

**BEFORE THE FLORIDA
PUBLIC SERVICE COMMISSION**

**DOCKET NO. 080677-EI
FLORIDA POWER & LIGHT COMPANY**

**IN RE: PETITION FOR RATE INCREASE BY
FLORIDA POWER & LIGHT COMPANY**

REBUTTAL TESTIMONY & EXHIBITS OF:

DR. ROSEMARY MORLEY

DOCUMENT NUMBER-DATE

08134 AUG-68

FPSC-COMMISSION CLERK

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **FLORIDA POWER & LIGHT COMPANY**

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5 **AUGUST 6, 2009**

6

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

8 A. My name is Dr. Rosemary Morley. My business address is Florida Power &
9 Light Company, 700 Universe Boulevard, Juno Beach, Florida 33408-0420.

10 **Q. Did you previously submit direct testimony in this proceeding?**

11 A. Yes.

12 **Q. Are you sponsoring any rebuttal exhibits in this case?**

13 A. Yes. I am sponsoring the following rebuttal exhibits:

- 14 ● RM-12, Summary of Forecasting Variance to Date
- 15 ● RM-13, Summary of Adjustments to the Forecast
- 16 ● RM-14, Calculation of the Adjustment for Minimum Use Customers
- 17 ● RM-15, Monthly Forecast Variance

18 **Q. What is the purpose of your rebuttal testimony?**

19 A. The purpose of my rebuttal testimony is to explain why the Commission should
20 reject the load forecasts proposed by the Office of Public Counsel's (OPC)
21 witness Brown. My testimony explains the purpose and necessity of the
22 adjustments FPL made to its econometric model in developing its forecast of net
23 energy for load (NEL) and how those adjustments have significantly improved the

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1 accuracy of FPL's forecast. I also demonstrate that the revisions to these
2 adjustments proposed by Ms. Brown are inappropriate and result in a substantially
3 less accurate and inherently biased forecast. In addition, my testimony addresses
4 issues raised by Ms. Brown and by SFHAA witness Kollen concerning the 2011
5 test year.

6 SUMMARY

7
8 **Q. Please summarize your rebuttal testimony.**

9 **A.** FPL's load forecast includes reasonable and appropriately developed adjustments
10 to its econometric model, including the adjustments for minimum use customers
11 and re-anchoring. These adjustments significantly improve the accuracy of FPL's
12 load forecast as evidenced by FPL's year-to-date variance on a weather
13 normalized basis which is less than +0.1%. By contrast, both of OPC's proposed
14 load forecasts understate or eliminate altogether the adjustments required for
15 minimum use customers and re-anchoring. As a result, and as reflected on
16 Exhibit RM-12, OPC's proposed load forecasts show a substantial bias towards
17 over-forecasting the actual level of NEL as evidenced by their year-to-date
18 weather normalized variance which ranges from -1.49% to -1.56%. In other
19 words, the revisions to the load forecast proposed by OPC inflate the errors in the
20 forecast more than fifteen fold. In summary, OPC's proposed forecasts are
21 clearly less accurate than FPL's load forecast and their recommended load
22 forecasts should be rejected. My testimony also explains why FPL's load forecast

1 for 2011 is reasonable, and does not rely on unfounded speculation regarding the
2 timing of the economic recovery.

3
4 **OPC's PROPOSED REVISIONS TO THE LOAD FORECAST**

5
6 **Q. Why did FPL make adjustments to the output of its econometric model in
7 developing its NEL forecast?**

8 A. FPL made adjustments to the output of its econometric model in order to improve
9 the accuracy of its NEL forecast. FPL's data, supported by outside sources
10 including ITRON and the U.S. Census Bureau, indicate recent changes in
11 consumption patterns. When such changes in consumption patterns are not fully
12 embedded in the historical data, adjustments to the output of the econometric
13 model are needed in order to avoid a bias in the forecast. A bias results in a
14 tendency to consistently understate or overstate the actual level of NEL. A good
15 forecaster strives to avoid such biases and instead aims to develop a forecast
16 which neither understates nor overstates actual values.

17 **Q. Has FPL documented the need for these adjustments?**

18 A. Yes. With the exception of the adjustment for the addition of the power sale
19 contract to the Seminole Electric Cooperative, all of the adjustments FPL
20 performed are needed collectively in order to correct for the econometric model's
21 tendency to over-forecast actual NEL levels as a result of the changes in
22 consumption patterns noted above. As shown on Exhibit RM-13, the output of
23 the econometric model had an average forecasting variance of -3.33% between

1 March 2008 and December 2008. The negative sign means that the econometric
2 model over-forecasted the actual level of NEL between March 2008 and
3 December 2008 by an average of 3.33%. Moreover, this was a consistent pattern
4 with the model over-forecasting each and every month and with the size of the
5 forecasting error increasing over time. As a result, the average forecasting error
6 in the last quarter of 2008 was -4.44% versus -3.33% for the March thru
7 December period as a whole. The pattern in forecasting errors between March
8 2008 and December 2008 clearly indicates the need for adjustments to the output
9 of the econometric model.

10 **Q. Ms. Brown states on page 32, lines 21 thru 22 of her testimony that the**
11 **econometric model's recent tendency to over-forecast simply replaced its**
12 **prior tendency to under-forecast. Is this correct?**

13 **A.** No. Prior to 2008, the econometric model did not exhibit any underlying bias in
14 terms of either under-forecasting or over-forecasting. This lack of bias is evident
15 in the random pattern of forecasting errors prior to 2008. Specifically, prior to
16 2008 the monthly direction of forecasting errors changed randomly with a month
17 or two of over-forecasting typically followed by a month or two of under-
18 forecasting and vice versa, with errors in over-forecasting and errors in under-
19 forecasting generally tending to offset one another. By contrast, the consistency
20 of over-forecasting since March 2008 clearly indicates a forecasting bias that
21 must be addressed.

1 **Q. Ms. Brown further claims that the MAPE statistics resulting from FPL**
2 **witness Hanser's in-sample and out-of-sample tests of the econometric model**
3 **indicate that no adjustments to the model are needed. Do you agree?**

4 A. No. Ms. Brown relies on MAPE statistics for a purpose for which they were not
5 intended, which is like trying to use a hammer where a screwdriver is needed. To
6 be clear, MAPE stands for mean absolute percentage error. As the name implies,
7 the MAPE statistic is based on the absolute forecasting error in each month. In
8 other words, a -2.0% error (i.e. over-forecasting the month's NEL by 2.0%) and a
9 +2.0% error (i.e. under-forecasting the month's NEL by 2.0%) both have an
10 absolute error of 2.0%. A bias in a forecast is indicated when the direction of the
11 monthly forecasting errors are predominantly in one direction (i.e. over-
12 forecasting) or another (i.e. under-forecasting). Because the MAPE statistic does
13 not take into account the direction of each month's forecasting error, it is not a
14 good measure of any underlying bias in a forecast.

15 **Q. Ms. Brown also claims on page 33, line 19 thru page 34, line 8 of her**
16 **testimony that the adjustment for minimum use customers is inherently**
17 **duplicative with the re-anchoring adjustment. Do you agree?**

18 A. No. Both adjustments are needed to address the bias toward over-forecasting
19 evident since March 2008. Based on March through December 2008 data the
20 adjustment for minimum use customers combined with the re-anchoring
21 adjustment results in a net adjustment of only -2.05%. By contrast, the trend in
22 forecasting error is -3.33% based on the March through December 2008 data and
23 -4.44% based on the last quarter of 2008. Moreover, as Exhibit RM-13 shows,

1 even accounting for the adjustments for mandated energy efficiency, minimum
2 use customers and re-anchoring, the cumulative adjustments to the forecast sum to
3 only -3.43%, a level that closely approximates the March through December 2008
4 forecasting error but is well below the trend in over-forecasting in the latter
5 months for 2008. The math simply does not add up to the duplication claimed by
6 Ms. Brown.

7 **Q. Ms. Brown implies that, since an increase in minimum use customers was**
8 **already occurring in 2008, the re-anchoring adjustment must already**
9 **adequately reflect the increase in minimum use customers. Do you agree?**

10 A. No. While it is true that the number of minimum use customers was already on
11 the rise in 2008, the re-anchoring adjustment is based on the average level of 2008
12 sales, and as such, was not designed to fully address the recent trend in over-
13 forecasting since March 2008, particularly the acceleration in the number of
14 minimum use customers that occurred during this time. Indeed, the re-anchoring
15 adjustment corrects for less than 40% of the March thru December 2008 average
16 forecasting error and an even smaller percentage of the forecasting error in the
17 later months of 2008. As such, it is clear that the re-anchoring adjustment alone
18 does not adequately address the model's tendency to over-forecast sales.

19 **Q. Is FPL's adjustment for minimum use customers overstated as Ms. Brown**
20 **claims on page 32, lines 15 and 16 of her testimony?**

21 A. No. If anything, the actual number of minimum use customers in 2009 indicates
22 that FPL's adjustment may have been on the low side. However, rather than
23 focusing on the accuracy of FPL's projections, Ms. Brown asserts that FPL's

1 adjustment for minimum use customers is overstated due to our estimate of the
2 long-run average percentage of residential customers qualifying as minimum use
3 customers and what she refers to as a formula error.

4 **Q. Is FPL's estimate of the long-run average percentage of residential customers**
5 **qualifying as minimum use customers appropriate?**

6 A. Yes. FPL used 7.0% as an estimate of the long-run average percentage of
7 residential customers qualifying as minimum use customers based on the average
8 percentage of minimum use customers during the 2003-2004 time period. The
9 2003 thru 2004 period is appropriate for this purpose because data from the U.S.
10 Census Bureau show that vacancy rates in Florida were very close to their long-
11 term averages during this time. Historically, vacancy rates in Florida were
12 relatively stable prior to the peak of the housing bubble in 2006. For example,
13 homeowner vacancy rates in Florida averaged 2.1% in 2003-2004, close to the
14 2.2% averaged between 1998 and 2005. Intuitively, the use of the 2003 thru
15 2004 period also makes sense in that it represents a period before the recent
16 housing boom and bust.

17 **Q. Why didn't FPL simply compute the average percentage of minimum use**
18 **customers since 1998, the period used to calibrate the econometric model?**

19 A. The data on minimum use customers, that is customers using between 1 and 200
20 kWh per month, are only available as far back as September 2002. However, as I
21 discussed above, data from the U.S. Census Bureau which are available for a
22 longer period of time support FPL's estimate of the long-term average percentage
23 of minimum use customers. Vacancy rates in Florida and the percentage of

1 residential customers qualifying as minimum use customers have historically
2 tracked one another. Therefore, the fact that vacancy rates were near their long-
3 term average between 2003-2004 indicates that the 2003 to 2004 period provides
4 a reasonable proxy for the long-term average of the percentage of residential
5 customers qualifying as minimum use customers.

6 **Q. Doesn't FPL have data on minimum use customers going back to 1997 based**
7 **on the file "empty_homes_history.xls" described by Ms. Brown on page 36,**
8 **lines 1 thru 18 of her testimony?**

9 A. No. The history going back to 1997 in the file "empty_homes_history.xls"
10 includes zero usage customers. As defined in my direct testimony, I am using the
11 term "minimum usage" customers to reflect those customers using between 1 and
12 200 kWh per month, not those using between 0 and 200 kWh a month. Hence,
13 Ms. Brown's suggestion that the data "was not reliable" on page 36, line 16 of her
14 testimony appears to be based on some confusion regarding the distinction
15 between the two series of data. If FPL had included zero usage customers in its
16 calculation of the impact from minimum use customers a larger adjustment would
17 have resulted.

18 **Q. Is Ms. Brown's estimate of the long-term average percentage of residential**
19 **customers qualifying as minimum use customers appropriate?**

20 A. No. Ms. Brown uses the period from September 2002 thru December 2007 to
21 estimate the long-term average percentage of residential customers qualifying as
22 minimum use customers, a period in which the percentage of minimum use
23 customers averaged 7.42%. Data from the U.S. Census Bureau show that

1 homeowner vacancy rates in Florida averaged 3.0% between September 2002 and
2 December 2007, well above their long-term average of 2.2%. Therefore, Ms.
3 Brown's assertion that the September 2002 thru December 2007 period be used to
4 estimate the long-term average percentage of residential customers qualifying as
5 minimum use customers should be rejected.

6 **Q. Ms. Brown also states on page 38, lines 5 thru 10 of her testimony that FPL's**
7 **assumption that all minimum use customers have zero usage results in an**
8 **inflated calculation of the adjustment for minimum use customers. Do you**
9 **agree?**

10 A. No. The refinement suggested by Ms. Brown has only a marginal impact on the
11 forecast. As shown on Exhibit RM-14, using 100 kWh as the assumed usage of
12 these customers results in a decrease of only 0.09% in the minimum use
13 adjustment in the 2010 test year. As I discuss below, of greater consequence is
14 the actual trend in the number of minimum use customers.

15 **Q. What percentage of residential customers qualify as minimum use customers**
16 **based on the most recent actuals available?**

17 A. As of June 2009, 9.03% of FPL's residential customers qualified as minimum use
18 customers. By contrast, FPL's load forecast assumed that only 8.55% of
19 residential customers would qualify as minimum use in June 2009. Based on this
20 actual data through June 2009, an updated adjustment for minimum use customers
21 for the test year would be 1.27%. As shown on Exhibit RM-14, this represents a
22 0.16% increase in the adjustment for minimum use customer in the 2010 test year
23 from FPL's filed forecast, even with the assumption that minimum use customers

1 use 100 kWh/month. Thus, FPL's proposed adjustment for minimum use
2 customers is not overstated and, if anything, may be too low in light of recent
3 actual data.

4 **Q. Does Ms. Brown express any other issues with FPL's forecast of minimum**
5 **use customers?**

6 A. Yes. On page 37, lines 21 thru 25 and page 38, lines 1 thru 4, Ms. Brown cites
7 discrepancies in the 2011 forecasted number of minimum use customers FPL
8 provided in response to OPC's third set of interrogatories, request number 175.
9 Consistent with the assumption of an improvement in the housing market in 2011,
10 FPL reduced the adjustment for minimum use customers by 50% in developing its
11 load forecast. Unfortunately, the projected number of minimum use customers in
12 2011 was incorrectly calculated in FPL's response to OPC's third set of
13 interrogatories, request number 175. While any confusion this may have caused
14 is regrettable and is being corrected with a supplemental interrogatory response,
15 this error had absolutely no impact on FPL's load forecast or MFR filing.

16 **Q. Ms. Brown on page 38, lines 11 thru 20 of her testimony describes what she**
17 **calls an error in the way FPL applied its re-anchoring adjustment. Is her**
18 **concern justified?**

19 A. No. FPL calculated the re-anchoring adjustment based on the average level of
20 2008 usage, after taking into account changes in mandated energy efficiency and
21 the addition of the Seminole Electric Power Sales. In developing the forecasts
22 for 2009, 2010 and 2011, the re-anchoring adjustment was then applied to the
23 output of the econometric model before any adjustments for mandated energy

1 efficiency or the Seminole Electric Power Sales. However, even if the re-
2 anchoring adjustment were applied to the output of the econometric model after
3 adjusting for mandated energy efficiency and the Seminole Electric Power Sales,
4 the impact on the forecast would be trivial, less than 0.05% in the 2010 test year.

5 **Q. Aside from the conceptual issues of how the adjustments to the load forecast**
6 **should be developed, does Ms. Brown accurately compute the methodology**
7 **she advocates?**

8 A. No. Ms. Brown's computation contains a serious arithmetic error. On her Exhibit
9 SLB-9, page 1 of 3, column k, the sum of "NEPACT" (i.e. mandated energy
10 efficiency) and new wholesale contracts (i.e. the Seminole Electric Power Sales)
11 in 2008 is incorrectly shown as -2,270,684,789 kWh. In reality, the sum of
12 mandated energy efficiency and the Seminole Electric Power Sales in 2008 is
13 -1,568,228,958 kWh. Exhibit SLB-9, page 1 of 3, column k, repeats the same
14 values for both 2008 and 2009 suggesting that this error may be typographical in
15 nature. However, the implication of this error on OPC's calculations is significant
16 since Ms. Brown advocates computing the re-anchoring adjustment based on the
17 "Revised NEL before Re-anchoring" for 2008 which is incorrectly calculated
18 based on the error in column k. Thus, even if one accepted OPC's flawed
19 methodology for computing the adjustments to the load forecast, this error means
20 that OPC's proposed re-anchoring adjustment shown in column n of Exhibit SLB-
21 9, page 1 of 3, would be significantly miscalculated. Correcting solely for the
22 impact of this arithmetic error, OPC's proposed re-anchoring adjustment, which is

1 shown as -0.075% in column n of Exhibit SLB-9, page 1 of 3, would instead be
2 -0.702%.

3 **Q. What impact does this specific error have on OPC's proposed load forecast?**

4 A. As a result of the error in column k of Exhibit SLB-9, page 1 of 3, the forecasted
5 values shown as the "Revised NEL Model" in column o are overstated in every
6 year. These figures, in turn, are used as OPC's proposed load forecast on Exhibit
7 SLB-9, page 2 of 3, which is shown as "Load Forecast Analysis Revenue
8 Calculations – Minimum Use Correction Only." Thus, even using OPC's flawed
9 methodology, OPC's proposed load forecast based on what it calls "Minimum
10 Use Correction Only" is overstated by approximately 698 GWh in 2009, by 704
11 GWh in 2010, and by 713 GWh in 2011.

12 **Q. Does this specific error also impact OPC's proposed increase in FPL's**
13 **revenue forecast?**

14 A. Yes. On Exhibit SLB-9, page 2 of 3, OPC proposes a \$43.7 million increase in
15 2010 and a \$37.5 million increase in 2011 in FPL's revenue forecast. However,
16 had OPC correctly reflected the sum of 2008 mandated energy efficiency and
17 incremental wholesale sales on Exhibit SLB-9, page 1 of 3, column k, their
18 proposed increase to FPL's revenue forecast would be \$19.8 million in 2010 and
19 \$13.3 million in 2011. Thus, OPC's error in the sum of the 2008 mandated
20 energy efficiency and incremental wholesale sales resulted in an overstatement of
21 FPL's revenues of \$23.8 million in 2010 and \$24.1 million in 2011.

22 **Q. Does this mean an increase in FPL's revenue forecast of \$19.8 million in 2010**
23 **and \$13.3 million in 2011 would be appropriate?**

1 A. Not at all. OPC has not demonstrated that any revision in FPL's revenue forecast
2 is needed. I merely wish to point out that OPC has not correctly implemented the
3 methodology they advocate.

4 **Q. How accurate has OPC's proposed load forecast been based on what it calls**
5 **"Minimum Use Correction Only"?**

6 A. OPC's proposed forecast based on what it calls "Minimum Use Correction Only"
7 has a year-to-date variance on a weather normalized basis of -1.49%, an error
8 more than fifteen times larger than FPL's forecasting variance during the same
9 period. Exhibit RM-12 provides a graphic illustration of the superior forecasting
10 accuracy of FPL's forecast.

11 **Q. What monthly pattern do you observe in OPC's proposed load forecast**
12 **based on what it calls "Minimum Use Correction Only"?**

13 A. Exhibit RM-15 shows the monthly patterns in the forecasting error of FPL's
14 forecast versus OPC's proposed load forecast based on what it calls "Minimum
15 Use Correction Only." The monthly pattern of OPC's forecast clearly shows a
16 consistent bias toward over-forecasting NEL. OPC's proposed "Minimum Use
17 Correction Only" load forecast has over-forecasted NEL each and every month of
18 2009 thru June. By contrast, FPL's forecast shows a far more random pattern in
19 the forecast error, with some months over-forecasted and some months under-
20 forecasted. This pattern demonstrates that there is no underlying bias in FPL's
21 load forecast.

1 **Q. Does OPC offer another proposed load forecast in addition to the one**
2 **referred to as “Minimum Use Correction Only” on Exhibit SLB-9, page 2 of**
3 **3?**

4 A. Yes. OPC also proposes a load forecast based on removing the re-anchoring
5 adjustment altogether. This proposed load forecast is referred to as “Minimum
6 Use Correction and Remove Re-anchoring” on Exhibit SLB-9, page 3 of 3. Ms.
7 Brown offers absolutely no explanation in her testimony to support the complete
8 removal of the re-anchoring adjustment. Not surprisingly, this revision further
9 compromises the accuracy of the forecast.

10 **Q. How accurate has OPC’s proposed load forecast been based on what it calls**
11 **“Minimum Use Correction and Remove Re-anchoring Adjustment”?**

12 A. As shown on Exhibit RM-12, OPC’s proposed “Minimum Use Correction and
13 Remove Re-anchoring Adjustment” load forecast has a weather-normalized year-
14 to-date variance of -1.56%, more than fifteen times as high as FPL’s forecasting
15 variance.

16 **Q. What monthly pattern do you observe in OPC’s proposed load forecast**
17 **based on what it calls “Minimum Use Correction Only and Remove Re-**
18 **anchoring Adjustment”?**

19 A. Exhibit RM-15 shows the monthly patterns in the forecasting error of FPL’s
20 forecast versus OPC’s proposed load forecast based on what it calls “Minimum
21 Use Correction and Remove Re-anchoring Adjustment.” OPC’s proposal again
22 chronically over-forecasts NEL with a negative forecasting variance each and
23 every month. This clearly indicates an underlying bias in OPC’s proposed load

1 forecast. Moreover, the trend in recent months is one of an increasing tendency to
2 over-forecast.

3 **Q. Aside from their lack of accuracy and forecast bias, what other conclusions**
4 **do you draw from your analysis of OPC's two proposed load forecasts as**
5 **presented by Ms. Brown?**

6 A. OPC's proposed "Minimum Use Correction Only" load forecast does not
7 represent any legitimate corrections to FPL's adjustment for minimum use
8 customers. Rather, the revenue impact shown on Exhibit SLB-9, page 2 of 3 is
9 the result of understating the adjustment for minimum use customers and
10 miscalculating the re-anchoring adjustment. The understatement of the
11 adjustment for minimum use customers results primarily from the inappropriate
12 time period Ms. Brown uses to estimate the long-run average percentage of
13 residential customers using between 1 and 200 kWh/month. The miscalculation
14 of the re-anchoring adjustment is the result of the false impression that a double-
15 counting exists between the re-anchoring adjustment and the adjustment for
16 minimum use customers. OPC's miscalculation of the re-anchoring adjustment is
17 then further compounded by its arithmetic error in summing the 2008 impact of
18 mandated energy efficiency and new wholesale sales as shown on Exhibit SLB-9,
19 page 1 of 3, column k.

20
21 OPC's proposed load forecast based on what it calls "Minimum Use Correction
22 and Remove Re-anchoring Adjustment" represents an even more extreme and less
23 successful attempt to revise FPL's forecast. Given the econometric model's

1 tendency to over-forecast the level of NEL, as shown on Exhibit RM-13, it is
2 difficult to imagine why anyone would conclude that a re-anchoring adjustment is
3 not required. By eliminating the re-anchoring adjustment and understating the
4 adjustment for minimum use customers, OPC attempts to address what is a 3.33%
5 to 4.44% bias toward over-forecasting with adjustments that sum to only a 2.0%
6 reduction in the output of the econometric model. Given this gap, it is not
7 surprising that OPC's "Minimum Use Correction and Remove Re-anchoring
8 Adjustment" load forecast has a weather-normalized year-to-date variance of
9 -1.56%.

10
11 In summary, OPC's proposed load forecasts are clearly inferior to FPL's load
12 forecast and should be rejected by the Commission. Likewise, the revenue
13 deficiency impacts calculations presented on Exhibit SLB-10 which rely on
14 OPC's proposed load forecasts should be rejected.

15
16 **LOAD FORECAST IN THE 2011 TEST YEAR**

17
18 **Q. OPC witness Brown on page 5, lines 1 thru 22 of her testimony and SFHAA**
19 **witness Kollen on page 7, line 11 thru page 9, line 13 of his testimony both**
20 **state that forecasts for the 2011 test year are too speculative to be relied on in**
21 **this proceeding. Is FPL's load forecast for the 2011 test year speculative?**

22 **A.** No. FPL's load forecast for 2011 is reasonable and is not the result of negative
23 speculation regarding the timing of the economic recovery. FPL's 2011 load

1 forecast to a large extent reflects the start of a recovery in customer and sales
2 growth. Accordingly, FPL's load forecast shows NEL increasing by 1.6% in
3 2011, its highest rate of increase since 2006. Likewise, FPL's load forecast shows
4 the number of customers increasing by 1.3% in 2011, its highest rate of increase
5 since 2007. It is also important to keep in mind that uncertainty regarding the
6 2011 test year is a two-sided risk. Indeed, based on the information currently
7 available, there is a relatively greater risk that FPL's 2011 load forecast is too
8 high rather than too low.

9 **Q. What factors suggest that the 2011 load forecast may be too high?**

10 A. The University of Florida released a new population forecast in March 2009
11 indicating even lower population growth through 2011. While the University of
12 Florida has a history of underestimating the state's long-run population growth,
13 their shorter term accuracy has been very good. Moreover, the reduction in short-
14 term population growth indicated by the University of Florida is consistent with
15 FPL's own experience which shows the number of customers continuing to fall on
16 an annual basis.

17 **Q. What impact would the University of Florida's March 2009 population
18 forecast have on FPL's load forecast for the test years?**

19 A. The University of Florida's March 2009 population projections would result in a
20 0.7% reduction in NEL in 2010 and a 1.5% reduction in NEL in 2011 relative to
21 FPL's filed load forecast.

22 **Q. Are there any other factors which would reduce the load forecast for the test
23 years?**

1 A. Yes. FPL's load forecast does not reflect any incremental DSM. In other words,
2 FPL's load forecast reflects only existing DSM programs and participation levels.
3 Incremental DSM is treated as a line item reduction to the load forecast as part of
4 the resource planning process.

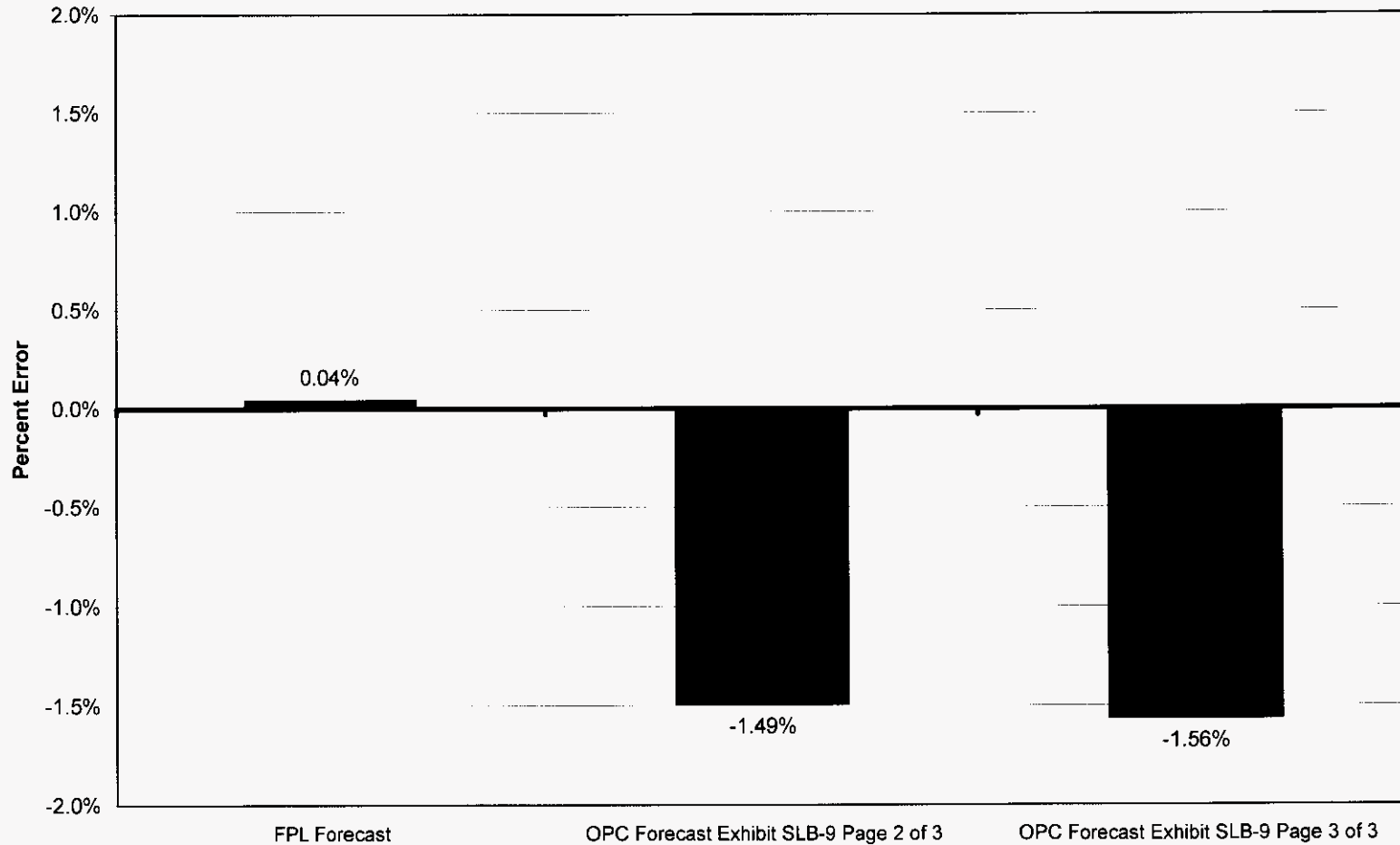
5 **Q. What impact would incremental DSM have on the load forecasts for the test**
6 **years?**

7 A. In Docket 080407-EG, FPL has proposed 74.1 GWh of incremental DSM in 2010
8 and 148.6 GWh in 2011. These estimates would reduce FPL's projected NEL by
9 about 0.1% in both 2010 and 2011. Of course, to the extent that there are any
10 modifications in the actual level of incremental DSM, these impacts would be
11 affected. For example, in Docket 080407-EG, GDS Associates has proposed
12 594.2 GWh of incremental DSM in 2010 and 1191.5 GWh in 2011. These
13 estimates would reduce FPL's projected NEL by 0.6% in 2010 and by 1.1% in
14 2011.

15 **Q. Does this conclude your rebuttal testimony?**

16 A. Yes.

Net Energy for Load Cumulative Forecast Variance YTD Through June (Weather Normalized)



Docket No. 080677-EI
 Summary of Adjustments
 to the Forecast
 Exhibit RM-13, Page 1 of 1

Month	Output of the Econometric Model	Actual	Forecasting Error
Mar-08	8,488,468	8,257,888	-2.7%
Apr-08	8,952,665	8,815,270	-1.5%
May-08	10,233,625	9,814,090	-4.1%
Jun-08	11,034,889	10,835,527	-1.8%
Jul-08	10,935,058	10,374,157	-5.1%
Aug-08	11,366,842	11,090,312	-2.4%
Sep-08	11,368,201	11,113,521	-2.2%
Oct-08	9,637,791	9,267,678	-3.8%
Nov-08	8,231,215	7,895,270	-4.1%
Dec-08	7,935,368	7,506,932	-5.4%
Average Forecasting Error (March 2008 - December 2008)			-3.33%
Average Forecasting Error (July 2008 - December 2008)			-3.85%
Average Forecasting Error (October 2008 - December 2008)			-4.44%

	<u>Adjustments to Forecast*</u>
Adjustment for Mandated Energy Efficiency	-1.37%
Adjustment for Re-anchoring	-1.29%
Adjustment for Empty Homes	-0.77%
Sum	-3.43%

* Based on March 2008 through December 2008 levels.
 Note: Totals may not sum due to rounding.

Calculation of the Adjustment for Minimum Use Customers

	As Filed	100 kWh Usage Scenario	Difference from As Filed	Updated for actuals through June 2009	Difference from As Filed
average % of RS-1 customer using 1-200 KWH					
Long-term Average	7.00%	7.00%		7.00%	
Oct-08	8.44%	8.44%		8.44%	
Estimated 2009 (trended)	8.68%	8.68%		9.16%	
Estimated 2010 (trended)	8.96%	8.96%		9.44%	
Delta for 2009	1.68%	1.68%		2.16%	
Delta for 2010	1.96%	1.96%		2.44%	
average usage of customers more than 200 KWh	1,200	1,200		1,200	
Average usage of customers less than 200 kWh usage decline	(1,200)	(1,100)		(100) (1,100)	
Total Number of Residential Customers 2009	3,994,173	3,994,173		3,994,173	
Increase in Very Low Usage Customers in 2009	67,295	67,295		86,467	
Impact on 2009 sales	(969,047,488)	(888,293,530)	80,753,957	(1,141,364,305)	(172,316,817)
Billed Sales Jan - Dec 2009 (preliminary)	102,605,337,611	102,605,337,611		102,605,337,611	
2009 Adjustment for Minimum use customers	-0.94%	-0.87%	0.08%	-1.11%	-0.17%
Total Number of Residential Customers 2010	4,010,837	4,010,837		4,010,837	
Increase in Very Low Usage Customers in 2010	78,646	78,646		97,898	
Impact on 2010 sales	(1,132,508,319)	(1,038,132,626)	94,375,693	(1,292,259,281)	(159,750,962)
Billed Sales Jan - Dec 2010 (preliminary)	102,033,943,256	102,033,943,256		102,033,943,256	
2010 Adjustment for Minimum use customers	-1.11%	-1.02%	0.09%	-1.27%	-0.16%
2011 Adjustment for Minimum use customers	-0.55%	-0.51%	0.05%	-0.63%	-0.08%

Net Energy For Load Monthly Forecast Variance Through June 2009 (Weather Normalized)

