

BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

In the Matter of

PETITION FOR APPROVAL OF NUMERIC DOCKET NO. 040029-EG
CONSERVATION GOALS BY FLORIDA POWER
& LIGHT COMPANY.

PETITION FOR APPROVAL OF DOCKET NO. 040660-EG
MODIFICATIONS TO BUILDSMART
PROGRAM BY FLORIDA POWER &
LIGHT COMPANY.



ELECTRONIC VERSIONS OF THIS TRANSCRIPT ARE
A CONVENIENCE COPY ONLY AND ARE NOT
THE OFFICIAL TRANSCRIPT OF THE HEARING,
THE .PDF VERSION INCLUDES PREFILED TESTIMONY.

VOLUME 2

Pages 162 through 334

PROCEEDINGS: HEARING

BEFORE: COMMISSIONER J. TERRY DEASON
COMMISSIONER RUDOLPH "RUDY" BRADLEY
COMMISSIONER LISA POLAK EDGAR

DATE: Monday, October 10, 2005

PLACE: Betty Easley Conference Center
Room 148
4075 Esplanade Way
Tallahassee, Florida

REPORTED BY: LINDA BOLES, RPR, CRR
JANE FAUROT, RPR
Official FPSC Hearings Reporters
(850) 413-6734/(850) 413-6732

APPEARANCES: (As heretofore noted.)

1 I N D E X

2 WITNESSES

3	NAME:	PAGE NO.
4		
5	DENNIS J. STROER	
6	Direct Examination by Mr. Tait	165
7	Prefiled Direct Testimony Inserted	170
8	Cross Examination by Mr. Bryan	192
9	Redirect Examination by Mr. Tait	221
10		
11	JON F. KLONGERBO	
12	Direct Examination by Mr. Tait	225
13	Prefiled Direct Testimony Inserted	229
14	Cross Examination by Mr. Bryan	247
15	Redirect Examination by Mr. Tait	260
16		
17	PHILIP FAIREY	
18	Direct Examination by Mr. Tait	263
19	Prefiled Direct Testimony Inserted	265
20	Cross Examination by Mr. Bryan	280
21	Redirect Examination by Mr. Tait	284
22		
23	DANIEL J. HAYWOOD (Rebuttal)	
24	Direct Examination by Ms. Smith	288
25	Prefiled Rebuttal Testimony Inserted	290
26	Cross Examination by Mr. Tait	323
27	Cross Examination by Ms. Brown	331
28	Redirect Examination by Ms. Smith	332
29		
30		
31		
32	CERTIFICATE OF REPORTERS	334
33		
34		
35		

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

EXHIBITS

NUMBER:		ID.	ADMTD.
9	JK-1		262
10	Philip Fairey Resume		288
20	Stroer - 9/26/05 Version of Prefiled Exhibits	169	225
21	Klongerbo - RESNET Blog 6/20/05	259	262
22	Fairey - 9/14/05 Deposition Transcript	283	287
23	Haywood - Interrogatory No. 12	323	333

P R O C E E D I N G S

(Transcript follows in sequence from Volume 1.)

COMMISSIONER DEASON: Call the hearing back to order.

Okay. I believe we have concluded FPL's direct case, and now we can go to, Mr. Tait, your direct case. You may call your first witness.

MR. TAIT: Okay. I'll call Mr. Stroer.

DENNIS J. STROER

was called as a witness on behalf of Calcs-Plus, Inc., and, having been duly sworn, testified as follows:

D I R E C T E X A M I N A T I O N

BY MR. TAIT:

Q Mr. Stroer, would you please state your name and business address.

A My name is Dennis Stroer. I own Calcs-Plus located in Venice, Florida, 417 Commercial Court, Suite F, 34292.

Q Did you prepare 22 pages of prefiled testimony?

A Yes, I did.

Q Do you have any changes in the testimony?

A No, I don't.

Q If I asked you the same questions today, would you provide the same answers to your -- as your prefiled testimony?

A Yes, I would.

MR. TAIT: I'd like to enter the prefiled testimony into the record, sir.

1 COMMISSIONER DEASON: Without objection, it shall be
2 so inserted.

3 BY MR. TAIT:

4 Q Have you any exhibits with that prefiled testimony?

5 A Yes, I did.

6 MR. TAIT: Mr. Chairman, the exhibits that are
7 attached to the prefiled testimony were cut off in the
8 printing, and I provided at that day, on August 12th, a set of
9 Excel spreadsheets to both the staff and the opposing attorneys
10 of Florida Power & Light. I'd like to offer what I presented
11 to them on that date. Actually then I also clarified it and
12 had some very slight amendments that basically did not amend
13 any of the basic data within the testimony for Mr. Stroer. I
14 would like to offer, without objection, if possible, from the
15 opposing attorney, the clarified exhibit of August the 30th as
16 his exhibit for this testimony.

17 MR. BRYAN: I'm sorry. Did you just say August the
18 30th? Is that the --

19 MR. TAIT: Yes.

20 MR. BRYAN: So you're not going to offer the
21 September 26th amended exhibit; is that correct?

22 COMMISSIONER DEASON: Excuse me, Mr. Tait. Mr. Tait,
23 I'm sorry. Can you speak into the microphone for the benefit
24 of the court reporter?

25 MR. TAIT: Yes, sir. Actually there -- this exhibit

1 has, has been generated three different times and has been
2 provided to the parties on those dates. There was one on
3 August the 12th; an Excel spreadsheet was provided to all the
4 parties. Then on August the 30th we provided a, what we called
5 an amended and clarified exhibit, which was filed with the
6 clerk and provided to all the parties, again in Excel
7 spreadsheets as well as in better copies. And then on
8 September the 26th we provided, in response to an interrogatory
9 by the staff, a final so-called clarified copy of basically the
10 same data. The differences in the three are there were some
11 additional calculations in the September 26th one that came out
12 of the same set of data that we provided to staff, and I could
13 point out those changes, if you wanted to, or I'm sure Florida
14 Power & Light could point out the changes in that as well.
15 They're very minor changes and they were merely calculations
16 that were done. My preference would be not to have the first
17 two introduced, but rather introduce the latest one, which
18 would be the September 26th one, which is the one that was
19 attached to Mr. Haywood's deposition.

20 MR. BRYAN: Commissioner, we will not formally object
21 to the, the September 26th exhibit. But subject to
22 qualification, again, this is another example where there were
23 three attempts -- there were two attempts after the date in the
24 order establishing procedure for filing exhibits that this,
25 this exhibit was amended, the last time on September 26th, the

1 last day of discovery, and it was, it was used in the
2 deposition of Mr. Haywood, and that was where he'd seen it for
3 the first time.

4 But to shorten this discussion, we will not object to
5 that exhibit being entered. I will tell you, we are not clear
6 what changes were made though between August 12th and
7 September 26th.

8 COMMISSIONER DEASON: Staff, I have a question. What
9 you identified as Exhibit 8, what version was that?

10 MS. BROWN: That would be the version filed with the
11 direct testimony. That would be the first version.

12 COMMISSIONER DEASON: Okay. So that may or may not
13 get admitted.

14 Mr. Tait, it's your desire at this point to have
15 identified as Exhibit Number 20 the 9/26 version of
16 Mr. Stroer's prefiled exhibits; is that correct?

17 MR. TAIT: That is correct, sir.

18 COMMISSIONER DEASON: All right. That would be
19 hearing Exhibit Number 20, the 9/26 version. And is there any
20 need to identify the late August version?

21 MR. TAIT: No, sir. No, sir. With the understanding
22 of counsel from the Florida Power & Light, you know, this, this
23 version would be the cleaner version.

24 COMMISSIONER DEASON: Okay. We will identify that as
25 Exhibit 20.

1 MR. TAIT: Which is the same as was on the
2 deposition.

3 (Exhibit Number 20 marked for identification.)

4 BY MR. TAIT:

5 Q I just provided you a copy of the clarified exhibit
6 from 9/26 as noted on here. I believe it's 11 pages. Have you
7 prepared this exhibit that's now denominated -- Exhibit 20, Mr.
8 Chairman, was it?

9 COMMISSIONER DEASON: I'm sorry. You were asking
10 your question to --

11 MR. TAIT: It's numbered Exhibit 20?

12 COMMISSIONER DEASON: Yes. It's been identified as
13 Exhibit 20.

14 BY MR. TAIT:

15 Q Can you look at Exhibit 20 and say that this was an
16 exhibit you prepared consistent with your prefiled testimony?

17 A Yes, it is.

18 MR. TAIT: Thank you. I believe I'll now hand him
19 over for cross-examination, sir.

20

21

22

23

24

25

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **CALCS PLUS**

3 **TESTIMONY OF DENNIS J. Stroer**

4 **DOCKET NOS. 040029-EG, 040660-EG**

5 **AUGUST 12, 2005**

6 **1. Please state your name, current position and address.**

7 Dennis J. Stroer, an individual and President of Calcs-Plus, residing at 230
8 Dartmouth Road, Venice, FL 34293, and a FPL ratepayer under FPL residential
9 account # 03459-46495.

10 **2. Please provide us your educational background and any special**
11 **credentials or training that you have received relevant to your**
12 **testimony in this case.**

13 High school graduate, two years of college (climate control technology), class "A"
14 HVAC contracting license (CACO 27359), Florida certified residential energy
15 rater (189), new commercial and public building rater (066), NBI certified test and
16 balance, and certified by ACCA to teach Manual J v8.

17 **3. Please provide us with your past and present professional association**
18 **memberships and positions you have held in those associations.**

19 ACCA (Air Conditioning Contractors of America), ASHRAE (American Society of
20 Heating, Refrigeration and Air-Conditioning Engineers, Inc), NERA (National
21 Energy Raters Association), and RESNET (Residential Energy Services
22 Network)

1 **4. Please provide us with a brief statement of your background and**
2 **experience in the areas of building science, standards of building**
3 **practice and programs involving residential energy efficiency and**
4 **conservation.**

5 Besides doing energy ratings our company provides Room x Room HVAC load
6 calculations, HVAC system design, and building diagnostics. Building diagnostics
7 is an area that keeps us in step with the world of building science. This valued
8 service is in high demand because of the very nature of our hot humid climate
9 and the large inventory of failed buildings. Building diagnostics is all about
10 solving moisture problems related to uncontrolled air flow, poor HVAC system
11 design, and faulty construction. We have been able to accumulate a wealth of
12 data and information that we use for educational purposes to improve new
13 construction.

14 **5. What is a building energy efficiency rating under Florida Law?**

15 In 1993 the Florida Legislature passed a law (Florida Statute 553.990) that is
16 called the Florida Building Energy-Efficiency Rating System Act. This law (as
17 subsequently amended) provides for a statewide uniform rating system for rating
18 the energy efficiency of all buildings in Florida that is consistent with the federal
19 HERS Guidelines. The Act required the Department of Community Affairs (DCA)
20 to implement the law by developing the actual program elements to achieve this
21 rating system.

22 **6. Are there any categories of ratings?**

1 Class 1 Rating -- an energy rating, conducted in accordance with Rule 9B-60,
2 using site energy audit and performance test data as the sources for the input
3 data on which the rating is based.

4 Class 2 Rating -- an energy rating, conducted in accordance with Rule 9B-60,
5 using site energy audit data as the source for the input data on which the rating is
6 based.

7 Class 3 Rating -- a projected energy rating, reserved for new buildings and
8 clearly labeled as "projected rating based on plans" that is conducted in
9 accordance with Rule 9B-60 using plans and construction documents as the
10 sources for the input data on which the rating is based.

11 **7. What services need to be performed to provide a rating under the**
12 **various categories?**

13 Rule 9B-60 is the base line for these services and other services are usually
14 added to enhance the worth of a rating business to their client in a free enterprise
15 system i.e. the cost of a code calculation (the very beginning step to a Class 1
16 energy rating) is offset by the cost of a room x room HVAC load calculation which
17 we provide with every code calculation.

18 **8. What is the difference between the process of developing and**
19 **completing a code compliance form and a Class 3 rating?**

20 A Class 3 rating and a code compliance form are accentually the same because
21 they both require plans and construction documents, the both require the same
22 software, and the input data is the same. With a Class 3 rating you can add other

1 energy features such as lighting, refrigerator, cloths dryer, kitchen stove, pool
2 pump, etc. The real difference is how the software handles the data. After the
3 data has been put into the software you have a choice. You can print out a Code
4 Compliance form for the permitting process or, after registering the rating, a
5 Florida Building Energy Rating Guide can be printed. One might say that it's only
6 a Code Compliance calculation until it is has been registered because you are
7 not able to print/produce a Florida Building Energy Rating Guide until you have
8 received a registration key from our HERS provider.

9 **9. What services are involved in developing a BERS rating? By steps**
10 **and for each category of rating.**

11 To conduct a Class 1 rating the rater must work through all the procedures
12 required in Rule 9B-60. The rater must start out by conducting a projected energy
13 rating using plans and construction documents as the sources on which the
14 rating will be based. The data is entered into the Energy Gauge Software to
15 achieve the projected rating. At this point the rater can consult with the
16 builder/owner regarding energy improvements using the software to help make
17 decisions on the most affective approach. It is the responsibility of the rater to
18 review HVAC sizing especially if energy upgrades were added that will
19 impact/reduce HVAC load requirements. When the building is at a point where
20 site inspection and verification can be performed, the projected energy rating is
21 then edited to closer reflect the "as-built" building. If there are any deficiencies
22 they are reported and corrected. When the home is completely finished and after
23 the mechanical systems have been commissioned and in operation a site

1 inspection, verification, building infiltration test, and duct test are performed, the
2 Energy Gauge Software is again updated with these results and a HERS score is
3 calculated. In order to print these results a registration key is required.

4 **10. How many have you performed over last 5 years? Last year?**

5 2000 – 0 ratings, 2001 – 0 ratings, 2002 – 1 rating, 2003 – 39, 2004 – 90, 2004 –
6 72,

7 **11. Are you familiar with the FPL BuildSmart program? If so, please**
8 **describe your involvement or experience with it.**

9 I am familiar with the FPL program because we are working on the same project
10 together and I also had to learn about their program back when we went before
11 the PSC a few years back. Their program leaves builders with a false sense of
12 energy efficiency in their built home. When we first started the testing at the WCI
13 project in Venice our FGBC certifier was surprised that our duct scores were
14 coming in so low when all of the homes were certified BuildSmart Gold. Our duct
15 testing method uncovered much more duct leakage than their method had.

16 **12. Compare the services provided under the BuildSmart program with the**
17 **services you generally offer and with the services you offer when you**
18 **rate a home.**

19 Our ratings are conducted according to the “Florida Addenda to the National
20 HERS Council Guidelines”, Rule 9B-60, and RESNET standards. Our testing
21 includes a duct test using a duct tester in compliance with the only procedure the
22 State of Florida recognizes. FPL uses the Pressure Pan Test which is not
23 recognized by the State of Florida. All of our ratings are registered with the State

1 of Florida with a certified HERS rating which is nationally recognized, Build Smart
2 does not. A complete rating includes Energy Calculations and Room x Room
3 Manual J Load Calculations for the permitting process and is also used for proper
4 HVAC and Duct sizing

5 **13. Have you observed any measurable difference in outcomes for homes**
6 **in which you have provided rating service and homes that have**
7 **received BuildSmart's basic or premier services? If so, please**
8 **describe.**

9 Yes, after assembling and reviewing the spread sheet file "WCI Test Results,"
10 see my Exhibit I, our data shows a difference on the duct testing end. With
11 regards to duct testing, the pressure pan duct testing method used in the
12 BuildSmart program has consistently proven to be substandard to the more
13 accurate approved duct testing method that we use to test the same homes. This
14 project is also designated a BuildSmart Gold Community and the spread sheet
15 reveals that these homes clearly failed BuildSmarts "Technical Specifications of
16 Eligibility" which basically says - Air distribution system must meet the following
17 criteria:

18 ***"Sealing of the ducted air distribution system may have a maximum cfm***
19 ***leakage of five percent (5%) of the air-conditioned square footage of the***
20 ***home at the final inspection and three percent (3%) at the mid-point***
21 ***inspection."***

22 You will also note that a number of homes, as-built, seems to even fail passing
23 the Florida Energy Code's minimum standard. I am still in the process of

1 preparing this table and will provide within the next few days the e-ratio of each
2 as-built home along with the already provided HERS score.

3 **14. Have you reviewed any homes that have received code calculations**
4 **from FPL, including an e-ratio, and how has the as-built aspect of your**
5 **review compared to their initial code calculations?**

6 We have not up to this point because FPL has refused to give us those ENB files
7 that they used to certify BuildSmart Gold each individual home. FPL did give us
8 basic "builder model" ENB files but they did not reflect any of the homes they
9 certified so a real comparison can't be made. As I stated in my answer to
10 question 14, I will have the "as-built" e-ratios for each of the houses that can
11 easily be compared to the e-ratio provided during the initial code compliance
12 calculation stage as filed with the code compliance forms.

13 **15. Are you familiar with other jurisdictions' efforts to measure and**
14 **regulate residential building practices and, if so, can you summarize**
15 **their various approaches?**

16 Yes, Ken Fonorow works with GRU in Gainesville and I have discussed with him
17 their program which early on involved their hosting a series of meetings to
18 encourage the development of Energy Star. However, once begun in the private,
19 small business sector they have not attempted to provide competitive services
20 not a competitive labeling program. I have also talked with many other
21 individuals about their experiences but too many to recount in this brief
22 testimony.

1 **16. Are there national standards for the development of comparative**
 2 **information about the relative energy efficiency of a residential unit?**

3 Yes, the Mortgage Industry National Home Energy Rating Standards. The
 4 standards, adopted by RESNET set the national procedures for home energy
 5 ratings. The standards focus on three areas:

- 6 • Rating Program Administration (Chapter One)
- 7 • Rater Training and Certification (Chapter Two)
- 8 • Technical Guidelines (Chapter Three)

9 **17. How do you believe any residential program purporting to increase**
 10 **residential building energy efficiencies should be measured and**
 11 **monitored?**

12 I only know of one way so of course I feel that it is the best and that is following
 13 the standards mentioned question 20 above, applying the Florida Addenda to the
 14 National Home Council Guidelines, and conducting these ratings within the
 15 guidelines of Florida Administrative Code: Rule 9B-60.

16 **18. How does Florida assure its citizens fair, impartial and accurate**
 17 **information on the energy usage in their residences?**

18 **“9B-60.008 Guidelines for Uniformity, Adopted.**

19 The Mortgage Industry National Home Energy Rating Systems Accreditation
 20 Standards, promulgated by the National Association of State Energy Officials
 21 (NASEO)/Residential Energy Services Network (RESNET), June 15, 2002, are
 22 adopted and incorporated by reference as the rule of this Department.”

1 **19. How would you measure a residential unit's energy efficiency?**

2 Only by using procedures described method above.

3 **20. If the program's direct costs are to be paid by someone other than the**
4 **program operator, how would you assure a program designed to be**
5 **effective yet minimize the cost burden on those that pay for it?**

6 Energy ratings along with documentation to support the rating should not be
7 proprietary information. The initial input data into Energy Gauge is required for
8 the permitting process (EPI calculation), FGBC certification, Energy Star, and the
9 BuildSmart program. The Energy Gauge file that holds and produces the
10 required calculations for all four needs to be assessable so that it is not paid for
11 more than once. The way the situation stands now FPL gets paid through the
12 tariff to produce this information and we get paid a second time because FPL will
13 not share the information with us. So ultimately the same information is being
14 paid for twice for each house that is rated.

15 **21. How would you assure maximum quality control to verify the results**
16 **claimed for the program and the persistence of those results over**
17 **time?**

18 Certified ratings conducted according to State recognized programs performed
19 by third part rating business who have no financial interest in the home being
20 rated.

21 **29. Why has FPL's program design never maximized the potential for**
22 **energy efficiency in residential building practices and has failed to meet**

1 **the market penetration that many other programs have offered**
2 **throughout the U.S. and even within the State of Florida?**

3 It has been clear from the documents submitted by FPL over the years, in
4 support of their program and its proposed modifications, that its achievements
5 compared to the current national standard for an “energy efficient” home, the
6 Energy Star Home® is woefully lacking. It is also clear that its market
7 penetration rate is woefully low even for its modest gains per home; that
8 conclusion may be drawn from their testimony for supporting a modification in
9 their program as well as from a review of various data that we provided them in
10 our response to their discovery requests.

11 **30. Why do you believe that FPL’s modifications to its BuildSmart**
12 **Program will not increase the market penetration of the Program to**
13 **the extent projected?**

14 Certainly, FPL hopes and could possibly achieve greater market
15 penetration by lowering their performance objectives and giving away their
16 services free!! The problem is not solely market penetration but success in
17 achieving residential energy efficiency. In order to accomplish this, the
18 performance objectives per home should recognize the national standard that is
19 being achieved in far greater numbers throughout the rest of the country and
20 even in other parts of Florida where utility programs are tailored to support the
21 marketplace and recognize the leveraged assistance of the national labeling
22 program, the Energy Star Home®. In fact, a greater penetration rate into the
23 marketplace of the BuildSmart program as proposed could definitely lead to

1 lower energy efficiency in residential new construction in their territory than would
2 otherwise be available from existing market forces. Simply compare the
3 penetration rate for the national standard energy efficient home in the Gainesville
4 region where the local municipal utility provided early coalition support but
5 refused to enter into competitive services and instead encouraged the
6 development of an “energy efficient business sector” in the private marketplace.

7 **31. Why do you believe that FPL’s proposed revised BuildSmart**
8 **program is in “violation of F.S. Section 366.03.”**

9 The BuildSmart program, as modified, clearly grants benefits to
10 participating builders and their customers. These benefits will also accrue to
11 those participants, and ultimately to the utility, through the offering of “free,” or in
12 the past “reduced cost,” services that are available in the competitive market and
13 that have a significant impact on improving the value of the utility to its
14 shareholders. The direct costs of providing these benefits to the participants and
15 the shareholders are born by all the ratepayers through a compulsory charge. In
16 addition, the program as designed fails to cost effectively reduce this burden
17 through appropriate means of utilizing existing market forces and service
18 providers; thereby, creating an even greater undue benefit to its participants and
19 shareholders and unreasonably benefits its beneficiaries—the participants and
20 the utility itself-- while imposing unreasonable costs on its captive residential
21 ratepayer.

22

1 **32. Why do you believe FPL's program design "does not try to**
2 **incorporate positive private and public sector efforts."**

3 It is clear that the program, as designed and further as proposed to be
4 modified, does not fully incorporate the efforts behind the Energy Star Homes®
5 program by USEPA and USDOE; lessons learned and objectives set for the
6 USDOE Build America® program; efforts made by the DCA in establishing a
7 uniform system for measuring energy efficiency of [residential] buildings; and has
8 impeded the full development of a cadre of independent raters certified by the
9 State of Florida.

10 **32. Why do you believe that the modifications proposed by FPL**
11 **designed to allow FPL greater penetration in the production housing**
12 **market and increase its penetration into the custom market continue to**
13 **destroy any possibility of the emerging free market for energy efficiency**
14 **services, particularly in the delivery of assessment and inspection**
15 **services, and runs counter to the state policy articulated by both F.S.**
16 **Chapters 366 (particularly F.S. § 366.03 and § 366.81)?**

17 Briefly, the sum total of my testimony provides the bases necessary to
18 reach this determination. As outlined in the protests, and the preliminary
19 pleadings, as well as the answers to various other questions as part of
20 Petitioner's answers to the first two sets of interrogatories and document
21 requests from FPL, FPL's program, as it currently exists and even more under
22 the proposed modifications, has caused predatory pricing in the residential
23 energy efficiency services marketplace; that is, "low cost" or now proposed

1 “totally free” services paid for by the ratepayer not the corporation and
2 beneficiary. This strategy has, and will continue, to block the development of a
3 competitive energy efficiency service market sector that can be met by raters
4 (whether independent small Florida businesses, government program employees
5 or utility employees) paid from sources other than compulsory charges to a
6 captive ratepayer.

7 Florida Power and Light Company has been constantly informed of this
8 problem, and has been aware of its existence, since at least January 30, 2002, or
9 even earlier (see Commission Docket # 020084-EI; particularly the letter of
10 November 7, 2001, from Joyal Construction).

11 My experiences gives a real life perspective to this.

12 In 1995 the Florida Solar Energy Center offered a week-long course to
13 train people to be Class 1 Energy Raters. The cost of the course was about
14 \$2,500.00. One of the attractions of the course was that this would be a new
15 upcoming enterprise for people. There were a lot of people trained during 1995
16 & 1996. After the training I invested in the equipment necessary to do the ratings
17 at a cost of about \$4,500.00.

18 I subsequently joined an association of other Energy Raters and tried to
19 expand this area of my business. In 1998, I was offered a small sub division in
20 our area to do the ratings on by a “production builder.” After I did two homes in
21 the sub-division, Florida Power & Light went to the developer and sold him the
22 “FREE” Build Smart Program. Needless to say the FREE service was preferred
23 over my company service that had a cost attached.

1 Three years later (2001), we were offered a contract from Trifecta
2 Construction Solutions to do the energy ratings required for the Florida Green
3 Building Certification process at WCI Venice Golf and River Club. This project
4 was very close to our home base and our desire to practice the techniques we
5 were trained in was a very good draw for our company. We took this contract at
6 a discounted price because not only did we want to use our training and
7 equipment but the certifying agent (builder's representative) was to acquire the
8 files we needed to register our ratings from Florida Power & Light which lessened
9 our overhead for the project.

10 We received from FPL a group of basic home calculations for the WCI
11 subdivision, there were homes in the subdivision that were not included in the
12 basic plans. We ended up doing many of these homes although FPL had also
13 done them for their Build Smart Program. This is double work and costs not only
14 us, but also FPL (or their ratepayer) &, ultimately, the consumer who becomes an
15 FPL ratepayer.

16 The main thrust of our business is Energy Code Calculations and the
17 average cost of these calculations runs between \$85 - \$125. We have done
18 approximately 3000 since January 2002 and could have done an additional 3000
19 if we were not displaced in the market by FPL's "free or discounted" services to
20 builders who participated in their BuildSmart program even though some of their
21 homes may not have qualified for BuildSmart medallion certification and were not
22 charged any program costs. In addition, we have performed over 200 ratings
23 during the same period and could have done an additional 400 ratings if the

1 BuildSmart program had not been in existence. The conclusions drawn from the
2 experience of independent raters in the Gainesville region would suggest that
3 these estimates are very conservative. The losses to my business from this
4 location alone since January 2002 can be estimated at more than \$400,000.

5 I see many benefits in a partnership between utilities and private third
6 party energy rating companies. Many projects in our area are also trying to meet
7 the federal Energy Star Home® & Florida Green Building Certification®
8 standards as well as FPL Build Smart Program parameters. Green Building
9 Certification costs a builder a fee of \$500 (+ or -) for the FGBC certification and
10 this does not cover the costs of energy upgrades often necessary to comply with
11 both FGBC Green and Build Smart.

12 We have kept our costs to the Certifying Agent low by requiring the agent
13 to provide us with the EnergyGauge® files on the residences and because all the
14 projects we are involved in are in our general work area. The information needed
15 for FGBC and Energy Star Home certifying and for Build Smart participation are
16 for the most part identical. This information is collected in the same manner and
17 the software used for certifying, code compliance purposes and ratings is the
18 State of Florida required standard, EnergyGauge®.

19 On many projects FPL' current (discounted) fee and the Certifying agent
20 are both being paid for by the builder. FPL states that their administrative cost
21 per participating home, including many services similar to providing an official
22 rating, in the BuildSmart program is \$400.00 (see, Initial Testimony of Daniel J.
23 Haywood filed 7/15/05 on page 19, line 14). The true cost for our company to do

1 a Class 1 Energy Rating on a residence of approximately 2000 sq ft ranges
2 between \$300 – 350.

3 Over the course of the last decade, it is very obvious that this fledgling
4 rating industry has become dominated by the Power Companies using the
5 advantages that cost recovery the FEECA gave them. The majority of active
6 raters on the certified list now maintained by the State are from utilities. The
7 majority of the work being done in the rating field is now being done by them.
8 Upon completion of its discovery and initial testimony, the Petitioner may also
9 have additional bases and examples to provide.

10 **33. Why do you believe that the Commission should not take action to**
11 **approve a program design that avoids existing state standards and**
12 **clearly uses the ‘monopoly’ power granted by the state to fund a**
13 **program to the detriment of an emerging ‘free and fair’ competitive**
14 **marketplace?**

15 Briefly, I believe the proposed program fails to conform to the existing
16 state standards for information provided on the energy efficiency performance of
17 a residential building. In so doing, it fails to adequately address the performance
18 as-built of a BuildSmart home and lacks quality control and monitoring built into
19 the state certification process. It further fails to provide adequate monitoring and
20 measurement of results in a verifiable manner. It is also extraordinarily
21 expensive and wastes significant amount of ratepayer’s money that the collect
22 through compulsory charges.

23

1 **34. What standards for program review do you believe the Commission**
2 **should use to evaluate these energy efficiency and conservation**
3 **programs?**

4 I believe the following criteria should be used by the Commission to evaluate
5 these programs:

- 6 • whether the program advances the policy objectives of Rule 25-17.001,
7 Florida Administrative Code, and Sections 366.80 through 366.85, Florida
8 Statutes, also known as the "Florida Energy Efficiency and Conservation Act"
9 (FEECA);
- 10 • whether the program complies with the requirements of chapter 366, Florida
11 Statutes, Rule Chapter 25-17, Florida Administrative Code, and applicable
12 Commission policies;
- 13 • whether the program sets forth reasonable performance objectives, is directly
14 monitorable and yields measurable results;
- 15 • whether the program is cost-effective and does not impose unreasonable
16 costs on the ratepayer; and
- 17 • whether the program maximizes the use of other reasonably available
18 resources, both within and without FPL, and thereby minimizes its impact on
19 the ratepayer for cost recovery.

20 **35. Why do you believe FPL's BuildSmart Program is a**
21 **monopolistic attempt to destroy the competitive marketplace for energy**
22 **efficient services.**

23

1 FPL's practices have resulted in creating a significant reduction the
2 number of professionals, especially in the small, independent business sector,
3 dedicated to providing energy efficiency services, including educational and
4 marketing efforts to builders and consumers. The caliber of services and
5 professional competency cannot overcome the subsidized "free" services that
6 FPL will utilize to stifle the development of an independent, small, competitive
7 business sector, even though the results of their program to date has been less
8 than stellar. In fact, if the small businessperson was compensated only the
9 administrative costs of \$400/home as quoted by an FPL staff (far below their past
10 average of \$488/home) in his testimony, market penetration of energy-efficient
11 homes would exponentially increase far beyond the FPL projections.

12 Briefly, the sum total of my testimony provides the bases necessary to
13 reach that determination. As outlined in the protests, and the preliminary
14 pleadings, as well as the answers to various other questions as part of the first
15 two sets of interrogatories and document requests posed by FPL, FPL's
16 program, as it currently exists and even more under the proposed modifications,
17 have caused predatory pricing ("low cost" or now proposed "totally free" services
18 paid for by the ratepayer not the corporation and beneficiary) that has, and will
19 continue, to block the development of a competitive energy efficiency service
20 market sector that can be met by raters (either independent, small businesses,
21 government programs or utility employees) paid from sources other than
22 compulsory charges to a captive ratepayer.

1 Florida Power and Light Company has been informed of this problem, and
 2 has been aware of its existence, since at least January 30, 2002, or even earlier
 3 (see Commission Docket # 020084-EI; particularly the letter of November 7,
 4 2001, from Joyal Construction).

5 **35. Why do you believe the substance of the FPL program constitutes**
 6 **the creation of free ratings in violation of Commission rules, and FPL**
 7 **tariff schedules?**

8 FPL's current pricing structure includes a tariff for BERS rating services
 9 as required by Florida Administrative Code Chapter 25-17.003(4a) which states:

10 "(4) Energy Audit Charges: (a) Every public utility shall charge an
 11 eligible customer for a BERS Audit. The amount of this charge,
 12 which shall reflect actual cost, shall first be filed with the
 13 Commission as part of the utility's tariff."

14 Through its BuildSmart program, FPL offers services "free or at a
 15 discounted price" to participating builders that, short of actually registering a
 16 rating, are the same, equal or similar to all the services provided by a license
 17 rater in developing a BERS Audit ("rating").

18 The following has always been posted on our web site. Our prices for residential
 19 EPI calculations have not changed since 1992.

20 **Cost of Services RESIDENTIAL**

21 EPI CALCULATIONS

22 UP TO 1500 Sq Ft \$25.00	4501 – 5000 Sq Ft \$60.00
23 1501 – 2000 Sq Ft \$30.00	5001 – 5500 Sq Ft \$65.00

1	2001 – 2500 Sq Ft	\$35.00	5501 – 6000 Sq Ft	\$70.00
2	2501 – 3000 Sq Ft	\$40.00	6001 – 6500 Sq Ft	\$75.00
3	3001 – 3500 Sq Ft	\$45.00	6501 – 7000 Sq Ft	\$80.00
4	3501 – 4000 Sq Ft	\$50.00	7001 – 7500 Sq Ft	\$85.00
5	4001 – 4500 Sq Ft	\$55.00	7501 – 8000 Sq Ft	\$90.00

6 NOTE: For multi-story homes ADD \$15.00 per story Short Form EPI \$25.00

7 **HVAC Load Calculations**

8 Per Room Charge \$5.00 Minimum \$50.00

9 EPI Calculation Update: \$25.00 HVAC Load Calculation Update \$30.00

10 **HAVAC System Design:** \$10.00 per drop + \$20.00 per duct system**

11 ADD \$20.00 per A/C system if specs are required

12 **COMMERCIAL**

13 **EPI Calculations**

14 By the Zone* First Zone: \$15.00 All Others: \$50.00 each

15 **HVAC Load Calculations**

16 Per Room Charge \$8.50 Minimum \$85.00

17 **HVAC System Design:** \$10.00 per drop \$20.00 per duct system** \$20.00 per

18 A/C system

19 **ENERGY RATINGS & DIAGNOSTICS**

20 Diagnostic test of air conditioning system return and supply CFM and duct

21 system static pressure with report: \$75.00 per hour 3 hour

22 minimum

23

1 Duct system tightness test \$150.00 single duct system \$50.00 each additional
 2 duct system

3 **Class 1 Energy Ratings**

4 + New Single Family Residence with single A/C system \$400.00

5 Existing Single Family Residence with single A/C system w/blueprint \$400.00

6 Existing Single Family Residence with single A/C system w/out blueprint \$500.00

7 For all of above: ADD \$50.00 for each additional duct system

8 + Includes EPI Calculation & HVAC Load Calculations needed for permitting

9 ** Duct System: single zone supply duct system with associated return duct
 10 system

11 Example: One 3 ton A/C system with single zone is 1 duct system

12 Example: One 3 ton A/C system with three zones is 3 duct systems

13 *Zone: A space or group of spaces within a building with any combination of
 14 heating,

15 Cooling, or lighting requirements sufficiently similar so that desired
 16 conditions can be maintained throughout by a single controlling device.

17 A zone can also be a non conditioned space such as a manufacturing
 18 area, Service and repair area, etc. inside a structure and has specific lighting for
 19 the related work.

20 **36. Why do you believe the objective of FPL's BuildSmart Program**
 21 **should include the promotion of a full, free and fair marketplace for**
 22 **residential energy efficiency services?**

23

1 Clearly, under the state law providing for the development of energy
2 efficiency and conservation programs, providing for the establishment of a
3 uniform system of providing accurate information to consumers, as well as the
4 state comprehensive plan contained in Chapter 187, F.S., it is the public purpose
5 of the state to promote a full, free and fair marketplace for any services that are
6 not under the regulatory compact as specified in chapter 366, F.S., or other
7 provision of state law. The authority of the Commission to authorize any program
8 that is designed in such a way to reduce the development of such a marketplace
9 should be clearly specified and narrowly used.

10 **37. Does this conclude your testimony?**

11 Yes.

12

13

14

15

16

1 COMMISSIONER DEASON: Please proceed.

2 MR. BRYAN: Thank you.

3 CROSS EXAMINATION

4 BY MR. BRYAN:

5 Q Good afternoon, Mr. Stroer.

6 A Good afternoon.

7 Q My name is Patrick Bryan, and it's actually nice to
8 meet you for the first time.

9 A Well, thank you. You too.

10 Q I have several questions for you this afternoon, but
11 the first question I want to ask you is if you're generally
12 familiar with the, the list of issues that are set out in the
13 prehearing order that was entered in this docket. It's
14 essentially seven issues that the, that the Commission will
15 ultimately decide in this docket. Are you aware of those, sir?

16 A Yes, I am.

17 Q Okay. Well, what I'd like to do at least for the
18 first three issues is just read each issue and then ask you a
19 series of questions about your prefiled testimony as they
20 relate to those issues. Okay?

21 A Okay.

22 Q The first issue in the prehearing order is "Is the
23 BuildSmart Program cost-effective?"

24 And actually, Mr. Tait, if I may just address Mr.
25 Tait, I thought I heard in your opening that you were

1 stipulating that the BuildSmart Program met the three tests set
2 out in the PSC's approved cost-effectiveness criteria. Was
3 that correct?

4 MR. TAIT: Subject to our challenge of the costs,
5 some of the costs in there as reasonable and prudent.

6 MR. BRYAN: The reason I was asking is if we can
7 stipulate to that on the record, this may avoid the need for
8 this line of questionings.

9 MR. TAIT: Subject, as I said, again to the factor of
10 the costs that are involved in the calculation as to whether
11 they're reasonable and prudent, as to the shifting of the costs
12 from the participant to the ratepayer.

13 MR. BRYAN: Okay. Well, thank you. I don't believe
14 that's a stipulation then.

15 BY MR. BRYAN:

16 Q Okay. The first question I would like to ask you --
17 actually I'd like to refer you to your prefiled testimony, and
18 it's question 34 and that's on Page 17 of your prefiled
19 testimony. And the question there -- are you there, sir?

20 A Yes.

21 Q Just so the record is clear, I will read the
22 question. It is, "What standards for program review do you
23 believe the Commission should use to evaluate these energy
24 efficiency and conservation programs?" And the portion of your
25 answer that I'm concerned with for purposes of this question

1 starts at Line 15 and goes through Line 19. And you respond,
2 "Whether the program is cost-effective and does not impose
3 unreasonable costs on the ratepayer; and whether the program
4 maximizes the use of other reasonably available resources, both
5 within and without FPL, and thereby minimizes its impact on the
6 ratepayer for cost recovery."

7 So the question I have for you, sir, is are you
8 familiar with the Public Service Commission-approved
9 cost-effectiveness criteria for demand-side management
10 programs?

11 A Personally I am not myself, no.

12 Q Okay. Is -- well, I guess I can ask Mr. Klongerbo
13 then.

14 So let me ask you this then, sir. It's true, isn't
15 it, that you have not performed then and you have not had
16 performed an independent cost-effective, cost-effectiveness
17 analysis for the proposed redesigned BuildSmart Program; isn't
18 that true?

19 A That is true. I have not.

20 Q Okay. And to your knowledge, has Mr. Klongerbo done
21 that?

22 MR. TAIT: I object to that question. Mr. Klongerbo
23 will be here. He can testify to that fact.

24 MR. BRYAN: That's fine.

25 BY MR. BRYAN:

1 Q So if, if you have not performed an independent
2 analysis, you would have no opinion then as to whether the
3 redesigned BuildSmart Program satisfies the PSC-approved
4 criteria for cost-effectiveness; isn't that true?

5 A I don't quite know how to answer that because when
6 you look at -- you know, I'm a field person. When you look at
7 what I see in the field as to what's going on out there and
8 how, how FPL's BuildSmart Program is being conducted today and
9 how they plan on conducting it, I have to say, no, it is not
10 cost-effective for the ratepayer and for the end-user.

11 Q Yes, sir. My question though is under the Public
12 Service Commission-approved criteria, do you have an opinion as
13 to whether the BuildSmart Program is cost-effective? Have you
14 performed --

15 MR. TAIT: I object. Excuse me. I'll object to this
16 question, the nature of the question. It's calling kind of for
17 expert witness testimony. This man is not an expert witness.

18 MR. BRYAN: He's -- his testimony, his prefiled
19 testimony, the question I just read and the portions of the
20 answer I read indicate that he's proposing essentially new
21 cost-effectiveness criteria, and I think it's a fair question,
22 sir.

23 COMMISSIONER DEASON: I will overrule the objection.
24 The witness may answer the question, and the Commission will
25 give the answer whatever weight it deems appropriate.

1 THE WITNESS: No, I have not.

2 BY MR. BRYAN:

3 Q No, you have not performed a RIM test?

4 A That's right. I have not.

5 Q Have you performed a participant test?

6 A No, I have not.

7 Q A total resource cost test?

8 A No.

9 Q Thank you.

10 The second issue in the prehearing order is as
11 follows. "Is the modified BuildSmart Program directly
12 monitorable and will it yield measurable results?"

13 And now I'd like to refer you to your prefiled
14 testimony, question number 33, which is on Page 16. And that
15 question reads, "Why do you believe that the Commission should
16 not take action to approve a program design that avoids
17 existing state standards and clearly uses the 'monopoly' power
18 granted by the state to fund a program to the detriment of an
19 emerging 'free and fair' competitive marketplace?"

20 And, again, the portion of your answer that I'm
21 concerned about for this question starts at the middle of Line
22 19 and goes through the middle of Line 20 where you respond,
23 "It further," meaning the BuildSmart Programs, "it further
24 fails to provide adequate monitoring and measurement of results
25 in a verifiable manner." Do you see that, sir?

1 A Yes, I do.

2 Q Okay. Now in bringing this protest and for the
3 duration of this proceeding you've had opportunity to review
4 numerous filings on the BuildSmart Program; is that correct?

5 A Yes.

6 Q And even back in 2002 when you were involved in
7 another proceeding, you had opportunity back then -- you've
8 reviewed -- you've become aware and knowledgeable about the
9 BuildSmart Program; is that fair?

10 A Yes.

11 Q You are aware then, aren't you, sir, that since the
12 inception of the BuildSmart Program, FPL has monitored and
13 tracked the number of program participants for each year?

14 A Yes.

15 Q Okay. You're aware, are you not, that since the
16 inception of the BuildSmart Program, FPL has tracked and
17 monitored its penetration level with respect to eligible
18 customers for each year; isn't that true?

19 A Yes.

20 Q And you're also aware that the BuildSmart Program,
21 since its inception, has tracked and monitored its costs for
22 each year?

23 A I'm sure you have. Right.

24 Q And you should also know, and correct me if I'm
25 wrong, that since the inception of the BuildSmart Program, FPL

1 has tracked and monitored the types of equipment, the
2 air-conditioning units, the water heaters, other types of
3 equipment in each BuildSmart home.

4 A Yes.

5 Q Would you agree then that the program is, in fact,
6 monitorable to the extent it can monitor and track those items
7 and that data?

8 A Is that -- I can't answer your question.

9 No, I don't agree with that because I haven't seen
10 that data.

11 Q I thought you just testified that you had seen
12 filings and that you were aware that FPL tracked that data.

13 A I am aware that they track that data. But basically
14 everything that you have is proprietary information.

15 Q Okay.

16 A In other words, I can't look at calculations and tell
17 you anything about what you're doing. I don't see a score.

18 Q Okay. But you are aware that FPL does track that,
19 those items, that data. You just haven't seen the data; is
20 that correct?

21 A That's correct.

22 Q Okay. Is there any reason to believe that FPL could
23 not continue to monitor and track that data, those items in the
24 modified program?

25 A Yes. But that's kind of like the fox watching the

1 henhouse.

2 Q I'm sorry. I'm not sure if I've understood your
3 answer.

4 A Well, you're tracking your own data.

5 Q Okay. Let me -- okay. That was my question.

6 There's no reason that you're aware of that FPL could
7 not continue to track this data, no matter --

8 A No.

9 Q Okay. Thank you. And were you aware that for a
10 number of years now FPL has employed a third-party consultant
11 to review the BuildSmart Program, from its objectives, its
12 goals, to its administration and the implementation of the
13 program? Were you aware of that?

14 A Yes.

15 Q Okay. Now the second part of Issue 2 was, dealt with
16 measurable results. On February 22nd in 2005 FPL filed its
17 annual report summarizing the 2004 demand-side management
18 activities with the Public Service Commission, and that report
19 is included within staff's composite Exhibit Number 2. And on
20 Page 49, Bate's Number 49 of that exhibit -- do you have that,
21 sir?

22 A I don't think so. I don't have it in front of me.

23 Q Well --

24 MS. VINING: That should be over there by the
25 witness's chair.

1 MS. HARLOW: We have an extra.

2 THE WITNESS: Thank you.

3 BY MR. BRYAN:

4 Q I'm sorry. Are you on Page 49 of the Bate stamp?

5 A I am.

6 Q Okay. Now this page deals with the BuildSmart
7 Program, and it cites the annual demand and energy savings for
8 the BuildSmart Program for 2004. And I'll just sort of, again,
9 for the record so that it's clear, let me just read the program
10 total numbers and then ask you questions about them.

11 The annual, annual demand and energy savings current
12 year of installation 2004, summer kW reduction under program
13 total at the meeting, at the meter, I'm sorry, 1,948 kilowatts;
14 at the generator, 2153 kilowatts. Winter kW reduction, program
15 total at the meter, 2,198 kilowatts; at the generator,
16 2,429 kilowatts. The kWh reduction, which is the 2004
17 kilowatt-hour savings from 2004 installations under program
18 total, 3,646,182 kilowatt hours; at the generator, 3,938,837
19 kilowatt hours.

20 My question to you is can you tell me or show me what
21 objective evidence you have filed or submitted in this
22 proceeding that demonstrates that you have performed
23 calculations which disprove or discredit these numbers?

24 A No, I have not.

25 Q Okay. Now with respect to projected demand and

1 energy savings, have you reviewed, in preparing for this case,
2 Table Number 3 to Mr. Haywood's prefiled direct testimony?

3 A Yeah. I've looked at it, but I can't -- I don't have
4 that, again, I don't have that in front of me.

5 Q You're generally aware that it's the projected demand
6 and energy savings for the modified program?

7 A Yes.

8 Q Can you tell me or show me what objective evidence
9 you have filed or submitted in this proceeding that
10 demonstrates you have performed calculations disproving or
11 discrediting those numbers in Table 3 of Mr. Haywood's prefiled
12 testimony?

13 A No, I can't. Because our calculations are based on
14 individual, individual homes.

15 Q But you have not performed calculations as to FPL's
16 annual demand and energy savings; is that correct, sir?

17 A No, I have not.

18 Q Okay. Now I would like to read for you Issue 3 out
19 of the prehearing order. And that issue is, "Does the modified
20 BuildSmart Program advance the policy objectives of FEECA,
21 Section 366.080, et seq., Florida Statutes, Commission Rule
22 25-17.001, Florida Administrative Code, and applicable
23 Commission policies?"

24 And with respect to this issue, I'd like to refer you
25 to your prefiled testimony, question number 32 on Page 12.

1 Do you have that in front of you, Mr. Stroer?

2 A I do. I do.

3 Q Okay. And I'm going to abbreviate the reading of the
4 question, but feel free to read the whole thing if you think
5 I'm being unfair or mischaracterizing it.

6 Essentially it asks: Why do you believe that the
7 modifications proposed by FPL, and then at the end, run counter
8 to the state policy articulated by both Florida Statutes
9 Chapters 366 (particularly Section 366.03 and Section 366.81)?
10 Do you see that?

11 A I do.

12 Q And the first two lines of your answer are, "Briefly,
13 the sum total of my testimony provides the bases necessary to
14 reach this determination." Do you see that?

15 A Yes.

16 Q Now, again, for purposes of this question I'm
17 concerned with 366.81. That's FEECA, that's a portion of
18 FEECA. Is that your understanding?

19 A Yes.

20 Q Okay. And I'm going to read you a portion of FEECA
21 and then ask you questions about it.

22 366.81, the third line down, "Reduction in and
23 control of the growth rates of electric consumption and of
24 weather-sensitive peak demand are of particular importance.
25 The Legislature further finds that the Florida Public Service

1 Commission is the appropriate agency to adopt goals and approve
2 plans related to the conservation of electric energy."

3 And then the issue also dealt with Florida
4 Administrative Code Rule 25-17.001. I'd like to read you a
5 portion of that rule, (3) of that rule, "Reducing the growth
6 rate of weather-sensitive peak demand on the electric system to
7 the extent cost-effective is a priority. Reducing the growth
8 rate of weather-sensitive peak demand benefits not only the
9 individual customer who reduces his demand but also all other
10 customers on the system, both of whom realize the immediate
11 benefits of reducing the fuel costs of the most expensive form
12 of generation and the longer term benefits of deferring the
13 need for construction of additional generating capacity."

14 Now, Mr. Stroer, if the numbers set out on Bate's
15 Page Number 49 in staff's composite Exhibit Number 2 that you
16 just saw are correct, BuildSmart indeed caused a reduction in
17 the growth rates of electric consumption and weather-sensitive
18 peak demands; isn't that true?

19 A According to this, yes.

20 Q Well, you have not -- you testified earlier that you
21 did not provide or perform calculations which disprove or
22 discredit the numbers set out on that Page 49; isn't that true?

23 A That's correct.

24 Q Now I'd like to ask you a few questions on quality
25 control, which was an issue in your prefiled testimony.

1 In your testimony you imply, and, again, if I
2 mischaracterize anything, please tell me, but I believe that
3 you imply that you believe there are better quality controls on
4 certified raters as opposed to noncertified raters; is that
5 fair?

6 A That's fair.

7 Q And you believe that the quality of their work is
8 superior to noncertified raters; is that fair?

9 A Say that again.

10 Q You believe that the quality of a certified rater's
11 work is superior to noncertified raters.

12 A That's correct.

13 Q Presumably in part that's because you believe the
14 training for certified raters is better than other types of
15 training for noncertified raters.

16 A That's correct.

17 Q But yet you acknowledge in your prefiled testimony
18 that the majority of active raters on the certified list now
19 maintained by the state of Florida are actually from utilities;
20 isn't that true?

21 A That's absolutely correct.

22 Q And were you aware that FPL currently employs
23 11 certified raters who work in or in connection with the
24 BuildSmart Program?

25 A I know that.

1 Q How many certified raters does Calcs-Plus have?

2 A Calcs-Plus has two certified raters right now.

3 Do you want me to expand on that?

4 Q No. That's fine. Thank you.

5 A Okay.

6 Q Excuse me. Now you believe -- well, let me strike
7 that.

8 The certified rating system in Florida is regulated
9 by the state; is that your understanding?

10 A Yes.

11 Q And by that, do you really mean -- isn't it FSEC, the
12 Florida Solar Energy Center, that provides that function
13 currently?

14 A They're our provider, yes, our rating provider.

15 Q And the certified rating system -- and I'm quoting
16 you, but tell me if you agree. This was in an answer to one of
17 your interrogatories.

18 The certified rating system, quote, has significant
19 quality controls featured by independent sources that are
20 concerned solely with the quality and accuracy of the
21 information provided. Is that -- do you stand by that
22 statement?

23 A I do.

24 Q Okay. In other words, FSEC, the Florida Solar Energy
25 Center, monitors the certified raters and ensures and enforces

1 quality control among them?

2 A That's correct.

3 Q Would it surprise you, Mr. Stroer, that Mr. Philip
4 Fairey, one of your witnesses, who is the Deputy Director of
5 the Florida Solar Energy Center, testified in his deposition in
6 this matter that FSEC -- in all the years that Calcs-Plus has
7 been in business doing ratings, FSEC has never performed a
8 second audit in the field on a Calcs-Plus, your business,
9 Calcs-Plus rated home?

10 A Okay. So they haven't.

11 Q Thank you.

12 Let me now go to Exhibit DS-1. And this is the
13 exhibit that we had our little discussion on before I started
14 my cross-examination of you. And just for the record again,
15 it's the 9/26/05 version. And I'd just like to ask you with
16 respect to this exhibit, the data in the exhibit on the WCI
17 project, which I think constitutes just about every page except
18 the first page, that data was compiled by you, organized by you
19 and put into this exhibit form by you; isn't that true?

20 A That's correct.

21 Q This document was not put together by some
22 independent third party and you just pulled it from somewhere.
23 You actually created this document; correct?

24 A Yes. This is something that we do on an ongoing
25 basis when we do ratings. So it's a cumulative.

1 Q Okay. And the Calcs-Plus data in this exhibit was
2 supplied solely by you or Calcs-Plus; isn't that true?

3 A Well, we actually retrieved a lot of the data back
4 from, from the ratings that we performed and we registered
5 through Florida Solar Energy Center. So these -- what I'm
6 saying is these are all certified.

7 Q Yes. But supplied by you, Calcs-Plus.

8 A Right.

9 Q Okay. And when you get a rating certified, that
10 doesn't mean that there was an in-the-field inspection of the
11 work that was done in each house; isn't that true?

12 A Right.

13 Q Okay. There was a desk audit done perhaps; is that
14 what you're referring to?

15 A No, these here -- excuse me. These here were all
16 field ratings. These weren't desk audits.

17 Q Okay. These were field ratings. But there's no
18 independent third-party field verification for the data, is
19 there, sir?

20 A We are third party.

21 Q Okay. Just so I am clear, when I refer to third
22 party in the context of this question, I mean some party other
23 than Calcs-Plus.

24 A That's correct.

25 Q Okay. Now Pages 2 through 5 contain information on

1 homes you claim were first audited by FPL under the BuildSmart
2 Program using the pressure pan test and then subsequently
3 audited by Calcs-Plus using the duct pressurization or the duct
4 blaster; is that correct?

5 A That's correct.

6 Q Now the WCI community in Venice that this exhibit
7 applies to has, according to the exhibit, 456 BuildSmart
8 certified homes; is that true?

9 A As far as we know they are, that's true. That's
10 correct.

11 Q Okay. Yet your Exhibit DS-1 consists of data on only
12 132 homes; isn't that true?

13 A That's correct.

14 Q Now the reason you were conducting audits on the
15 homes in this community was to certify the community and all of
16 its residences under the Florida Green Home Designation
17 Standard; isn't that true?

18 A That's correct.

19 Q In order to do that, didn't you need to conduct
20 audits on all 456 homes?

21 A Certainly.

22 Q And did you?

23 A No, we haven't. We are not allowed back into those
24 houses at this point because they were already occupied when we
25 came on site, when we started. There was over, I don't know,

1 100 and some odd homes or 200 homes that were already occupied,
2 and WCI won't let us in those houses or has not consented to
3 let us into those houses at this point. But they do need them
4 all certified, yes.

5 Q How many homes did you rate then?

6 A Probably, just looking at this list here which comes
7 down to 132, probably we're about 150.

8 Q Okay. But yet you only put data in for 132 homes?

9 A Well, we're still doing it. We're doing ratings
10 probably today as we speak out there.

11 Q Okay. Now your exhibit, DS-1, does not identify the
12 address of any of the homes involved, does it?

13 A That's correct.

14 Q So from reading the exhibit one cannot tell where the
15 home is located.

16 A No, not from this exhibit.

17 Q Okay. Now your exhibit has dates that you claim that
18 Calcs-Plus performed its audits, but it does not have dates of
19 the BuildSmart audit for each home in this community; isn't
20 that true?

21 A That's right.

22 Q And isn't that because you, quote, have no idea as to
23 when they were tested by BuildSmart, unquote?

24 A That's right.

25 Q And you're familiar enough with the BuildSmart

1 Program, aren't you, sir, to know the general process?
2 Essentially an audit is conducted, readings will be taken and
3 compiled. If the home doesn't pass the BuildSmart standards
4 the first time, FPL instructs the builder what corrections or
5 repairs must be made. FPL then goes out, rechecks the home,
6 takes measurements all over again a second time. And if it
7 passes, it certifies the home. If it doesn't pass, it goes out
8 a third time and so on. Are you familiar with that process,
9 sir?

10 A I'm very familiar with it.

11 Q Now because you don't know when the BuildSmart audits
12 were done, you don't know if the homes you audited even passed
13 FPL BuildSmart's standards at the time of your audits; isn't
14 that true?

15 A That's not true.

16 Q Why is that not true?

17 A Because here in the last six months we have been
18 right on the edge of going into houses before they've been
19 occupied. WCI will not let us or BuildSmart back into a house
20 after it's been occupied because they don't want the blower
21 door set up when the customer is in there. We have been in
22 right at the very edge and we have, we have finished these
23 houses up just as people have been walking in the door, so I
24 know they have not been retested by BuildSmart. And we've
25 taken pictures of the problems that have existed.

1 Q Your exhibit has ratings that started in the year
2 2003, it goes into 2004 and up into 2005. Your last answer
3 said in the last six months you've been on the edge. But you
4 do not know when FPL's audits were done on these homes, do you?

5 A Yeah, I can, I can relate to an instance back in
6 2002, the third house we checked, and it had a 20 percent duct
7 leakage in it. And I brought three FPL testers in and myself
8 to try to figure out where these leaks were because they had
9 given that particular house a leak-free duct test on it and we
10 were getting 20 percent leakage. And between us we all found
11 the leaks, where the leaks were located at. But to this date
12 those leaks have never been fixed. They're still there in
13 every single house that's going in.

14 Q Now you're aware, aren't you, being in the business
15 that you're in, that right before or right when a homeowner
16 moves in, it is not unusual for workers to complete punch list
17 items or finish installations such as alarm systems?

18 A That's correct.

19 Q And that may include work in the attic or around the
20 air handler that could damage the integrity of ductwork
21 systems?

22 A That's correct.

23 Q Okay. So --

24 A But these leaks had nothing to do with duct systems.

25 Q That's not apparent from your exhibit, is it,

1 Mr. Stroer?

2 A But they're all called duct leaks.

3 Q Okay.

4 A But it isn't from somebody crawling through an attic.
5 That's blatant.

6 Q Now your Exhibit DS-1, as I mentioned earlier, has
7 ratings or data from ratings you conducted during parts of
8 2003, 2004 and parts of 2005. Now during those years, to date
9 in 2005 FPL has certified about 5,500 BuildSmart homes. You
10 rated, in your exhibit, 132 homes. And if my arithmetic is
11 correct, that represents about 2.5 percent of the total
12 BuildSmart homes from those three years. Do you disagree with
13 that statement, sir?

14 A Shoot, no.

15 Q So the conclusions about the BuildSmart Program that
16 you make from the data in this exhibit you don't deny are based
17 on 2.5 percent of the homes FPL certified during those three
18 years; is that correct?

19 A Please repeat that. I didn't quite understand. I'm
20 sorry.

21 Q Well, I think the prior question you agreed with my
22 arithmetic, and so the follow-up is that the conclusions that
23 you make from this Exhibit DS-1 about the BuildSmart Program
24 are based on 2.5 percent of the homes FPL certified in the
25 three years during which you performed the ratings in the WCI

1 project.

2 A That's correct.

3 Q And for that 2.5 percent, you don't know when your
4 audit was done relative to FPL's. That's correct, isn't it?

5 A I don't know when -- yeah. For the most part, I
6 would say yes.

7 Q You don't know what work was done in the interim in
8 the home, in each home between the date of the BuildSmart audit
9 and the Calcs-Plus rating; isn't that true?

10 A You're saying I don't know the date between when the
11 --

12 Q No, sir. I'm sorry. I'll ask the question again.

13 You don't know who was in the house or what work was
14 done in the house in between the two audits, the FPL audit on
15 the first hand and the Calcs-Plus audit on the second hand?

16 A That's correct.

17 Q Okay. And you acknowledged using a different duct
18 tester; isn't that true?

19 A Yes.

20 Q Did you personally conduct all the Calcs-Plus ratings
21 on the 132 WCI homes that are listed in your Exhibit DS-1?

22 A No, I did not.

23 Q Who did?

24 A Well, I have Jon over there that came over and
25 performed ratings with us. I have a data collector that's in

1 training that collects data under our supervision. But
2 basically, yeah, there's two of us that did most of the ratings
3 there.

4 Q Okay. You said two of you did most of the ratings.
5 Were ratings done by any noncertified raters in the employment
6 of Calcs-Plus?

7 A No, not complete ratings.

8 Q I'm sorry. Explain that then, sir.

9 A Well, we bring -- you know, we have people that we're
10 trying to train out there because they're -- in this field
11 there's, it's hard to find raters being that they've pretty
12 much given up the profession over the years, all the raters
13 that's been trained. So we're trying to, we're trying to bring
14 this field back up again. We're trying to, trying to bring
15 technicians back into the field. The best way to do it is to
16 start them right out into the field, and then when they get to
17 a certain point, you send them to school so that they can, so
18 that they can better understand it and do better. So we have
19 used -- we do have a data collector out there that operates,
20 does the mechanical part of it, operates a blower door and a
21 duct tester.

22 Q Who is noncertified; is that right?

23 A Who is -- yes, he is.

24 Q And are ratings being done today in the WCI project?

25 A Yeah. Possibly.

1 Q Who's doing them since the two certified raters are
2 here today?

3 A Well, he'll go out there and he will set up or he'll
4 duct mask all the grills, get things completely ready to go,
5 and then start performing tests. And I'll run out there and
6 watch, oversee what he's doing.

7 Q But --

8 A So he can do a lot of preparatory work out there
9 getting five or six houses ready all at once.

10 Q Okay. Thank you.

11 The next line of questionings deals with economic
12 damages. And in response to question 29 of your prefiled
13 testimony on Page 10 -- actually the question starts at the
14 bottom of Page 9. Sorry. And the question is, for the record,
15 "Why has FPL's program design never maximized the potential for
16 energy efficiency in residential building practices and has
17 failed to meet the market penetration that many other programs
18 have offered throughout the U.S. and even within the state of
19 Florida?"

20 And, again, the portion of your answer that I am
21 concerned about for this question starts at the end of
22 Line 6, and where you state that market penetration, I'm sorry,
23 the market penetration rate for BuildSmart is woefully low. Do
24 you see that, sir?

25 A I do.

1 Q Okay. Now in question, response to question 32 on
2 Page 12 you essentially state that the proposed modifications
3 to BuildSmart will, quote, continue to destroy any possibility
4 of the emerging free market for energy efficiency services. Do
5 you see that?

6 A Yes.

7 Q Okay. Do not those two statements seem just a bit
8 inconsistent to you, sir?

9 A No, they don't.

10 Q Okay. That's fair enough.

11 Let me refer you now to question number 35 in your
12 prefiled testimony, and that is on Page 17. And I believe
13 there are two question 35s, and this is the first one and it
14 starts on Page 17.

15 And the question is, "Why do you believe FPL's
16 BuildSmart Program is a monopolistic attempt to destroy the
17 competitive marketplace for energy efficient services?" And
18 you first, in your first sentence answer you state, quote,
19 FPL's practices have resulted in creating a significant
20 reduction, I think you meant to say in the number of
21 professionals, especially in the small, independent business
22 sector dedicated to providing energy efficient services.
23 Excuse me. And then you go on.

24 My question to you, sir, is did you know that in the
25 year 2004 there were approximately 100,000 new homes built in

1 FPL's service territory?

2 A Okay.

3 Q You have no reason to disbelieve that figure, do you,
4 sir?

5 A No.

6 Q Did you know that in the year 2004 BuildSmart
7 certified 2,032 homes? And that's listed in staff's composite
8 Exhibit Number 2. Were you aware of that?

9 A Yes, I am.

10 Q So that works out to about two out of every
11 100 homes. Is that not true?

12 A Okay. Yeah.

13 Q So 2 percent market share, is that the monopoly that
14 you're referring to in response to your questions in your
15 prefiled testimony?

16 A No. I think the monopoly I'm referring to is the
17 fact that it's awful hard for us to compete against free.

18 Q Now in this proceeding Calcs-Plus has asserted at
19 least for its east coast office that it has stopped marketing
20 in FPL's service territory. Do you recall that?

21 A In the east coast?

22 Q Yes, sir.

23 A Yes, I believe so.

24 Q Now FPL asked you in a request to produce, POD 51,
25 our third set, to produce copies of all documents utilized by

1 Calcs-Plus with respect to marketing or educational activities
2 within FPL's service territory since January 1 of 1997. And
3 Calcs-Plus did not provide any documents; isn't that your
4 recollection, sir?

5 A Yes.

6 Q Excuse me for one second.

7 At Page 14 of your prefiled testimony starting at
8 Line 17 -- do you have that, sir?

9 A I do.

10 Q You state that since January 2002 Calcs-Plus could
11 have done an additional 3,000 energy code calculations and an
12 additional 400 ratings if you weren't displaced in the market
13 by FPL. Do you see that?

14 A Yes, I do.

15 Q In interrogatories FPL asked you to substantiate
16 those claims. Do you recall that?

17 A Yes.

18 Q Okay. In fact, in Interrogatory Number 80 in FPL's
19 third set to you, we asked, "Please identify and describe in
20 detail any and all bases for the assertions in the testimony of
21 Dennis J. Stroer dated August 12th, 2005, that Calcs-Plus could
22 have done an additional 3,000 energy code calculations if not
23 displaced in the market by FPL's free discounted services, and
24 that it could have performed an additional 400 ratings if the
25 BuildSmart Program had not been in existence." Do you recall

1 your response to that interrogatory, sir?

2 A No, not -- not at the moment.

3 Q Let me read it to you, sir.

4 Response, quote, well, let's face it. Other than
5 FPL, we have performed more energy calcs than any other single
6 entity in our local area. Our company's compliance data
7 services came into being in 1991 to provide code energy
8 calculations to the construction industry. When the BuildSmart
9 Program came into existence, FPL provided -- FPL also provided
10 code energy calculations to builders for free at the expense of
11 the ratepayers.

12 My question to you, sir, contained in that answer,
13 are those the detailed bases justifying your claims that you
14 could have performed 400 additional ratings and 3,000 energy
15 code calculations?

16 A No. That was a -- you know, we just averaged out,
17 figured out how many more we could do during those times.
18 There was definitely an instance that comes to mind of about 30
19 houses that we were going to certify, certify ENERGY STAR®
20 during that time, and we were also providing the code
21 calculations. We did two of the houses, and BuildSmart came in
22 and took the whole project away from us. So, you know, you
23 have to consider how many more are you losing?

24 Q My question though is have you provided objective
25 evidentiary support for the claims you made in your prefiled

1 testimony? And with all due respect, it seems like you're
2 providing me anecdotal evidence with respect to 30 homes. You
3 have not provided any objective evidentiary support for your
4 claims in this proceeding, have you, sir?

5 A No.

6 Q You've not hired an economist to calculate your lost
7 wages.

8 A No, we have not.

9 Q In Interrogatory Number 81 FPL asked you to please
10 identify and describe in detail any and all bases for the
11 assertion in the testimony of Dennis J. Stroer dated
12 August 12th, 2005, that, quote, the losses to my business from
13 this location alone since January 2002 can be estimated at more
14 than \$400,000, end quote.

15 Do you recall your response to that question asking
16 for detailed bases supporting that claim? No?

17 A No, I don't recall the response.

18 Q Let me read the response then. Quote, FPL considers
19 themselves and markets themselves as the energy experts in
20 their service area. They have left builders with the idea that
21 the BuildSmart Program is the cutting edge energy program that
22 supersedes all others. I lost a whole project that was
23 designated ENERGY STAR® to FPL because they convinced the
24 developer that the BuildSmart Program was the program they
25 needed. See our 2002 case.

1 My question to you then, is the response contained in
2 answer to Interrogatory Number 81, that sets forth all of the
3 detailed bases and justification for your claim that you lost
4 \$400,000 since January of 2002 to FPL?

5 A Evidently I just didn't answer the question, did I?

6 Q I suppose not. And, again, you've not hired an
7 economist --

8 A No, I have not.

9 Q -- to calculate your damages.

10 MR. BRYAN: Commissioners, I have no further
11 questions.

12 COMMISSIONER DEASON: We'll take a ten-minute recess
13 at this time.

14 (Recess taken.)

15 COMMISSIONER DEASON: We'll go back on the record.
16 Staff, do you have any questions for the witness?

17 MS. VINING: Staff does not have any questions.

18 COMMISSIONER DEASON: Okay. Commissioners?
19 Redirect.

20 MR. TAIT: Thank you, Your Honor.

21 REDIRECT EXAMINATION

22 BY MR. TAIT:

23 Q The first question -- I'd like to go back to Page 16
24 where you were being questioned about monitoring programs and
25 we went through the tracking, you know, about tracking the

1 number of participants, tracking the number of their
2 penetration, looking at the Page 49 here as well. Do you have
3 any dispute about the capacity of Florida Power & Light to
4 count those numbers?

5 A Well, basically looking at their list on 49, on their
6 projected cumulative number of program participants, when you
7 look at their percentages, their projected cumulative
8 percentage levels and the way it jumps up, it's kind of weird
9 because if you go between, for instance, between 2008 and 2009,
10 the program is going to jump from thirty-two eight to
11 thirty-seven eight, and then they say the program is going to
12 go from 72 percent to 81 percent. That doesn't seem to be
13 correct. It looks like the way they're accumulating this every
14 year, they're not really doing a good average on it.

15 Q Okay. The second thing is, is that what he was
16 citing to you on Page 16 of your testimony were individual
17 items that Florida Power & Light tracks. Is there a -- have
18 you, have you seen any evidence that Florida Power & Light
19 tests that data to see how accurate their data is?

20 A No, I don't. They count, but I can't see them
21 testing, not like we're going out there and performing tests.

22 Q I'll refer back to Page 49 again, and down below they
23 have a set of figures about what kind of energy savings they
24 project that they receive per installation, which is what
25 basically produces their so-called results.

1 Do you have any question about the use of those
2 projections?

3 A At the meter -- and I assume that that would be the
4 individual's meter at the individual house's meter --

5 Q Yes.

6 A -- they're showing a savings there, and our testing
7 doesn't seem to agree with that. In fact, our, our spreadsheet
8 here doesn't seem to agree with it at all. In fact, we don't
9 see a savings on most of the houses that we're testing here.

10 Q So what you're suggesting is, is that although
11 they've projected that they will achieve these savings in each
12 of the BuildSmart homes, your actual evidence in your table,
13 tables of your rating show that there's none.

14 A That's right.

15 Q Or very little.

16 He also stated that the percent of the whole, and
17 then he went to the number of BuildSmart homes statewide that
18 they had done represented 2.5 percent of the entire. You
19 looked at one community, one set of homes. Do you recall what
20 the percentage of the number of those homes that you tested
21 with the rating were of the entire universe of that community?

22 A Geez, I'm going to say we tested about 50 percent,
23 maybe 40 percent of the homes in that community.

24 Q You will be. But I'd refer you to the front page of
25 number 20 to help you, assist you in those calculations. So

1 what you calculated were -- he reported that there was
2 456 homes built during that period of time by Florida Power &
3 Light, and how many did you test with the rating system?

4 A Well, we've tested about -- you're talking about just
5 in the WCI?

6 Q I'm talking about what you reported here on your --
7 as of mid-July.

8 A 130 some homes.

9 Q And what percentage did that represent of that
10 community?

11 A I would say 30 percent of those homes.

12 Q Would you believe me if I told you the accurate
13 figure would be 29 percent?

14 A 29 percent. Okay.

15 Q He questioned you quite a bit about the fact that you
16 weren't sure when BuildSmart completed their testing of the
17 home, but you reflected that certainly in the last six months,
18 or has it been longer, that you're pretty well sure that you
19 went in and rated a home after it was released by BuildSmart?

20 A That's correct.

21 MR. TAIT: Thank you. I have no more further.

22 COMMISSIONER DEASON: Exhibits?

23 MR. BRYAN: None.

24 COMMISSIONER DEASON: Okay. We have Exhibit 20,
25 which is the 9/26 version. Without objection, hearing no

1 objection, show that Exhibit 20 is admitted.

2 (Exhibit 20 admitted into the record.)

3 COMMISSIONER DEASON: You may be excused. And, Mr.
4 Tait, you may call your next witness.

5 MR. TAIT: Mr. Klongerbo.

6 Excuse me. Can I reverse the order of my witnesses?
7 Because I think Mr. Fairey may have a flight or there's going
8 to be a problem. I don't know how long -- how long do you
9 think you'll --

10 MR. BRYAN: My cross of Mr. Klongerbo, I intend it to
11 be short and even shorter -- I think there's a way to make it
12 even shorter. 15, 20 minutes.

13 MR. TAIT: Oh, that's no problem then.

14 JON F. KLONGERBO

15 was called as a witness on behalf of Calcs-Plus, Inc., and,
16 having been duly sworn, testified as follows:

17 DIRECT EXAMINATION

18 BY MR. TAIT:

19 Q Would you please state your name and business
20 address.

21 A Jon F. Klongerbo. I'm the East Coast Director of
22 Calcs-Plus, 1351 Park Avenue, Titusville, Florida 32780.

23 Q Have you prepared, have you prepared 18 pages of
24 prefiled testimony in this case?

25 A Yes, sir.

1 Q Have you any changes to that prefiled testimony?

2 A No, sir.

3 Q If I asked you the same questions today, would you
4 provide the same answers as your prefiled testimony?

5 A Yes, sir.

6 MR. TAIT: I'd like to offer this testimony into the
7 record?

8 COMMISSIONER DEASON: Without objection, it shall be
9 so inserted.

10 BY MR. TAIT:

11 Q Do you have any exhibits that were attached to this
12 prefiled testimony?

13 A Yes, sir.

14 MR. TAIT: Again, asking for approval of Florida
15 Power & Light, I'd like to offer the September 26th kind of
16 final copy of this exhibit to be entered. Again, I represent
17 that there's basically no change in any figures or data that's
18 included in the report. There may be one or two items of
19 calculations that are done. It was provided to Florida Power &
20 Light on the 26th as well as to the staff.

21 COMMISSIONER DEASON: We will identify that as
22 Exhibit 21.

23 MR. BRYAN: FPL will not object, Commissioner.

24 COMMISSIONER DEASON: We're just identifying it at
25 this point.

1 MR. BRYAN: Oh, I'm sorry.

2 COMMISSIONER DEASON: Do we have copies of that, Mr.
3 Tait?

4 MR. TAIT: Yes, sir. That's what I'm looking for.
5 Actually I'll change -- these are actually the
6 exhibits as filed on August 12th.

7 COMMISSIONER DEASON: I'm sorry. What, what was just
8 handed out?

9 MR. TAIT: The exhibits that were actually filed as
10 of August the 12th.

11 COMMISSIONER DEASON: So this is the same then as
12 what was previously identified as Exhibit 8?

13 MR. TAIT: Exhibit, is it 8 or 7?

14 MS. VINING: It would have been 9.

15 MR. TAIT: It would have been 9. So this would be
16 Exhibit 9.

17 COMMISSIONER DEASON: Exhibit 9. I'm sorry. I stand
18 corrected. Okay. So this is, in fact --

19 BY MR. TAIT:

20 Q So this is, in fact -- is this, in fact, your exhibit
21 that you offered with your testimony on August the 12th?

22 A Yes, sir. Yes, sir.

23 MR. TAIT: Okay. Offer the witness for
24 cross-examination.

25 MR. BRYAN: Was that exhibit entered, moved into

1 evidence?

2 COMMISSIONER DEASON: We're not moving exhibits yet.

3 MR. TAIT: I've identified it as Exhibit 9.

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **CALCS PLUS**

3 **TESTIMONY OF JON F. KLONGERBO**

4 **DOCKET NOS. 040029-EG, 040660-EG**

5 **AUGUST 12, 2005**

6 **1. Please state your name, current position and address.**

7 Jon F. Klongerbo, an individual and Florida East Coast Director of Calcs-Plus, residing at
8 1351 Park Avenue, Titusville, FL 32780, and a FPL ratepayer under residential account #
9 84452-34043.

10 **2. Please provide us your educational background and any special credentials**
11 **or training that you have received relevant to your testimony in this case.**

12 Bachelor of Science Business Administration, University of Florida, 1987

13 MBA, University of Central Florida, 1993

14 Certified Class 1 Energy Rater

15 **3. Please provide us with your past and present professional association**
16 **memberships and positions you have held in those associations.**

17 Current Member, National Energy Raters Association (NERA)

18 Past Board Member on (NERA)

19 **4. Please provide us with a brief statement of your background and experience**
20 **in the areas of building science, standards of building practice and programs**
21 **involving residential energy efficiency and conservation.**

22

1 I have conducted hundreds of Energy Ratings and on site inspections to collect data
2 collect on residential structures for various research projects as well as various
3 diagnostics projects. Provided technical expertise for the development of a mid-point,
4 stand-alone duct testing system.

5 **5. Describe your service offerings and prices.**

6 Residential Energy Ratings for Home owners and Builders. Prices vary depending upon
7 volume builder and custom builders and travel. Generally, \$300 plus \$50 each additional
8 AC system for custom homes and \$250 plus \$50 each additional AC system for for tract
9 homes.

10 Mid-Point duct testing. Test involves temporarily sealing of register boxes and
11 pressurizing the system, introducing theatrical fog and sealing visible leaks. Standard
12 fees are \$300 plus \$50 each additional AC system.

13 State Energy Code and room by room load calculations (fees posted at [www.calcs-](http://www.calcs-plus.com)
14 [plus.com](http://www.calcs-plus.com)). \$5 per room for load calculations. Fees for Energy Code calculations based
15 upon \$50 for homes up to 1500 sq. ft. \$5 for each 500 sq. ft thereafter.

16 **6. How many ratings have you performed over last 5 years? Last year?**

17 Last five years: Approximately 240. Last Year: Approximately 50.

18 **7. How many code calculations have your performed and filed over last 5**
19 **years? Last year?**

20 Basic code calculations are submitted with the rating (a subset of the rating). Our East
21 Coast Office has processed approximately 150 combination load and code calculations in
22 the last year and approximately 400 load and code combination calculations since Jan
23 2003.

1 **8. Are you familiar with the FPL BuildSmart program? If so, please describe**
2 **your involvement or experience with it.**

3 Yes. Program is based upon 3 levels, Gold, Silver and Bronze depending upon various
4 energy efficiency levels. Benchmarks are based upon the States Energy Code e-ratio
5 (Referred to as “EPI Rating” by FPL staff). May include a free BERS Rating for Energy
6 Star certification. My involvement is very limited with BuildSmart as I have educated
7 builders on Federal Energy Efficiency programs and have lost clients to free BERS
8 ratings offerings by utilities. One example would be Accessible Structures, Inc,
9 Titusville Florida, who was contacted and educated by Calcs-Plus for Energy Star
10 ratings. The client was enthusiastic and was invited to the Florida Housing Coalition by
11 Tei Kucharski to provide a presentation on conscientious Builder’s practices. At that
12 meeting, Ms. Holly Duquette, the FPL BuildSmart Representative, recruited the builder
13 into the BuildSmart program with enticed “Free” ratings. Subsequently, educational
14 efforts for Builders has ceased in that territory. No marketing or educational activities
15 are expended in service areas that are serviced by utilities that give away BERS ratings.
16 Almost all of my rating business is conducted in Kissimmee and KUA service territory.

17 **9. Compare the services provided under the BuildSmart program with the**
18 **services you generally offer and with the services you offer when you rate a**
19 **home.**

20 My on-site services include duct testing with a blower door and duct tester. The tests
21 include duct leakage both within and outside conditioned spaces. This is commonly
22 referred to as “Total” and “Out” tests. It is my understanding that FPL uses the “Pressure
23 Pan” method which estimates leakage instead of measuring the CFM (cubic feet per

1 minute) leakage measured by the calibrated duct tester, digital manometer and blower
2 door assembly. I rate the homes using the Energy Gauge software, register the rating
3 with the Florida Solar Energy Center (FSEC) and providing the report to the client.

4 I am not familiar with the method that FPL measures duct leakage at the mid-point level.

5 It seem to not be possible with the pressure pan method as the building shell must be de-
6 pressurized in comparison with the outside environment which would not be possible

7 without the drywall installed. In any event, I have found that taking leakage rates during

8 mid-point inspect is not an accurate method for predicting final leakage after drywall and

9 the air handler is installed (especially with the "Total" test. My mid-point test is

10 concentrated on locating leaks at that point and sealing those visible leaks.

11 **10. Have you observed any measurable difference in outcomes for homes in which**
12 **you have provided rating service and homes that have received BuildSmart's**
13 **basic or premier services? If so, please describe.**

14 No, I have no first hand comparison because, as previously stated, my work is almost
15 exclusively out of FPL service territory.

16 **11. What duct testing protocol was used on the homes described in your answer to**
17 **10.above by you; by FPL?**

18 Please see answer 9 and 10 above.

19 **12. Have you reviewed any homes that have received code calculations from FPL,**
20 **including an e-ratio, and how has the as-built aspect of your review compared**
21 **to their initial code calculations?**

22 No.

23

1 **13. Have you reviewed the initial pre-filed testimony of FPL's witnesses as**
2 **submitted on July 15, 2005? If so, please comment on any concerns that are**
3 **raised based on your experience and not included in your response to another**
4 **question.**

5 Yes, Mr. Haywood's Testimony of July 15th regarding the following questions to wit:

6 ***Q. Why does FPL propose to eliminate Program participation fees?***

7 ***A. During interviews with decision makers from major production builder firms,***
8 ***FPL uncovered that program participation fees were viewed as a major***
9 ***impediment to builder participation. Builders, and especially the large volume***
10 ***production builders that are necessary for the program to achieve scale***
11 ***economies, voiced their objections to paying per-home participation fees in***
12 ***addition to the investments they must make to achieve e-Ratio levels***
13 ***necessary for participation in the Buildsmart program. These builders believe***
14 ***that the cost increases associated with the home upgrades necessary to be a***
15 ***BuildSmart participant represent the "cost of entry." In effect, program***
16 ***participation fees act as a deterrent to production builder participation, which***
17 ***limits the Buildsmart Program's ability to fully tap this large market."***

18 There are areas in the State where energy-efficiency programs thrive with a participation
19 fee or charges for services. It is unclear why there is such a low market penetration for
20 the BuildSmart Program, but to infer that because there is a miniscule charge for testing
21 and verification when home prices are at an all time high is puzzling. It is further
22 puzzling since a portion of the program (Gold Level, Basic). has been offering Free
23 BERS Ratings by FPL without participation fees.

1 ***Q. How does the proposed redesigned Buildsmart Program interact with the***
2 ***DOE's and EPA's ENERGY STARB Program and other new home***
3 ***construction programs?***

4 *A. FPL will continue to advocate and promote the FGBC's green building*
5 *standards through Buildsmart. Through increased promotional activities, FPL*
6 *will enhance the Program's support of ENERGY STARB. As ENERGY*
7 *STARB participation criteria is modified, BuildSmart representatives will*
8 *also educate local builders on these changes and provide recommendations for*
9 *how builders may achieve ENERGY STARB certification under any revised*
10 *criteria. All of these activities will further facilitate builders' involvement in*
11 *ENERGY STAR and FGBC's Green Building certification."*

12 Currently, any the Bronze and Silver levels do not have any bearing on the Florida Green
13 Building Certification. The BuildSmart Gold Level can only influence the FGBC
14 certification if a HERS Rating is performed on the home, a standard not promoted by
15 FPL because of the duct testing methods involved. Pressure Pan testing is not a
16 recognized protocol for duct testing for a HERS Rating or BERS Class 1 Rating.

17 ***Q. "How will FPL's proposed Program modifications promote ENERGY***
18 ***STAR certification?***

19 *A. Builder incentives, such as cooperative advertising incentives of up to \$50 per*
20 *home, will be available to builders for qualifying Buildsmart homes that also*
21 *achieve certification through DOE's and EPA's ENERGY STARB program.*
22 *Additionally, eliminating BuildSmart participation fees and providing*
23 *incentives to builders further strengthens Buildsmart's ability to partner with*

1 private raters - who will charge an additional fee for their rating services -
2 thereby creating a complement of services to those builders seeking ENERGY
3 STAR certification, and creating a collaborative approach that strengthens
4 both Buildsmart's and the raters' value proposition to these builders."

5 This answer is contradictory to the reason for eliminating participation fees to increase
6 market penetration. To eliminate program fees but to increase the cost to builder's by
7 hiring private raters - who will charge an additional rating fee is perplexing.

8 ***"Q. Describe the two certification approaches: flexible measure and***
9 ***prescriptive measure approach.***

10 ***A. Each approach is targeted at a specific market's needs. The Prescriptive***
11 ***approach is targeted at meeting the needs of the production builder/homebuyer***
12 ***market and will include measures related to HVAC, ductwork and insulation.***
13 ***Under the prescriptive approach, to receive Buildsmart certification, a home***
14 ***must include specific prescriptive energy efficiency measures targeted to***
15 ***achieve an e-Ratio value at least 10% better than a baseline home as***
16 ***prescribed by the Florida Energy Efficiency Code. Under this approach,***
17 ***builders must submit to FPL plans or specifications that FPL can use to***
18 ***validate that the installed measures meet Buildsmart prescriptive***
19 ***requirements.***

20 ***The Flexible approach is targeted at the custom builder/homebuyer market***
21 ***and will allow any combination of measures necessary to achieve an e-Ratio***
22 ***value at least 20% better than a baseline home as prescribed by the Florida***
23 ***Energy Efficiency Code."***

1 This is contradictory to the reasoning for eliminating Bronze, Silver and Gold levels – to
2 eliminate confusion. There proposal now has Flexible and Prescriptive Programs, one
3 with 10% efficiency and one with 20% increased efficiency. There is no distinction
4 between the two different programs for homeowners to know if they have a 10%
5 BuildSmart home or a 20% BuildSmart home.

6 **14. What is your opinion of the proposed Prescriptive Program proposed by FPL?**

7 I don't see any benefit to the prescriptive method for the following reasons:

- 8 1. Different efficiency levels causing confusion on which BuildSmart Program
9 equates to what efficiency. One BuildSmart House will be scored based upon a 10%
10 increase in energy efficiency and one scored based upon 20%. There is no disclosure to
11 the homeowner to which standard is used.
- 12 2. Prescriptive program involves use of the Pressure Pan testing methodology which
13 would result in an artificially low result for leakage. The builder and/or homeowner will
14 be lured into a false sense of energy-efficiency.
- 15 3. No provisions for quality control by a 3rd party entity.
- 16 4. Not an efficient use of resources to support two programs.

17 **15. Are you familiar with other jurisdictions' efforts to measure and regulate**
18 **residential building practices and, if so, can you summarize their various**
19 **approaches?**

20 I am not familiar with other states programs. I am familiar with other Utilities programs
21 in Florida.

22 Progress Energy's Program is based on the HERS and Energy Star Program. The main
23 differences with that program are that they only test and inspect 1 out of 7 houses and, if

1 that one house passes the HERS score criteria, than the rest are assumed to be Energy
2 Star compliant. The other significant difference is that they will only include homes in
3 their program that have electric heat pumps. Their BERS Ratings are offered for free.
4 Orlando Utilities Corporation (OUC) offers free BERS Ratings and tests every house.
5 All the other utilities, to the best of my knowledge, offer BERS Ratings for the fee filed
6 as their tariff and/or offer marketing and educational assistance.

7 **16. Are there national standards for the development of comparative information**
8 **about the relative energy efficiency of a residential unit?**

9 Yes, the Home Energy Rating System (HERS) is the most recognized standard in the
10 country. Florida and national-based programs that use this national standard as at least a
11 portion of their certification is The Energy Star program, the Building America program
12 and the Florida Green Building Certification.

13 **17. How do you believe any residential program purporting to increase residential**
14 **building energy efficiencies should be measured and monitored?**

15 To alleviate confusion, one standard should be used for measurement that is
16 understandable, realistic and enforceable. A third-party, respected entity should have the
17 authority to randomly select homes for on-site re-inspection and re-testing of homes for
18 adherence to standards. This party should also have the authority to investigate consumer
19 complaints. In the event of non-compliance to standards of the program, they should have
20 the authority to administer administrative sanctions to reflect the severity of the non-
21 compliance.

22 **18. How does Florida assure its citizens fair, impartial and accurate information on**
23 **the energy usage in their residences?**

1 Unfortunately, I believe that Florida has conflicting programs under conflicting
2 state governing and regulatory bodies that much confusion exists without unified
3 educational and consistent policies to the citizens. For example, almost every utility has
4 their unique demand side programs, there are national programs and a state energy code
5 that may or may not have different benchmarks, testing protocols, level of different
6 efficiencies, the sampling of homes for compliance, etc

7 **19. How would you measure a residential unit's energy efficiency?**

8 Specific standard would be based upon the HERS methodology. Although not perfect, it
9 is based upon relatively sound research and is constantly evolving to reflect changing
10 conditions and incorporating new products and techniques. It is also almost universally
11 accepted nationally to reduce citizen's confusion concerning other local efficiency
12 programs.

13 **20. Recognizing that you are not an economist, but rather an educated layman and**
14 **a FPL commercial and residential customer, how would you measure the cost**
15 **effectiveness of any entity's program to enhance the energy efficiency of a**
16 **residential unit?**

17 In general terms, the cost of the program should not exceed what the private market can
18 provide without reimbursement from outside sources. In other words, the program
19 should be a market-driven and provide a marketable service with measurable savings that
20 outweigh the upfront cost to the consumer.

21

1 **21. In order to measure and monitor the success of any program to enhance the**
 2 **energy efficiency of a residential unit, how would you assure accurate**
 3 **information?**

4 A third party quality control entity is crucial to ensure accuracy and for the integrity of
 5 the program with random field audits of inspected and tested homes. In addition that
 6 entity should be responsible for archiving the data for research, analysis of the success
 7 and evolving development of the program. Currently, the Florida Solar Energy Center
 8 fulfills all of those functions as a HERS provider.

9 **22. If the program's direct costs are to be paid by someone other than the program**
 10 **operator, how would you assure a program designed to be effective yet minimize**
 11 **the cost burden on those that pay for it?**

12 A competitive market and those related economic forces naturally attain a level of
 13 optimal efficiency. There will be a point where the value of the service equals the cost of
 14 the service via supply and demand forces. This will be the natural optimal cost effective
 15 point.

16 **23. How would you assure maximum quality control to verify the results claimed for**
 17 **the program and the persistence of those results over time?**

18 Please see answer 21.

19 Briefly, Table 1 in Exhibit I provides facts that suggests to me that FPL's
 20 BuildSmart program was not as cost effective as it could be and overly burdens the
 21 ratepayer when FPL applies for and receives cost recovery:

22 Clearly the program as developed and proposed by FPL results in a low
 23 percentage paid from program revenue (as opposed to alternative program including

1 ratings paid by customer); relatively low participation rates; high cost per home (more
2 than the cost of either a utility or independent rating).

3 An easily understood alternative program if FPL desires to provide subsidized
4 services in this area, can be seen in Table 2 in Exhibit I, and have a significantly less
5 impact on the FPL ratepayer.

6 **24. Are there other residential new construction programs offered by utilities**
7 **that meet the standards you have outlined and enhance, rather than destroy, the**
8 **free, competitive marketplace for energy efficient services?**

9 As developed by FPL, the Build Smart program is unique to them. Other utilities
10 have programs directed at new residential construction but none identical to FPL's. The
11 municipal utility that comes first to my mind is at Gainesville Regional Utility ("GRU").
12 It was recognized as "Utility of the Year" by the EPA Energy Star program for its
13 aggressive behavior to institute energy efficiency practices in residential new
14 construction in its territory. Its program demonstrates highly successful performance
15 without costing its ratepayers.

16 After its initial assistance to introduce the Energy Star Homes label to builders in
17 the Gainesville territory (and in the surrounding territory as well), GRU made its
18 corporate decision not to provide rating services but rather support the efforts of
19 independent raters and "energy star" builders. It merely lists them on its website at
20 virtually no cost to the utility.

21 Table 3 in Exhibit I, still in its developmental stage, is drawn from the EPA
22 Energy Star homes site. It overstates the allocation of energy star homes to FPL and PEF
23 programs because it allocates all the homes of one of their allied builders to the

1 respective utility. We know for a fact that many of the homes of certain builders have
2 received support from Orlando Utilities Commission (“OUC”) and independent raters as
3 well. The figures showing new starts (market universe) are also in development. The
4 figures shown are taken from the USDOE Building Code Assistance Program (“BCAP”)
5 and are in conflict with some data reported by the utilities. However, even with this bias,
6 you can see that the GRU-type program utilizing the strengths of the independent rater
7 and the competitive private sector far surpasses the market penetration of the costly (to
8 ratepayers) utility programs.

9 Other state programs come from the EPA and USDOE sites mentioned above and
10 demonstrate that Florida, although among the leading home-building states in the nation
11 ranks in the bottom third of energy star home penetration in its market

12 **25. Why do you believe that FPL’s program is subsidized and provides an undue**
13 **benefit to FPL in its attempt to provide services in a competitive marketplace?**

14 The funds that FPL recovers from ECCR are part of a compulsory contribution
15 from the ratepayers. As such, they are similar to collections based on its basic rate. In
16 fact, the total of all additional charges imposed by various “add-on” compulsory charges
17 authorized by the Commission amount to more revenue to FPL than its basic rate
18 recovery. In every sense of the word, these “add-on” amounts are calculated similar to
19 the base rate on the ratepayer bill through surcharges. The money only subsidizes FPL
20 expenditures similar to their expenditures, including profits, derived from its customer
21 billing. In 2004, 91% of BuildSmart costs were borne by the aggregate ratepayer base,
22 whereas 0 % of free market, independent operated BERS rating activities were subsidized
23 by the aggregate rate-payer base.

1 The average cost per BuildSmart home in 2004 by FPL was \$488 with as little as
2 10% improvement in efficiency. This is in comparison to \$250-\$350/home for an Energy
3 Star Home rated by Independently-operated businesses with 20-30% increase in energy
4 efficiency. The homes rated under the BERS Program are more cost-effective than those
5 under the FPL program subsidized by the ECCR fund, however, there exists no
6 methodology to calculate the DSM savings and effects by the substitution effect of the
7 free-market, unsubsidized marketplace. It could be argued that the BuildSmart Program
8 generally is detrimental to free-market programs as it is unwarranted competition with
9 more efficient market-driven programs and which would not exist if not for the
10 \$1,032,589 charged to the ratepayers through surcharges in 2004. See for example, the
11 impact in the Gainesville Regional Utility territory that I described in the answer to an
12 earlier question.

13 **26. How much has FPL recovered from the ratepayers for its entry into the**
14 **energy efficiency services market for new residential construction?**

15 FPL's BuildSmart' Program ratepayer recovery provided to the PSC, the total
16 ECCR Recovery from years 2002-2004 is over \$2,200,000 without accounting for the
17 additional ~\$1.2 million for projected recovery totals for 2005. See following table. If
18 you go from initial program year, including the study period, this sum would triple.

19 As asserted previously, new construction programs administered by private industry
20 result in no funds charged to FPL's ratepayers, yielding a savings of over \$3.4 millions in
21 savings to FPL ratepayers through elimination of the compulsory contribution for the
22 program, and would result in improved energy efficiency savings overall.

1 **27. Why do you believe the BuildSmart program should use the Energy Star home**
2 **offered by the federal government and supported by the state?**

3 It is my belief that the nationally recognized label of an Energy Star home should
4 be integrated into any Florida program encouraging energy efficient building practices.
5 This allows the national investment in developing market conditions to provide support to
6 the Florida program and assures greater communication with customers. It also uses
7 nationally recognized standards, enhances and simplifies customer confidence and
8 provides a clear benchmark for customers to distinguish a truly energy efficient home in
9 the marketplace. The two are separate programs, however, FPL can easily design the
10 BuildSmart program with Energy Star since both the basis of efficiency levels are
11 performance oriented by Florida law—the state code compliance methodology is already
12 easily tied to the national standard based upon the (HERS) methodology. The
13 BuildSmart program's Gold Level is 30% more energy-efficient than Florida Code
14 requires (currently surpassing the minimum energy-efficiency level of an Energy Star
15 Home) and its Silver level at 20% is close to the current Energy Star level, why not have
16 the home qualified for Energy Star. By labeling homes using different programs, based
17 on different standards, FPL is confusing the customer; failing to set an appropriate
18 (national) standard for energy efficiency; and have some BuildSmart homes fail the
19 national test (label) for an energy efficient home; that of Energy Star. Florida would also
20 be well served by a tie between Energy Star home and the Florida energy efficient home
21 in order to maximize any federal tax credit that may be initiated; since the proposals for a
22 new home tax credit are tied to the national label and national system of performance
23 rating.

1 **28. Why do you believe that approval of FPL's BuildSmart Program as designed**
2 **will increase your electric rates?**

3 It is very simple. FPL has filed for cost recovery from its ratepayers for the costs
4 it incurs in providing the BuildSmart Program. The amount of this recovery is added
5 uniformly to the base rate of the residential ratepayer; in essence, increasing the charge
6 per kilowatt hour used. FPL has shown that the BuildSmart Program as designed by FPL
7 passes the Rate Impact Measure ("RIM") test; that is, it provides benefits to FPL from
8 "avoided costs" to cover the direct and indirect ("lost revenues") costs of the program.
9 Therefore, FPL argues that the program would not increase the base rate for any
10 ratepayer. However, the Commission has historically awarded cost recovery to FPL for
11 its direct costs in addition to those benefits. Some would say creating a "windfall profit"
12 to the extent of such recovery to FPL; but, all would admit that it increases the cost of a
13 kilowatt hour (rate) to the consumer.

14 As residential ratepayers, their cost per kilowatt hour increases due to cost
15 recovery of the direct program costs, although FPL has shown through its use of the RIM
16 test that it has also received benefits that covers both the direct program costs and its lost
17 revenues as a result of the program.

18 As a commercial ratepayer and competing business, I will lose business for the
19 services I provide not only because of FPL's entry into the business of providing services
20 that I believe to constitute a "de facto" rating and/or services that are part of its rating
21 service offer, but also because FPL is subsidized and enabled to provide such services
22 "free" based by its benefits gained and additionally its cost recovery granted. In fact,
23 FPL "profits" by its "free" services in direct competition with me. Furthermore, FPL

1 does not need to provide these services in the competitive marketplace to retain
2 customers. Its only provided reason to offer these “free” services is to increase its market
3 share for these services in the private market to the detriment of the my business.

4 **29. Why do you think that approval of FPL’s BuildSmart Program as designed**
5 **will grant undue and/or unreasonable preferences and or advantages to certain**
6 **persons contrary to § 366.03, F.S.?**

7 I believe that the program, with its proposed modifications, provides “free”
8 services that are available in the competitive marketplace to builders who sign up for
9 FPL’s BuildSmart Program at a cost imposed upon every residential ratepayer. FPL
10 gains a “subsidized” entry into an area of services that, heretofore, have been competitive
11 in the private marketplace. The builders are granted an advantage in marketing their
12 product (residential unit) as energy efficient (certified by the local utility) and in
13 obtaining subsidized services. The customers of those builders are granted an undue
14 and/or unreasonable preference and/or advantage by receiving the benefits of those
15 services provided free and, in result, have lower bills for their electric energy usage that
16 other residential homeowners and renters that have not had the advantage of the “free”
17 services. In fact, the other residential customers pay a higher amount for their electric
18 energy usage because they are subsidizing the cost of providing those “free” services.

19 **30.. Why do you believe that FPL’s program will further confuse the consumer on**
20 **what is an “energy efficient” home?**

21 I believe that removing independent raters will further place the onsite
22 information provided builders and their ultimate customers, homeowners, into the hands
23 of an information provider that has different interests. State and federal programs to

1 assure a fair, complete and understandable set of information to be provided the
2 consumer will further be weakened. Certainly, FPL's adoption of a "new" labeling
3 system does not add much clarification as to what constitutes an "energy efficient" home.
4 It brings to mind an old advertisement by a member of the "mobile home industry" that
5 their homes "met the most energy efficient standards established by law," in referring to
6 the fact that their homes met the lowest minimum standards of the preempted federal
7 standards set by HUD...a far cry from any type of significant energy efficiency as any
8 mobile home owner paying his electric bill can attest.

9 **31. Have you reviewed the materials provided by FPL in its initial response filed**
10 **last week to Petitioner's First Set of Interrogatories and Request for Production of**
11 **Documents?**

12 I have had some opportunity to review and had the Table 4 in Exhibit I prepared to try
13 and summarize some of the voluminous data contained in their response. I haven't had a
14 chance to fully analyze but I believe the table provides some interesting insights and
15 opens several lines of inquiry that I am pursuing.

16 **32. Does this conclude your testimony?**

17 Yes.

CROSS EXAMINATION

1
2 BY MR. BRYAN:

3 Q Good afternoon, Mr. Klongerbo.

4 A Good afternoon, sir.

5 Q It's nice to meet you as well.

6 A Same here.

7 Q I've been seeing your name in the file for a few
8 months.

9 I'd like to try to shorten my cross-examination.
10 Hopefully you won't object to that.

11 In a number of questions posed to you in your
12 prefiled testimony, it seems to me that you were essentially
13 asked to propose alternatives to Commission-approved current
14 rules and criteria with respect to demand-side management
15 programs. And then I'll point out the questions in a moment,
16 but it seems to me you were asked what do you believe the rules
17 should be with respect to these sorts of residential energy
18 efficiency programs or how would you do it? And maybe to
19 shorten this, and if you need more time, that would be fair,
20 but I'd refer you to question 17 on Page 9 of your prefiled
21 testimony.

22 A Yes, sir.

23 Q And the question is "How do you believe any
24 residential program purporting to increase residential building
25 energy efficiencies should be monitored and measured?" And

1 then question 19 on Page 10.

2 A Yes, sir.

3 Q "How would you measure a residential unit's energy
4 efficiency?" Do you see that, sir?

5 A Yes, sir.

6 Q Question 20 on Page 10, there's -- if you delete the
7 first part, it's "How would you measure the cost-effectiveness
8 of an entity's program to enhance the energy efficiency of a
9 residential unit?"

10 And question -- I'm sorry. Are you there, sir?

11 A Yes, sir.

12 Q Okay. And then question 21 and question 23, again
13 they start out, "How would you assure maximum quality control?"
14 I'm sorry. That's 23. And 21, "How would you assure accurate
15 information?"

16 So I guess my question to you, is it -- in response
17 to these questions, tell me if it's a fair characterization
18 that you essentially were proposing alternatives based on your
19 experience how to change or improve upon, in your experience,
20 Commission-approved current rules and criteria with respect to
21 demand-side programs?

22 A The answer to that, I would say, is that there are
23 many programs around the country that have different ways of
24 measuring energy efficiency, whether it be through a national
25 program, which I prefer, with consistent policies and so forth.

1 So basically that would be my, my answer to what you asked.

2 Q Okay. But you were not purporting to state what the
3 current Commission-approved rules or criteria are in answers to
4 these responses. You're proposing alternatives; is that
5 correct?

6 A In a perfect world I would like to see these
7 alternatives.

8 Q Okay. Thank you. Now were you aware that the
9 currently effective criteria and rules for, that are in effect
10 with respect to demand-side management programs in Florida were
11 worked out by the Commissioners back in the mid-90s after
12 extended proceedings that included, I believe, two weeks of
13 hearings involving numerous parties of every constituent group:
14 Industry, conservationists, consumer groups, staff, just to
15 name a few? That was in the original goals docket. Are you
16 familiar with that?

17 A I have heard that there was a lot of work done back
18 in the '90s and, and early '90s. I'm not familiar with exactly
19 what dockets those were. I don't know if it's been changed
20 since 1993 or 1995. It probably hasn't. But I am aware that
21 there was a series of hearings or dockets pertinent to this,
22 pertinent to the energy, DSM program.

23 Q And that's where the rules and the criteria were
24 established after --

25 A Established and not changed since, as I believe.

1 Q Okay. And so, so then you know, you're aware that
2 since then the Commission has continually endorsed the
3 currently effective criteria and rules.

4 A Yes. I'm aware of that. And I believe that's
5 because there was never really a reason to question them.

6 Q So you believe the criteria and rules should be
7 changed though in accordance with your proposals based on your
8 testimony in this proceeding?

9 A In general I think rules and policies have to evolve
10 with the industry.

11 Q Okay. So is the answer to my question yes?

12 A Yes.

13 Q Thank you. Now with respect to your proposed
14 alternatives as to what the Commission rules and criteria ought
15 to be in your mind for residential energy efficiency programs,
16 say, on, you know, quality control, cost-effectiveness,
17 assuring accurate information, how to best measure a
18 residential unit's energy efficiency, I assume you would prefer
19 that those alternative criteria and rules apply to all utility
20 residential energy programs and not just to FPL's BuildSmart
21 Program; is that fair?

22 A I would say all including independent raters and
23 utilities.

24 Q Okay. Is it your understanding then that if your
25 proposals, your alternatives are adopted in this docket which

1 concerns only two demand-side management programs of one
2 utility, Florida Power & Light Company, that those
3 alternatives, those proposals would apply to all investor-owned
4 utility DSM programs and apply to raters?

5 A That's correct. The only reason why -- well, one of
6 the reasons why we're here in this forum is that that's, that's
7 where we are ratepayers and that's where we have standing.

8 Q My question though is is it your understanding that
9 if the Commission does what you're asking it to do, adopting
10 your proposals, your alternative suggestions on how the rules
11 ought to be, that if they do that, that the rules would then be
12 in effect with respect to all demand-side management programs
13 of investor-owned utilities and of raters?

14 A In a perfect world we would have consistent rules and
15 policies and enforcement and feedback loops with one central
16 program.

17 Q Okay. So that's, that's what you want then?

18 A I think that would be best for everybody.

19 Q Okay. Now would you agree or acknowledge though that
20 FPL is constrained to abide by the current Commission rules and
21 criteria in effect for demand-side management programs?

22 A I don't know what the reason is for construing it. I
23 think there's opportunities for you to modify programs within
24 the PSC guidelines, but I don't know if you consider that
25 constrained or not.

1 Q Well, I guess my question is would you acknowledge
2 that FPL has to abide by the Commission-approved rules and
3 criteria?

4 A I know there are set forth goals by the Public
5 Service Commission, and that's about all I know.

6 Q Okay. Now in your testimony, your prefiled
7 testimony, question 13 on Page 5, you indicate your belief that
8 the elimination of participation fees in the modified
9 BuildSmart Program won't help FPL penetrate the builder market.
10 In fact, at Line 19 on Page 5 you state, it is, quote, it is
11 unclear why there is such a low market penetration for the
12 BuildSmart Program, but to infer that because there is a
13 miniscule charge for testing and verification when home prices
14 are at an all-time high is puzzling, end quote.

15 My question to you is did you perform any market
16 research on this particular issue?

17 A What I can tell you is where there's, there's
18 utilities, municipal utilities in other parts of the state that
19 are not constrained, as you say, by the Public Service
20 Commission that has a much higher market penetration than what
21 BuildSmart has, has shown with no fees.

22 Q Do you have expertise in market research, sir?

23 A I have an MBA.

24 Q Was it in market research?

25 A No, it's not.

1 Q So the answer in this response is your personal
2 opinion; is that correct, sir?

3 A Personal opinion based on field knowledge.

4 Q Okay. Now you can't understand why eliminating a,
5 quote, unquote, miniscule fee would make any difference to a
6 builder.

7 A Well, I don't understand when -- you used WCI in, in
8 the previous testimony with Mr. Stroer -- is that they are
9 paying for both a BuildSmart certified house and a Florida
10 Green Building certified house with a full-blown rating.

11 Q And your point is that they're paying twice?

12 A They're, they're paying twice, and it doesn't seem to
13 be an inhibitor to pay, for them to pay for redundant services
14 almost.

15 Q So you think they enjoy paying twice and wouldn't,
16 wouldn't appreciate --

17 A That's not what you asked me, sir.

18 Q Well, I'm asking you now. Is that what you believe,
19 that they'd like to pay twice?

20 A No. Actually I think it's a waste of money. That
21 goes back to my previous statement that I wish there was one
22 universal energy efficient program for the whole state.

23 Q But your initial point was you don't believe the
24 elimination of fees will help FPL penetrate the market.

25 A Not when you're talking about \$175 when houses are

1 selling for \$500,000. Either they're going to pay for that
2 house to be certified and with that label or not.

3 Q But if you take the case of a production builder, the
4 fee is \$100 or \$175 per home, if you multiply that by 1,000
5 homes, that's a lot of money, isn't it, sir?

6 A 500,000 homes times -- \$500,000 a home times 1,000 is
7 a lot of money too.

8 Q The participation fees are not the only cost to a
9 builder, too; isn't that true, sir?

10 A That's correct.

11 Q There are costs associated with equipment upgrades,
12 other compliance measures?

13 A That's correct.

14 Q Don't you believe that a builder could take the
15 savings from the elimination of a participation fee and apply
16 that to upgrades in the home?

17 A Well, I would be suspect to see how much upgrades
18 they can do for \$250.

19 Q Let me refer you now to your Exhibit JK-1. And, I'm
20 sorry, that is now Exhibit Number 9 --

21 A Yes, sir.

22 Q -- in this proceeding.

23 And in particular, I want to refer you to Table 3,
24 which is on the second page of the exhibit.

25 A Yes, sir.

1 Q And let me ask you if it's a fair characterization to
2 say that your point in this table is to show that the
3 BuildSmart Program historically has not led to many ENERGY
4 STAR® homes; is that fair?

5 A That's fair. Yes, sir.

6 Q Now you recognize, don't you, that the standards for
7 BuildSmart and the standards for ENERGY STAR® are not the same?

8 A That's correct, sir. But Gainesville Regional
9 Utilities has 11 percent with a much higher standard program
10 than FP&L for some reason.

11 Q My question to you though is they're different
12 programs, aren't they, sir, ENERGY STAR® and BuildSmart?

13 A That's correct.

14 Q And certainly a builder can participate in BuildSmart
15 without participating in ENERGY STAR®; is that correct?

16 A That's correct.

17 Q And although FPL has stated its intention for
18 BuildSmart to promote the ENERGY STAR® program, you would
19 concede, wouldn't you, that the primary objective of the
20 BuildSmart Program is to certify to BuildSmart standards, not
21 to ENERGY STAR® standards; isn't that correct?

22 A Whatever -- yes, that's correct. Whatever the
23 BuildSmart standards are.

24 Q Thank you. And your Table 3 purports to show that in
25 2003 FPL's BuildSmart Program was responsible for only

1 52 ENERGY STAR® homes, I believe.

2 A That's correct.

3 Q But, in fact, in calendar year 2003 FPL certified
4 1,668 BuildSmart homes. That's in staff's composite Exhibit
5 Number 2.

6 A They can certify 10,000. It depends on what the,
7 what the efficiency level is and what you're certifying.

8 Q Okay. And in 2004 it certified 2,032 BuildSmart
9 homes. Do you have any reason to disbelieve that?

10 A I have no reason to disbelieve that at all.

11 Q And would you agree, if you're going to judge the
12 BuildSmart Program on its merits or the success of the
13 BuildSmart Program, the better indicator would be the number of
14 BuildSmart homes certified rather than the number of ENERGY
15 STAR® homes?

16 A It depends on what your standards are.

17 Q Well, it's a BuildSmart Program certifying to
18 BuildSmart standards; is that correct?

19 A The correct BuildSmart standards don't mean anything
20 until compared to what they may be, what you tell it it is, so.

21 Q FPL creates the standards. That's your point, isn't
22 it?

23 A That's correct.

24 Q Okay. Let me read you -- and this is the last line
25 of questioning. Let me read you a couple of statements and ask

1 you if you agree with them. Before I do that, let me ask you,
2 is your company, Calcs-Plus, is that a for-profit company?

3 A Yes, it is.

4 Q And second, you are a member of RESNET, the --

5 A Calcs-Plus is, so I guess by definition I am too.

6 Q Okay. That's the Residential Energy Services
7 Network?

8 A Yes, sir.

9 Q That's a private organization of residential energy
10 raters essentially?

11 A No. It's more than that. They come up with policies
12 and standards and basically the administration of, basically
13 the administration of the Home Energy Rating System Program.

14 Q And Mr. Stroer or Mr. Fairey are also members to your
15 knowledge?

16 A I believe that Mr. Fairey is the president, current
17 president.

18 Q Okay. Okay. The statement that I'm about to read
19 you, the first statement, it comes from a blog on the RESNET
20 Blog dated June 20th, 2005, and the title is, the headline,
21 quote, unquote, Utility Intrusion into Energy Efficiency
22 Programs, end quote.

23 The first statement I'd like to ask you about is,
24 quote, from the blog, paragraph number one. "Investor-owned
25 utilities, IOUs, exist to maximize profits for their

1 shareholders. All the end-arounds and smoke-and-mirror PR
2 programs about energy conservation are used as a public
3 relations spin to achieve their ultimate goal: To increase
4 profits and/or appease regulators. That is what every
5 for-profit company is naturally expected to achieve."

6 Do you agree with that statement, sir?

7 A I wrote it, so I would have to say I do agree with
8 that statement.

9 Q And let me ask you about question, statement number
10 two in your blog. "Why do IOUs want to de-market their product
11 which derives them of profit? Because they don't want to build
12 additional power plants? Or maybe where they will either
13 increase profits through increased usage, or, in the case of
14 regulated IOUs, request rate hikes to ensure a level of
15 profitability that would be acceptable to shareholders." Does
16 that statement still represent your sentiments, sir?

17 A Yes, sir, it does.

18 Q And the final statement in this blog, "Why do you
19 care as a rater (this is a rater forum)? Well, if you are in
20 the rating business, it would make sense to involve yourself
21 with issues that would affect the climate for you, as a
22 professional, to succeed as a business and more importantly to
23 affect the atmosphere in which you are able to market your
24 trade." My question is that's what this is about for you,
25 isn't it, sir? It's about being able to market your trade,

1 it's about your economic interests; isn't that true?

2 A You pulled one statement out and, and said that this
3 is my complete thoughts on energy efficiency, and that's not
4 true. What I did say was true, that IOUs are in the business
5 of making money as any for-profit industry is.

6 Q As Calcs-Plus is; is that true?

7 A We're -- we based on our profits, based on reputation
8 and our reputation for saving electricity versus selling
9 electricity.

10 MR. BRYAN: And I would just like to ask the witness
11 if he can identify the blog, if that's necessary, so that we
12 can move it into evidence.

13 COMMISSIONER DEASON: You may distribute it.

14 BY MR. BRYAN:

15 Q And, Mr. Klongerbo, can you identify the first page
16 of the document that I handed to you as comments that you wrote
17 on the RESNET Blog?

18 A That's correct.

19 COMMISSIONER DEASON: Do you wish to have this
20 identified?

21 MR. BRYAN: Yes, sir.

22 COMMISSIONER DEASON: Exhibit Number 21.

23 (Exhibit Number 21 marked for identification.)

24 MR. BRYAN: And, sir, if it's appropriate, I'd like
25 to move that exhibit into evidence at this time.

1 COMMISSIONER DEASON: We'll wait until the
2 conclusion.

3 MR. BRYAN: I'm sorry. I am done. No further
4 questions.

5 COMMISSIONER DEASON: Okay. Staff?

6 MS. BROWN: No questions.

7 COMMISSIONER DEASON: Commissioners? Redirect.

8 REDIRECT EXAMINATION

9 BY MR. TAIT:

10 Q In the opening set of questions you were asked a lot
11 about criteria and rules and your opinions and all of that.
12 Rather than -- weren't you saying that, you know, to
13 specifically look at -- that the program should be monitorable,
14 that that is an appropriate criteria and rule?

15 A Yes, sir. That's correct. As --

16 Q And what would you, what would you identify as being
17 a good monitoring program that ought to be demonstrated in any
18 filing with the Public Service Commission?

19 A Any program that has basic checks and balances where
20 independent third parties can perform quality control checks,
21 there should be monitoring, feedback loop and enforcement
22 capability to ensure that field testing, execution of reports
23 is done adequately.

24 Q He referred to RESNET as the Residential Energy
25 Services Network. Are there any utility members of that group?

1 A As far as I know there are.

2 Q Do they have a set of standards about what they
3 consider to be proper monitoring techniques and testing of data
4 that's going to go into creating energy efficiency performance
5 in a particular home?

6 A Are you talking about specific raters that are also
7 employed by utilities around the country?

8 Q No. What I'm, what I'm discussing now is back over
9 on the issue of how would you quality control your data going
10 into your data bank?

11 A You should have one central database that all would
12 submit data into for quality control purposes and for modifying
13 the program as seen fit by the data that is coming into the
14 database.

15 Q Do they have any recommendations on procedures or
16 methodology that should be used to monitor and test that data
17 as it goes into the database and as it's used?

18 A There is -- there's mechanisms where the, not only
19 are the raters checked for the quality of the data, but also
20 the training providers and the HERS providers have to go
21 through periodic checks to make sure that they're keeping up
22 with the paperwork on the raters also. So it's not just
23 checking up on the raters. It's also checking up on the
24 checkers.

25 Q In your own experience, are you aware of methods that

1 are used in the state of Florida to test and monitor the data
2 that goes to create a rating?

3 A Yes, sir, I am.

4 Q Could you explain those, please?

5 A Basically the only software that we can use to
6 process a rating is through the Florida Solar Energy Center.
7 It's called the Engage Software where we actually input the
8 thermal characteristics of the house, along with the equipment
9 efficiency and our testing data on the field, out in the field,
10 input it into one central location. The house is then saved as
11 a file, sent to the Florida Solar Energy Center for
12 verification. At that point we are entered -- we are issued a
13 security code if the quality checks out, and then we can
14 actually print out the report to send to the client.

15 MR. TAIT: I have no further questions.

16 COMMISSIONER DEASON: Exhibits?

17 MR. BRYAN: I would move Exhibit Number 21.

18 COMMISSIONER DEASON: Without objection, show Exhibit
19 21 admitted.

20 (Exhibit 21 admitted into the record.)

21 MR. TAIT: I'd move Exhibit 9.

22 COMMISSIONER DEASON: Without objection, show that
23 Exhibit 9 is admitted.

24 (Exhibit 9 admitted into the record.)

25 COMMISSIONER DEASON: Thank you, sir. You may be

1 excused.

2 THE WITNESS: Thank you, sir.

3 PHILIP FAIREY

4 was called as a witness on behalf of Calcs-Plus, Inc., and,
5 having been duly sworn, testified as follows:

6 DIRECT EXAMINATION

7 BY MR. TAIT:

8 Q Would you please state your name and business,
9 please.

10 A My name is Philip Fairey. I'm Deputy Director of the
11 Florida Solar Energy Center, and that's at 1679 Clearlake Road,
12 Cocoa, Florida.

13 Q Have you prepared, I believe it's 15 pages of your --
14 do you have in front of you your prepared testimony?

15 A Yes, sir.

16 Q Can you count the number of pages?

17 A It is 15 pages.

18 Q Fifteen pages. Have you prepared 15 pages of
19 prepared testimony? Have you -- do you have any changes?

20 A No, I do not.

21 Q If I asked you the same questions, would you provide
22 the same answers to your --

23 A Yes, I would.

24 MR. TAIT: I'd like to enter the testimony into the
25 record.

1 COMMISSIONER DEASON: Without objection, it shall be
2 so inserted.

3 BY MR. TAIT:

4 Q Do you have any exhibits to that testimony?

5 A Yes, I have one.

6 MR. TAIT: And I believe that's identified as Exhibit
7 10.

8 Your witness.

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **CALCS PLUS**

3 **TESTIMONY OF PHILIP FAIREY**

4 **DOCKET NOS. 040029-EG, 040660-EG**

5 **AUGUST 12, 2005**

6 **1. Please state your name, current position and address.**

7 Philip Fairey

8 Deputy Director, Florida Solar Energy Center

9 1679 Clearlake Rd, Cocoa, FL 32922

10 **2. Please provide us your educational background and any special credentials**
11 **or training that you have received relevant to your testimony in this case.**

12 Please see attached resume—Exhibit 1

13 **3. Please provide us with your past and present professional association**
14 **memberships and positions you have held in those associations.**

15 Please see attached resume—Exhibit 1

16 **4. Please provide us with a brief statement of your background and experience**
17 **in the areas of building science, standards of building practice and programs**
18 **involving residential energy efficiency and conservation.**

19 Please see attached resume—Exhibit 1

20 **5. Please provide us with a brief statement of activities in which you have**
21 **initiated, supported, and/or managed the establishment and adoption of**
22 **standards in the areas of residential building construction practices.**

- 1 • Member of Florida Building Commission Energy Technical Advisory
- 2 Committee
- 3 • Principal developer of Florida's Building Energy Rating System under
- 4 contract with DCA
- 5 • Principal developer of RESNET Rating Method and RESNET Standards
- 6 • Active involvement over the years in MEC and IECC code process, proposing
- 7 a number of changes to the code, many of which were adopted.
- 8 • Principal author of Section 404 of the IECC 2004 Supplement on
- 9 performance-based code compliance.

10 **6. How does the Florida Building Code measure and regulate residential**
11 **building energy efficiencies in Florida?**

12 The Florida Building Code uses a predominantly performance-based approach to
13 code compliance. It establishes a "baseline" building that is used to create an
14 energy budget. The proposed building must have energy use for heating cooling
15 and hot water that equals or is less than that energy budget of the baseline
16 building in order to achieve compliance. That same performance methodology is
17 used, under worst-case conditions, to create a few prescriptive compliance
18 "packages" that may be used in lieu of the performance approach.

19 **7. Are you familiar with other jurisdictions' efforts to measure and regulate**
20 **residential building practices and, if so, can you summarize their various**
21 **approaches?**

22

1 Yes, I am familiar with many other jurisdictions' efforts. There are two basic
2 approaches to building code regulation and compliance: prescriptive and
3 performance. Prescriptive codes specify minimum requirements for each building
4 component, such as wall, ceiling, floor, etc. R-value without regard to the overall
5 energy use performance of the building. Performance codes specify the overall
6 performance that must be achieved on a whole building basis without specifying
7 specific minimum requirement for the individual components. Many codes allow
8 compliance by some combination of both methods but there are some code
9 jurisdictions that only allow compliance by one method or the other.

10 **8. Are there national standards for the development of systems for rating the**
11 **energy efficiency of buildings? If so, describe and indicate where the**
12 **standards may be found.**

13 Yes, the Residential Energy Services Network (RESNET) develops and maintains
14 national standards for Home Energy Rating Systems (HERS). These standards
15 cover accreditation of HERS Providers, training and certification of home energy
16 raters, quality assurance technical requirements for home energy ratings. See also
17 <http://www.natresnet.org/standards/default.htm>.

18 **9. How do you believe any residential program purporting to increase**
19 **residential building energy efficiencies should be measured and monitored?**

20 I believe the most effective way is through trained and certified third-party
21 inspections and testing.

22 **10. What is a building energy efficiency rating under Florida Law?**

23

1 My interpretation of the Law is that an energy efficiency rating is the statewide
2 uniform means of analyzing and comparing the relative energy efficiency of
3 buildings.

4 **11. Please give us a brief description of your involvement in the development and**
5 **implementation of the Florida Building Energy Efficiency Rating Law,**
6 **Florida Statute Chapter 553, Part VIII, Sections 553.90 et seq. and Florida**
7 **Administrative Code Rule Chapter 9B-60.**

8 Under contract with the Department of Community Affairs, I led FSEC's efforts
9 to develop and implement Florida's Building Energy Rating System or BERS.

10 We also assisted DCA with technical assistance in the development of Rule 9B-
11 60, which implements the Law and we are currently under no-cost contract with
12 DCA to provide administration of Florida's rating system.

13 **12. Are there any categories of ratings?**

14 Yes, there are three categories or Classes of Ratings. These classes are
15 determined by the nature of the data that are used in the development of the
16 rating.

17 **13. What services need to be performed to provide a rating under the various**
18 **categories?**

19 Class 3 ratings are developed based solely only on the information provided in
20 construction documents and are considered "projected" ratings because the
21 properties have not yet been constructed.

22

1 Class 2 ratings are developed based on inspection of the actual in-situ building,
2 where the energy characteristics of the building are inspected and confirmed.

3 Class 1 ratings are developed based on inspection of the energy characteristics of
4 actual in-situ building plus the results of specific tests that are performed on the
5 building to measure its air tightness and duct system integrity.

6 Class 2 and Class 1 ratings are considered “confirmed” ratings.

7 **14. What is the difference between the process of developing and completing a**
8 **code compliance form and a Class 3 rating?**

9 There is a basic underlying philosophical difference in that code compliance aims
10 to achieve minimum performance while ratings aim to achieve maximum
11 performance. Other than that, the technical differences are relatively small
12 because the Law requires that Florida’s rating system be compatible with state
13 building codes. Nonetheless, there are small differences because the “baseline”
14 building used in Florida’s code is not always exactly consistent with the HERS
15 Reference home, which, like Florida’s code baseline, is the national standard used
16 for comparison in rating systems. The Law also requires that Florida be
17 compatible with national rating system standards.

18 **15. Is there any relationship between an e-ratio developed in the process of code**
19 **compliance work and a BERS score developed in the process of a Class 3**
20 **rating? If so, explain.**

21 No, there is no relationship that can be directly correlated. In general, the lower
22 the e-Ratio the higher the BERS score but one cannot determine one number from
23 the other because their basic methods of determination are different.

1 **16. The Department has periodically reviewed both its building code and its**
2 **rules relating to regulation of rating systems. What was your role in these**
3 **activities?**

4 I serve as a voting member of the Florida Building Commission Energy Technical
5 Advisory Committee and as such am intimately involved in the periodic review
6 and maintenance of Florida's building energy codes. My organization is also
7 under no-cost contract with the Department for administration of Florida's rating
8 system and am intimately involved as their contractor in the periodic review and
9 maintenance of Florida's rating system.

10 **17. Did you provide any recommendation to the Florida Public Service**
11 **Commission when it adopted Rule 25-17.003(4)(a), F.A.C., as amended on**
12 **7/14/1996? If so, what was your recommendation and reasons therefore?**
13 **Please provide a copy of any written statement or letter that you submitted.**

14 As I recall, in consultation with the Florida Energy Office, we made a joint
15 recommendation to Mr. Jim Dean of the Florida PSC that Class A utility audits be
16 altered to use the Florida Building Energy Rating System for such audits and that
17 the rule be changed to require that utilities charge their customers for such
18 services and file a tariff with the FPSC for their full cost of such services to their
19 customers. I no longer have any written record of these transactions.

20 **18. How does Florida assure its citizens fair, impartial and accurate information**
21 **on the energy usage in their residences?**

22

1 In general, this assurance flows from the *Florida Building Energy Efficiency*
2 *Ratings Act* of 1993 (as amended in 1994), which requires that energy rating
3 system be uniform across the state and that energy ratings provided under the
4 auspices of the Act be conducted by trained and state-certified, independent third
5 parties.

6 **19. How would you measure a residential unit's energy efficiency?**

7 The best available means of assessing the relative energy efficiency of a
8 residential unit in Florida is Florida's building energy rating system.

9 **20. Recognizing that you are not an economist, but rather an educated layman,**
10 **how would you measure the cost effectiveness of any entity's program to**
11 **enhance the energy efficiency of a residential unit?**

12 I would say that the simplest means of determining the cost effectiveness of an
13 entity's efforts to enhance energy efficiency would be the cost of achieving the
14 increased energy efficiency divided by the amount of energy saved. In other
15 words, dollars expended per kWh avoided.

16 **21. In order to measure and monitor the success of any program to enhance the**
17 **energy efficiency of a residential unit, how would you assure accurate**
18 **information?**

19 The best currently available means of cost-effectively assessing energy savings in
20 homes is the Florida Building Energy Rating System.

21

1 **22. If the program's direct costs are to be paid by someone other than the**
2 **program operator, how would you assure a program designed to be effective**
3 **yet minimize the cost burden on those that pay for it?**

4 I think I would require that the cost of providing the energy efficiency be less than
5 the amortized cost of the avoided energy use.

6 **23. How would you assure maximum quality control to verify the results claimed**
7 **for the program and the persistence of those results over time?**

8 I believe that the most cost-effective means of maximizing quality control and
9 verifying energy savings is Florida's Building Energy Rating System.

10 **24. What are the accepted duct testing method(s) recognized by Florida, other**
11 **state, national and international standards?**

12 Those methods specified by ASHRAE/ANSI Standard 152-2004, "Method of
13 Test for Determining the Design and Seasonal Efficiencies of Residential Thermal
14 Distribution Systems."

15 **25. What is the difference between the testing protocols? Which is more**
16 **accurate and why?**

17 At present, there is only one nationally accepted protocol as specified in the
18 answer to question 24 above.

19 **26. Was Pressure Pan testing ever accepted by the State? If, yes, then is it still**
20 **accepted as a valid testing protocol? If no, then why not?**

21 Yes, in the past, pressure pan testing was accepted by the state as a "threshold"
22 test for the determination of acceptable duct leakage. As of the most recent
23 change to rule 9B-60 and to national standards, it is no longer an accepted test

1 protocol for duct leakage. There are multiple reasons. Among them is the fact
2 that pressure pan testing does not actually determine the leakage rate of duct
3 systems, it only determines the probable location of likely problems but not the
4 extent of the problem. Additionally, the promulgation of a national consensus
5 standard (ASHRAE/ANSI Standard 152-2004) recognized by the American
6 National Standards Institute (ANSI), first published in 2004 provides the standard
7 protocol for the measurement of duct leakage.

8 **27. Were you involved in the original residential new construction study**
9 **conducted by FPL in 1993-94 that lead to their BuildSmart program? If so,**
10 **what was your involvement?**

11 Yes, I was project manager and co-principal investigator for the FSEC portion of
12 the study (field inspections, testing, monitoring and analysis). FPL's prime
13 contractor for the development of their program implementation guidelines was
14 Quantum Consulting. FSEC also provided technical advise to Quantum on
15 program implementation.

16 **28. What was the duct testing protocol used in that study?**

17 Multiple duct testing protocols were used in the study: two different pressure pan
18 methods, two different blower door subtraction method and the duct
19 pressurization test method (duct blaster) were all used and the results were
20 compared.

21 **29. Have you or your staff at FSEC been involved in reviewing the results of any**
22 **duct tests done in homes tested by either the Petitioner or Respondent? If so,**
23 **please describe circumstances and results.**

1 Yes, for both parties. As part of our quality control procedures for Florida
2 ratings, staff of our Energy Gauge office reviews the results from each rating.
3 During these reviews, duct test results are reviewed for reasonableness and ratings
4 are sometimes returned for revision prior to registration.

5 **30. Have you or your staff at FSEC done any audits (second ratings) on homes**
6 **rated by either the Petitioner or Respondent? If so, please describe**
7 **circumstances and results.**

8 Yes, FSEC staff has performed a follow up audit and rating on one central Florida
9 residence that was originally rated by the Respondent. The follow-up was
10 performed at the request of the builder. The results were that the follow up rating
11 produced a HERS Score of 84.5, while the original rating had reported a HERS
12 Score of 86. The follow up found that duct leakage was larger than reported in
13 the original rating for the home and that actual installed window area was greater
14 than that reported by the original rating. These differences caused the follow-up
15 rating to be lower than the minimum score of 86, which was required to obtain
16 the home's Energy Star label.

17 **31. Are you aware of any studies of the differences between initial code**
18 **calculations done on homes and their subsequent as-built energy efficiency**
19 **compared to the Florida code or a BERS rating? If not studies, have you any**
20 **anecdotal or individual case(s) evidence of any differences?**

21 Yes, such studies were accomplished as a part of the FPL BuildSmart project.
22

1 **32. Have you reviewed the initial pre-filed testimony of FPL's witnesses as**
2 **submitted on July 15, 2005? If so, please comment on any concerns that you**
3 **have based on your experience and not included in your response to another**
4 **question.**

5 Yes, I have reviewed the pre-filed testimony of Mr. R. Steven Sim and Mr. Daniel
6 J. Haywood as filed on July 15. With respect to Mr. Sim's testimony, I am not
7 familiar with the EGEAS model that was used to develop the DSM cost
8 effectiveness results and am, therefore, not able to comment on those results.

9 With respect to Mr. Haywood's testimony, it is not clear to me how the program
10 intends to achieve savings any greater than 10% as compared with code
11 minimums. The "Flexible" approach requires 20% savings while the
12 "Prescriptive" approach requires only 10% savings, while there appears to be no
13 significant difference in incentives. The only incentive difference that I was able
14 to discern was a \$50 builder incentive for reaching the ENERGY STAR® level of
15 performance, which may or may not be reached with the "Flexible" approach.

16 Thus, it would appear that the program design is effectively rewarding the lower
17 10% savings level of the "Prescriptive" approach by not providing any significant
18 incentive to reach the greater 20% savings required as a minimum by the
19 "Flexible" approach. Considering the administrative costs per home are estimated
20 at \$400 for even the 10% savings level, the \$50 incentive for doubling that energy
21 savings seems quite small and it seems doubtful to me that this incentive would
22 induce many builders to participate at the higher level of performance.

23

1 **33. Have you reviewed the responses to the Petitioner's 1st Set of Interrogatories**
2 **and for Production of Documents filed by FPL on July 30, 2005? If so,**
3 **please comment on any concerns that you have based on your experience and**
4 **not included in your response to another question.**

5 No, I have not reviewed these documents.

6 **34. In administering Florida's rating law (§ 553.90 et seq., FS), please explain the**
7 **processes you use to assure quality control and to assure that Florida's**
8 **citizens receive the best, un-biased, accurate and verifiable information**
9 **about the energy efficiency of their home and as compared to other like**
10 **homes.**

11 The quality control procedures FSEC's Energy Gauge Office employs as a
12 nationally accredited Home Energy Rating System (HERS) Provider are as
13 prescribed by RESNET Standards (see
14 <http://www.natresnet.org/standards/default.htm>). In addition, the Energy Gauge
15 Office reviews each rating that is performed prior to registration of the rating and
16 occasionally performs field verification on ratings that appear questionable.
17 Florida's rating system software is configured so as to prevent the printing of the
18 ratings until they have been registered with our office and entered into the State's
19 database of ratings, which the Energy Gauge Office maintains. Florida raters are
20 also required to maintain proficiency by completing continuing education training
21 and passing written and practical exams on a triennial basis. FSEC's Energy
22 Gauge Office provides this training and the exams.

23

1 **35. Are you aware of any methods used by FPL to assure adequate quality**
2 **control and provide accurate, reliable monitoring and performance data on**
3 **their BuildSmart program? If so, please describe and evaluate.**

4 Other than meeting the Florida Building Energy Rating System requirements for
5 training and certification of Raters and review by the Energy Gauge Office of
6 Ratings that are submitted for registration, I am not aware of any additional
7 internal FPL quality control procedures or provisions within their BuildSmart
8 program. There may be some, however, I am not aware of their existence or the
9 specifics of their requirements. I am not aware of any current field monitoring of
10 home energy use by FPL at the current time.

11 **36. Do you have any recommendations, based on your experience as**
12 **administrative agent for the state's rating program, as to how the FPL and**
13 **the Commission may improve its monitoring and performance measuring**
14 **capabilities? If so, discuss.**

15 The Commission could require that all residential energy savings for utility
16 programs that are subject to energy conservation cost recovery be verified through
17 registered Class 2 (inspected in the field) or Class 1 (inspected and tested in the
18 field) confirmed Building Energy Rating System performance ratings.

19 **37. What has been the trend for the number of certified raters for the years 1995**
20 **to 2005? Please describe the significance of the number of certified raters**
21 **during this time period. What is the approximate ratio of raters directly**
22 **employed by utilities to those who are not? What is the approximate number**
23 **of active raters (10 ratings +/-year) and what is the approximate comparison**

1 **between active utility raters and others during that time frame? Please**
2 **describe the significance to trends in these categories and reasons for the**
3 **trends.**

4 This data required to answer this question will take much more time to develop
5 than has been provided by this subpoena.

6 **38. What is the interrelationship between the states BERS system and the**
7 **Energy Star Homes program? What are the similarities and differences? Is**
8 **there a threshold to achieve an Energy Star home using the BERS system?**
9 **What is that threshold and how was it developed?**

10 The EPA ENERGY STAR® program has as its basic qualification criteria a HERS
11 (BERS) score threshold of 86 points. EPA also allows “Builder Option
12 Packages” or BOPs to be used as qualification for the ENERGY STAR label. BOPs
13 are prescriptive packages that are constructed by EPA contractors using worst
14 case conditions designed to ensure that all homes, which conform to the BOPs,
15 will meet or exceed the HERS score threshold of 86 points. The threshold for
16 achieving ENERGY STAR status using Florida’s BERS system is the same – a score
17 of 86 points or greater using a Class 2 or Class 1 confirmed BERS rating. The
18 threshold was developed by EPA so as to provide energy savings of
19 approximately 30% as compared with the HERS Reference Home, which has
20 been historically based on the 1993 Model Energy Code.

21 **39. Are you aware of any minimum charges required to be charged for BERS**
22 **Audits, If so, what are the minimum charges for each classification? If, yes,**

1 **to the best of your knowledge, are there exceptions for charging these**
2 **minimums by individuals/businesses in State statutes or rules?**

3 Yes, PSC Rule 25-17.003(4)(a), F.A.C. requires that utilities charge their
4 customers for BERS ratings (Class A audits). It further requires that they file a
5 tariff with the PSC for the full cost of providing these energy rating services. I
6 have seen the tariff filings from some of the utilities in the past but I do not recall
7 the exact values quoted. However, it is my recollection that, in general, the
8 utilities have quoted higher tariffs for Class 1 and Class 2 confirmed Ratings than
9 for Class 3 projected ratings. I am not aware of the existence of any exceptions to
10 this utility requirement in any State statute or Rule.

11 **40. Does this conclude your testimony?**

12 Yes.

CROSS EXAMINATION

1
2 BY MR. BRYAN:

3 Q Thank you. Good afternoon, Mr. Fairey.

4 A Good afternoon, sir.

5 Q The last time I saw you you were about to fly off to
6 Europe. I hope your trip was successful and enjoyable.

7 A I'm much more relaxed today. Thank you.

8 Q I intend to be very brief. I had a number of
9 questions, but I will abbreviate them. I know you've got a
10 plane to catch.

11 Mr. Fairey, this is not the first time that you have
12 participated as a witness with Mr. Stroer and Mr. Klongerbo in
13 a Public Service Commission hearing, is it?

14 A No, sir.

15 Q Okay. In fact, a few years back, I believe in 2002
16 you were a witness with them in the National Home Energy Raters
17 Association where essentially that group was petitioning the
18 PSC to not allow utilities to provide energy conservation
19 ratings free of charge; isn't that correct?

20 A That's correct.

21 Q And the opinions contained in your prefiled
22 testimony, do they represent the official position of the
23 Florida Solar Energy Center?

24 A No, sir. They represent my opinions.

25 Q Your personal opinions?

1 A Yes, sir.

2 Q I'd like to refer you to your prefiled testimony
3 question number 9.

4 A Yes, sir.

5 Q And that's on Page 3. And in your -- the response to
6 that question -- well, the question is, "How do you believe any
7 residential program purporting to increase residential building
8 energy efficiencies should be measured and monitored?" And
9 your response is, "I believe the most effective way is through
10 trained and certified third-party inspections and testing."
11 And my question deals with the term "certified third-party."

12 And, in fact, in question 18 of your prefiled
13 testimony on Page 6, and the response is on Page 7, you use
14 that term again, "state-certified, independent third parties."
15 And my question to you is, the use of that term, "certified
16 third-party," you do not intend to exclude utility employees
17 who are certified under the BERS system, do you?

18 A No, sir.

19 Q And it is not your opinion as you sit here today
20 under current laws and current rules under the Florida
21 Administrative Code that FPL is required to use a HERS or BERS
22 rating in the BuildSmart Program, is it?

23 A No. I do not believe that is the case.

24 Q Thank you. Let me refer you then to your prefiled
25 testimony question number 26. And that is the -- it's on Page

1 8.

2 I apologize for that delay. Question number 26, the
3 question is, "Was the pressure pan testing ever accepted by the
4 state? If yes, then is it still accepted as a valid testing
5 protocol? If no, then why not?"

6 And the first part of your response is, "Yes, in the
7 past, pressure pan testing was accepted by the state as a
8 "threshold" test for determination of acceptable duct leakage.
9 As of the most recent change to Rule 9B-60 and to national
10 standards, it is no longer an accepted test protocol for duct
11 leakage." Do you see that, Mr. Fairey?

12 A Yes, I do.

13 Q Wouldn't it be a fair clarification of your answer
14 though that the pressure pan is no longer an accepted test
15 protocol for quantifying duct leakage for a BERS/HERS rating,
16 but it is still an accepted and valid diagnostic tool for
17 identifying the likely location of duct leaks?

18 A Yes, I would say that that's a fair clarification.

19 Q And, in fact, the pressure pan test, in your own
20 words from your deposition, the pressure pan test is, quote, an
21 excellent diagnostic tool. It does a very good job of locating
22 major duct leakage when it is within a reasonable proximity of
23 supply registers and returns. Do you agree with that?

24 A I do.

25 Q And isn't it true, Mr. Fairey, that the pressure pan

1 test is used, still used in numerous programs related to
2 building energy efficiency throughout the country for purposes
3 of identifying duct leaks?

4 A Yes, I do agree that it is often used for that. And
5 the reason it's used is because it is a good diagnostic tool
6 for doing that, and so that the leaks in the ducts can be
7 repaired.

8 Q That -- okay. And even your colleague, Neil Moyer at
9 FSEC, to your knowledge still advocates the pressure pan test
10 as a diagnostic tool for identifying duct leaks so they can be
11 repaired; isn't that true?

12 A That's correct.

13 MR. BRYAN: Commissioners, I have no further
14 questions.

15 There's one omission at the beginning of the cross.
16 I think counsel had stipulated for the parties and staff that
17 Mr. Fairey's deposition could be moved into the record. And I,
18 in my attempt to do this quickly, forgot to ask for that. I
19 have copies here.

20 COMMISSIONER DEASON: You may distribute the copies.
21 We will identify it as Exhibit 22.

22 (Exhibit Number 22 marked for identification.)

23 COMMISSIONER DEASON: Staff, do you have questions?

24 MS. BROWN: We have no questions. But I would like
25 to clarify whether the deposition that was just entered into

1 the record includes the exhibits that were part of the
2 deposition.

3 MR. BRYAN: Yes, it does.

4 COMMISSIONER DEASON: It has been identified but not
5 yet moved.

6 MS. BROWN: Right. Okay. We have no questions.

7 COMMISSIONER DEASON: Commissioners?

8 Redirect.

9 REDIRECT EXAMINATION

10 BY MR. TAIT:

11 Q On the question of the pressure pan test, if your
12 technical specifications called for a 5 percent leakage out,
13 which I guess is called a QN in the technical terms, would the
14 pressure pan identify major for that technical specification?

15 A Not very precisely. And there are many places where
16 the pressure pan test would not predict well whether or not you
17 were meeting that condition.

18 Q Does the pressure pan identify all leaks?

19 A No.

20 Q So, therefore, if you have as a technical standard
21 that this is a leak-free or tight duct system, air-conditioning
22 system, would that be measured and reflected by pressure pan?

23 A Not according to current national standards. Current
24 national standards do recognize pressure pan testing, but they
25 recognize it as a diagnostic technique to be used to determine

1 the location of leaks so that they can be repaired. Current
2 national standards recognize what amounts to duct
3 pressurization as the methodology to determine the magnitude of
4 leakage.

5 Q If you have a certified rater but -- what would a
6 certified rater do to issue a certified rating, what steps
7 would he go through?

8 A What steps would a certified rater go through to
9 issue a certified rating?

10 Q Yeah. I'm kind of referring back to the question
11 that you were asked about if you have a certified rater, does
12 that assure that you are having quality data? And so how would
13 you assure that a certified rater has quality data placed in
14 the system?

15 A Well, you know, the, the standards for raters and
16 what they are supposed to do in order to achieve what is called
17 a confirmed rating, which is what gets you the rating guide
18 that tells you how well your building stacks up against all
19 other buildings, essentially require that the rater gather data
20 either from a set of construction drawings and specifications
21 or from actual visual audits in the field for all of the
22 different components of the building and what their
23 characteristic thermal performance characteristics are for
24 walls, windows, doors, ceilings, floors, everything that you
25 can ascribe some type of energy impact on a building gets

1 gathered either one way or the other.

2 And then what raters generally do when they're
3 working particularly with new buildings and with builders is
4 they will function as consultants essentially and advisers to
5 the builder in terms of how the builder can improve the
6 efficiency of that home in order to meet some type of standard
7 or guideline.

8 Good examples are things like the ENERGY STAR®
9 Program or Build America Program or Energy Efficient Mortgage
10 Program which have standards, and the Green Homes Programs,
11 which have standards that are relative to rating scores that
12 they have, that builders have to achieve in order to qualify
13 for these labels or marketing packages that various
14 organizations and entities have. And the raters often serve as
15 advisors to builders in terms of, okay, how can I best achieve
16 this goal? My goal is to have a HERS score of, say, 86 in
17 order to qualify for ENERGY STAR®. And so what the raters will
18 do is they will provide the builder with the most
19 cost-effective means of getting from where he is right now to
20 where he wants to go. And in addition to that, the raters are
21 responsible for going on the job in order to confirm this
22 rating and to perform all of the inspections and tests that
23 might be necessary to certify that what has been proposed to be
24 done has actually been done in the field.

25 And so the rater's task is not a simple task of just

1 generating a number. It's a progression of tasks that
2 essentially amount to energy efficiency expertise that proceeds
3 from the very initiation of a project all the way through to
4 the final completion of the project.

5 Q And how do you assure that the data that's put into
6 that system is accurate?

7 A Well --

8 MR. BRYAN: Excuse me, Commissioners. I would
9 object. This is going way beyond the scope of
10 cross-examination; the last two questions did, in fact. And I
11 gave Mr. Tait some leeway, but I would object.

12 MR. TAIT: He kind of opened the subject matter by
13 talking about raters and how raters basically operate in light
14 of the BuildSmart Program.

15 COMMISSIONER DEASON: Mr. Tait, I believe you've gone
16 way beyond the scope of the cross-examination. I'd ask you to
17 move on.

18 MR. TAIT: I have no further questions.

19 COMMISSIONER DEASON: Exhibits.

20 MR. BRYAN: FPL would move Exhibit 22 into evidence.

21 COMMISSIONER DEASON: Without objection, show that
22 Exhibit 22 is admitted.

23 (Exhibit 22 admitted into the record.)

24 COMMISSIONER DEASON: I believe we have Exhibit 10.

25 MR. TAIT: I would move Exhibit 10. I'm sorry.

1 COMMISSIONER DEASON: Without objection, show that
2 Exhibit 10 is admitted.

3 (Exhibit 10 admitted into the record.)

4 COMMISSIONER DEASON: Thank you, Mr. Fairey.

5 I think we have one rebuttal witness.

6 MS. SMITH: FPL calls Mr. Dan Haywood.

7 DANIEL J. HAYWOOD

8 was called as a witness on behalf of Florida Power & Light
9 Company, and, having been duly sworn, testified as follows:

10 DIRECT EXAMINATION

11 BY MS. SMITH:

12 Q You have previously testified today, Mr. Haywood?

13 A Yes.

14 Q Have you prepared and caused to be filed 30 pages of
15 prefiled rebuttal testimony in this proceeding?

16 A Yes.

17 Q Do you have any changes or revisions to your prefiled
18 rebuttal testimony?

19 A No.

20 Q If I asked you the same questions contained in your
21 prefiled rebuttal testimony today, would your answers be the
22 same?

23 A Yes.

24 MS. SMITH: I ask that Mr. Haywood's prefiled
25 rebuttal testimony be inserted into the record.

1 COMMISSIONER DEASON: Without objection, it shall be
2 so inserted.

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **FLORIDA POWER & LIGHT COMPANY**

3 **REBUTTAL TESTIMONY OF DANIEL J. HAYWOOD**

4 **DOCKET NOS. 040029-EG, 040660-EG**

5 **SEPTEMBER 9, 2005**

6

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

8 A. My name is Daniel J. Haywood and my business address is: 700 Universe
9 Boulevard, Juno Beach, Florida 33408.

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

11 A. Yes.

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

13 A. The purpose of my testimony is to rebut the assertions of witnesses Philip
14 Fairey, Jon Klongerbo, Neil Moyer and Dennis Stroer addressing FPL's
15 Residential New Construction program (BuildSmart® or the Program). The
16 assertions raised in the testimony of Richard Dixon and Kenneth Fonorow
17 repeat assertions related to the use of the pressure pan method for duct testing
18 raised by Mr. Fairey and Mr. Klongerbo. I address these issues in the rebuttal
19 to Mr. Fairey's and Mr. Klongerbo's testimony.

20 **Q. Please briefly summarize your rebuttal testimony.**

21 A. Petitioners are confused about or ignore the intent of the BuildSmart®
22 Program. As addressed in my Direct Testimony, filed July 15, 2005, the
23 Program is designed to increase energy efficiency in the residential new home

1 construction market. It is not a rating tool. The State of Florida has adopted
2 the Building Energy Rating System (BERS) to rate the energy efficiency of
3 new homes and FPL fully supports this tool. However, the BuildSmart®
4 Program does not require a BERS Rating, nor should it. If a customer wants a
5 BERS Rating, a private rating firm may provide it. Alternatively, FPL may
6 provide it pursuant to FPL's BERS tariff on file with the Florida Public
7 Service Commission (PSC or Commission).

8
9 Additionally, Petitioners have focused considerable discussion on the
10 appropriate duct testing method for the Program. Once again, this confuses
11 the intent of the BuildSmart® Program and a BERS Rating. In sum, two
12 different duct testing protocols have been introduced – duct tester and
13 pressure pan -- and it is important to distinguish the major differences in the
14 two.

15
16 FPL's BuildSmart® Program utilizes the pressure pan technology to locate
17 duct leakage within air-conditioning ductwork. This is an accurate, cost
18 efficient method of determining both the location and magnitude of leakage.
19 The demand and energy impacts for the proposed BuildSmart® program
20 revisions are based on the utilizing the pressure pan technology.

21

1 Prior to November 2004, the pressure pan technology was an approved
2 method of testing for duct leakage for a BERS rating. After that date the duct
3 tester is the only approved method. The BERS rating requires that leakage be
4 quantified in cubic feet per minute (cfm). In order to quantify cfm leakage,
5 effective November 2004, the testing protocol has changed to require a duct
6 tester. This method determines the amount of leakage, but it does not
7 determine where the leaks are occurring. When FPL performs a BERS rating,
8 it uses this approved duct testing method.

9
10 **I. FPL's BUILDSMART® PROGRAM IS COST EFFECTIVE**

11 **Q. Mr. Klongerbo asserts on page 11, lines 19-21, of his testimony that**
12 **“FPL's BuildSmart Program was not as cost effective as it could be and**
13 **overly burdens the ratepayer when FPL applies for and receives cost**
14 **recovery.” Do you agree?**

15 **A.** No. Mr. Klongerbo's assertion is unsubstantiated. The program cost data
16 presented in “Jon Klongerbo Ex. 1”, Table 1, does not match actual
17 conservation program cost data filed with the PSC and overstates the
18 Program's achieved, cost effective cost per home for years 2002-2004.

19 **Q. Do you believe Mr. Klongerbo's suggested alternative to the proposed**
20 **modified BuildSmart® Program is a more cost-effective alternative?**

1 A. No. Mr. Klongerbo presents Table 2 to his testimony as a benchmark for
2 comparison of his proposed alternative to FPL's proposed modified
3 BuildSmart® Program. Yet the data provided in Table 2 is unsubstantiated
4 and does not detail assumptions that serve as a basis for each cost category.

5

6 First, the "Marketing – Admin" costs are unrealistically low to support and
7 manage a program in growth mode and to provide for the critical activities
8 needed to enroll new builders and sustain their participation. The activities
9 associated with these costs can be extensive and include activities such as
10 builder/trade and contractor/rater awareness, education, training, promotion,
11 coordination and general support, as well as increased outreach, marketing
12 and promotion of the Program to prospective homebuyers. Mr. Klongerbo
13 apparently disregards these activities although there is no doubt that they are
14 crucial to developing builder/homebuyer interest and participation in
15 residential new construction energy efficiency programs.

16

17 Second, the "Q.C." costs are unrealistically low to complete the inspections
18 required to verify that each home has met BuildSmart® standards. The listed
19 "Tariff" charge is not associated with energy conservation cost recovery
20 clause (ECCR) recovery, as implied by the Table's "Net ECCR Cost
21 Recovery" calculation.

22

1 Finally, the Table also appears to assume that half of the homes will receive a
2 BERS Rating under FPL's BERS Tariff, which indicates that FPL staff will be
3 performing these BERS Ratings directly. This assumption contradicts the
4 proposed modified Program's collaborative approach of working with private
5 Rater firms when a builder or homebuyer desires to achieve both
6 BuildSmart® and ENERGY STAR® and/or Florida Green Building Coalition
7 (FGBC) Green Home certification and therefore requires a BERS Rating.

8
9 Overall, Mr. Klongerbo's proposed alternate program is flawed and if his
10 assumptions were adjusted to reflect the key BuildSmart® activity costs
11 contained in the modified Program filing, his proposal would result in a higher
12 cost per home than the cost-effective proposed modified Program

13 **Q. Please respond to Mr. Klongerbo's recommendation on page 10, lines 17-**
14 **20 of his testimony that the cost effectiveness of a program should be**
15 **measured by whether the cost of the program exceeds what the private**
16 **market can provide without reimbursement from outside sources."**

17 **A.** For the same reason that it is inappropriate for Mr. Fairey to propose a new
18 cost-effectiveness test in this proceeding (See Rebuttal Testimony of Dr.
19 Steven R. Sim), it is inappropriate for Mr. Klongerbo to do so. As a
20 substantive matter, Mr. Klongerbo's suggestion is unworkable because it
21 assumes that the private market can solely achieve the benefits achieved and
22 forecasted through BuildSmart®. This assumption is false and is, in fact,
23 disproved by Mr. Klongerbo's own data. As identified in "Jon Klongerbo Ex.

1 1", Table 3, the market for BERS Ratings remains low in Florida and the
2 efforts of the private market have not induced significant participation
3 throughout the State. Based on the data provided by the Petitioners regarding
4 the number of Ratings they have completed during the past several years, it
5 appears that the private market had significantly less success in penetrating
6 the residential new construction market in FPL's service territory than the
7 BuildSmart® Program. This insight is significant because the Petitioners
8 acknowledge that a majority of the new construction market has not yet been
9 penetrated by BuildSmart®, indicating that they had ample opportunity to
10 penetrate a large portion of the un-served market through the provision of
11 their BERS Ratings services. However, adoption of their Rating services has
12 been extremely low, thus reflecting the inability of private market forces alone
13 to make a significant impact on energy efficiency in residential new
14 construction and the apparent weak value proposition that their Rating
15 services alone currently present to the builder market.

16
17 Additionally, Mr. Klongerbo's response seems to directly compare the Rater's
18 cost to provide a BERS Rating with the overall cost of performing all
19 activities associated with the BuildSmart® Program. The inspection cost
20 associated with the verification of BuildSmart®-required measures is just one
21 component of the overall Program costs and the Raters' activities are not
22 inclusive of all activities encompassed within the proposed modified
23 BuildSmart® Program.

1 **Q. Mr. Klongerbo asserts on page 16, lines 3-17, that FPL’s BuildSmart®**
2 **Program, as designed, will increase electric rates and create a “windfall**
3 **profit” to FPL to the extent of recovery of the direct and indirect costs of**
4 **the Program. Do you agree?**

5 A. No. The proposed, modified Program is cost effective based on Commission-
6 approved cost effectiveness methodologies. Under these methodologies, the
7 Program’s benefits must exceed its costs and therefore result in a net benefit
8 to FPL’s customers. Further, FPL’s recovery of BuildSmart®-related costs are
9 restricted to prudently-incurred expenses, and are recovered dollar-for-dollar
10 through the ECCR clause. FPL earns no profit on these costs, which are
11 reviewed annually by the PSC.

12 **Q. Please respond to Mr. Klongerbo’s assertion on page 11, line 22, through**
13 **page 12, line 2, that “the program as developed and proposed by FPL**
14 **results in a low percentage paid from program revenue (as opposed to**
15 **alternative program including ratings paid by customer); relatively low**
16 **participation rates; high cost per home (more than the cost of either a**
17 **utility or independent rating).”**

18 A. The proposed, modified Program eliminates program participation fees and,
19 therefore, does not have program revenues. Builders, and especially large
20 volume production builders, voiced their objections to paying per-home
21 participation fees in addition to the investments they must make to meet
22 BuildSmart® requirements. These builders believe that the cost increases
23 associated with the energy efficiency-related home upgrades necessary to

1 participate in BuildSmart® represent the “cost of entry.” In effect,
2 BuildSmart® Program participation fees act as a deterrent to production
3 builder participation, which limits the Program’s ability to fully tap this large
4 market. By tapping this large market, FPL expects to significantly increase
5 BuildSmart’s® participation rates and achieve scale economies to ensure that
6 the Program maintains cost effectiveness even with significantly increased
7 outreach, training, marketing and promotional support – all the key activities
8 necessary to create a robust residential new construction energy efficiency
9 market that will benefit all FPL customers as well as the private Ratings
10 industry.

11 **Q. Please respond to Mr. Klongerbo’s comment on page 13, lines 21-23, that**
12 **“[i]n 2004, 91% of BuildSmart® costs were borne by the aggregate**
13 **ratepayer base, whereas 0% of free market, independent operated BERS**
14 **rating activities were subsidized by the aggregate rate-payer base.”**

15 A. The BuildSmart® Program is proposed as a component of FPL’s Demand
16 Side Management (DSM) Plan. The BuildSmart® Program is cost effective
17 based on Commission-approved cost effectiveness methodologies.
18 Additionally, it is important to note the distinction between the BuildSmart®
19 Program and private Rating services. The BuildSmart® Program is designed
20 to prompt the installation of energy efficient measures and to certify that the
21 required measures have been installed in a new home, thus meeting the
22 objectives of the Florida Energy Efficiency and Conservation Act (FEECA).
23 A BERS Rating specifically includes a set of activities - described in detail in

1 Mr. Stroer's, Mr. Klongerbo's, Mr. Fairey's and Mr. Dixon's testimonies –
2 that are designed to result in a comparative energy efficiency score (HERS
3 score), as defined in Rule 9B-60.002, Florida Administrative Code, and
4 provide homeowners with associated documentation. Mr. Stroer's testimony,
5 page 5 line 19 through page 6 line 4, and Mr. Klongerbo's testimony, page 3
6 line 20 through page 4, line 10, details some of the differences between
7 BuildSmart® and the services that Raters provide. The proposed modified
8 BuildSmart® Program does not require nor directly provide a BERS Rating,
9 as provided through private Rating firms or alternatively through FPL's BERS
10 Tariff. When an FPL customer specifically requests a BERS Rating from FPL,
11 the customer is subject to FPL's BERS Tariff and pays the fees identified
12 within that Tariff. BuildSmart® in no way precludes a builder or homebuyer
13 from also seeking a BERS Rating and key BuildSmart® activities –
14 particularly outreach, training, energy analyses and promotion - are in fact
15 complementary to the services provided by Raters.

16 **Q. Do you agree with Mr. Klongerbo's statement on page 14, lines 4-7 of his**
17 **testimony that "[t]he homes rated under the BERS Program are more**
18 **cost-effective than those under the FPL program subsidized by the ECCR**
19 **fund, however, there exists no methodology to calculate the DSM savings**
20 **and effects by the substitution effect of the free-market unsubsidized**
21 **marketplace"?**

22 **A.** This is a broad assertion with no data supporting it. Just because a home has a
23 BERS Rating does not guarantee any level of energy efficiency – it is simply a

1 Rating tool. Further, Mr. Klongerbo's statement is irrelevant to the
2 Commission's decision on this matter. The relevant matter is whether the
3 BuildSmart® Program will provide cost-effective benefits to FPL's
4 customers. The proposed modified BuildSmart® Program is a voluntary
5 program and does not require a BERS Rating nor does it in any way preclude
6 builders from pursuing private BERS Rating services exclusive of
7 BuildSmart®.

8
9 In regards to free market activities, the economic justification for a builder
10 choosing a BERS Raters' services is based on the Rating firm effectively
11 marketing the value of its service and proving to the builder that its value
12 exceeds the costs of the Rating. In regard to the Gainesville Regional Utilities
13 (GRU) example cited by Mr. Klongerbo, to my knowledge, GRU does not
14 have a utility-operated residential new construction ENERGY STAR®
15 Program. The purported Rating participation levels in the Gainesville area
16 could be the result of more effective marketing and business practices of the
17 local Rating firms, possibly in cooperation with GRU, or may result in part
18 from building permitting incentives and promotion available through the City
19 of Gainesville's Green Building Program. The cooperative promotion and
20 support attributed to GRU, which the Petitioners seem to acknowledge as
21 beneficial to their business in the cited GRU example as well as in Mr.
22 Stroer's testimony (page 15, lines 5 and 6 "I see many benefits in a
23 partnership between utilities and private third party energy rating

1 companies.”), is planned at an even greater level within FPL’s proposed
2 modified Program. The proposed modified Program’s increases support of
3 ENERGY STAR® and its planned collaboration with private Raters to market
4 and implement ENERGY STAR® is expected to lead to increased
5 participation in both programs and increased demand for private Rating
6 services.

7
8 **II. FPL’S BUILDSMART® PROGRAM IS MEASURABLE AND**
9 **MONITORABLE**

10 **Q. Do you agree with Mr. Stroer’s argument on page 19, lines 5-19 that**
11 **FPL’s Program “constitutes the creation of free ratings in violation of**
12 **Commission rules, and FPL tariff schedules”?**

13 **A.** No. The Petitioners do not understand the proposed changes associated with
14 the modified program and they are inappropriately labeling the BuildSmart®
15 certification as a BERS Rating. BuildSmart® is designed to meet the
16 objectives of FEECA by prompting the installation of energy efficient
17 measures in residential new construction and by verifying that the specific
18 BuildSmart®-required measures have been installed to BuildSmart®
19 standards. The builder or homebuyer then receives certification that the home
20 was constructed to BuildSmart® standards. The proposed modified
21 BuildSmart® Program is not designed to provide builders or homebuyers with
22 a confirmed and registered BERS Rating and HERS score value. The HERS
23 score and the resulting documentation result only from a BERS Rating.

1 **Q. Mr. Stroer asserts on page 16, lines 15-17 that FPL’s Program “fails to**
2 **conform to existing state standards for information provided on the**
3 **energy efficiency performance of a residential building.” Do you agree?**

4 A. No. Under the proposed, modified Program, BuildSmart® will identify that
5 the participating home is built to a standard beyond the Florida Energy
6 Efficiency Code’s minimum requirements. However, BuildSmart® will not
7 provide a BERS Rating or provide customers with a HERS score specifically
8 identifying the home’s Rated efficiency level. If a builder or homebuyer
9 desires a HERS score and the associated HERS documentation, BuildSmart®
10 will advise them of BERS Ratings services available through private Rating
11 firms or, alternatively, available under FPL’s BERS Tariff. When a builder
12 agrees to participate in both BuildSmart® and ENERGY STAR®,
13 BuildSmart® will provide builder incentives and BuildSmart’s® activities
14 will be complimentary to the services provided by private Ratings firm,
15 thereby serving as an enabler to the private Ratings market.

16 **Q. Do you agree with Mr. Fairey’s assertion on page 7, lines 19-20 that**
17 **“[t]he best currently available means of cost-effectively assessing energy**
18 **savings in homes is the Florida Building Energy Rating System” (BERS)?**

19 A. No. First, his assertion is unsubstantiated. Also, Mr. Fairey appears to
20 misunderstand the objectives of measuring and monitoring in the context of
21 utility energy conservation programs. The objective of monitoring is to
22 determine, after the fact, how the home performed relative to the initial energy

1 and demand impact estimates. A BERS Rating would not substitute for the
2 activities FPL performs as part of its measurement and monitoring plan, which
3 includes analyzing and modeling impacts, monitoring the number of
4 participants, the program approach and the specific measures utilized by
5 participants; the electric energy and peak demand savings achieved and the
6 costs of implementing the program. Program participation and efficiency
7 upgrades will be tracked in a BuildSmart® database. FPL will monitor the
8 program's actual results on a continual basis and re-evaluate the forecasted
9 participation levels and the energy and demand impact data, as necessary,
10 over time. BuildSmart's® measurement and monitoring plan, as further
11 described in my Direct Testimony, is appropriate for this purpose.

12 **Q. Do you see problems with Mr. Fairey's suggestion on page 13, lines 15-18**
13 **of his testimony that "[t]he Commission could require that all residential**
14 **energy savings for utility programs that are subject to energy**
15 **conservation cost recovery be verified through registered Class 2**
16 **(inspected in the field) or Class 1 (inspected and tested in the field)**
17 **confirmed Building Energy Rating System performance ratings?**

18 A. Yes. If Mr. Fairey's suggestion is intended for all residential utility energy
19 savings programs, then this requirement would place an unnecessary cost
20 burden on other programs that are not targeted to new home construction.
21 Alternatively, if Mr. Fairey's suggestion is only for new home construction
22 programs, there still exists the issue that BERS is a voluntary standard and is
23 not mandated for all new homes. The proposed modified BuildSmart®

1 Program's inspection activities are not designed to provide a formal BERS
2 Rating for a home but rather are designed to efficiently and effectively verify
3 that the required BuildSmart® measures, designed to meet FEECA objectives,
4 have been installed in the home so that the home may receive BuildSmart®
5 certification. Completing a BERS Rating requires a more complex set of
6 activities that go beyond the activities required to certify a BuildSmart® home
7 and - if required for every participating BuildSmart® home - would therefore
8 result in additional program and/or participant costs. Consumers who see
9 value in receiving a confirmed BERS Rating for their home currently have the
10 voluntary option of paying for a BERS Rating from private Rating firms or
11 through FPL's BERS Tariff. However, consumers who do not desire a formal
12 BERS Rating should not be mandated to obtain one – this requirement would
13 in fact conflict with the voluntary aspect of the BERS system. This additional
14 expense, when not desired by the homebuyer or builder, will act as an
15 impediment to encouraging builders to install energy efficient measures that
16 cost effectively meet the objectives of FEECA.

17 **Q. Mr. Stroer seems to suggest on page 9, lines 18-20, of his testimony that**
18 **FPL has a “financial interest in the home being rated.” Do you agree?**

19 **A.** No. FPL does not have a financial interest in homes being rated. As required
20 by Rule 25-17.003(4), Florida Administrative Code, charges for BERS audits
21 reflect the Company's actual cost of performing such audits.

1 **Q. Please respond to Mr. Fairey’s assertion on page 5, lines 18-21, that the**
2 **“most effective way” to measure and monitor residential building energy**
3 **efficiencies is through trained and certified third-party inspections and**
4 **testing.**

5 A. As purported in Mr. Stroer’s testimony (page 16, lines 5-6), most certified
6 Raters work for utilities. Therefore, based on Mr. Fairey’s assertion,
7 BuildSmart® employees, who are trained and certified to perform Ratings,
8 would be a viable choice for performing BuildSmart® inspections. Further,
9 FPL has a robust plan for monitoring and evaluating all of its DSM programs,
10 which is handled by an outside consultant.

11 **Q. Do you agree with Mr. Klongerbo’s assertion on page 8, line 15, that the**
12 **prescriptive approach proposed by FPL provides no benefit because**
13 **there are “[n]o provisions for quality control by a 3rd party entity”?**

14 A. No. Homes participating in the BuildSmart® Prescriptive approach will be
15 subject to BuildSmart® inspections necessary to validate that required
16 BuildSmart® measures have been installed. Additionally, the Prescriptive
17 approach will provide significant benefits. The Prescriptive approach is
18 designed specifically to address production builders’ needs for simple and
19 consistent participation requirements. By designing a Program approach to
20 serve this substantial market, FPL expects significantly increased, cost-
21 effective participation that will provide benefits to all FPL customers and will
22 further meet the objectives of FEECA. Mr. Klongerbo’s assertion appears to

1 be based on the economic benefit that a private Rating firm would achieve if
2 such a firm were paid to provide Ratings for all BuildSmart®-certified homes.
3 Although the proposed, modified Program is designed to encourage increased
4 demand for Rating services through increased promotion of ENERGY
5 STAR®, the Program is specifically designed to cost effectively meet the
6 objectives of FEECA and is not solely focused on creating a business
7 opportunity for private Rating firms.

8 **Q. Mr. Stroer asserts on page 17, lines 17-19 that one of the criteria to**
9 **evaluate the energy efficiency programs at issue should be “whether the**
10 **program maximizes the use of other reasonably available resources, both**
11 **within and without FPL, and thereby minimizes its impact on the**
12 **ratepayer for cost recovery.” Do you agree with his suggestion?**

13 **A.** No. It has no basis in FEECA or the Commission’s rules and is an
14 inappropriate question because it does not provide any objective definition or
15 criteria for what might be deemed a “reasonably available resource.” The
16 Petitioners have presented no data demonstrating that the use of resources
17 outside of FPL would minimize the cost of the BuildSmart® Program.

18 **Q. Mr. Klongerbo’s recommends on page 9, lines 16-21, that “[a] third-**
19 **party, respected entity should have the authority to randomly select**
20 **homes for on-site re-inspection and re-testing of homes for adherence to**
21 **standards. This party should also have the authority to investigate**
22 **consumer complaints. In the event of non-compliance to standards of the**

1 **program, they should have the authority to administer administrative**
2 **sanctions to reflect the severity of the non-compliance.” Are there**
3 **problems with his recommendations?**

4 A. Yes. FPL is ultimately responsible for ensuring that BuildSmart® fulfills the
5 Program requirements and goals approved by the Commission. Additionally,
6 FPL is responsible for ensuring that the Program is measured and monitored
7 per the Commission-approved Plan. It is not, and should not be, the
8 responsibility of Rater entities to investigate and sanction FPL DSM-related
9 customer complaints.

10 **Q. Mr. Fairey states on page 13, lines 4-8 that, “[o]ther than meeting the**
11 **Florida Building Energy Rating System requirements for training and**
12 **certification of Raters and review by the Energy Gauge Office of Ratings**
13 **that are submitted for registration, I am not aware of any additional**
14 **internal FPL quality control procedures or provisions within their**
15 **BuildSmart program.” Please describe the quality control procedures**
16 **and provisions within the BuildSmart® Program.**

17 A. Every BuildSmart® home is inspected by trained BuildSmart®
18 representatives, many of whom are state-certified Raters. Upon identification
19 of a deficiency in any program-related measure, BuildSmart® representatives
20 notify the builder of the deficiency and will not certify the home as
21 BuildSmart® until the identified deficiency is corrected and re-inspected to
22 verify its passing status. Program participation, efficiency upgrades and

1 inspection results are tracked in a BuildSmart® database. FPL monitors the
2 Program's actual results on a continual basis and re-evaluates the forecasted
3 participation levels and the energy and demand impact data, as necessary,
4 over time.

5 **Q. Is FPL's methodology for duct testing inappropriate for BuildSmart®, as**
6 **suggested by Mr. Fairey and Mr. Moyer?**

7 A. No. The Pressure Pan Method used for the BuildSmart® Program is
8 appropriate for meeting BuildSmart® air-conditioning duct standards and for
9 identifying accurate demand and energy impacts associated with the ductwork
10 requirement. After evaluation of multiple duct testing methods, FPL's energy
11 and demand impacts were derived based on the duct testing method currently
12 in use by the Program. The duct testing protocol using the pressure pan
13 screening method, as was taught by the Florida Solar Energy Center and
14 described as a threshold test in Mr. Fairey's testimony, was selected due to its
15 ability to efficiently and cost effectively identify duct leaks for repair, an
16 important requirement in maintaining overall program cost effectiveness.
17 Because reported impacts are based on this method, it is currently the
18 appropriate method for determining whether a home complies with
19 BuildSmart® standards and for calculating demand and energy impacts
20 associated with this measure.

1 **Q. Please respond to Mr. Klongerbo’s assertion on page 6, lines 15-16 that**
2 **“[p]ressure pan testing is not a recognized protocol for duct testing for a**
3 **HERS Rating or a BERS Class 1 Rating.”**

4 **A. Mr. Klongerbo is correct that pressure pan testing is not a recognized protocol**
5 **for a BERS Class 1 Rating as of November 2004. Prior to November 2004,**
6 **the pressure pan test was a recognized protocol and, in fact, was taught as part**
7 **of the BERS training conducted by the Florida Solar Energy Center.**

8
9 FPL’s BuildSmart® Program is designed to provide certification that cost-
10 effective energy efficiency measures have been installed in a home and meet
11 BuildSmart® standards. The Program is not designed to provide a HERS
12 Rating or a BERS Class 1 Rating and, therefore, is not mandated to use the
13 duct testing protocol specified for a BERS Rating. As noted in the previous
14 response, the pressure pan method is currently the appropriate method for
15 diagnosing duct leakage for repair in BuildSmart® homes, and for quantifying
16 and reporting BuildSmart® impacts.

17 **Q. Do you agree with Mr. Klongerbo’s assertion on page 8, lines 12-14, that**
18 **the “[p]rescriptive program involves use of the Pressure Pan testing**
19 **methodology which would result in an artificially low result for leakage”?**

20 **A. No. Although leakage results will differ depending on the testing method**
21 **used, within the context of BuildSmart® Program requirements, the main**
22 **issues are whether Program reported impacts are accurate based upon the**

1 testing method used and whether the testing method is sufficient for meeting
2 program objectives of cost effectively identifying duct leaks for repair.
3 Because the BuildSmart® Program impacts were developed based upon the
4 pressure pan method, the leakage results provided by that method provide
5 accurate demand and energy impacts associated with the cost effective
6 identification of duct system leaks. It is important to note that the duct testing
7 issues raised by Mr. Klongerbo, Mr. Fairey and Mr. Moyer are applicable to
8 processes defined for the more complex BERS Rating and used to generate a
9 HERS score. The proposed modified BuildSmart® Program does not provide
10 a BERS Rating or a HERS score.

11 **Q. Mr. Stroer asserts on page 5, lines 9-15, that the duct testing method he**
12 **utilizes uncovers much more duct leakage than FPL's method. Please**
13 **respond.**

14 **A.** Based upon the data provided by Mr. Stroer, it is difficult to substantiate his
15 assertion. It is unclear whether this data was validated by an independent party
16 or whether the data is solely based on Mr. Stroer's own testing results.
17 However, there are a number of possible reasons why data may vary:

- 18 • The Petitioner and Respondent utilize different testing methods, each
19 method suitable for their own specific need but which will result in
20 different data values. As mentioned above, BuildSmart's® protocols
21 are designed to provide the most cost effective identification of duct
22 system leaks to meet BuildSmart® Program standards, not necessarily
23 to ensure a completely leak free duct system.

- 1 • The tests may have been performed on different dates and/or at
2 different times and may have been affected by changing field
3 conditions caused by worker disruption or homeowner actions.
- 4 • Basic home data, such as square footage, may be wrong in the
5 petitioner's file, leading to inaccurate results.
- 6 • At the time Mr. Stroer performed his test, homes listed in his file may
7 have failed BuildSmart® inspection and ductwork not yet been
8 repaired nor the home received final BuildSmart® certification.

9 **Q. Mr. Stroer suggests on page 6, line 9 through page 7, line 2, that homes in**
10 **a designated “BuildSmart Gold Community” failed the Program’s**
11 **“Technical Specifications of Eligibility.” Is this true?**

12 A. No. Mr. Stroer is incorrect in identifying the noted community as a
13 “BuildSmart Gold Community.” In fact, less than 1% of these homes were
14 actually certified as Gold homes under the existing BuildSmart® Program.
15 Most of the homes within this community achieve Bronze or Silver
16 classification under the existing Program. These homes are each inspected and
17 upon identification of deficiencies, using FPL inspection and testing
18 protocols, they would not be issued a BuildSmart® certificate until such
19 deficiency is corrected.

20 **Q. Does FPL refuse to share the Energy Gauge file with private raters, as**
21 **alleged by Mr. Stroer on page 9, lines 9-14?**

1 A. It is FPL's policy not to share this customer-specific data unless it has
2 permission to do so.

3

4 **III. FPL'S BUILDSMART® PROGRAM OTHERWISE COMPLIES WITH**
5 **SECTION 366.82(3), FLORIDA STATUTES, AND APPLICABLE**
6 **COMMISSION RULES AND POLICIES**
7

8 **Q. Regarding the BuildSmart® Program, Mr. Stroer states on page 10, lines**
9 **3-10, that “[i]t has been clear from the documents submitted by FPL over**
10 **the years, in support of their program and its proposed modifications,**
11 **that its achievements compared to the current national standard for an**
12 **‘energy efficient’ home, the ENERGY STAR HOME® is woefully**
13 **lacking. It is also clear that its market penetration rate is woefully low**
14 **even for its modest gains per home; that conclusion may be drawn from**
15 **their testimony for supporting a modification in their program as well as**
16 **from a review of various data that we provided them in our response to**
17 **their discovery requests.” Do you agree with Mr. Stroer’s assertions?**

18 A. No. The Program design is targeted at prompting the installation of energy
19 efficient measures that address FEECA objectives, while also minimizing the
20 likelihood of builders or homebuyers comprising overall home performance.
21 The BuildSmart® Program is not designed to exclusively certify ENERGY
22 STAR® homes; ENERGY STAR®-certified homes are just a component of
23 the overall BuildSmart® participation. However, the proposed, modified
24 Program increases support for the ENERGY STAR® program and expects to

1 achieve a significant increase in homes certified both BuildSmart® and
2 ENERGY STAR®. Also, Mr. Stroer's assertions are irrelevant. His assertions
3 reflect past Program results. These results are based on the current Program's
4 appeal to the custom, low volume home market. The proposed modified
5 Program is designed to further penetrate the residential new construction
6 market and achieve energy performance gains across the entire builder
7 market, with emphasis on the production builder market. The modified
8 Program is designed to permit builders previously unwilling to participate,
9 especially production builders, to participate at levels practical to their unique
10 target market, construction and budget needs. The modified program is
11 designed to continually work with builders to educate them and encourage
12 them to implement additional upgrades and measures that will lead to
13 increasing levels of efficiency.

14 **Q. Do you agree with Mr. Fairey's assertion on page 11, lines 16-19, that**
15 **"the [BuildSmart®] Program design is effectively rewarding the lower**
16 **10% savings level of the 'Prescriptive' approach by not providing any**
17 **significant incentive to reach the greater 20% savings required as a**
18 **minimum by the 'Flexible' approach"?**

19 **A.** No. A basic flaw in Mr. Fairey's assertion relates to his lack of understanding
20 of the builder market and builder-perceived incentives. Builders see value in
21 the differentiation and competitive positioning provided through the
22 BuildSmart® or BuildSmart® plus ENERGY STAR® or FGBC certification,
23 and their primary demand, before or in addition to cash incentives, relates to

1 all the additional outreach, training, marketing and promotional services
2 provided through BuildSmart®. The value they perceive from these efforts is
3 a strong motivator for their participation and the distinction provided by
4 participating at the BuildSmart® plus ENERGY STAR® and/or FGBC level
5 provides motivation for achieving this level, if the builder can practically do
6 so.

7 **Q. Does the proposed modified Program encourage builders to incorporate**
8 **energy efficient measures in homes?**

9 A. Yes. The proposed modified Program is designed to recognize the critical
10 role that the builder plays in the "customer chain" by developing program
11 approaches more aligned with the needs of custom and production builder
12 markets. FPL will initially work with builders to identify the program
13 approach that best suits them. Builders willing to pursue the higher levels of
14 efficiency will be recognized for achieving both BuildSmart® and ENERGY
15 STAR® and/or FGBC certification - the incentive being added differentiation
16 and subsequent promotion for achieving this level of efficiency - and, via the
17 HERS score provided through Rater services, homebuyers associated with
18 these builders will receive explicit information and detailed reports regarding
19 a home's energy efficiency score, which serves as a further incentive for the
20 builder to participate. Builders unwilling to achieve the highest level of
21 efficiencies, due to target market and/or construction budget issues, yet still
22 willing to implement upgraded measures that provide cost effective benefits to
23 FPL customers will receive recognition of BuildSmart® certification only.

1 Providing both a Prescriptive approach and a Flexible approach ensures that
2 FPL is not leaving cost effective DSM "on the table."

3
4 FPL expects the Prescriptive approach to initially appeal to production
5 builders previously unwilling to participate due to perceived complexity and
6 cost of a flexible approach and FPL expects, at least initially, a substantial
7 number of new production builder homes to participate via the Prescriptive
8 approach. As BuildSmart® develops strong relationships with production
9 builders and develops recognition as the builder's energy expert, the Program
10 will continually encourage these builders to progressively increase the energy
11 efficient measures included in their homes as a means to strengthen their
12 competitive position and differentiation within the residential new
13 construction market.

14 **Q. Do you believe the question of whether Mr. Klongerbo or Mr. Stroer have**
15 **lost business due to FPL's BuildSmart® Program is relevant to the**
16 **Commission's consideration of the proposed Program modifications?**

17 A. No. FPL submits that Calcs-Plus' competitive economic interests in this
18 Docket are not of the kind the Commission is charged to protect. In addition,
19 the example of lost business that is cited in Mr. Klongerbo's testimony (page
20 3, line 8), Accessible Structures Inc., is a business that, to my knowledge,
21 never participated in the BuildSmart® Program. Therefore, it is difficult to
22 understand how Calcs Plus can claim lost business due to BuildSmart®. To
23 the contrary, one of Calcs Plus' most apparent Ratings business successes is

1 the WCI Communities' project in Venice, referenced in Mr. Stroer's
2 testimony (page 14, line 3). This builder is one of BuildSmart's® most active
3 participants and sees the strong value proposition that results from achieving
4 both BuildSmart® and Green Building certification. This example actually
5 illustrates the potential that the proposed, modified Program presents for
6 increasing demand for Ratings and for achieving a win-win-win collaborative
7 approach that benefits builders, private Raters and FPL's customers through
8 increased incorporation of cost effective, energy efficient measures in new
9 homes.

10 **Q. Mr. Klongerbo asserts on page 17, lines 7-18, that FPL's BuildSmart®**
11 **Program grants "undue and/or unreasonable preferences and or**
12 **advantages to certain persons contrary to § 366.03, F.S." Do you agree**
13 **with his analysis?**

14 A. I am not an attorney and do not profess to testify as to whether a statute has
15 been violated. However, I can respond to Mr. Klongerbo's analysis. Clearly,
16 Mr. Klongerbo's analysis is flawed. Both Mr. Stroer and Mr. Klongerbo point
17 out in their testimony that there is a distinction between the services they
18 provide – BERS Ratings - and the basic BuildSmart® certification. Therefore,
19 it is difficult to understand why Mr. Klongerbo perceives BuildSmart® to be a
20 competitor as opposed to being an ally in promoting energy efficiency within
21 the residential new construction market. Mr. Stroer's own testimony states
22 that he believes there are benefits in partnering with a utility. Also, because

1 the Program is cost effective based on Commission-approved methodologies,
2 all FPL customers benefit from this Program.

3 **Q. Do you believe that Mr. Klongerbo's assertion on page 5, lines 18-19 that**
4 **"[t]here are areas in the State where energy-efficiency programs thrive**
5 **with a participation fee or charges for services" is relevant or appropriate**
6 **for the Commission's consideration of whether FPL's Program will have**
7 **greater penetration if participation fees for builders are eliminated?**

8 A. No. Mr. Klongerbo's assertion is unsubstantiated. Notwithstanding this issue,
9 FPL did not infer that the fee is a barrier – rather, builders directly told FPL
10 that the BuildSmart® participation fee is a barrier to participation. This point
11 is further evidenced by the fact that even though Mr. Klongerbo claims that a
12 miniscule charge - such as the current cost associated with BuildSmart®
13 participation or the cost of a BERS Rating - should not be an inhibitor,
14 production builders have apparently been reluctant to participate in
15 BuildSmart® or BERS Ratings services to date. So it is apparent that builders
16 do scrutinize all extra expenses that impact the construction budget.
17 Furthermore, Mr. Stroer's response on page 9, lines 11-14, provides solid
18 reasoning for the elimination of the BuildSmart® participation fees. With the
19 BuildSmart® participation fee eliminated, the builder only has to pay the
20 BERS Rating fees for homes certified both BuildSmart® and FGBC and/or
21 ENERGY STAR®, and the builder could then use the money previously
22 incurred in paying BuildSmart® participation fees to invest in additional
23 energy efficient measure upgrades. The Rater would also benefit by having an

1 additional partner – BuildSmart® – providing key activities that will result in
2 sustained builder participation.

3 **Q. Please respond to Mr. Klongerbo’s comment that eliminating**
4 **BuildSmart® participation fees and providing incentives to builders**
5 **seeking ENERGY STAR® certification “is contradictory to the reason**
6 **for eliminating participation fees to increase market penetration.” (Page**
7 **7, lines 5-7).**

8 A. Again, Mr. Klongerbo’s assertion reflects a lack of understanding of the
9 proposed, modified Program. Mr. Klongerbo does not understand this
10 component of the Program. The participation fees relate to the BuildSmart®
11 certification. A BERS Rating is required by ENERGY STAR® and by FGBC,
12 not by BuildSmart®. With the current Program design, a builder’s cost to
13 participate in BuildSmart® and ENERGY STAR® or FGBC includes 1) cost
14 of measure upgrades, 2) BuildSmart® fees (when Silver or Bronze level) and
15 3) Rater’s fees (for BERS Rating). Eliminating the BuildSmart® fee actually
16 will allow the builder to budget for additional energy efficiency measures
17 using the savings resulting from not incurring the BuildSmart® participation
18 fee. Also, under the proposed, modified Program, builders will receive
19 enhanced promotional support from FPL.

20 **Q. Do you agree with Mr. Klongerbo’s suggestion on page 8, lines 1-5, that**
21 **the proposed modifications to BuildSmart® creates confusion because**

1 **there is “no distinction” between the Flexible and Prescriptive**
2 **approaches?**

3 A. No. Again, Mr. Klongerbo’s assertion reflects a misunderstanding of the
4 proposed, modified Program. The current system of “levels” did not prove
5 effective because it created homebuyer confusion. The proposed redesigned
6 Program is designed to recognize the critical role that the builder plays in the
7 “customer chain” by developing program approaches aligned with the needs
8 of custom and production builder markets – each program approach suited to
9 key builder markets. FPL will initially work with each builder to identify the
10 program approach that best suits them. Through BuildSmart®, homebuyers
11 will gain assurance and certification that their homes include measures that
12 meet FPL BuildSmart® standards and exceed minimal code requirements.
13 Additionally, builders participating in both BuildSmart® and ENERGY
14 STAR® will receive recognition of participation at this level and through the
15 collaborative effort of the builder, FPL and the builder’s Rater, will receive a
16 HERS score and report detailing their home’s specific energy efficiency level.

17 **Q. Mr. Klongerbo asserts on page 15, lines 3-23, that the ENERGY STAR®**
18 **program “should be integrated into any Florida program encouraging**
19 **energy efficient building practices.” Do you agree?**

20 A. Yes. In fact, FPL’s proposed modified BuildSmart® Program will enhance the
21 Program’s support of ENERGY STAR® through increased outreach and
22 builder incentives. As ENERGY STAR® participation criteria is modified,

1 BuildSmart® representatives will educate local builders on these changes and
2 provide recommendations for how builders may achieve ENERGY STAR®
3 certification under revised criteria. All of these activities will further facilitate
4 builders' involvement in ENERGY STAR®. Additionally, builder incentives,
5 such as cooperative advertising incentives of up to \$50 per home, will be
6 available to builders for qualifying BuildSmart® homes that also achieve
7 certification through the ENERGY STAR® program. Finally, eliminating
8 BuildSmart® participation fees and providing incentives to builders further
9 strengthens BuildSmart's® ability to partner with private Raters, thereby
10 creating a complement of services to those builders seeking ENERGY
11 STAR® certification, and creating a collaborative approach that strengthens
12 both BuildSmart's® and the Raters' value proposition to these builders.

13 **Q. Do you have any comments on Table 4 to Mr. Klongerbo's testimony?**

14 A. Yes. Mr. Klongerbo's Table 4 appears to detail BuildSmart® Program
15 statistics associated with the current Program design and BERS Program
16 statistics. It is not apparent how these statistics are relevant to the proposed,
17 modified Program as FPL seeks to eliminate the Gold, Silver and Bronze
18 levels and given that the proposed modified FPL BuildSmart® Program does
19 not provide BERS Ratings.

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

21 A. Yes.

1 BY MS. SMITH:

2 Q Have you prepared a summary of your rebuttal
3 testimony?

4 A Yes.

5 Q Would you please provide your summary to the
6 Commission?

7 A Yes.

8 Good afternoon, Commissioners. My rebuttal testimony
9 addresses Petitioners' assertion that FPL's BuildSmart program
10 amounts to free ratings in violation of Commission rules and
11 FPL tariff schedules. This assertion is incorrect. A Building
12 Energy Rating System, or BERS rating, is designed to produce a
13 specific comparative energy score for a home. BuildSmart is
14 not a rating tool. It is designed as a comprehensive program
15 targeted to cost-effectively increasing energy efficiency in
16 the residential new home construction market.

17 Completing a BERS rating requires a set of activities
18 that go beyond the activities required to inspect a BuildSmart
19 home. If a BERS rating was mandated for every participating
20 BuildSmart home, it would result in additional program and/or
21 participant costs ultimately impeding program participation.
22 If a builder or home buyer desires or requires a comparative
23 energy score and the associated documentation available through
24 a formal BERS rating, FPL advises them of BERS rating services
25 available through private rating firms or alternatively

1 available under FPL's BERS tariff on file with the Commission.

2 Additionally, Petitioners have focused considerable
3 discussion on the appropriate duct testing method for the
4 program, even though duct testing is just one component of the
5 overall BuildSmart certification process. Petitioners confuse
6 the intent of the BuildSmart program with the BERS rating. The
7 pressure pan methodology used by FPL's BuildSmart program to
8 locate air conditioning duct leakage is an accurate
9 cost-efficient method --

10 COMMISSIONER DEASON: Mr. Haywood, slow down just a
11 little. We're not in that big a hurry.

12 THE REPORTER: Thank you.

13 THE WITNESS: I'm sorry.

14 -- of determining both the location and magnitude of
15 leakage. Since November 2004, BERS ratings have required use
16 of the duct tester methodology instead of the pressure pan
17 methodology. The duct tester methodology specifically
18 quantifies the amount of duct system leakage, but does not
19 directly locate duct leakage for repair. To verify that a home
20 meets BuildSmart standards, it is important to effectively
21 identify the location of leaks and duct work. Use of the
22 pressure pan methodology enables FPL to do this.

23 My testimony also rebuts assertions that Petitioner's
24 suggested alternative to BuildSmart is more cost-effective.
25 Petitioners present a suggested designed based on arbitrary

1 cost allotment among cost categories and no detailed
2 explanation of their assumptions. If Petitioners' assumptions
3 were adjusted to reflect key BuildSmart activity costs
4 contained in the modified program filing, the proposal would
5 result in a higher cost per home than under the proposed
6 modified BuildSmart program.

7 Finally, my testimony rebuts the Petitioners'
8 allegations regarding lost business due to the BuildSmart
9 program. First, it is highly questionable whether the
10 Petitioners have lost business because of BuildSmart. Apart
11 from that, Calcs-Plus economic interest in providing ratings
12 are not at issue here. Even so, through increased outreach and
13 promotional activities related to the ENERGY STAR® and Green
14 Building, the proposed modified BuildSmart program has the
15 potential to increase demand for private rating services and
16 achieve a win/win/win collaborative approach that benefits
17 builders, private raters, and FPL's customers through increased
18 incorporation of cost-effective energy efficient measures in
19 new homes.

20 MS. SMITH: Mr. Haywood is available for
21 cross-examination.

22 COMMISSIONER DEASON: Mr. Tait.

23 MR. TAIT: Thank you. I will try to make this very
24 short. I do have one exhibit, I believe. What number will
25 this be?

1 COMMISSIONER DEASON: This would be 23.

2 MR. TAIT: 23.

3 (Exhibit 23 marked for identification.)

4 CROSS EXAMINATION

5 BY MR. TAIT:

6 Q Mr. Haywood, you testified that a rating would be
7 available from Florida Power and Light and charged according to
8 the BERS tariff. However, on Interrogatory 12, your answer to
9 that is that you have done 389 ratings under the category in
10 the last five years at no charge, is that correct?

11 A The response in this interrogatory indicates that,
12 correct.

13 Q You also stated -- in an earlier deposition we
14 discussed technical standards, and that one of the technical
15 standards of the BuildSmart Program is that you have a five
16 percent -- what is called in technical terms a QN. In other
17 words, five percent duct leakage on the conditioned air space,
18 is that correct?

19 A Correct. Our technical standard represents, and our
20 current standards represent five percent leakage. And we
21 currently use the pressure pan method as the threshold test to
22 determine if a home meets that threshold. Essentially what we
23 do is we use the pressure pan to calculate and use a certain
24 value as a measurement to determine whether a home meets that
25 standard. And that is a methodology that was incorporated into

1 the program many years ago and has been used effectively for
2 many years. It's a methodology that was previously part of
3 actually BERS. It was acceptable to BERS ratings, as well.

4 Q However, there has been testimony, is it not correct,
5 that that is no longer a valid way to measure duct leakage?

6 A No. My interpretation of the testimony was that it
7 was not a valid method for a BERS rating, not necessarily for
8 BuildSmart. We still find the pressure pan to be a very
9 effective tool, because the basis for BuildSmart, the duct work
10 is -- essentially it's about finding the leaks.

11 The analogy I could use is a hole in the tire. You
12 know, if you have got a leak, it could be a slow leak, it could
13 be a fast leak, but what is critical is that you find the leak
14 and you get it repaired. And that's what we accomplish in
15 BuildSmart is identifying leaks and getting them repaired. And
16 for the purposes of our standard, we are able to use the
17 threshold test to identify a certain value and use that for the
18 purposes of our BuildSmart standard threshold.

19 Q I would like to refer to Exhibit 20. Do you have a
20 copy of it over there?

21 A I don't believe so.

22 MS. SMITH: Do you have a copy, Mr. Haywood?

23 THE WITNESS: No, I don't.

24 BY MR. TAIT:

25 Q Have you seen this exhibit before?

1 A I have seen either this exhibit or something similar
2 to it.

3 Q This is the exhibit that Mr. Stroer was discussing as
4 part of his work in the community involved, is that correct?

5 A Yes, this appears to represent the WCI community that
6 Mr. Stroer references.

7 Q Do you recall when you were first given this exhibit
8 or a similar exhibit to it with the same data, same facts?

9 A I recall that -- yes, I recall that I received it in
10 early August.

11 Q What did you do with the exhibit? What did you do
12 with the factual underpinnings and with the exhibit as shown,
13 where it showed that very few of the BuildSmart homes in that
14 particular location that were tested passed your BuildSmart
15 technical standard?

16 A I have reviewed this exhibit and the allegation that,
17 you know, the data represents homes that pass or that don't --
18 allegedly don't meet BuildSmart standards. I have reviewed it
19 and our program management has reviewed it as well.

20 Q Does it not demonstrate a failure of monitoring
21 and/or testing the data that is in the system in your Florida
22 Power and Light BuildSmart data bank?

23 A No, I don't believe this data demonstrates that.
24 There would be a number of assumptions, a number of issues that
25 would have to be overcome to even draw any type of valid

1 conclusion from this list of data.

2 Q Did you attempt to identify whether those issues were
3 viable or not viable as far as testing this data? I believe
4 you referred to them in your rebuttal testimony.

5 A Yes, to the best of my ability. But there is
6 really -- to the best of my ability, and others within FPL come
7 to similar conclusions, it is very, very difficult to draw any
8 valid conclusions from this data. There are a number of issues
9 related to this issue, or, I'm sorry, related to this
10 spreadsheet and the data represented in it. And those issues,
11 at least some of them are described in Mr. Stroer's discussion
12 earlier. I don't know, we can go through them again, but
13 certainly there is just the fundamental issue of the source of
14 the data. It doesn't appear that it is a nonbiased source.

15 A bigger issue, and this was described, I think, by
16 Mr. Stroer earlier, is that we don't know the timing of these
17 inspections relative to the BuildSmart inspection. The
18 BuildSmart inspection could have been before Mr. Stroer's
19 inspection. And if that were the case, and assuming -- then
20 there is just a whole litany of assumptions I have to make here
21 to just talk through this. But assuming that the home passed,
22 earlier there was the discussion about the fact that there
23 could be workers in the home between the time that our test was
24 performed and supposedly Mr. Stroer's tests were performed.
25 Or, and this is very common as well, we could have failed it

1 and we could not have come back out yet for a final inspection.
2 That would be another example.

3 Also embedded within here is the consideration of
4 just the age of some of the data, and that was discussed
5 earlier, too, is that even if you could look at some of these
6 houses individually, which is another issue because we were not
7 able to identify which home is which for comparison purposes,
8 it would be difficult to discern how a test done today would
9 relate to a test done several years ago.

10 There is the general question of just, again, as it
11 relates to that last point, of not being able -- I'm sorry, two
12 points ago, of not being able to identify where these homes
13 are, how to match these homes to our database. On top of this,
14 we don't even have any ability to cross-check simple data such
15 as square footage data in here. So there is really a litany of
16 issues that preclude us from looking at this and drawing any
17 valid conclusion at this point.

18 Q Having gained this knowledge in early August, did you
19 try to take any steps at all to have this raised as a red flag?
20 Did you take any steps at all to check your database to see if
21 it was correct or not correct?

22 A I don't believe we can check our database to compare
23 this data. We don't have the specific files that represent
24 which home was which included within here. I believe it's the
25 address category listed here, it is just a code number. And we

1 don't have the customer's permission -- another issue that we
2 have embedded in here, and it has been a concern of mine since
3 I first received this data, is I have never received explicit
4 instruction from the customer that there was an allowance for
5 release of what I perceive to be confidential information.

6 And we have subsequently tried to contact the
7 customer, at least my contact there, and she has been out of
8 town. And she replied last week that she will get back with me
9 shortly. But to this date we haven't even validated that it
10 was appropriate for this data to be released in the first
11 place. So, again, there are a number of concerns.

12 Q But it was released to you directly on August 5th.
13 It showed, if you look at the front page, the first table, it
14 shows that in that community there were 456 homes built during
15 the years in question, that the sample of those homes that were
16 drawn by Calcs-Plus were 133, or 29 percent of those homes are
17 tested. And, actually, as you look at it, it's even a higher
18 percentage in the latter years.

19 As Mr. Stroer testified, he was not able, once they
20 wanted him to go back into the older homes, because there were
21 people living in those homes, and the developer/builder asked
22 not to have those homes tested, but he completed a
23 substantially higher percentage in the last several years.

24 Wouldn't that -- and of those homes, you had 200 --
25 57 percent of them were classified as silver, a little over a

1 percent is gold, so basically 59 percent of them were gold or
2 silver, and the sample showed zero gold or silver homes. And
3 then bronze, it shows 188 bronze, and it shows that of the
4 bronze only six passed all of your technical standards, but
5 that 17 --

6 MS. SMITH: Excuse me, I would ask that Mr. Tait
7 perhaps get to the question. I'm sorry, there has been be a
8 lot of --

9 BY MR. TAIT:

10 Q My question is with this kind of data in front of
11 you, why did you not take any action, and what action --
12 because you reported you basically just kind of disregarded the
13 data and didn't take any action at all.

14 A No, I don't believe that's what I said. I believe
15 what I indicated is we received a long set of data. We needed
16 to review it. Of course, initially we had confidentiality
17 concerns. We are still working through that, but we did review
18 the data. I reviewed the data, the program manager reviewed
19 the data. The feedback I received from the program manager
20 beyond the fact that there is very similar concerns from her
21 perspective, and with the people she consulted with, she is
22 very confident, based on her work, that any homes within the
23 WCI community that may be included in this list and may be
24 BuildSmart certified passed inspection to BuildSmart standards
25 at the time they would have been certified.

1 So what we end up with is we end up with a list that
2 has the number of issues that I described a few moments ago.
3 And at this point in time there is no valid conclusions we can
4 draw from this list. It is not a matter of inaction.

5 Q And that is going back to your first statement that
6 you made when you were responding to me. You said, well, this
7 is not an unbiased source, this is a biased source of
8 materials, and so, therefore, you disregard that. But after
9 the testimony of what a rating goes through to be validated and
10 to be tested as far as the data that is in that and be
11 confirmed, would you not consider that a very good source of
12 data, and then question your own source internally as to your
13 own data within the Florida Power and Light database?

14 A I believe, as I'm hearing your question, to get to
15 the point that you are at would require me to draw out through
16 all of those assumptions and issues that I described earlier.
17 And, also, another key distinction, as you just pointed out, is
18 this data as it is represented represents some form of the
19 methods included within a BERS rating, which may not reflect
20 the methods -- it may not reflect the methods in BuildSmart for
21 these particular homes. So, again, there is just a litany of
22 issues that would have to be addressed in order to draw any
23 valid conclusions from this list.

24 Q And to your knowledge, you nor anybody else at
25 Florida Power and Light has drawn any of those conclusions or

1 is working on any of those litany of issues?

2 A At this point we have not been able to draw any
3 conclusions from this list at this point.

4 MR. TAIT: I have no further questions.

5 COMMISSIONER DEASON: Staff.

6 MS. BROWN: Just one, Mr. Haywood.

7 CROSS EXAMINATION

8 BY MS. BROWN:

9 Q How does the cost of the pressure pan protocol
10 compare to the cost of the duct tester protocol?

11 A I don't know the specific dollar value cost of each.
12 I do know that the duct tester protocol is significantly more
13 resource intensive, time intensive than the pressure pan
14 methodology.

15 Q Does it require the use of more equipment than the
16 pressure pan test?

17 A Yes. My understanding is within the context of
18 the -- I will call it the duct tester methodology, additional
19 equipment is required and additional steps. Because at the end
20 of the day, quantifying leakage is not, you know, is not the
21 end all. There has to be some degree of identification as
22 well.

23 MS. BROWN: No other questions.

24 COMMISSIONER DEASON: Commissioners?

25 Redirect.

REDIRECT EXAMINATION

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

BY MS. SMITH:

Q Mr. Haywood, does FPL have as a BuildSmart technical standard a requirement that it have a leak free duct system, that the home have a leak free duct system?

A No, it does not.

Q And is the 5 percent duct test requirement the sole requirement that must be met in order to achieve BuildSmart certification?

A No. The duct testing is just one component of multiple requirements for BuildSmart.

Q Could FPL use the duct tester methodology to locate leaks instead of using the pressure pan methodology?

A To my knowledge, not directly, not the duct test.

Q So the duct tester methodology would have to be used in addition to the pressure pan if FPL were going to locate leaks?

A I'll say in addition to the duct tester, there would have to be some other procedure, some other method to locate leaks to supplement the duct tester methodology.

MS. SMITH: No further questions.

COMMISSIONER DEASON: Exhibits.

MR. TAIT: I wish to offer Exhibit 23.

COMMISSIONER DEASON: Without objection, show that Exhibit Number 23 is admitted.

1 (Exhibit 23 admitted into the record.)

2 COMMISSIONER DEASON: Okay. Staff, what is the
3 remaining schedule for the case?

4 MS. BROWN: The transcript of the hearing is due
5 October 14th. Briefs are due November 7th. Staff's
6 recommendation is due December 8th, with an agenda December
7 20th.

8 COMMISSIONER DEASON: Anything else to come before
9 the Commission at this time?

10 Hearing none. Staff?

11 MS. BROWN: Nothing, Commissioner. Thank you.

12 COMMISSIONER DEASON: Thank you all. This hearing is
13 adjourned.

14 MR. BRYAN: Thank you.

15 (The hearing concluded at 4:10 p.m.)

16

17

18

19

20

21

22

23

24

25

1 STATE OF FLORIDA)
2 COUNTY OF LEON)

CERTIFICATE OF REPORTERS

3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

WE, JANE FAUROT, RPR, and LINDA BOLES, RPR, CRR, Official Commission Reporters, do hereby certify that the foregoing proceeding was heard at the time and place herein stated.

IT IS FURTHER CERTIFIED that we stenographically reported the said proceedings; that the same has been transcribed under our direct supervision; and that this transcript constitutes a true transcription of our notes of said proceedings.

WE FURTHER CERTIFY that we are not a relative, employee, attorney or counsel of any of the parties, nor are we a relative or employee of any of the parties' attorneys or counsel connected with the action, nor are we financially interested in the action.

DATED THIS 13TH DAY OF OCTOBER, 2005.



JANE FAUROT, RPR
FPSC Official Commission
Reporter
(850) 413-6732

LINDA BOLES, RPR, CRR
FPSC Official Commission
Reporter
(850) 413-6734

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET 040029-EG

NO. 04060-EG Exhibit No. 1

Company/ FPSC Staff

Witness: Comprehensive Exhibit List

Date: 10/10/05

Comprehensive Exhibit List			
Hearing I.D. #	Witness	I.D. # As Filed	Exhibit Description
<i>Staff</i>			
✓ 1		Comprehensive Exhibit List	Comprehensive Exhibit List
✓ 2		Composite Stip-2	FPL's responses to Staff's First Set of Interrogatories (Nos. 1-10)
			FPL's responses to Staff's First Request for Production of Documents (Nos. 1 (redacted) and 2)
			FPL's Demand Side Management Annual Report, dated February 22, 2005
<i>Testimony Exhibit List</i>			
<i>FPL Direct</i>			
✓ 3	Daniel J. Haywood	DJH-1	Table 1: Homebuyer and Homebuilder Key Needs
✓ 4	Daniel J. Haywood	DJH-2	Table 2: Summary Comparison of Program Components and Features
✓ 5	Daniel J. Haywood	DJH-3	Table 3: Projected Demand and Energy Savings
✓ 6	Daniel J. Haywood	DJH-4	Table 4: Projected Participation (RCS Program)
✓ 7	Steven R. Sim	SRS-1	Cost-Effectiveness Analysis of FPL's Residential New Construction DSM Option (BuildSmart)
<i>Calcs-Plus</i>			
X 8	Dennis Stroer	DS-1	
✓ 9	Jon Klongerbo	JK-1	
✓ 10	Philip Fairey		Resume
✓ 11	Neil Moyer STIPULATED	NM-1	Resume
✓ 12	Rick Dixon STIPULATED		Attachments to pre-filed testimony (2 letters and 1 report)
✓ 13	Haywood		9.20 Depo Transcript

Comprehensive Exhibit List			
Hearing I.D. #	Witness	I.D. # As Filed	Exhibit Description
✓ 14	Haywood		Homebuyer and Homebuilder Key Needs
✓ 15	Haywood		Summary Comparison of Program Components and Features
✓ 16	Haywood		Projected Demand and Energy Savings
✓ 17	Haywood		Interrog. No. 4
✓ 18	Sim		Reps Transcript
✓ 19	Sim		Results of FPL's Cost Effectiveness Tests on BuildSmart Program
✓ 20	Stroer		9-26 Version of Prefiled Exhibits
20	Klugerbo		9-26 Version of Prefiled Exhibits
✓ 21	Klugerbo		RES Blog 6-20-05
✓ 22	Fairey		Reps Transcript
✓ 23	Haywood		Interrog. No. 12

EXHIBIT NUMBER:

2

TITLE:

STIPULATED COMPOSITE EXHIBIT 2

DOCKET NOS.:

040029-EG and 040660-EG

COMPANY:

FPL

WITNESSES:

Daniel J. Haywood and Steven R. Sim

DESCRIPTION:

COMPOSITE EXHIBIT:

- 1) FPL's responses to Staff's First Set of Interrogatories (Nos. 1 – 10)
- 2) FPL's responses to Staff's First Request for Production of Documents (Nos. 1 (redacted) and 2)
- 3) FPL's Demand-Side Management Annual Report, dated February 22, 2005

PROFFERED BY:

STAFF

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET 040029-EG +
NO. 040660-EG Exhibit No. 2
Company/ FPSC Staff
Witness: Composite Stip-2
Date: 10/10/05

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for approval of modifications to BuildSmart Program by Florida Power & Light Company))))	Docket No. 040660-EG
---	------------------	-----------------------------

In re: Petition for approval of numeric conservation goals by Florida Power & Light Company))))	Docket No. 040029-EG
		Filed: September 6, 2005

**FLORIDA POWER & LIGHT COMPANY'S
OBJECTIONS AND RESPONSES TO STAFF'S FIRST REQUEST
FOR PRODUCTION OF DOCUMENTS (NOS. 1 AND 2)
AND FIRST SET OF INTERROGATORIES (NOS. 1-10)**

Florida Power & Light Company ("FPL") submits the following Objections and Responses to the Staff of the Florida Public Service Commission's ("Staff's") First Request for Production of Documents (Nos. 1 and 2) and First Set of Interrogatories (Nos. 1-10).

I. General Objections

FPL objects to each and every request that calls for information protected by the attorney-client privilege, the work product doctrine, the accountant-client privilege, the trade secret privilege, or any other applicable privilege or protection afforded by law, whether such privilege or protection appears at the time response is first made or is later determined to be applicable for any reason. FPL in no way intends to waive such privilege or protection. The nature of the document(s) will be described in the privilege log filed/prepared by FPL.

FPL objects to providing information that is proprietary, confidential business information and customer-specific information without provisions in place to protect the confidentiality of the information. FPL in no way intends to waive claims of confidentiality.

FPL objects to each discovery request and any instructions that purport to expand FPL's obligations under applicable law.

FPL is a large corporation with employees located in many different locations. In the course of its business, FPL creates numerous documents that are not subject to Florida Public Service Commission or other governmental record retention requirements. These documents are kept in numerous locations and frequently are moved from site to site as employees change jobs or as business is reorganized. Therefore, it is possible that not every relevant document may have been consulted in developing FPL's responses. Rather, these responses provide all the information that FPL obtained after a reasonable and diligent search conducted in connection with this discovery request. To the extent that the discovery requests propose to require more, FPL objects on the grounds that compliance would impose an undue burden or expense on FPL.

FPL objects to any production location other than FPL's General Offices at 9250 West Flagler Street, Miami, Florida.

FPL objects to each request to the extent that it seeks information that is not relevant to the subject matter of this docket and is not reasonably calculated to lead to the discovery of admissible evidence. FPL expressly reserves and does not waive any and all objections it may have to the admissibility, authenticity or relevancy of the information provided in its answers to the interrogatories.

FPL objects to the instructions and/or definitions set forth in Staff's First Request for Production of Documents and First Set of Interrogatories to the extent that they purport to impose upon FPL obligations that FPL does not have under the law.

FPL objects to each and every request to the extent it is vague, ambiguous, overly broad, imprecise, or utilizes terms that are subject to multiple interpretations but are not properly

defined or explained for purposes of such discovery requests. Any responses provided by FPL to Staff's First Request for Production of Documents and First Set of Interrogatories will be provided subject to, and without waiver of, the foregoing objection.

FPL also objects to these discovery requests to the extent they call for FPL to prepare information in a particular format or perform calculations or analyses not previously prepared or performed as purporting to expand FPL's obligations under applicable law. Further, FPL objects to these interrogatories to the extent they purport to require FPL to conduct an analysis or create information not prepared by FPL in the normal course of business. FPL will comply with its obligations under the applicable rules of procedure.

FPL objects to any discovery request that calls for the creation of information, as opposed to the reporting of presently existing information, as purporting to expand FPL's obligation under the law. The Florida Rules of Civil Procedure only require FPL to produce responsive documents "that are in the possession, custody or control" of FPL. There is no obligation to create documents, records, or information that does not exist at the time of the request.

FPL objects to providing information to the extent that such information is already in the public record before the Florida Public Service Commission, or otherwise available to Staff through normal procedures.

FPL objects to each discovery request to the extent that the information requested constitutes "trade secrets" which are privileged pursuant to Sections 90.506 and 366.093(3)(a), Florida Statutes.

In addition, FPL reserves its right to count interrogatories and their sub-parts (as permitted under the applicable rules of procedure) in determining whether it is obligated to respond to additional interrogatories served by any party.

II. Specific Objections

FPL incorporates by reference all of the foregoing General Objections into each of its Specific Objections set forth below as though fully stated therein.

Staff's First Request for Production of Documents

Request for Production No. 1: FPL objects to Request for Production No. 1 to the extent the Request seeks confidential, proprietary business information. FPL objects to providing this information without adequate provisions in place to protect the confidentiality of the information.

III. Responses

Pursuant to Rule 28-106.106, Florida Administrative Code, and Rules 1.340 and 1.350, Florida Rules of Civil Procedure, Florida Power & Light Company ("FPL") responds to Staff's First Request for Production of Documents (Nos. 1 and 2) and First Set of Interrogatories (Nos. 1-10) as follows:

1. FPL incorporates its objections to Staff's First Request for Production of Documents (Nos. 1 and 2) above. FPL's responses are without waiver of those prior objections. All documents will be made available by FPL for inspection and review by Staff at FPL's General Offices at 9250 West Flagler Street, Miami, Florida during regular business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, upon reasonable notice to FPL's counsel.

2. Attached hereto are FPL's answers to Staff's First Set of Interrogatories (Nos. 1-10) consistent with its prior objections, together with the affidavit of the person providing said answers.

000004

Florida Power & Light Company
Docket No. 040660-EG
Staff's First Set of Interrogatories
Interrogatory No. 1
Page 1 of 1

Q.

Mr. Haywood stated in his direct testimony that the Prescriptive approach of the modified BuildSmart program is designed to simplify participation requirements and energy efficiency options, thereby allowing the production builders to engage in large volume discount purchases of energy efficiency measures that do not trigger housing plan modifications. List all the energy efficiency measures that the production builders will have to purchase in volume in order to convert new construction sites into BuildSmart homes using the Prescriptive approach.

A.

Measures to be proposed for each prescriptive home include high efficiency air-conditioning units (heat pumps in the Central and North climate zones when electric heating is used), increased ceiling insulation and programmable thermostats. Builders must also agree to construct their air-conditioning ductwork systems to meet BuildSmart ducted air distribution leakage standards.

000005

Q.

Given the list above, how many of these energy efficiency measures are a part of another FPL conservation program? Are there any rebates associated with these measures in other FPL conservation programs? If so, what are the rebates?

A.

FPL conservation programs for existing homes include installation of high efficiency air-conditioning (including heat pumps), increased ceiling insulation, and air conditioning duct system repairs. These programs are targeted at existing homes and are based on improvements to existing conditions. They do not specifically address the first-time installation conditions associated with new construction. The rebates associated with each of these programs are included in the tables below.

Table 1: Air Conditioning Incentives (Source: Residential Air Conditioning Program Standards April 1, 2005)

RESIDENTIAL HVAC CENTRAL STRAIGHT COOL – AIR COOLED INCENTIVE PER PARTICIPANT					
COOLING CAPACITY		SEER	SEER	SEER	SEER>=
BTUH		FROM	TO	TO	TO
		12.0	13.0	14.0	15.0
		12.9	13.9	14.9	
FROM	TO				
	<21000	\$90	\$135	\$190	\$215
21000	26999	\$120	\$175	\$250	\$285
27000	32999	\$150	\$225	\$310	\$355
33000	38999	\$180	\$265	\$375	\$430
39000	44999	\$215	\$310	\$435	\$500
45000	50999	\$240	\$355	\$500	\$575
51000	56999	\$270	\$400	\$565	\$645
57000	65000	\$300			
			\$445	\$625	\$710
SIZE BTUH		EER	EER	EER	EER
		From	To	To	To
		11.0	12.0	13.0	14.0
		To	11.9	12.9	13.9
	>65000	\$440	\$565	\$670	\$760

000006

RESIDENTIAL HVAC CENTRAL HEAT PUMPS - AIR COOLED INCENTIVE PER PARTICIPANT						
COOLING CAPACITY		FROM	SEER	SEER	SEER	SEER1
BTUH		TO	12.0	13.0	14.0	5.0
FROM	TO		12.9	13.9	14.9	>15
	<21000		\$ 75	\$110	\$155	\$195
21000	26999		\$105	\$135	\$210	\$265
27000	32999		\$130	\$185	\$260	\$330
33000	38999		\$155	\$225	\$310	\$395
39000	44999		\$180	\$260	\$360	\$465
45000	50999		\$205	\$295	\$410	\$530
51000	56999		\$230	\$335	\$465	\$595
57000	65000		\$260	\$370	\$515	\$660
SIZE BTUH		From	EER	EER	EER	EER
	>65000	To	11.0	12.0	13.0	14.0
			11.9	12.9	13.9	14.9
			\$440	\$565	\$670	\$760

RESIDENTIAL HVAC CENTRAL STRAIGHT COOL & HEAT PUMPS - WATER SOURCE INCENTIVE PER PARTICIPANT						
COOLING CAPACITY		FROM	EER	EER	EER	EER
BTUH		TO	12.0	13.0	14.0	15.0
FROM	TO		12.9	13.9	14.9	>15
9000	14999		\$105	\$135	\$160	\$180
15000	20999		\$160	\$200	\$240	\$270
21000	26999		\$210	\$265	\$315	\$360
27000	32999		\$265	\$335	\$400	\$450
33000	38999		\$320	\$400	\$475	\$535
39000	44999		\$370	\$465	\$555	\$625
45000	50999		\$425	\$535	\$635	\$715
51000	56000		\$475	\$600	\$715	\$805
57000	65000		\$540	\$675	\$795	\$910
	>65000		\$315	\$455	\$585	\$685

000007

Table 2: Insulation Incentives (Source: Residential Building Envelope Program Standards April 1, 2005)

Insulation Measures

ACCESSIBLE ATTICS

Existing R-Value	Resultant > R19
R0 - R2	11.0¢ sq. ft.
R3 - R5	6.0¢ sq. ft.
R6 - R8	3.0¢ sq. ft.
R9 - R11	1.0¢ sq. ft.

SPACE LIMITED ATTICS AND MOBILE HOMES

Existing R-Value	Resultant > R11
R0 - R2	11.0¢
R3 - R4	6.0¢

Table 3: Duct System Repair Incentives (Source: Duct System Testing and Repair Program Standards April 1, 2005)

<u>Estimated Repair Time</u>	<u>Incentive Code</u>	<u>FPL Repair Incentive</u>
<1.5 Hr	A	
1.6-2.0	B	\$38
2.1-2.5	C	\$48
2.6-3.0	D	\$58
3.1-3.5	E	\$68
3.6-4.0	F	\$77
4.1-4.5	G	\$87
4.6-5.0	H	\$96
5.1-5.5	I	\$106
5.6-6.0	J	\$115
6.1-6.5	K	\$123
6.6-7.0	L	\$131
7.1-7.5	M	\$138
7.6-8.0	N	\$146
>8.0	O	\$150
		\$154

000008

Q.

How many new homes built in FPL's service area have qualified for an Energy Star rating that were not a part of FPL's BuildSmart program? Provide details as to how these homes were qualified

A.

FPL does not possess the requested information. As Florida's HERS Provider, the Florida Solar Energy Center (FSEC) is responsible for processing and certifying HERS Ratings completed by HERS Raters. FSEC provides the EPA with information necessary to determine the number of HERS Ratings certified and the number of Ratings that also meet ENERGY STAR criteria.

Instead of pursuing ENERGY STAR certification via the HERS Ratings (performance-based) approach, a builder may choose to pursue ENERGY STAR certification via the Builder Option Packages, or BOPs, (prescriptive) approach. A builder seeking certification under this approach must follow the ENERGY STAR BOPs criteria and receives certification via an ENERGY STAR BOPs Provider. FPL is not currently a BOPs Provider.

Q.

Mr. Haywood stated on page 19, line 8, of his direct testimony that the estimated participant costs for the BuildSmart program are calculated to be \$724 per home. How did FPL arrive at this estimate? How much of this cost will be paid by FPL, directly or through rebates?

A.

Participant costs for each program approach – prescriptive and flexible - were derived through participating builder feedback on measure costs and validated against outputs from the state-approved energy analysis tool, Energy Gauge®. A weighted overall cost was determined from the expected participant costs for each approach and the forecasted participation in each approach.

None of the measure costs will be paid by FPL, directly or through rebates.

000010

Q.
On page 19, line 14, of Mr. Haywood's direct testimony, he stated that the modified BuildSmart program's administrative costs are estimated to be \$400.00 per home. Provide a detailed breakdown of these administrative costs.

A.
The breakdown of forecasted costs, estimated for each expense category, is as follows:

Expense Category	Per Home Program Administrative Costs
Payroll & Benefits	\$ 305
Materials & Supplies	\$ 4
Outside Services	\$ 21
Advertising	\$ 40
Incentives	\$ -
Vehicles	\$ 2
Other	\$ 29
Program Administrative Costs/Home	\$ 400

030011

Q.

How do the estimated administrative costs per home under the modified BuildSmart program compare to the administrative costs under the existing BuildSmart program? Provide details of any expected administrative cost increases or savings under the modified program. How does the expected change in participation levels impact the administrative costs per home?

A.

Overall per home administrative costs for the proposed modified program are forecasted to be consistent with program administrative costs for the most recent two years preceding the filing. The table below compares past program expenses, by expense categories, with expenses estimated for these same categories under the modified program.

Per Home Program Administrative Costs	2002	2003	Estimated Modified Program Component Costs
Payroll & Benefits	\$ 331	\$ 300	\$ 305
Materials & Supplies	\$ 4	\$ 9	\$ 4
Outside Services	\$ 7	\$ 27	\$ 21
Advertising	\$ 8	\$ 28	\$ 40
Incentives	\$ -	\$ -	\$ -
Vehicles	\$ 1	\$ 3	\$ 2
Other	\$ 31	\$ 38	\$ 29
Program Administrative Costs	\$ 382	\$ 405	\$ 400

The proposed modified program design places emphasis on activities designed to grow and sustain BuildSmart and ENERGY STAR participation, such as increased builder/contractor/rater awareness, education, training, coordination and general support, as well as increased outreach, marketing and promotion of the program to prospective homebuyers. The projected costs per home, estimated and apportioned by key BuildSmart activities, are listed in the table below:

Activity	Per Home Costs - By key activity
Builder Awareness, Education, Training, Support; Contractor/Rater Outreach, Training, Support; Homebuyer Outreach	\$ 116
Energy Analyses and Recommendations	\$ 57
Inspections	\$ 90
Marketing Expenses & Promotional Incentives	\$ 72
Certification and General Administrative Support	\$ 15
Program Management	\$ 16
Misc and Non-reoccurring Program Expenses	\$ 34
Total	\$ 400

000012

Q.

On page 15, lines 6 through 18, of Mr. Haywood's direct testimony, Mr. Haywood discusses FPL's marketing efforts to encourage participation in the modified BuildSmart program. Please discuss any differences in FPL's marketing approach under the modified program compared to the marketing of the existing BuildSmart program

A.

In addition to continuing to provide marketing support (examples of existing marketing support include brochures, signage, promotional assistance, recognition) to the custom builders currently participating in BuildSmart, the marketing approach for the modified program will provide specialized support to meet the more complex needs of production builders. Production builders place high value on being recognized as building high quality, energy efficient homes and desire to develop comprehensive marketing plans that highlight the energy efficient features of their homes. Under the modified program, BuildSmart representatives will be dedicated to working with participating production builders to develop and implement marketing strategies that match and complement the builder's specific marketing plans. These marketing strategies may include: collaboration with builders on the development of marketing brochures and model displays; installation of site and community signage; builder staff, builder trade and homebuyer workshops; and advertising and public relations support. Additionally, BuildSmart representatives will participate in builder outreach events targeted at educating the builder community on energy efficiency, BuildSmart, ENERGY STAR and Florida Green Building standards. These events may include workshops, trade shows and homebuilder association meetings.

000013

Q.
Provide a table for years 2005 through 2014 that shows the expected contribution made by the modified BuildSmart program to FPL's Commission-approved energy and demand savings goals.

A.
At the Meter

Year	Annual Number of Participants	Per Customer KWh	Per Customer Winter kW	Per Customer Summer kW	Total Annual KWh	Total Annual Winter kW	Total Annual Summer kW
2005	3,816	1,460	0.88	0.78	5,570,995	3,358	2,976
2006	5,344	1460	0.88	0.78	7,801,510	4,702	4,168
2007	6,945	1460	0.88	0.78	10,139,700	6,112	5,417
2008	8,335	1460	0.88	0.78	12,168,370	7,334	6,501
2009	9,170	1460	0.88	0.78	13,388,200	8,070	7,153
2010	10,084	1460	0.88	0.78	14,722,348	8,874	7,865
2011	10,084	1460	0.88	0.78	14,722,348	8,874	7,865
2012	10,084	1460	0.88	0.78	14,722,348	8,874	7,865
2013	10,084	1460	0.88	0.78	14,722,348	8,874	7,865
2014	10,084	1460	0.88	0.78	14,722,348	8,874	7,865

000014

Q.

According to Mr. Haywood's direct testimony, builders of BuildSmart homes that also achieve Energy Star certification will be eligible for an up to \$50 per home builder incentive. How will FPL determine the exact builder incentive per home?

A.

The builder incentive for a BuildSmart home that is also ENERGY STAR certified is initially set at the cost effective level of \$50 per home. As Florida Building Code changes and/or changes to ENERGY STAR criteria are announced, FPL will have to re-evaluate the builder incentive level to determine whether the initial builder incentive of \$50 is still cost effective after the changes take effect; if the initial builder incentive level is not cost effective after the changes, FPL will adjust the builder incentive to a level that maintains program cost effectiveness.

Q.
Provide lists of the typical energy efficiency upgrades anticipated under the Prescriptive and Flexible approaches of the modified BuildSmart program. Provide estimates of the impact of each of these measures on customer demand and energy usage.

A.
Energy and demand impacts for BuildSmart homes are calculated based on the relative energy performance (e-Ratio) of the whole home. Component impacts are not specifically defined for each individual home certified BuildSmart. Energy and demand impact tables, used to calculate whole house impacts, were developed using estimation techniques based on extensive engineering modeling incorporating end use monitoring data, which identified the relationship between e-Ratio values and the calibrated summer demand, winter demand and energy impacts of the home. Forecasted total program energy and demand impacts are weighted based on the forecasted participation in the prescriptive and flexible approaches.

The following table lists representative upgrades associated with the BuildSmart proposed prescriptive and flexible approaches, along with the representative estimated demand and energy impacts for a typical detached home. Actual total home energy and demand impacts will vary based on home attributes including size, climate zone and final e-Ratio score.

Component	Flexible Measures (any combination of measures recognized by EnergyGauge)		
	Summer Demand Impact (kW)	Winter Demand Impact (kW)	Annual Energy Impact (kWH)
HVAC system upgrades and sealed ductwork	1.00	0.90	1734
Building Envelope Improvements	0.07	0.25	188
Water Heating Efficiency Upgrades	0.10	0.00	176
Enforcement Inspections	0.11	0.24	261
	Basic Required Prescriptive Measures		
	Summer Demand Impact (kW)	Winter Demand Impact (kW)	Annual Energy Impact (kWH)
HVAC - Equipment upgrade (SEER 12 min) and sealed ductwork	0.45	0.37	776
Insulation Upgrade (R30 min)	0.05	0.18	147
Enforcement Inspections	0.10	0.21	228

1 A Partnership in Meeting New
2 Homebuyers' Desire for an
3 Energy-Efficient Home

4 FPL BuildSmart® and [REDACTED]



FPL®

BuildSmart®

BSm 002367

Topics

- Benefits of energy efficiency in new home construction
- Typical features of an energy efficient BuildSmart home
- Overview of FPL BuildSmart Program
 - FPL's commitment to supporting builders of energy efficient homes



FPL

BuildSmart[®]

000019

BSm 002368

Benefits of Energy Efficiency

- Long-term energy cost savings
- Greater comfort and cleaner indoor air with high-performance cooling and heating systems and sealed air ducts
- Conservation of natural resources
- Helps to lessen the need for costly, new power plants



BuildSmart[®]

Typical Energy Efficient Features of a BuildSmart Home

- High efficiency air conditioning
 - 12 SEER or greater systems with programmable thermostats
- High efficiency water heater
- R30 Ceiling Insulation
- Quality-constructed air conditioning ductwork
- Pre-wired for ceiling fans



BuildSmart[®]

FPL BuildSmart Overview

Built to a Higher Standard

Program Overview

How does BuildSmart work?

BuildSmart in 3 Steps:

1. Plans Review
2. Energy Analysis
3. Home Inspection & Certification



FPL[®]

BuildSmart[®]

FPL BuildSmart Overview

- ◆ FPL's certification program for energy efficient new homes
- ◆ Certifies individual homes, and communities
- ◆ BuildSmart homes are "Built to a Higher Standard" and exceed Florida's energy code minimum requirements
- ◆ Achieves resource conservation and long term energy cost savings through energy efficient home construction



FPL

BuildSmart

BSm 002372

FPL BuildSmart Benefits

- Homeowners achieve long term savings on energy bills
- Research shows that consumers get peace of mind from FPL certification
 - FPL uses state-certified energy raters to inspect and performance test participating homes
 - ◆ Using third party certification demonstrates the builder's attention to detail and commitment to quality



BuildSmart[®]

FPL BuildSmart

How does it work?

- ◆ Flexible, because it's performance based
- ◆ Builder can install simple, prescriptive measures or use a wide range of available measures that achieve an energy score (e-ratio) .80 or lower



BuildSmart[®]

BSm 002374

000025

BuildSmart Process: 3 Steps

- 1. Plans Review** - FPL Energy Experts review the plans of your most popular models. We'll help identify the cost-effective path to making the homes BuildSmart.
- 2. Energy Calculations (e-Ratio)** - FPL calculates future energy savings based on the BuildSmart package(s) you plan to offer.

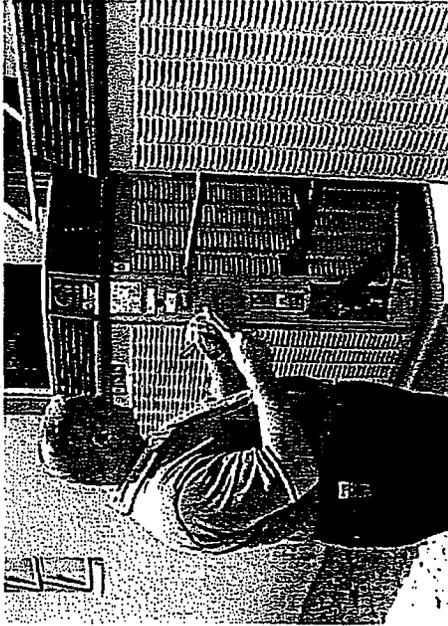


BuildSmart[®]

BuildSmart Process: 3 Steps

3. Inspection and Certification

FPL inspects every BuildSmart home.



Our Energy Experts verify that energy upgrades are in place, visually inspect workmanship of air-conditioning ductwork and perform a test selected duct systems to ensure quality workmanship and minimal conditioned air leaks.



FPL[®]

BuildSmart[®]

BSm 002376

BuildSmart Program Redesign

- Proposed Program Changes (pending regulatory approval)
 - Eliminate program participation fees
 - Allow for “prescriptive” measures - high efficiency air conditioning, extra insulation and high quality air conditioning ductwork installation
 - Allow single family attached homes to participate
 - Increase marketing and promotion of Program to prospective homebuyers through BuildSmart builder partnerships
 - Partner with ENERGY STAR® and HERS raters to provide enhanced levels of builder support and promotional incentives (\$50 promotional incentive per ENERGY STAR/BuildSmart home)



FPL

BuildSmart®

BSm 002377

1 A Partnership in Meeting
2 Homebuyers' Desire for an
3 Energy-Efficient New Home

4 FPL BuildSmart® and [REDACTED]



FPL

BuildSmart®

Topics

- Benefits of energy efficiency in new home construction
- Typical features of an energy efficient BuildSmart home
- Overview of FPL BuildSmart Program
 - FPL's commitment to supporting builders of energy efficient homes



BuildSmart[®]

Benefits of Energy Efficiency

- Long-term energy cost savings
- Greater comfort and cleaner indoor air with high-performance cooling and heating systems and sealed air ducts
- Conservation of natural resources
- Helps to lessen the need for costly, new power plants



FPL

BuildSmart

BSm 002380

000031

Typical Energy Efficient Features of a BuildSmart Home

- High efficiency air conditioning
 - 12 SEER or greater systems with programmable thermostats
- High efficiency water heater
- R30 Ceiling Insulation
- Quality-constructed air conditioning ductwork
- Pre-wired for ceiling fans



BuildSmart[®]

BSm 002381

000032

FPL BuildSmart Overview

Built to a Higher Standard

Program Overview

How does BuildSmart work?

BuildSmart in 3 Steps:

1. Plans Review
2. Energy Analysis
3. Home Inspection & Certification



FPL[®]

BuildSmart[®]

BSm 002382

000033

FPL BuildSmart Overview

- ◆ FPL's certification program for energy efficient new homes
- ◆ Certifies individual homes, and communities
- ◆ BuildSmart homes are "Built to a Higher Standard" and exceed Florida's energy code minimum requirements
- ◆ Achieves resource conservation and long term energy cost savings through energy efficient home construction



FPL[®]

BuildSmart[®]

FPL BuildSmart Benefits

- ◆ Homeowners achieve long term savings on energy bills
- ◆ Research shows that consumers get peace of mind from FPL certification
- ◆ FPL uses state-certified energy raters to inspect and performance test participating homes
- ◆ Using third party certification demonstrates the builder's attention to detail and commitment to quality



FPL[®]

BuildSmart[®]

BSm 002384

000035

FPL BuildSmart

How does it work?

- ◆ Flexible, because it's performance based
- ◆ Builder can install simple, prescriptive measures or use a wide range of available measures that achieve an energy score (e-ratio) .80 or lower



FPL[®]

BuildSmart[®]

BuildSmart Process: 3 Steps

- 1. Plans Review** - FPL Energy Experts review the plans of your most popular models. We'll help identify the cost-effective path to making the homes BuildSmart.
- 2. Energy Calculations (e-Ratio)** - FPL calculates future energy savings based on the BuildSmart package(s) you plan to offer.

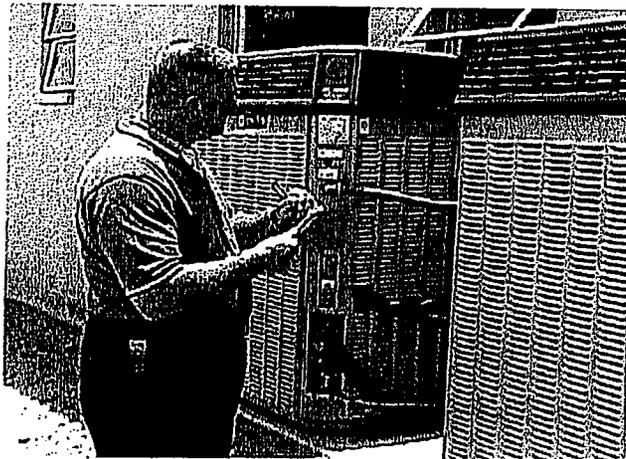


BuildSmart[®]

BuildSmart Process: 3 Steps

3. Inspection and Certification

FPL inspects every BuildSmart home.



Our Energy Experts verify that energy upgrades are in place, visually inspect workmanship of air-conditioning ductwork and performance test selected duct systems to ensure quality workmanship and minimal conditioned air leaks.



FPL[®]

BuildSmart[®]

BSm 002387

000038

BuildSmart Program Redesign

- 1 • Proposed Program Changes (pending regulatory approval)
- 2 • Eliminate program participation fees
- 3 • Allow for “prescriptive” measures - high efficiency air conditioning,
- 4 extra insulation and high quality air conditioning ductwork installation
- 5 • Allow single family attached homes to participate
- 6 • Increase marketing and promotion of Program to prospective
- 7 homebuyers through BuildSmart builder partnerships
- 8 • Partner with builder to develop custom marketing collateral (for example,
- 9  Green Building DVD)



FPL[®]

BuildSmart[®]



2005

**ENERGY STAR for Homes
Outstanding Achievement Award**

The U.S. Environmental Protection Agency recognizes

Florida Power & Light Company

for verifying more than 60 ENERGY STAR qualified homes in the past year

BSm 002389

000040



February 22, 2005

Mr. Bob Trapp, Deputy Director
Division of Economic Regulation
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Fl 32399-0850

Re: 2004 Demand Side Management Annual Report

Dear Mr. Trapp:

Pursuant to Rule 25-17.0021(5) FPL is submitting its annual report summarizing 2004 demand side management (DSM) activities and achievements.

The demand and energy goals in this report are those approved in Docket No. 991788-EG, Demand-Side Management Plan of Florida Power & Light Company, dated December 29, 1999.

Please find enclosed three (3) copies of the 2004 Demand Side Management Annual Report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ken Getchell', is written over a horizontal line.

Ken Getchell
Budget and Regulatory Supervisor

Enclosures

000041

**FLORIDA POWER & LIGHT COMPANY
DEMAND SIDE MANAGEMENT
ANNUAL REPORT 2004**

In addition to the individual program information that accompanies this report, below is a brief description of FPL's research and development efforts for 2004.

RESEARCH & DEVELOPMENT

- A. Conservation Research and Development.** Over the years, FPL has researched a wide variety of technologies to develop new Demand Side Management (DSM) programs such as Commercial/Industrial Building Envelope, Business On Call load control, and Residential New Home Construction (BuildSmart).

During 2004, FPL filed new DSM Goals which included two brand new program measures: (1) Energy Recovery Ventilators (under the CI HVAC Program), and (2) Residential Reflective Roof (under the Residential Building Envelope Program). Both of these new program measures are a direct result of research projects conducted under the Conservation R&D program.

Technology assessments for possible product development are continuing. DSM measures currently being evaluated include: (1) The Vacant Home Study - scientific field experiments to test strategies to control relative humidity, and therefore mold and mildew, in vacant homes of seasonal customers with considerations to energy consumption and peak hour electrical demand, (2) The Chilling Filter - an evaporative pre-cooler for commercial direct expansion (DX) a/c, and (3) Fuel Cells - a field test of a next-generation, small commercial fuel cell fueled by natural gas.

- B. Low Income Weatherization Program:** This program employed a combination of energy audits and incentives to encourage low-income housing administrators to perform tune-ups of Heating Ventilation and Air Conditioning (HVAC) systems and install reduced air infiltration energy efficient measures.

FPL received approval for this program in Docket No. 040049-EG, Order No. PSC-04-0359-PAA-EG, issued April 5, 2004. During 2004 there were a total of 13 installations and 4.13 kW.

- C. Photovoltaic Research, Development and Education Project (PVR&D).** The objective of this project was to work with customers to install five to ten photovoltaic roof systems in new, single family homes and small commercial facilities.

This project was completed as of December 2003. Analysis of the data was completed in January 2004 and cost effectiveness determination was made on February 5, 2004. The results indicated that the PV systems did not perform cost effectively. A report with the results was submitted to FPSC on June 17th, 2004.

000042

- D. **Green Energy Project.** Under this project FPL is providing residential customers interested in promoting renewable energy the option of participating in this voluntary program.

FPL received approval for this project in Docket No. 030752-EI, Order No. PSC-03-1442-TRF-EI issued December 22, 2003. A consummating order was issued on January 16, 2004, thereby allowing FPL to begin marketing its Green Power Pricing Program. Program accomplishments thru year end 2004 include 10,674 customer enrollments and the purchase of 9,665 MWh's of renewable energy.

OTHER CONSERVATION ACTIVITIES

- E. **Cogeneration.** The objective of this program is to facilitate the installation of cogeneration and small power production facilities.

Program accomplishments for 2004 include purchases from thirteen facilities providing energy savings of 6,448 GWHs and summer and winter demand savings of 885 MWs and 911 MWs, respectively.

000043

FLORIDA POWER & LIGHT
Comparison of Achieved kW and kWh Reductions
with Annual Target Included in Public Service Commission Approved Goals
December 31, 2004

Residential and Commercial/Industrial

Year	Winter Peak mW Reduction			Summer Peak mW Reduction			gWh Energy Reduction		
	Cumulative Total	Cumulative Commission Approved	%	Cumulative Total	Cumulative Commission Approved	%	Cumulative Total	Cumulative Commission Approved	%
	<u>Achieved</u>	<u>Goal</u>	<u>Variance</u>	<u>Achieved</u>	<u>Goal</u>	<u>Variance</u>	<u>Achieved</u>	<u>Goal</u>	<u>Variance</u>
2000	94.6	112.1	-16%	134.9	121.7	11%	188.9	160.4	18%
2001	175.2	171.2	2%	244.8	199.8	22%	400.0	275.9	45%
2002	266.7	214.1	25%	363.0	269.0	35%	606.9	393.5	54%
2003	391.5	257.2	52%	528.2	339.4	56%	803.2	514.4	56%
2004	421.8	300.2	40%	605.0	410.4	47%	964.0	637.7	51%
2005		344.8			483.6			766.8	
2006		386.1			554.2			895.8	
2007		427.0			625.0			1,025.0	
2008		467.9			696.6			1,155.6	
2009		505.4			764.7			1,266.6	

The Winter Peak, Summer Peak and Energy Reductions represent the Residential and Commercial/Industrial combined DSM effort.

Residential

Year	Winter Peak mW Reduction			Summer Peak mW Reduction			gWh Energy Reduction		
	Cumulative Total	Cumulative Commission Approved	%	Cumulative Total	Cumulative Commission Approved	%	Cumulative Total	Cumulative Commission Approved	%
	<u>Achieved</u>	<u>Goal</u>	<u>Variance</u>	<u>Achieved</u>	<u>Goal</u>	<u>Variance</u>	<u>Achieved</u>	<u>Goal</u>	<u>Variance</u>
2000	78.3	91.6	-15%	93.4	75.5	24%	123.7	91.9	35%
2001	139.4	139.0	0%	158.4	126.5	25%	231.0	178.3	30%
2002	225.2	170.0	32%	243.1	169.4	44%	350.3	267.1	31%
2003	256.0	200.4	28%	293.4	212.8	38%	434.9	357.3	22%
2004	273.6	230.1	19%	338.9	256.6	32%	526.2	448.9	17%
2005		260.6			302.0			544.2	
2006		289.0			347.0			640.9	
2007		317.2			392.6			739.3	
2008		345.7			439.4			840.3	
2009		372.4			485.9			943.2	

Commercial/Industrial

Year	Winter Peak mW Reduction			Summer Peak mW Reduction			gWh Energy Reduction		
	Cumulative Total	Cumulative Commission Approved	%	Cumulative Total	Cumulative Commission Approved	%	Cumulative Total	Cumulative Commission Approved	%
	<u>Achieved</u>	<u>Goal</u>	<u>Variance</u>	<u>Achieved</u>	<u>Goal</u>	<u>Variance</u>	<u>Achieved</u>	<u>Goal</u>	<u>Variance</u>
2000	16.4	20.5	-20%	41.5	46.2	-10%	65.2	68.5	-5%
2001	35.9	32.2	11%	86.3	73.3	18%	169.0	97.6	73%
2002	41.4	44.1	-6%	119.8	99.6	20%	256.7	126.4	103%
2003	135.5	56.8	139%	234.8	126.6	85%	368.3	157.1	134%
2004	148.2	70.1	111%	266.1	153.8	73%	437.8	188.8	132%
2005		84.2			181.6			222.6	
2006		97.1			207.2			254.9	
2007		109.8			232.4			285.7	
2008		122.2			257.2			315.3	
2009		133.0			278.8			343.4	

DEMAND SIDE MANAGEMENT ANNUAL REPORT

Utility: Florida Power and Light
 Program Name: Residential Building Envelope Program
 Program Start Date: January 1, 2001
 Reporting Period: 2004

a	b	c	d	e	f	g	h	i
Year	Total Number of Customers	Total Number of Eligible Customers	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % [d/cx100]	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % [g/cx100]	Actual Participation Over (Under) Projected Participants (g-d)
2000	3,398,802	413,886	6,851	1.66%	13,866	13,866	3.35%	7,015
2001	3,462,962	378,499	25,165	6.65%	25,014	38,880	10.27%	13,715
2002	3,525,089	342,326	41,503	12.12%	25,588	64,468	18.83%	22,965
2003	3,585,232	309,809	56,085	18.10%	17,891	82,359	26.58%	26,274
2004	3,643,479	280,563	69,106	24.63%	10,982	93,341	33.27%	24,235
2005	3,700,888	254,241	80,739	31.76%				
2006	3,757,466	230,538	91,139	39.53%				
2007	3,813,758	209,180	100,441	48.02%				
2008	3,870,300	189,924	101,272	53.32%				
2009	3,927,596	172,553	116,214	67.35%				

Annual Demand and Energy Savings

Current Year of Installation:	Per Installation		Program Total	
	@ Meter	@ Generator	@ Meter	@ Generator
Summer KW Reduction	0.18	0.20	1,981	2,190
Winter KW Reduction	0.41	0.45	4,476	4,948
(1) KWH Reduction	477	516	5,242,965	5,663,784

Utility cost per Installation \$139.80
 Total Program Cost of the Utility (Administration and Incentives) \$(000) \$1,535
 Net Benefits of Measures Installed During Reporting Period \$(000) \$22

Annual and cumulative program participants start in 2000 and do not reflect 626,989 participants in the Residential Ceiling Insulation and Conservation Window Treatment programs prior to 2000.
 (1) KWH Reduction represents one year KWH savings from 2004 installations.

00045

DEMAND SIDE MANAGEMENT ANNUAL REPORT

Utility: Florida Power and Light
 Program Name: Duct System Testing and Repair Program
 Program Start Date: January 1, 2001
 Reporting Period: 2004

a	b	c	d	e	f	g	h	i
	Total	Total	Projected	Projected	Actual	Actual	Actual	Actual
	Number of	Number of	Cumulative	Cumulative	Annual	Cumulative	Cumulative	Participation
Year	Customers	Eligible	Number of	Level %	Number of	Number of	Penetration	Over (Under)
		Customers	Program	[d/cx100]	Program	Program	Level %	Projected
			Participants		Participants	Participants		Participants
								(g-d)
2000	3,398,802	1,618,745	32,279	1.99%	11,446	11,446	0.71%	(20,833)
2001	3,462,962	1,649,303	61,412	3.72%	23,198	34,644	2.10%	(26,768)
2002	3,525,089	1,678,892	91,134	5.43%	35,206	69,850	4.16%	(21,284)
2003	3,585,232	1,707,536	121,424	7.11%	22,920	92,770	5.43%	(28,654)
2004	3,643,479	1,735,278	152,270	8.77%	17,949	110,719	6.38%	(41,551)
2005	3,700,888	1,762,620	183,661	10.42%				
2006	3,757,466	1,789,566	215,595	12.05%				
2007	3,813,758	1,816,376	248,069	13.66%				
2008	3,870,300	1,843,305	281,090	15.25%				
2009	3,927,596	1,870,594	314,661	16.82%				

Annual Demand and Energy Savings

Current Year of Installation:

Summer KW Reduction

Winter KW Reduction

(1) KWH Reduction

	Per Installation		Program Total	
	@ Meter	@ Generator	@ Meter	@ Generator
Summer KW Reduction	0.16	0.18	2,850	3,151
Winter KW Reduction	0.16	0.18	2,848	3,148
(1) KWH Reduction	324	350	5,819,737	6,286,850

Utility cost per Installation

Total Program Cost of the Utility (Administration and Incentives) \$(000)

Net Benefits of Measures Installed During Reporting Period \$(000)

\$112.44

\$2,018

\$16

* Annual and cumulative program participants start in 2000 and do not reflect 807,982 participants prior to 2000.

(256,463 Duct Maintenance and 551,519 Low Cost H.E.L.P. participants.)

(1) KWH Reduction represents one year KWH savings from 2004 installations.

000016

DEMAND SIDE MANAGEMENT ANNUAL REPORT

Utility: Florida Power and Light
 Program Name: Residential Load Management (On Call) Program
 Program Start Date: January 1, 2001
 Reporting Period: 2004

a	b	c	d	e	f	g	h	i
Year	Total Number of Customers	Total Number of Eligible Customers	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % [d/cx100]	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % [g/cx100]	Actual Participation Over (Under) Projected Participants (g-d)
2000	3,398,802	2,135,321	36,808	1.72%	41,462	41,462	1.94%	4,654
2001	3,462,962	2,126,591	50,393	2.37%	16,479	57,941	2.72%	7,548
2002	3,525,089	2,117,563	55,488	2.62%	29,975	87,916	4.15%	32,428
2003	3,585,232	2,108,299	60,582	2.87%	10,170	98,086	4.65%	37,504
2004	3,643,479	2,098,875	65,677	3.13%	2,146	100,232	4.78%	34,555
2005	3,700,888	2,089,905	70,771	3.39%				
2006	3,757,466	2,081,372	75,016	3.60%				
2007	3,813,758	2,073,550	79,262	3.82%				
2008	3,870,300	2,066,687	83,507	4.04%				
2009	3,927,596	2,060,997	86,903	4.22%				

Annual Demand and Energy Savings

Current Year of Installation:

Summer KW Reduction

Winter KW Reduction

(1) KWH Reduction

Per Installation		Program Total	
@ Meter	@ Generator	@ Meter	@ Generator
0.99	1.09	2,125	2,348
1.18	1.30	2,532	2,799
19	20	40,017	43,229

Utility cost per Installation

Total Program Cost of the Utility (Administration and Incentives) \$(000)

Net Benefits of Measures Installed During Reporting Period \$(000)

\$87.03 **
 \$62,279 **
 \$120

* Annual and cumulative program participants start in 2000 and do not reflect 615,346 participants prior to 2000.

** Utility Cost per installation is based on cumulative number of year-end 2004 installs of 715,578. Utility program costs for 2004 include O&M and Depreciation & Return expenses, and incentives paid in 2004 to active participating customers who were signed up in 2004 and in years prior to 2004.

(1) KWH Reduction represents one year KWH savings from 2004 installations.

000048

DEMAND SIDE MANAGEMENT ANNUAL REPORT

Utility: Florida Power and Light
 Program Name: Residential New Construction (Buildsmart) Program
 Program Start Date: January 1, 2001
 Reporting Period: 2004

a	b	c	d	e	f	g	h	i
Year	Total Number of Customers	Total Number of Eligible Customers	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % [d/cx100]	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % [g/cx100]	Actual Participation Over (Under) Projected Participants (g-d)
2000	3,398,802	44,386	3,140	7.07%	708	708	1.60%	(2,432)
2001	3,462,962	45,904	5,713	12.44%	1,204	1,912	4.17%	(3,801)
2002	3,525,089	45,177	8,893	19.69%	1,303	3,215	7.12%	(5,678)
2003	3,585,232	44,437	12,022	27.05%	1,668	4,883	10.99%	(7,139)
2004	3,643,479	43,717	15,099	34.54%	2,032	6,915	15.82%	(8,184)
2005	3,700,888	43,760	19,375	44.28%				
2006	3,757,466	43,788	23,855	54.02%				
2007	3,813,758	44,225	27,977	63.26%				
2008	3,870,300	45,082	32,838	72.84%				
2009	3,927,596	46,353	37,836	81.62%				

Annual Demand and Energy Savings

Current Year of Installation:

Summer KW Reduction
 Winter KW Reduction
 (1) KWH Reduction

Per Installation		Program Total	
@ Meter	@ Generator	@ Meter	@ Generator
0.96	1.06	1,948	2,153
1.08	1.20	2,198	2,429
1,794	1,938	3,646,182	3,938,837

Utility cost per Installation

Total Program Cost of the Utility (Administration and Incentives) \$(000)

Net Benefits of Measures Installed During Reporting Period \$(000)

\$286.97
 \$583
 \$119

* Annual and cumulative program participants start in 2000 and do not reflect 566 participants prior to 2000.
 (1) KWH Reduction represents one year KWH savings from 2004 installations.

000049

DEMAND SIDE MANAGEMENT ANNUAL REPORT

Utility: Florida Power and Light
 Program Name: Residential Conservation Service
 Program Start Date: January 1, 2001
 Reporting Period: 2004

a	b	c	d	e	f	g	h	i
	Total	Total	Projected	Projected	Actual	Actual	Actual	Actual
	Number of	Number of	Cumulative	Cumulative	Annual	Cumulative	Cumulative	Participation
	Customers	Eligible	Number of	Penetration	Number of	Number of	Penetration	Over (Under)
Year	Customers	Customers	Program	Level %	Program	Program	Level %	Projected
			Participants	[d/cx100]	Participants	Participants	[g/cx100]	Participants
								(a-d)
2000	3,398,802	3,398,802	50,000 - 70,000	1.5% - 2.1%	42,046	42,046	1.24%	(7,954) - (27,954)
2001	3,462,962	3,462,962	100,000 - 140,000	2.9% - 4.0%	123,952	165,998	4.79%	65,998 - 25,998
2002	3,525,089	3,525,089	150,000 - 210,000	4.3% - 6.0%	96,879	262,877	7.46%	112,877 - 52,877
2003	3,585,232	3,585,232	200,000 - 280,000	5.6% - 7.8%	109,132	372,009	10.38%	172,009 - 92,009
2004	3,643,479	3,643,479	250,000 - 350,000	6.9% - 9.6%	109,781	481,790	13.22%	231,790 - 131,790
2005	3,700,888	3,700,888	300,000 - 420,000	8.1% - 11.3%				
2006	3,757,466	3,757,466	350,000 - 490,000	9.3% - 13.0%				
2007	3,813,758	3,813,758	400,000 - 560,000	10.5% - 14.7%				
2008	3,870,300	3,870,300	450,000 - 630,000	11.6% - 16.3%				
2009	3,927,596	3,927,596	500,000 - 700,000	12.7% - 17.8%				

Annual Demand and Energy Savings
 Current Year of Installation:
 Summer KW Reduction
 Winter KW Reduction
 KWH Reduction

Per Installation		Program Total	
@ Meter	@ Generator	@ Meter	@ Generator

No demand and energy projections made for this program.

Utility cost per Installation
 Total Program Cost of the Utility (Administration and Incentives) \$(000)
 Net Benefits of Measures Installed During Reporting Period \$(000)

\$79.98
 \$8,780
 NA

* Annual and cumulative program participants start in 2000 and do not reflect 1,500,437 participants prior to 2000.

000050

DEMAND SIDE MANAGEMENT ANNUAL REPORT

Utility: Florida Power and Light
 Program Name: Commercial/Industrial Heating, Ventilating and Air Conditioning Program
 Program Start Date: January 1, 2001
 Reporting Period: 2004

a	b	c	d	e	f	g	h	i
Year	Total Number of Customers	Total Number of Eligible Customers	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % [d/cx100]	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % [g/cx100]	Actual Participation Over (Under) Projected Participants(kw) (i-d)
2000	696,495	482,803	17,482	3.62%	20,422	20,422	4.23%	2,940
2001	711,330	461,059	27,857	6.04%	17,099	37,521	8.14%	9,664
2002	726,481	440,318	38,240	8.68%	24,525	62,046	14.09%	23,806
2003	741,955	420,531	48,647	11.57%	17,706	79,752	18.96%	31,105
2004	757,759	401,655	58,882	14.66%	11,454	91,206	22.71%	32,324
2005	773,899	383,646	68,954	17.97%				
2006	790,383	366,463	78,872	21.52%				
2007	807,218	350,068	88,643	25.32%				
2008	824,412	334,423	98,276	29.39%				
2009	841,972	319,494	107,777	33.73%				

Annual Demand and Energy Savings

Current Year of Installation:

Summer KW Reduction
 Winter KW Reduction

(1) KWH Reduction

** Per Installation		Program Total	
@ Meter	@ Generator	@ Meter	@ Generator
1.00	1.11	11,454	12,661
0.07	0.08	825	912
2,855	3,084	32,704,697	35,329,694

Utility cost per Installation - kw

Total Program Cost of the Utility (Administration and Incentives) \$(000)

Net Benefits of Measures Installed During Reporting Period \$(000)

\$208.72

\$2,391

\$148

Column b - The total summer kw demand reduction for all HVAC equipment.

Column c - The total summer kw demand reduction capability of eligible HVAC equipment.

Columns d, f, g - The annual number of participants in the program expressed in summer kw demand reduction.

* Annual and cumulative program participants start in 2000 and do not reflect summer kw demand reduction of 140,924 prior to 2000.

** One summer kw equals one installation.

(1) KWH Reduction represents one year KWH savings from 2004 installations.

000051

DEMAND SIDE MANAGEMENT ANNUAL REPORT

Utility: Florida Power and Light
 Program Name: Commercial/Industrial Efficient Lighting
 Program Start Date: January 1, 2001
 Reporting Period: 2004

a	b	c	d	e	f	g	h	i
Year	Total Number of Customers	Total Number of Eligible Customers	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % [d/cx100]	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % [g/cx100]	Actual Participation Over (Under) Projected Participants(kw) (g-d)
2000	764,864	426,054	4,634	1.09%	3,293	3,293	0.77%	(1,341)
2001	781,156	409,618	7,505	1.83%	4,048	7,341	1.79%	(164)
2002	797,794	393,873	10,556	2.68%	5,386	12,727	3.23%	2,171
2003	814,787	378,787	14,299	3.77%	5,448	18,175	4.80%	3,875
2004	832,142	364,331	18,502	5.08%	5,646	23,820	6.54%	5,318
2005	849,867	350,475	23,447	6.69%				
2006	867,969	337,192	28,171	8.35%				
2007	886,457	324,456	32,683	10.07%				
2008	905,338	312,244	36,995	11.85%				
2009	924,622	300,531	41,115	13.68%				

Annual Demand and Energy Savings

Current Year of Installation:

Summer KW Reduction
 Winter KW Reduction

(1) KWH Reduction

** Per Installation		Program Total	
@ Meter	@ Generator	@ Meter	@ Generator
1.00	1.11	5,646	6,240
0.66	0.73	3,714	4,105
4,975	5,374	28,085,561	30,339,809

Utility cost per Installation - kw

Total Program Cost of the Utility (Administration and Incentives) \$(000)

Net Benefits of Measures Installed During Reporting Period \$(000)

\$116.18

\$656

\$73

Column b - The total summer kw demand reduction for all lighting equipment of C/I Customers.

Column c - The total summer kw demand reduction capability of eligible lighting equipment.

Columns d, f, g - The annual number of participants in the program expressed in summer kw demand reduction.

* Annual and cumulative program participants start in 2000 and do not reflect summer kw demand reduction of 199,324 prior to 2000.

** One summer kw equals one installation.

(1) KWH Reduction represents one year KWH savings from 2004 installations.

250000

DEMAND SIDE MANAGEMENT ANNUAL REPORT

Utility: Florida Power and Light
 Program Name: Commercial/Industrial Building Envelope
 Program Start Date: January 1, 2001
 Reporting Period: 2004

a	b	c	d	e	f	g	h	i
Year	Total Number of Customers	Total Number of Eligible Customers	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % [d/cx100]	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % [g/cx100]	Actual Participation Over (Under) Projected Participants(kw) (g-d)
2000	1,328,466	651,588	5,100	0.78%	4,111	4,111	0.63%	(989)
2001	1,356,762	641,765	8,866	1.38%	1,363	5,474	0.85%	(3,392)
2002	1,385,662	632,171	12,600	1.99%	2,853	8,327	1.32%	(4,273)
2003	1,415,176	622,795	16,302	2.62%	2,441	10,767	1.73%	(5,535)
2004	1,445,319	613,631	19,973	3.25%	4,029	14,797	2.41%	(5,176)
2005	1,476,105	604,672	23,613	3.91%				
2006	1,507,546	595,913	27,222	4.57%				
2007	1,539,656	587,348	30,801	5.24%				
2008	1,572,451	578,972	34,350	5.93%				
2009	1,605,944	570,781	37,869	6.63%				

Annual Demand and Energy Savings

Current Year of Installation:

Summer KW Reduction

Winter KW Reduction

(1) KWH Reduction

** Per Installation		Program Total	
@ Meter	@ Generator	@ Meter	@ Generator
1.00	1.11	4,029	4,454
0.16	0.17	629	695
1,994	2,154	8,035,026	8,679,946

Utility cost per Installation - kw

Total Program Cost of the Utility (Administration and Incentives) \$(000)

Net Benefits of Measures Installed During Reporting Period \$(000)

\$226.11

\$911

\$48

Column b - The total summer kw demand reduction for building envelope technologies of C/I Customers.

Column c - The total summer kw demand reduction capability of eligible building envelope technologies.

Columns d, f, g - The annual number of participants in the program expressed in summer kw demand reduction.

* Annual and cumulative program participants start in 2000 and do not reflect summer kw demand reduction of 20,022 prior to 2000.

** One summer kw equals one installation.

(1) KWH Reduction represents one year KWH savings from 2004 installations.

000053

Utility: Florida Power and Light
 Program Name: Business Custom Incentive Program
 Program Start Date: January 1, 2001
 Reporting Period: 2004

a	b	c	d	e	f	g	h	i
Year	Total Number of Customers	Total Number of Eligible Customers	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % [d/cx100]	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % [g/cx100]	Actual Participation Over (Under) Projected Participants(kw) (g-d)
2000	23,760	2,970	80	2.69%	48	48	1.60%	(33)
2001	23,760	2,890	205	7.09%	4,853	4,901	169.57%	4,696
2002	23,760	2,765	355	12.84%	305	5,206	188.26%	4,851
2003	23,760	2,615	480	18.36%	7,986	13,192	504.46%	12,712
2004	23,760	2,490	630	25.30%	158	13,350	536.13%	12,720
2005	23,760	2,340	755	32.26%				
2006	23,760	2,215	905	40.86%				
2007	23,760	2,065	1,030	49.88%				
2008	23,760	1,940	1,180	60.82%				
2009	23,760	1,790	1,305	72.91%				

Annual Demand and Energy Savings

Current Year of Installation:

Summer KW Reduction
 Winter KW Reduction
 (1) KWH Reduction

** Per Installation		Program Total	
@ Meter	@ Generator	@ Meter	@ Generator
1.00	1.11	158	175
1.22	1.35	192	213
3,627	3,918	573,392	619,414

Utility cost per Installation - kw

Total Program Cost of the Utility (Administration and Incentives) \$(000)

Net Benefits of Measures Installed During Reporting Period \$(000)

\$145.95

\$23

\$17

Column b - The total summer kw demand reduction for battery charging customers.

Column c - The total summer kw demand reduction of targeted battery charging customers.

Columns d, f, g - The annual number of participants in the program expressed in summer kw demand reduction.

* Annual and cumulative program participants start in 2000 and do not reflect summer kw demand reduction of 3,086 prior to 2000.

Two BCI projects were completed in 2004. A detailed description of each project will be included in FPL's Energy Conservation Final True-Up.

** One summer kw equals one installation.

(1) KWH Reduction represents one year KWH savings from 2004 installations.

000054

DEMAND SIDE MANAGEMENT ANNUAL REPORT

Utility: Florida Power and Light
 Program Name: Business On Call
 Program Start Date: January 1, 2001
 Reporting Period: 2004

a	b	c	d	e	f	g	h	i
Year	Total Number of Customers	Total Number of Eligible Customers	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % [d/cx100]	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % [g/cx100]	Participation Over (Under) Projected Participants (g-d)
2000	420,366	406,854	3,030	0.74%	4,152	4,152	1.02%	1,122
2001	429,320	412,778	7,615	1.84%	9,419	13,571	3.29%	5,956
2002	438,465	417,338	11,283	2.70%	4,202	17,773	4.26%	6,490
2003	447,804	423,009	14,951	3.53%	6,002	23,775	5.62%	8,824
2004	457,342	428,879	18,619	4.34%	2,739	26,515	6.18%	7,896
2005	467,084	434,953	22,287	5.12%				
2006	477,033	441,234	25,038	5.67%				
2007	487,193	448,643	27,789	6.19%				
2008	497,571	456,270	30,540	6.69%				
2009	508,169	464,117	31,916	6.88%				

Annual Demand and Energy Savings

Current Year of Installation:

Summer KW Reduction
 Winter KW Reduction
 (1) KWH Reduction

** Per Installation		Program Total	
@ Meter	@ Generator	@ Meter	@ Generator
1.00	1.11	2,739	3,028
0.00	0.00	0	0
1.01	1.09	2,774	2,996

Utility cost per Installation - kw

Total Program Cost of the Utility (Administration and Incentives) \$(000)

Net Benefits of Measures Installed During Reporting Period \$(000)

\$53.16 ***
 \$2,446 ***
 \$122

Column b - The total summer kw demand reduction of controllable load attributable to C/I Customers.

Column c - The total summer kw demand reduction of controllable load for eligible C/I Customers.

Columns d, f, g - The annual number of participants in the program expressed in summer kw demand reduction.

* Annual and cumulative program participants start in 2000 and do not reflect summer kw demand reduction of 15,276 prior to 2000.

** One summer kw equals one installation.

*** Utility Cost per installation is based on cumulative active year-end summer kw demand reduction @ generator of 46,016. Utility program costs for 2004

include O&M and Depreciation & Return expenses, and incentives paid in 2004 to active participating customers who were signed up in 2004 and in years prior to 2004.

(1) KWH Reduction represents one year KWH savings from 2004 installations.

000055

DEMAND SIDE MANAGEMENT ANNUAL REPORT

Utility: Florida Power and Light
 Program Name: Commercial/Industrial Load Control
 Program Start Date: January 1, 2001
 Reporting Period: 2004

a	b	c	d	e	f	g	h	i
Year	Total Number of Customers	Total Number of Eligible Customers	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % [d/cx100]	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % [g/cx100]	Actual Participation Over (Under) Projected Participants (g-d)
2000	2,784,654	2,375,814	15,900	0.67%	9,300	9,300	0.39%	(6,600)
2001	2,843,151	2,434,311	15,900	0.65%	1,051	10,351	0.43%	(5,549)
2002	2,899,792	2,485,449	15,900	0.64%	-7,755	2,596	0.10%	(13,304)
2003	2,954,324	2,534,479	15,900	0.63%	70,241	72,837	2.87%	56,937
2004	3,006,844	2,581,497	15,900	0.62%	1,135	73,972	2.87%	58,072
2005	3,058,303	2,627,454	SEE NOTE **** BELOW					
2006	3,108,423	2,672,072						
2007	3,159,830	2,718,894						
2008	3,211,625	2,766,105						
2009	3,268,829	2,818,723						

Annual Demand and Energy Savings

Current Year of Installation:

Summer KW Reduction
 Winter KW Reduction

(1) KWH Reduction

Utility cost per Installation - kw

Total Program Cost of the Utility (Administration and Incentives) \$(000)

Net Benefits of Measures Installed During Reporting Period \$(000)

Per Installation		Program Total (1)	
@ Meter	@ Generator	@ Meter	@ Generator
**	**	1,135	1,255
**	**	1,135	1,255
**	**	15,318	16,548

\$59.19 ***

\$30,602 ***

NA

Column b - The total summer kw demand reduction of capability of C/I customers with loads greater than 200 kw.

Column c - The total summer kw demand reduction capability of eligible C/I customers.

Columns d, f, g - The annual number of participants in the program expressed in summer kw demand reduction.

* Annual and cumulative program participants start in 2000 and do not reflect 437.6 MW @ generator prior to 2000.

** Demand and energy savings vary by customer/installation.

*** Cost per installation based on cumulative active year-end megawatts @ generator of 517. Utility program costs for 2004 include O&M and Depreciation & Return expenses and incentives paid in 2004 to active customers who were signed up prior to 2004.

**** On April 4, 1996, FPL received approval in Order No. PSC-96-0468-FOF-EG, to limit the availability of the CILC program to existing customers. On March 10, 1999, Order No. PSC-99-0505-PCO-EG required customers under contract to take CILC service but not yet on the rate to initiate CILC service by 12/31/2000. The CILC program will continue after December 31, 2000, however, it will only be available for customers participating in it prior to December 31, 2000.

(1) KWH Reduction represents one year KWH savings from 2004 installations.

DEMAND SIDE MANAGEMENT ANNUAL REPORT

Utility: Florida Power and Light
 Program Name: Commercial/Industrial Demand Reduction
 Program Start Date: January 1, 2001
 Reporting Period: 2004

a	b	c	d	e	f	g	h	i
Year	Total Number of Customers	Total Number of Eligible Customers	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % [d/cx100]	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % [g/cx100]	Participation Over (Under) Projected Participants (g-d)
2000	2,784,654	2,375,814	0	0.00%	-	-	-	-
2001	2,843,151	2,434,311	5,502	0.23%	6,973	6,973	0.29%	1,471
2002	2,899,792	2,485,449	11,004	0.44%	4,025	10,998	0.44%	(6)
2003	2,954,324	2,534,479	16,506	0.65%	5,129	16,127	0.64%	(379)
2004	3,006,844	2,581,497	22,008	0.85%	6,143	22,270	0.86%	262
2005	3,058,303	2,627,454	27,510	1.05%				
2006	3,108,423	2,672,072	32,095	1.20%				
2007	3,159,830	2,718,894	36,680	1.35%				
2008	3,211,625	2,766,105	41,265	1.49%				
2009	3,268,829	2,818,723	44,475	1.58%				

Annual Demand and Energy Savings

Current Year of Installation:

Summer KW Reduction
 Winter KW Reduction

(1) KWH Reduction

Per Installation		Program Total	
@ Meter	@ Generator	@ Meter	@ Generator
**	**	6,143	6,790
**	**	6,143	6,790
**	**	82,877	89,529

Utility cost per Installation - kw

Total Program Cost of the Utility (Administration and Incentives) \$(000)

Net Benefits of Measures Installed During Reporting Period \$(000)

\$38.59 ***

\$945 ***

\$69

Column b - The total summer kw demand reduction of capability of C/I customers with loads greater than 200 kw.

Column c - The total summer kw demand reduction capability of eligible C/I customers.

Columns d, f, g - The annual number of participants in the program expressed in summer kw demand reduction.

** Demand and energy savings vary by customer/installation.

*** Cost per installation based on cumulative active year-end megawatts @ generator of 24.5

Utility program costs for 2004 include incentives paid in 2004 to active customers who were signed up in 2004 and in years prior to 2004.

(1) KWH Reduction represents one year KWH savings from 2004 installations.

000057

DEMAND SIDE MANAGEMENT ANNUAL REPORT

Utility: Florida Power and Light
 Program Name: Business Energy Evaluation Program
 Program Start Date: January 1, 2001
 Reporting Period: 2004

a	b	c	d	e	f	g	h	i
Year	Total Number of Customers	Total Eligible Customers	Projected Cumulative Number of Program Participants	Projected Cumulative Penetration Level % [d/cx100]	Actual Annual Number of Program Participants	Actual Cumulative Number of Program Participants	Actual Cumulative Penetration Level % [g/cx100]	Participation Over (Under) Projected Participants (g-d)
2000	430,477	430,477	5,000	1.16%	5,326	5,326	1.24%	326
2001	439,520	439,520	10,000	2.28%	7,346	12,672	2.88%	2,672
2002	448,276	448,276	15,000	3.35%	6,728	19,400	4.33%	4,400
2003	456,706	456,706	20,000	4.38%	8,691	28,091	6.15%	8,091
2004	464,825	464,825	25,000	5.38%	7,590	35,681	7.68%	10,681
2005	472,780	472,780	30,000	6.35%				
2006	480,528	480,528	35,000	7.28%				
2007	488,475	488,475	40,000	8.19%				
2008	496,482	496,482	45,000	9.06%				
2009	505,325	505,325	50,000	9.89%				

Annual Demand and Energy Savings
 Current Year of Installation:
 Summer KW Reduction
 Winter KW Reduction
 KWH Reduction

Per Installation		Program Total	
@ Meter	@ Generator	@ Meter	@ Generator

No demand and energy projections made for this program.

Utility cost per Installation
 Total Program Cost of the Utility (Administration and Incentives) \$(000)
 Net Benefits of Measures Installed During Reporting Period \$(000)

\$610.55
 \$4,634
 NA

* Annual and cumulative program participants start in 2000 and do not reflect 49,440 participants prior to 2000.

000058

Table 1: Homebuyer and Homebuilder Key Needs

Homebuyers' Primary Needs	Homebuilders' Primary Needs
Quality and performance in their new home (no problems)	Selling homes with high margins (including options)
Affordability	Cost control
Conduct business with a reputable builder	Differentiating products and services
Choices and options in upgrades	Delivering on schedule
Home value to appreciate	Satisfying customers
Good community	
Energy efficiency	

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET 040029-EG

NO. 040660-EG Exhibit No. 3

Company/ FPL Direct

Witness: Daniel J. Haywood (DJH-1)

Date: 10-10-05

Table 2: Summary Comparison of Program Components and Features

	Existing Program	Redesigned Program	
		"Prescriptive" Approach	"Flexible" Approach
Participation Requirements	<ul style="list-style-type: none"> Install measures to reach one of three levels tied to energy performance—Bronze, Silver or Gold 	<ul style="list-style-type: none"> Install prescriptive measures targeted to result in an e-Ratio score < .91 	<ul style="list-style-type: none"> Install measures that exceed "Prescriptive" approach requirements and result in an e-Ratio score < .81
Dwelling types	<ul style="list-style-type: none"> Single family detached 	<ul style="list-style-type: none"> Single family detached Single family attached homes 	
Participation Costs	<ul style="list-style-type: none"> Combination of cost of measures + BuildSmart fees (for Bronze and Silver homes only) 	<ul style="list-style-type: none"> Cost of measures 	
Applicable measures	<ul style="list-style-type: none"> Flexible measures Wide range of measures 	<ul style="list-style-type: none"> Prescriptive measures 	<ul style="list-style-type: none"> Flexible measures Wide range of measures
ENERGY STAR®	<ul style="list-style-type: none"> Limited participation 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Increased promotion via builder incentives up to \$50/home for qualifying BuildSmart homes that also achieve ENERGY STAR® certification.
Fees	<ul style="list-style-type: none"> Gold = \$0 Silver = \$75 Bronze = \$175 	<ul style="list-style-type: none"> No fees 	
Inspections	<ul style="list-style-type: none"> FPL reserves the right to perform a series of inspections on each home 	<ul style="list-style-type: none"> FPL reserves the right to perform a series of inspections on each home 	
Energy Performance Analyses	<ul style="list-style-type: none"> Performed for each participating home 	<ul style="list-style-type: none"> Based on analysis of model home design 	<ul style="list-style-type: none"> Performed for each participating home

FLORIDA PUBLIC SERVICE COMMISSION
 DOCKET 040069-EG +
 NO. 040660-EG Exhibit No. 4
 Company/ FPL Direct
 Witness: Daniel J. Haywood (DJH-2)
 Date: 10-10-05

Table 3: Projected Demand and Energy Savings

Year	Annual Number of Participants	Per Customer KWh	Per Customer Winter	Per Customer Summer	Total Annual KWh	Total Annual Winter	Total Annual Summer
2005	3,816	1,460	0.88	0.78	5,570,995	3,358	2,976
2006	5,344	1460	0.88	0.78	7,801,510	4,702	4,168
2007	6,945	1460	0.88	0.78	10,139,700	6,112	5,417
2008	8,335	1460	0.88	0.78	12,168,370	7,334	6,501
2009	9,170	1460	0.88	0.78	13,388,200	8,070	7,153
2010	10,084	1460	0.88	0.78	14,722,348	8,874	7,865
2011	10,084	1460	0.88	0.78	14,722,348	8,874	7,865
2012	10,084	1460	0.88	0.78	14,722,348	8,874	7,865
2013	10,084	1460	0.88	0.78	14,722,348	8,874	7,865
2014	10,084	1460	0.88	0.78	14,722,348	8,874	7,865

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET 040029-EG ✓

NO. 040660-EG Exhibit No. 5

Company/ FPL Direct

Witness: Daniel J. Haywood (DJH-3)

Date: 10-10-05

Table 4: Projected Participation (RCS Program)

Year	Annual Number of Participants
2005	75,000 - 100,000
2006	75,000 - 100,000
2007	75,000 - 100,000
2008	75,000 - 100,000
2009	75,000 - 100,000
2010	75,000 - 100,000
2011	75,000 - 100,000
2012	75,000 - 100,000
2013	75,000 - 100,000
2014	75,000 - 100,000

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET 040029-EG +

NO. 040660-EG Exhibit No. 6

Company/ FPL Direct

Witness: Daniel S. Haywood (DJH-4)

Date: 10-10-05

Document No. SRS – 1
Cost – Effectiveness Analysis of FPL’s Residential New
Construction DSM Option
(BuildSmartR)

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET 040029-EG +
NO. 040660-EG Exhibit No. 7
Company/ FPL Direct
Witness: Steven R. Sim (SRS-1)
Date: 10-10-05

	A	B	C	D	E	F	G	H	I	J	K
1	Program Name:		New Construction (BuildSmartR)								Rev: 9/18/96
2	Generator and T&D Cost File:				CPF96			Input File Revision			
3	Financial Assumptions File:		XLS								
4								COSTS:			
5	Base Year		2004		Billing KW by month						
6	Summer KW Red. @mtr (System / Billing)		0.78			0.0000		Util non-rec. cost/part.	400.00	\$/cust	
7	Winter KW Red. @mtr (System / Billing)		0.880			0.0000		Util rec. cost/part.yr.	\$0.00	\$/cust/yr	
8	Annual KWH Red @mtr		1,460	kWh		0.0000		Part. equip. cost	724.00	\$/cust	
9	KW Rebound Factor			%		0.0000		Part. O&M cost	-	\$/cust/yr	
10	KWH Rebound Factor			%		0.0000		Util non-rec. rebate	-	\$/cust	
11	Load-shifting%			%		0.0000		Util rec. rebate		\$/cust/yr	
12	Rate Class		RS			0.0000					
13	Rate Class Prior To DSM		RS			0.0000		Load Control Data:			
14	Life Cycle		15	years		0.0000		Computer Capital Equipment		\$/cust	
15						0.0000		Substation Capital Equipment		\$/cust	
16	Calculate costs?			Calculate		0.0000		Transponder Capital Equipment		\$/cust	
17						0.0000		Monitoring Capital Cost		\$/cust	
18	Participants for Year		2004					Replacement Install Cost		\$/cust	
19	Participants for Year		2005					Administrative Cost		\$/cust	
20	Participants for Year		2006					Moved or Drop-Off Customers		%	
21	Participants for Year		2007					%Admin Cost for Moving Cust		%	
22	Participants for Year		2008					Transponder Failure Rate		%	
23	Participants for Year		2009								
24	Participants for Year		2010					Carrying Charge Rates For Capital Investments:			
25	Participants for Year		2011					Substations			
26	Participants for Year		2012					Transponders			
27	Participants for Year		2013					& End Use		Computer Equipment	
28	Participants for Year		2014								
29	Participants for Year		2015								
30											
31				kWh		KW					
32	Effectiveness for Year		2004	1.00		1.00					
33	Effectiveness for Year		2005	1.00		1.00					
34	Effectiveness for Year		2006	1.00		1.00					
35	Effectiveness for Year		2007	1.00		1.00					
36	Effectiveness for Year		2008	1.00		1.00					
37	Effectiveness for Year		2009	1.00		1.00					
38	Effectiveness for Year		2010	1.00		1.00					
39	Effectiveness for Year		2011	1.00		1.00					
40	Effectiveness for Year		2012	1.00		1.00					
41	Effectiveness for Year		2013	1.00		1.00					
42	Effectiveness for Year		2014	1.00		1.00					
43	Effectiveness for Year		2015	1.00		1.00					
44	Effectiveness for Year		2016	1.00		1.00					
45	Effectiveness for Year		2017	1.00		1.00					
46	Effectiveness for Year		2018	1.00		1.00					
47	Effectiveness for Year		2019	1.00		1.00					
48	Effectiveness for Year		2020	1.00		1.00					
49	Effectiveness for Year		2021	1.00		1.00					
50	Effectiveness for Year		2022	1.00		1.00					
51	Effectiveness for Year		2023	1.00		1.00					
52	Effectiveness for Year		2024	1.00		1.00					
53	Effectiveness for Year		2025	1.00		1.00					
54	Effectiveness for Year		2026	1.00		1.00					
55	Effectiveness for Year		2027	1.00		1.00					
56	Effectiveness for Year		2028	1.00		1.00					

INPUT DATA -- PART I CONTINUED
PROGRAM METHOD SELECTED: REV_REQ
PROGRAM NAME: New Construction (BuildSmartE)

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER KW REDUCTION AT METER	0.80 kW
(2) GENERATOR KW REDUCTION PER CUSTOMER	1.07 kW
(3) KW LINE LOSS PERCENTAGE	9.53 %
(4) GENERATOR KWH REDUCTION PER CUSTOMER	1,577.18 kWh
(5) KWH LINE LOSS PERCENTAGE	7.43 %
(6) GROUP LINE LOSS MULTIPLIER	1.09
(7) CUSTOMER KWH INCREASE AT METER	0.89 kWh

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM	26 YEARS
(2) GENERATOR ECONOMIC LIFE	25 YEARS
(3) T&D ECONOMIC LIFE	35 YEARS
(4) K FACTOR FOR GENERATION	1.65516
(5) K FACTOR FOR T & D	1.65761

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECURRING COST PER CUSTOMER	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER	*** \$/CUST
(3) UTILITY COST ESCALATION RATE	*** %**
(4) CUSTOMER EQUIPMENT COST	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE	*** %**
(6) CUSTOMER O & M COST	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE	*** %**
* (8) INCREASED SUPPLY COSTS	*** \$/CUST/YR
* (9) SUPPLY COSTS ESCALATION RATES	*** %**
* (10) UTILITY DISCOUNT RATE	7.93 %
* (11) UTILITY AFUDC RATE	7.84 %
* (12) UTILITY NON RECURRING REBATE/INCENTIVE	*** \$/CUST
* (13) UTILITY RECURRING REBATE/INCENTIVE	*** \$/CUST
* (14) UTILITY REBATE/INCENTIVE ESCALATION RATE	*** %

* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK
** VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)
*** PROGRAM COST CALCULATION VALUES ARE SHOWN ON PAGE 2

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR	2004
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT	2010
(3) IN-SERVICE YEAR FOR AVOIDED T&D	2007-2010
(4) BASE YEAR AVOIDED GENERATING COST	485.29 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST	84.37 \$/kW
(6) BASE YEAR DISTRIBUTION COST	23.05 \$/kW
(7) GEN, TRAN & DIST COST ESCALATION RATE	3.00 %**
(8) GENERATOR FIXED O & M COST	27.78 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE	4.24 %**
(10) TRANSMISSION FIXED O & M COST	2.47 \$/kW
(11) DISTRIBUTION FIXED O & M COST	1.43 \$/kW
(12) T&D FIXED O&M ESCALATION RATE	4.24 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS	0.018 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE	1.88 %**
(15) GENERATOR CAPACITY FACTOR	47% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST	3.70 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE	3.14 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON FUEL COST IN CUSTOMER BILL	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL	*** \$/kW/MO
(4) DEMAND CHARGE ESCALATION RATE	*** %

* INPUT DATA - PART 1 CONTINUED
 PROGRAM METHOD SELECTED: REV_REQ
 PROGRAM NAME: New Construction (BuildSmartR)

YEAR	(1) UTILITY PROGRAM COSTS WITHOUT INCENTIVES \$(000)	(2) UTILITY INCENTIVES \$(000)	(3) OTHER UTILITY COSTS \$(000)	(4) TOTAL UTILITY PROGRAM COSTS \$(000)	(5) ENERGY CHARGE REVENUE LOSSES \$(000)	(6) DEMAND CHARGE REVENUE LOSSES \$(000)	(7) PARTICIPANT EQUIPMENT COSTS \$(000)	(8) PARTICIPANT O&M COSTS \$(000)	(9) OTHER PARTICIPANT COSTS \$(000)	(10) TOTAL PARTICIPANT COSTS \$(000)
2004	0	0	0	0	0	0	0	0	0	
2005	1,535	0	0	1,535	210	0	2,815	0	2,815	
2006	2,223	0	0	2,223	714	0	4,023	0	4,023	
2007	2,953	0	0	2,953	1,378	0	5,345	0	5,345	
2008	3,632	0	0	3,632	2,233	0	6,574	0	6,574	
2009	4,105	0	0	4,105	3,212	0	7,430	0	7,430	
2010	0	0	0	0	3,729	0	0	0	0	
2011	0	0	0	0	3,739	0	0	0	0	
2012	0	0	0	0	3,783	0	0	0	0	
2013	0	0	0	0	3,822	0	0	0	0	
2014	0	0	0	0	3,847	0	0	0	0	
2015	0	0	0	0	3,857	0	0	0	0	
2016	0	0	0	0	3,891	0	0	0	0	
2017	0	0	0	0	3,960	0	0	0	0	
2018	0	0	0	0	3,998	0	0	0	0	
2019	0	0	0	0	4,037	0	4,260	0	4,260	
2020	2,354	0	0	2,354	4,076	0	6,169	0	6,169	
2021	3,408	0	0	3,408	4,116	0	8,293	0	8,293	
2022	4,582	0	0	4,582	4,156	0	10,295	0	10,295	
2023	5,688	0	0	5,688	4,196	0	11,719	0	11,719	
2024	6,475	0	0	6,475	4,237	0	0	0	0	
2025	0	0	0	0	4,278	0	0	0	0	
2026	0	0	0	0	4,319	0	0	0	0	
2027	0	0	0	0	4,361	0	0	0	0	
2028	0	0	0	0	4,404	0	0	0	0	
2029	0	0	0	0						
<hr/>										
NOM	36,974	0	0	36,974	88,377	0	66,922	0	0	66,922
NPV	16,704	0	0	16,704	32,319	0	30,234	0	0	30,234

* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK
 ** NEGATIVE COSTS WILL BE CALCULATED AS POSITIVE BENEFITS FOR TRC AND RIM TESTS

CALCULATION OF GEN K-FACTOR
PROGRAM METHOD SELECTED REV_REQ
PROGRAM NAME: New Construction (BuddSmartR)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
YEAR	REQ-YEAR RATE BASE \$(000)	DEBT \$(000)	PREFERRED STOCK \$(000)	COMMON EQUITY \$(000)	INCOME TAXES \$(000)	PROPERTY TAX \$(000)	PROPERTY INSURANCE \$(000)	DEPREC. \$(000)	DEFERRED TAXES \$(000)	TOTAL FIXED CHARGES \$(000)	PRESENT WORTH FIXED CHARGES \$(000)	CUMULATIVE PW FIXED CHARGES \$(000)	REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$(000)
2010	23,063	706	0	1,395	923	0	0	901	1	3,925	3,925	3,925	22,521
2011	22,164	678	0	1,341	593	443	90	901	296	4,342	4,023	7,948	23,196
2012	20,967	642	0	1,269	594	424	93	901	250	4,172	3,581	11,530	23,892
2013	19,817	606	0	1,199	593	406	96	901	207	4,008	3,188	14,718	24,609
2014	18,709	572	0	1,132	590	387	99	901	168	3,849	2,837	17,554	25,347
2015	17,640	540	0	1,067	386	369	102	901	131	3,696	2,523	20,078	26,107
2016	16,608	508	0	1,005	581	351	105	901	97	3,547	2,244	22,322	26,891
2017	15,610	478	0	944	574	332	108	901	66	3,403	1,995	24,316	27,697
2018	14,643	448	0	886	542	314	111	901	61	3,263	1,772	26,088	28,528
2019	13,681	419	0	828	506	295	115	901	61	3,124	1,572	27,660	29,384
2020	12,719	389	0	770	469	277	118	901	61	2,984	1,391	29,052	30,266
2021	11,757	360	0	711	433	258	122	901	61	2,845	1,229	30,281	31,174
2022	10,795	330	0	653	396	240	125	901	61	2,706	1,083	31,364	32,109
2023	9,834	301	0	595	360	221	129	901	61	2,568	952	32,316	33,072
2024	8,872	271	0	537	323	203	133	901	61	2,429	834	33,150	34,064
2025	7,910	242	0	479	286	184	137	901	61	2,290	729	33,879	35,086
2026	6,948	213	0	420	250	166	141	901	61	2,152	635	34,514	36,139
2027	5,986	183	0	362	213	148	145	901	61	2,013	550	35,064	37,223
2028	5,024	154	0	304	177	129	150	901	61	1,875	475	35,539	38,340
2029	4,062	124	0	246	140	111	154	901	61	1,737	407	35,946	39,490
2030	3,100	95	0	188	293	92	159	901	(129)	1,599	348	36,294	40,673
2031	2,328	71	0	141	454	74	163	901	(319)	1,485	299	36,593	41,893
2032	1,746	53	0	106	432	55	168	901	(319)	1,397	261	36,854	43,152
2033	1,164	36	0	70	410	37	173	901	(319)	1,308	226	37,080	44,446
2034	582	18	0	35	388	18	179	901	(319)	1,220	195	37,275	45,780

IN SERVICE COST (\$000)	22,521
IN SERVICE YEAR	2010
BOOK LIFE (YRS)	25
BFPRC. TAX RATE	38.57%
DISCOUNT RATE	7.9%
PROPERTY TAX	2.05%
PROPERTY INSURANCE	0.39%

CAPITAL STRUCTURE		
SOURCE	WRIGHT	COST
DEBT	45%	6.80 %
P/S	0%	0.00 %
C/S	55%	11.00 %

K-FACTOR = CPWFC / IN-SVC COST = 1.65516

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION
 PROGRAM/METHOD SELECTED: REV_REQ
 PROGRAM NAME: New Construction (BuildSmartR)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	ACCUMULATED BOOK DEPR FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX (9)-(12)+(13)	ACCUMULATED DEFERRED TAX \$(000)
2010	3.75%	827	827	901	901	826	826	1	1,868	0	0	0	-	(544)
2011	7.22%	1,593	2,420	901	1,802	826	1,652	296	1,868	0	0	0	296	(248)
2012	6.68%	1,473	3,894	901	2,702	826	2,478	250	1,868	0	0	0	250	1
2013	6.18%	1,364	5,257	901	3,603	826	3,304	207	1,868	0	0	0	207	209
2014	5.71%	1,261	6,518	901	4,504	826	4,131	168	1,868	0	0	0	168	376
2015	5.29%	1,166	7,684	901	5,405	826	4,957	131	1,868	0	0	0	131	507
2016	4.89%	1,079	8,762	901	6,306	826	5,783	97	1,868	0	0	0	97	605
2017	4.52%	998	9,760	901	7,207	826	6,609	66	1,868	0	0	0	66	671
2018	4.46%	985	10,745	901	8,107	826	7,435	61	1,868	0	0	0	61	732
2019	4.46%	984	11,729	901	9,008	826	8,261	61	1,868	0	0	0	61	793
2020	4.46%	985	12,713	901	9,909	826	9,087	61	1,868	0	0	0	61	854
2021	4.46%	984	13,698	901	10,810	826	9,913	61	1,868	0	0	0	61	915
2022	4.46%	985	14,682	901	11,711	826	10,739	61	1,868	0	0	0	61	976
2023	4.46%	984	15,667	901	12,612	826	11,566	61	1,868	0	0	0	61	1,037
2024	4.46%	985	16,651	901	13,512	826	12,392	61	1,868	0	0	0	61	1,098
2025	4.46%	984	17,635	901	14,413	826	13,218	61	1,868	0	0	0	61	1,159
2026	4.46%	985	18,620	901	15,314	826	14,044	61	1,868	0	0	0	61	1,221
2027	4.46%	984	19,604	901	16,215	826	14,870	61	1,868	0	0	0	61	1,282
2028	4.46%	985	20,589	901	17,116	826	15,696	61	1,868	0	0	0	61	1,343
2029	4.46%	984	21,573	901	18,016	826	16,522	61	1,868	0	0	0	61	1,404
2030	2.23%	492	22,065	901	18,917	826	17,348	(129)	1,868	0	0	0	(129)	1,275
2031	0.00%	0	22,065	901	19,818	826	18,174	(319)	1,868	0	0	0	(319)	956
2032	0.00%	0	22,065	901	20,719	826	19,001	(319)	1,868	0	0	0	(319)	638
2033	0.00%	0	22,065	901	21,620	826	19,827	(319)	1,868	0	0	0	(319)	319
2034	0.00%	0	22,065	901	22,521	826	20,653	(319)	1,868	0	0	0	(319)	0

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(545)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	1,868
BOOK DEPR RATE - 1/USEFUL LIFE	4.00%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION
 PROGRAM METHOD SELECTED: REV_REQ
 PROGRAM NAME: New Construction (BuildSmartR)

(1)	(2)	(3)	(4)	(5)	(5a)*	(5b)*	(6)	(7)	(8)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	DEFERRED TAX \$(000)	NET PLANT IN SERVICE \$(000)	ACCUMULATED DEPRECIATION \$(000)	ACCUMULATED DEF TAXES \$(000)	BEGINNING YEAR RATE BASE \$(000)	ENDING OF YEAR RATE BASE \$(000)	MID-YEAR RATE BASE \$(000)
2010	3.75%	827	1	22,521	901	(544)	23,065	22,164	22,614
2011	7.22%	1,593	296	21,628	1,802	(248)	22,164	20,967	21,566
2012	6.68%	1,473	250	20,719	2,702	-	20,967	19,817	20,392
2013	6.18%	1,364	207	19,818	3,603	209	19,817	18,709	19,263
2014	5.71%	1,261	168	18,917	4,504	376	18,709	17,640	18,174
2015	5.29%	1,166	131	18,016	5,405	507	17,640	16,608	17,124
2016	4.89%	1,079	97	17,116	6,306	605	16,608	15,610	16,109
2017	4.52%	998	66	16,215	7,207	671	15,610	14,643	15,127
2018	4.46%	985	61	15,314	8,107	732	14,643	13,681	14,162
2019	4.46%	984	61	14,413	9,008	793	13,681	12,719	13,200
2020	4.46%	985	61	13,512	9,909	854	12,719	11,757	12,238
2021	4.46%	984	61	12,612	10,810	915	11,757	10,795	11,276
2022	4.46%	985	61	11,711	11,711	976	10,795	9,834	10,314
2023	4.46%	984	61	10,810	12,612	1,037	9,834	8,872	9,353
2024	4.46%	985	61	9,909	13,512	1,098	8,872	7,910	8,391
2025	4.46%	984	61	9,008	14,413	1,159	7,910	6,948	7,429
2026	4.46%	985	61	8,107	15,314	1,221	6,948	5,986	6,467
2027	4.46%	984	61	7,207	16,215	1,282	5,986	5,024	5,505
2028	4.46%	985	61	6,306	17,116	1,343	5,024	4,062	4,543
2029	4.46%	984	61	5,405	18,016	1,404	4,062	3,100	3,581
2030	2.23%	492	(129)	4,504	18,917	1,275	3,100	2,328	2,714
2031	0.00%	0	(319)	3,603	19,818	956	2,328	1,746	2,037
2032	0.00%	0	(319)	2,702	20,719	638	1,746	1,164	1,455
2033	0.00%	0	(319)	1,802	21,620	319	1,164	582	873
2034	0.00%	0	(319)	901	22,521	0	582	0	291

* Column not specified in workbook

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (%)	(6) ANNUAL SPENDING (\$/kW)	(7) CUMULATIVE AVERAGE SPENDING (\$/kW)
2004	-6	0.00%	1.000	0.00%	0.00	0.00
2005	-5	3.00%	1.030	0.00%	0.00	0.00
2006	-4	3.00%	1.061	16.00%	82.38	41.19
2007	-3	3.00%	1.093	30.00%	159.09	161.92
2008	-2	3.00%	1.126	32.00%	174.78	328.85
2009	-1	3.00%	1.159	22.00%	123.77	478.13

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$/kW)	(8a)* DEBT AFUDC (\$/kW)	(8b)* DEBT AFUDC (\$/kW)	(9) YEARLY TOTAL AFUDC (\$/kW)	(9a)* TOTAL AFUDC (\$/kW)	(9b)* CONSTRUCTION PERIOD INTEREST (\$/kW)	(9c)* CUMULATIVE CPI (\$/kW)	(9d)* DEFERRED TAXES (\$/kW)	(9e)* CUMULATIVE DEFERRED TAXES (\$/kW)	(10) INCREMENTAL YEAR-END BOOK VALUE (\$/kW)	(11) CUMULATIVE YEAR-END BOOK VALUE (\$/kW)
2004	-6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2005	-5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2006	-4	41.19	1.26	1.26	3.23	3.23	2.80	0.00	(0.59)	(0.59)	85.60	85.60
2007	-3	165.15	5.07	6.33	12.99	16.22	11.20	14.00	(2.36)	(2.96)	172.08	257.69
2008	-2	345.08	10.65	16.98	27.29	43.51	23.31	37.32	(4.89)	(7.84)	202.07	459.73
2009	-1	521.64	16.20	33.18	41.51	85.02	35.05	72.37	(7.27)	(15.11)	165.28	625.03

33.18

85.02

72.37

(15.11)

625.03

IN SERVICE YEAR	2010
PLANT COSTS	485.29
AFUDC RATE	7.84%

	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS
CONSTRUCTION CASH	19,457	19,457	19,457
EQUITY AFUDC	1,868		
DEBT AFUDC	1,196	1,196	
CPI			2,607
TOTAL	22,521	20,653	22,065

* Column not specified in workbook

INPUT DATA - PART 2
 PROGRAM METHOD SELECTED : REV_REQ
 PROGRAM NAME: New Construction (BuildSmartE)

(1)	(2)	(3)	(4)	(5)	(6)*	(7)	(8)	(9)
YEAR	CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	UTILITY AVERAGE SYSTEM FUEL COST (\$/kWh)	AVOIDED MARGINAL FUEL COST (\$/kWh)	INCREASED MARGINAL FUEL COST (\$/kWh)	REPLACEMENT FUEL COST (\$/kWh)	PROGRAM kW EFFECTIVENESS FACTOR	PROGRAM kW EFFECTIVENESS FACTOR
2004	0	0	4.22	3.16	4.32	0.00	1.00	1.00
2005	3,816	3,816	3.88	4.69	4.15	0.00	1.00	1.00
2006	9,159	9,159	3.77	4.68	4.04	0.00	1.00	1.00
2007	16,104	16,104	3.71	4.32	3.96	0.00	1.00	1.00
2008	24,439	24,439	3.66	4.61	3.92	0.00	1.00	1.00
2009	33,609	33,609	3.79	4.77	4.05	0.00	1.00	1.00
2010	33,609	33,609	3.90	4.72	4.14	5.14	1.00	1.00
2011	33,609	33,609	4.17	4.89	4.42	5.31	1.00	1.00
2012	33,609	33,609	4.18	5.11	4.41	4.92	1.00	1.00
2013	33,609	33,609	4.31	5.31	4.36	4.83	1.00	1.00
2014	33,609	33,609	4.39	5.43	4.64	4.91	1.00	1.00
2015	33,609	33,609	4.55	5.71	4.81	4.98	1.00	1.00
2016	33,609	33,609	4.69	5.86	4.94	5.27	1.00	1.00
2017	33,609	33,609	4.77	5.97	5.03	6.18	1.00	1.00
2018	33,609	33,609	4.92	6.19	5.18	6.59	1.00	1.00
2019	33,609	33,609	5.06	6.35	5.31	5.84	1.00	1.00
2020	33,609	33,609	5.16	6.34	5.43	5.71	1.00	1.00
2021	33,609	33,609	5.26	6.67	5.32	5.71	1.00	1.00
2022	33,609	33,609	5.30	6.98	5.77	6.49	1.00	1.00
2023	33,609	33,609	5.57	6.90	5.83	7.93	1.00	1.00
2024	33,609	33,609	5.66	6.97	5.92	8.04	1.00	1.00
2025	33,609	33,609	5.76	7.45	6.01	8.15	1.00	1.00
2026	33,609	33,609	5.87	7.12	6.10	8.26	1.00	1.00
2027	33,609	33,609	5.97	7.20	6.20	8.37	1.00	1.00
2028	33,609	33,609	6.07	7.27	6.29	8.49	1.00	1.00
2029	33,609	33,609	6.18	7.35	6.39	8.60	1.00	1.00

* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS.
 THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.

AVOIDED GENERATING BENEFITS
 PROGRAM METHOD SELECTED: REV_REQ
 PROGRAM NAME: New Construction (BuildSmartR)

YEAR	(2) AVOIDED GEN UNIT CAPACITY COST \$(000)	(3) AVOIDED GEN UNIT FIXED O&M \$(000)	(4) AVOIDED GEN UNIT VARIABLE O&M \$(000)	(5) AVOIDED GEN UNIT FUEL COST \$(000)	(6) REPLACEMENT FUEL COST \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)
2004	0	0	0	0	0	0
2005	0	0	0	0	0	0
2006	0	0	0	0	0	0
2007	0	0	0	0	0	0
2008	0	0	0	0	0	0
2009	0	0	0	0	0	0
2010	3,925	1,279	31	5,437	7,561	3,111
2011	4,342	1,336	33	9,329	12,995	2,066
2012	4,172	1,396	55	9,619	12,188	3,054
2013	4,008	1,460	57	9,844	11,988	3,380
2014	3,849	1,526	58	10,166	12,166	3,433
2015	3,696	1,597	58	10,423	12,056	3,719
2016	3,547	1,669	61	11,067	12,885	3,458
2017	3,403	1,742	61	11,067	14,629	1,643
2018	3,263	1,817	62	11,292	15,460	973
2019	3,124	1,898	64	11,710	13,722	3,074
2020	2,984	1,984	65	11,967	13,201	3,800
2021	2,845	2,075	66	12,064	12,933	4,117
2022	2,706	2,169	69	12,965	14,869	3,039
2023	2,568	2,261	65	12,225	16,548	570
2024	2,429	2,360	66	12,353	16,401	807
2025	2,290	2,463	66	12,483	16,254	1,049
2026	2,152	2,575	67	12,615	16,109	1,299
2027	2,013	2,692	68	12,748	15,965	1,555
2028	1,875	2,814	69	12,882	15,823	1,817
2029	1,737	2,942	70	13,017	15,681	2,085
NOM	60,929	40,836	1,228	225,273	279,436	48,050
NPV	22,741	12,103	392	71,194	89,732	17,699

TOTAL RESOURCE COST TEST
PROGRAM METHOD SELECTED: REV_REQ
PROGRAM NAME: New Construction (BuildSmartUR)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
YEAR	INCREASED SUPPLY COSTS \$(000)	UTILITY PROGRAM COSTS \$(000)	PARTICIPANT PROGRAM COSTS \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	AVOIDED GEN UNIT BENEFITS \$(000)	AVOIDED T&D BENEFITS \$(000)	PROGRAM FUEL SAVINGS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2004	0	0	0	0	0	0	0	0	0	0	0	0
2005	0	1,555	2,815	0	4,370	0	0	157	0	157	(4,213)	(3,903)
2006	0	2,223	4,023	0	6,246	0	95	538	0	634	(3,612)	(8,721)
2007	0	2,953	5,345	0	8,298	0	231	1,003	0	1,234	(7,064)	(14,340)
2008	0	3,632	6,574	0	10,206	0	406	1,666	0	2,072	(8,134)	(20,334)
2009	0	4,105	7,430	0	11,534	0	618	2,473	0	3,091	(8,444)	(26,099)
2010	0	0	0	0	0	3,111	852	2,782	0	6,745	6,745	(21,832)
2011	0	0	0	0	0	2,966	833	2,924	0	5,823	5,823	(18,419)
2012	0	0	0	0	0	3,054	813	3,023	0	6,893	6,893	(14,675)
2013	0	0	0	0	0	3,380	799	3,157	0	7,336	7,336	(10,984)
2014	0	0	0	0	0	3,433	783	3,232	0	7,440	7,440	(7,512)
2015	0	0	0	0	0	3,719	769	3,420	0	7,908	7,908	(4,096)
2016	0	0	0	0	0	3,458	756	3,506	0	7,720	7,720	(1,006)
2017	0	0	0	0	0	1,643	743	3,574	0	5,959	5,959	1,204
2018	0	0	0	0	0	973	730	3,713	0	5,417	5,417	3,065
2019	0	0	0	0	0	3,074	718	3,802	0	7,594	7,594	5,482
2020	0	2,354	4,260	0	6,613	3,800	707	3,931	0	8,438	1,825	6,020
2021	0	3,408	6,169	0	9,577	4,117	696	4,012	0	8,826	(751)	5,815
2022	0	4,582	8,293	0	12,874	3,039	686	4,200	0	7,925	(4,949)	4,562
2023	0	5,688	10,295	0	15,983	570	676	4,108	0	5,353	(10,630)	2,068
2024	0	6,475	11,719	0	18,194	807	666	4,138	0	5,611	(12,583)	(667)
2025	0	0	0	0	0	1,049	657	4,169	0	5,875	5,875	516
2026	0	0	0	0	0	1,299	649	4,200	0	6,148	6,148	1,663
2027	0	0	0	0	0	1,355	643	4,231	0	6,429	6,429	2,775
2028	0	0	0	0	0	1,817	639	4,261	0	6,718	6,718	3,851
2029	0	0	0	0	0	2,085	638	4,292	0	7,015	7,015	4,892

NOM	0	36,974	66,922	0	103,896	48,050	15,810	80,510	0	144,369	40,473	
NPV	0	16,704	30,234	0	46,938	17,699	6,053	28,079	0	51,830	4,892	

Discount Rate:
Benefit/Cost Ratio (Col(11) / Col(6)) :

7.93 %
1.10

PARTICIPANT COSTS AND BENEFITS
 PROGRAM METHOD SELECTED: REV. JRD
 PROGRAM NAME: New Construction (Buildsmart)

YEAR	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
		SAVINGS IN	TAX	UTILITY	OTHER	TOTAL	CUSTOMER	CUSTOMER	OTHER	TOTAL	NET	CUMULATIVE
		BILLS	CREDITS	REBATES	BENEFITS	BENEFITS	EQUIPMENT	LOAD COSTS	COSTS	COSTS	BENEFITS	DISCOUNTED
		(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)
2004		0	0	0	0	0	0	0	0	0	0	0
2005		345	0	0	0	1,171	4,023	0	0	4,023	(2,837)	(2,281)
2006		2,359	0	0	0	2,259	5,245	0	0	5,245	(3,085)	(7,191)
2007		3,660	0	0	0	3,660	6,574	0	0	6,574	(4,911)	(9,338)
2008		5,266	0	0	0	5,266	7,430	0	0	7,430	(6,156)	(10,816)
2009		6,130	0	0	0	6,130	0	0	0	6,130	(2,156)	(10,816)
2010		6,130	0	0	0	6,130	0	0	0	6,130	0	(6,948)
2011		6,202	0	0	0	6,202	0	0	0	6,202	0	(3,355)
2012		6,266	0	0	0	6,266	0	0	0	6,266	0	13
2013		6,266	0	0	0	6,266	0	0	0	6,266	0	3,166
2014		6,307	0	0	0	6,307	0	0	0	6,307	0	6,087
2015		6,379	0	0	0	6,379	0	0	0	6,379	0	8,811
2016		6,492	0	0	0	6,492	0	0	0	6,492	0	11,342
2017		6,555	0	0	0	6,555	0	0	0	6,555	0	13,707
2018		6,555	0	0	0	6,555	0	0	0	6,555	0	15,937
2019		6,618	0	0	0	6,618	0	0	0	6,618	0	18,024
2020		6,682	0	0	0	6,682	4,260	0	0	4,260	2,358	18,719
2021		6,747	0	0	0	6,747	6,189	0	0	6,189	513	18,860
2022		6,813	0	0	0	6,813	8,293	0	0	8,293	1,516	18,468
2023		6,879	0	0	0	6,879	10,295	0	0	10,295	(3,483)	17,651
2024		6,946	0	0	0	6,946	11,719	0	0	11,719	(4,840)	16,599
2025		7,013	0	0	0	7,013	0	0	0	7,013	0	17,998
2026		7,081	0	0	0	7,081	0	0	0	7,081	0	19,307
2027		7,150	0	0	0	7,150	0	0	0	7,150	0	20,531
2028		7,219	0	0	0	7,219	0	0	0	7,219	0	21,676
2029		0	0	0	0	0	0	0	0	0	0	22,747

In Service of Gen Unit:
 Discount Rate: 7.93
 Benefit/Cost Ratio (Col(6) / Col(10)) 1.75

NOM	144,881	0	0	0	0	144,881	66,922	0	0	66,922	0	77,958
NPV	52,981	0	0	0	0	52,981	30,234	0	0	30,234	0	22,747

RATE IMPACT TEST
 PROGRAM METHOD SELECTED: REV_REQ
 PROGRAM NAME: New Construction (BuildSmartR)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
YEAR	INCREASED SUPPLY COSTS \$(000)	UTILITY PROGRAM COSTS \$(000)	INCENTIVES \$(000)	REVENUE LOSSES \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	AVOIDED GEN UNIT & FUEL BENEFITS \$(000)	AVOIDED T&D BENEFITS \$(000)	REVENUE GAINS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2004	0	0	0	0	0	0	0	0	0	0	0	0	0
2005	0	1,555	0	210	0	1,765	157	0	0	0	157	(1,609)	(1,490)
2006	0	2,223	0	714	0	2,937	538	96	0	0	634	(2,303)	(3,467)
2007	0	2,953	0	1,378	0	4,331	1,003	231	0	0	1,234	(3,098)	(5,931)
2008	0	3,632	0	2,233	0	5,865	1,666	406	0	0	2,072	(3,793)	(8,726)
2009	0	4,105	0	3,212	0	7,317	2,473	618	0	0	3,091	(4,226)	(11,612)
2010	0	0	0	3,729	0	3,729	5,893	852	0	0	6,745	3,016	(9,704)
2011	0	0	0	3,739	0	3,739	4,990	833	0	0	5,823	2,084	(8,482)
2012	0	0	0	3,783	0	3,783	6,077	815	0	0	6,893	3,110	(6,793)
2013	0	0	0	3,822	0	3,822	6,537	799	0	0	7,336	3,513	(5,026)
2014	0	0	0	3,822	0	3,822	6,665	783	0	0	7,448	3,626	(3,335)
2015	0	0	0	3,847	0	3,847	7,139	769	0	0	7,908	4,061	(1,581)
2016	0	0	0	3,857	0	3,857	6,965	756	0	0	7,720	3,864	(35)
2017	0	0	0	3,891	0	3,891	5,217	743	0	0	5,959	2,068	732
2018	0	0	0	3,960	0	3,960	4,686	730	0	0	5,417	1,457	1,233
2019	0	0	0	3,998	0	3,998	6,875	718	0	0	7,594	3,595	2,377
2020	0	2,354	0	4,037	0	6,391	7,731	707	0	0	8,438	2,048	2,981
2021	0	3,408	0	4,076	0	7,484	8,129	696	0	0	8,826	1,341	3,348
2022	0	4,582	0	4,116	0	8,697	7,239	696	0	0	7,925	(772)	3,152
2023	0	5,688	0	4,156	0	9,844	4,677	676	0	0	5,353	(4,491)	2,099
2024	0	6,475	0	4,196	0	10,671	4,945	666	0	0	5,611	(5,060)	999
2025	0	0	0	4,237	0	4,237	5,218	657	0	0	5,875	1,638	1,329
2026	0	0	0	4,278	0	4,278	5,499	649	0	0	6,148	1,870	1,678
2027	0	0	0	4,319	0	4,319	5,786	643	0	0	6,429	2,110	2,042
2028	0	0	0	4,361	0	4,361	6,079	639	0	0	6,718	2,357	2,420
2029	0	0	0	4,404	0	4,404	6,377	638	0	0	7,015	2,612	2,808

NOM.	0	36,974	0	88,377	0	125,351	128,560	15,810	0	0	144,369	19,019
NPV	0	16,704	0	32,319	0	49,023	45,778	6,053	0	0	51,830	2,808

Discount Rate 7.93 %
 Benefit/Cost Ratio (Col(12) / Col(7)) : 1.06

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET 040029-EG +

NO. 040660-EG Exhibit No. 8

Company/ CalcS-Plus

Witness: Dennis Stroer (DS-1)

Date: 10-10-05

TABLE 1

See below for TECHNICAL SPECIFICATIONS OF ELIGIBILITY

Builder	ZIP CODE	City	PROCESS_DATE	HERS Score	Sq Ft of living area	CFM/2
WCI Communities	34275	Venice	7/27/2005 10:58	78.2	1663	
WCI Communities	34275	Venice	7/27/2005 10:58	84	1663	
WCI Communities	34275	Venice	8/30/2004 10:54	82	1351	
WCI Communities	34275	Venice	11/21/2003 15:20	81.6	1478	
WCI Communities	34275	Venice	3/7/2005 15:56	83.7	1663	
WCI Communities	34275	Venice	12/22/2004 14:18	83.8	1663	
WCI Communities	34275	Venice	7/28/2005 14:37	83.7	1478	
WCI Communities	34275	Venice	7/13/2004 7:27	82.5	1691	
WCI Communities	34275	Venice	8/30/2004 10:21	83	1478	
WCI Communities	34275	Venice	12/22/2004 14:19	84.7	1663	
WCI Communities	34275	Venice	10/14/2004 14:05	85.2	1482	
WCI Communities	34275	Venice	3/7/2005 15:56	84.4	1663	
WCI Communities	34275	Venice	8/30/2004 10:21	83.7	1663	
WCI Communities	34275	Venice	8/30/2004 10:20	82.9	2889	
WCI Communities	34275	Venice	8/30/2004 10:20	82.9	2889	
WCI Communities	34275	Venice	7/27/2005 10:58	83.5	2556	
WCI Communities	34275	Venice	12/16/2003 14:23	83.4	1478	
WCI Communities	34275	Venice	9/15/2004 10:17	83	1478	
WCI Communities	34275	Venice	6/29/2005 14:05	83.5	2556	
WCI Communities	34275	Venice	3/7/2005 15:56	83.4	1351	
WCI Communities	34275	Venice	8/30/2004 10:21	83.7	2889	
WCI Communities	34275	Venice	1/9/2004 9:52	84.1	1663	
WCI Communities	34275	Venice		84.9	1663	
WCI Communities	34275	Venice	5/18/2005 12:21	84.8	1482	
WCI Communities	34275	Venice	8/30/2004 10:22	84.1	1663	
WCI Communities	34275	Venice	3/7/2005 15:56	83.5	1663	
WCI Communities	34275	Venice	6/29/2005 14:05	83.6	2556	
WCI Communities	34275	Venice	1/9/2004 9:52	83	1478	
WCI Communities	34275	Venice	7/28/2005 14:38	83.4	1691	
WCI Communities	34275	Venice	10/14/2004 14:06	83.7	1351	
WCI Communities	34275	Venice	5/18/2005 12:22	83.5	1269	
WCI Communities	34275	Venice	12/22/2004 14:18	83.4	2889	
WCI Communities	34275	Venice	5/18/2005 12:21	85	1482	
WCI Communities	34275	Venice	7/13/2004 7:20	83.4	2195	
WCI Communities	34275	Venice	8/30/2004 10:21	83.7	2889	
WCI Communities	34275	Venice	8/30/2004 10:21	84.4	1663	
WCI Communities	34275	Venice	11/21/2003 15:26	84.8	1994	
WCI Communities	34275	Venice	1/9/2004 9:53	82.8	1691	
WCI Communities	34275	Venice	7/27/2005 10:58	83.1	1478	
WCI Communities	34275	Venice	5/18/2005 12:21	83.7	1269	

WCI Communities	34275	Venice	6/9/2004 11:30	83.1	2556
WCI Communities	34275	Venice	7/13/2004 7:25	81.7	2195
WCI Communities	34275	Venice	2/23/2004 11:25	82.5	2556
WCI Communities	34275	Venice	10/14/2004 14:04	83.4	2556
WCI Communities	34275	Venice	12/22/2004 14:19	83.9	1478
WCI Communities	34275	Venice	11/21/2003 15:27	83.4	1351
WCI Communities	34275	Venice	11/21/2003 15:27	84.3	1482
WCI Communities	34275	Venice	3/7/2005 15:56	83.8	1663
WCI Communities	34275	Venice	5/18/2005 12:22	83.5	1082
WCI Communities	34275	Venice	8/30/2004 10:22	85.1	1994
WCI Communities	34275	Venice	8/30/2004 10:20	83.4	2889
WCI Communities	34275	Venice	7/13/2004 7:26	83.4	2556
WCI Communities	34275	Venice	1/9/2004 9:52	84.1	1663
WCI Communities	34275	Venice	6/9/2004 11:31	83.4	2556
WCI Communities	34275	Venice	5/18/2005 12:22	83.7	1269
WCI Communities	34275	Venice	1/9/2004 9:52	83.9	1478
WCI Communities	34275	Venice	4/28/2005 8:05	83.8	2556
WCI Communities	34275	Venice	4/28/2005 8:02	85.9	1482
WCI Communities	34275	Venice	1/9/2004 9:53	83.4	1269
WCI Communities	34275	Venice	3/7/2005 15:56	83.2	1082
WCI Communities	34275	Venice	11/21/2003 15:26	85.1	1994
WCI Communities	34275	Venice	11/21/2003 15:28	84.8	1994
WCI Communities	34275	Venice	12/22/2004 14:19	83.8	2889
WCI Communities	34275	Venice	7/27/2005 10:58	84.1	1269
WCI Communities	34275	Venice	6/29/2005 13:56	85.2	1482
WCI Communities	34275	Venice	7/13/2004 7:27	84.7	1482
WCI Communities	34275	Venice	9/15/2004 10:19	85	1482
WCI Communities	34275	Venice	4/28/2005 8:01	84	2889
WCI Communities	34275	Venice	4/28/2005 8:01	84.7	2889
WCI Communities	34275	Venice	3/7/2005 15:56	84.8	1994
WCI Communities	34275	Venice	9/15/2004 10:17	84.8	1663
WCI Communities	34275	Venice	6/9/2004 11:33	84.9	1994
WCI Communities	34275	Venice	7/28/2005 14:37	83.2	1269
WCI Communities	34275	Venice	4/28/2005 8:03	84.7	1082
WCI Communities	34275	Venice	7/13/2004 9:05	84.7	1482
WCI Communities	34275	Venice	8/30/2004 10:54	84.7	1663
WCI Communities	34275	Venice	6/9/2004 11:31	82.2	2889
WCI Communities	34275	Venice	3/7/2005 15:56	83.3	1691
WCI Communities	34275	Venice	7/13/2004 7:27	85.1	1482
WCI Communities	34275	Venice	11/21/2003 15:24	83.3	1478
WCI Communities	34275	Venice	9/15/2004 10:18	86.2	1994
WCI Communities	34275	Venice	12/22/2004 14:18	85.2	1478
WCI Communities	34275	Venice	1/9/2004 9:53	83.5	1269
WCI Communities	34275	Venice	6/9/2004 11:32	82.9	1691
WCI Communities	34275	Venice	4/28/2005 8:02	84.1	1269
WCI Communities	34275	Venice	10/14/2004 14:05	84.5	1994
WCI Communities	34275	Venice	1/9/2004 9:53	83.7	1478
WCI Communities	34275	Venice	9/15/2004 10:17	85.1	1994
WCI Communities	34275	Venice	12/16/2003 14:24	84.4	1663
WCI Communities	34275	Venice	4/28/2005 8:02	83.9	1269

WCI Communities	34275	Venice	11/21/2003 15:19	85.2	1994
WCI Communities	34275	Venice	12/22/2004 14:17	84.8	1691
WCI Communities	34275	Venice	7/28/2005 14:38	83	1269
WCI Communities	34275	Venice	7/13/2004 9:05	83.6	1269
WCI Communities	34275	Venice	7/28/2005 14:38	82	1691
WCI Communities	34275	Venice	11/21/2003 15:19	84.7	1482
WCI Communities	34275	Venice	6/9/2004 11:33	82.9	1269
WCI Communities	34275	Venice	12/16/2003 14:23	84.1	1082
WCI Communities	34275	Venice	7/13/2004 9:05	83.9	1269
WCI Communities	34275	Venice	2/23/2004 11:48	83.9	1691
WCI Communities	34275	Venice	6/9/2004 11:30	85.4	3085
WCI Communities	34275	Venice	3/7/2005 15:56	84.6	1082
WCI Communities	34275	Venice	11/21/2003 15:28	85	1482
WCI Communities	34275	Venice	3/7/2005 15:56	85.7	1691
	34275				
WCI Communities	34275	Venice	11/21/2003 15:22	84.8	1994
WCI Communities	34275	Venice	2/23/2004 11:24	85.1	1482
WCI Communities	34275	Venice	8/30/2004 10:54	84.7	1994
WCI Communities	34275	Venice	7/28/2005 14:37	82.9	1082
WCI Communities	34275	Venice	11/21/2003 15:23	85.3	1482
WCI Communities	34275	Venice	11/21/2003 15:24	86	3085
WCI Communities	34275	Venice	12/22/2004 14:18	85.4	1994
WCI Communities	34275	Venice	7/28/2005 14:37	84.1	3085
WCI Communities	34275	Venice	7/15/2004 15:35	85.1	1691
WCI Communities	34275	Venice	8/30/2004 10:21	85.1	2889
WCI Communities	34275	Venice	11/21/2003 15:27	81.1	1082
WCI Communities	34275	Venice	7/28/2005 14:38	83.1	1269
WCI Communities	34275	Venice	11/21/2003 15:22	85.1	1994
WCI Communities	34275	Venice	12/16/2003 14:23	84.8	1482
WCI Communities	34275	Venice	8/30/2004 10:20	84.4	1691
WCI Communities	34275	Venice	8/30/2004 10:22	84.4	3282
WCI Communities	34275	Venice	10/14/2004 14:04	86.1	3085
WCI Communities	34275	Venice	2/23/2004 11:23	81.8	1691
WCI Communities	34275	Venice	2/23/2004 11:23	84.6	1691
WCI Communities	34275	Venice	1/9/2004 9:53	83.4	1082
WCI Communities		Venice	1/9/2004 9:52	84.1	1691
WCI Communities	34275	Venice	1/9/2004 9:53	83.7	1269
WCI Communities	34275	Venice	7/27/2005 14:32	84.3	1691
WCI Communities	34275	Venice	3/7/2005 15:56	85.5	1994
WCI Communities	34275	Venice	6/9/2004 11:29	83.6	2889
WCI Communities	34275	Venice	11/21/2003 15:22	84.8	1082
WCI Communities	34275	Venice	7/27/2005 14:32	84.4	1269
WCI Communities	34275	Venice	12/16/2003 14:24	84.8	1082
WCI Communities	34275	Venice	7/13/2004 9:05	85.2	1691
WCI Communities	34275	Venice	7/28/2005 14:39	84.2	2889
WCI Communities	34275	Venice	3/7/2005 15:56	86.5	1994
WCI Communities	34275	Venice	9/15/2004 10:18	85.4	1994

- Air distribution system must meet the following criteria:

Sealing of the ducted air distribution system may have a maximum cfm leakage of five percent (5%) of the air-conditioned square footage of the home at the final inspection and three percent (3%) at the mid-point inspection. State of Florida Energy Code approved closure systems must be used for all duct system connections.

BuildSmart™
Trade Ally Program Standard

Effective: June 1, 2000

Florida Power & Light Company
Residential New Construction BuildSmart™
Trade Ally Program Standards

TABLE 1

L BUILDSMART PROGRAM FIGURES FROM 2002-2004 DSM

TESTIMONY

L BUILDSMART											%
Year	Homes	Total exp	Cost/ Home	Pay & Benefits	Supplies	O/S Services	Ads	Veh	Other	Revenue	Program ratepayer
2005	3,821	\$1,238,542	\$324	\$875,958	\$9,525	\$228,334	\$15,000	\$6,887	\$102,838	\$0	100%
2004	2,318	\$1,130,813	\$488	\$707,136	\$668	\$333,407	\$12,802	\$4,627	\$72,173	\$98,224	91%
2003	1,230	\$726,046	\$590	\$503,876	\$1,760	\$100,982	\$59,260	\$4,341	\$55,827	\$132,050	82%
2002	1,475	\$641,584	\$435	\$468,382	\$10,114	\$107,788	\$8,390	\$116	\$46,794	\$59,975	91%

TABLE 2

ALTERNATIVE PROPOSAL		Marketing-Admin (25%)	Incentive (67%)	Q.C. (8%)	Tariff \$230 for 1/2 homes	Net ECCR Cost Recovery	% ratepayer Program costs				
Year	Homes	Total exp	Per home	Per home	Per home						
2005	3,821	\$1,238,542	\$309,636	\$81	\$829,823	\$217	\$99,083	\$26	\$439,415	\$799,127	65%

TABLE 3

ENERGY STAR FIGURES FOR FLORIDA FROM EPA

FLORIDA PUBLIC SERVICE COMMISSION
 DOCKET 040029-EG-4
 NO. 040660-EG Exhibit No. 9
 Company/ Calc's - Plus
 Witness: Jon Klongerbo (JK-1)
 Date: 10-10-05

WEBSITE

	Bldrs rpting E* homes	Bldrs with no homes rpted	HOMES total program	HOMES last 12 mo.	% last 12	2003 New Starts*	% E*
FLORIDA	48	34	6244	2496	39.97%	156,852	1.59%
FPL	5	n/a	312	52	16.67%	74,240	0.07%
GRU	11	n/a	621	173	27.86%	1,536	11.26%
PEF	19	n/a	4152	1737	41.84%	21,959	7.91%
OTHER	13	n/a	1159	534	46.07%	59,117	0.90%

OTHER STATES

	Bldrs rpting E* homes	Bldrs with no homes rpted	HOMES total program	HOMES last 12 mo.	% last 12	2003 New Starts*	% E*
CALIFORNIA	101	71	40186	24281	60.42%	139,870	17.36%
TEXAS	150	124	75044	41636	55.48%	134,197	31.03%
OHIO	31	18	11110	6236	56.13%	42,703	14.60%
NEVADA	32	24	33018	16919	51.24%	33,090	51.13%

WISCONSIN	230	114	4058	2112	52.05%	28,744	7.35%
NEW YORK	197	130	3200	1763	55.09%	24,196	7.29%
NEW JERSEY	56	38	7740	4210	54.39%	22,163	19.00%
MASS	55	33	2251	1049	46.60%	13,037	8.05%
INDIANA	33	17	7375	3011	40.83%	12,601	23.89%
VERMONT	25	8	1114	356	31.96%	2,430	14.65%
RHODE ISL	9	8	536	201	37.50%	1,948	10.32%

*State new starts are taken from BCAP table;

allocation within Florida is using factor derived from reported residential customers by utility (PSC)

TABLE 4

#4, 8 & 13-BUILDSMART DATA								(#8--SERVICE PERFORMED Code calc
Level	2000	2001	2002	2003	2004	2005	TOTAL	
Bronze #	212	335	286	325	317	276	1751	1751
Fees*	\$40,280	\$63,650	\$54,340	\$61,750	\$60,230	\$52,440	\$332,690	
Silver	304	481	633	844	994	551	3807	3807
Fees*	\$27,360	\$43,290	\$56,970	\$75,960	\$89,460	\$49,590	\$342,630	
Gold	189	387	384	498	722	309	2489	2489
Fees*	0	0	0	0	0	0	0	
Plus premium service surcharge* *at minimum			n/r	n/r	n/r	n/r	\$10,250	
					Program	Revenue:	\$685,570	8047
# Builders	225	284	222	155	148	76		
#12-BERS w/BuildSmart								
# BERS	\$ collected		If tariff was					

n/r		charged
n/r		at min.
389	\$289.56	\$95,305

#6-BERS

Level	2000	2001	2002	2003	2004	2005		<u>\$ at min tariff</u>
Class 1	38	108	80	92	80	15	413	\$101,185
Class 2	1	1	0	0	0	0	2	\$380
Class 3	1	2	0	0	0	0	3	\$270
							418	\$101,835

#9-BERS cost analysis

TOTAL \$	Salaries	Dir X	Overhead	Marketing
\$10,329	\$5,371.08	\$2,478.96	\$2,375.67	\$0.00
100%	52%	24%	23%	0%

Resume

Philip Fairey

Florida Solar Energy Center

e-mail: pfairey@fsec.ucf.edu

1679 Clearlake Road

phone: (321) 638-1005

Cocoa, FL 32922-5703

fax: (321) 638-1010

EMPLOYMENT BACKGROUND

1990-present: *Deputy Director*, FSEC. Assist the Director in matters of policy, budget and planning. Represent FSEC at public and institutional engagements and on committees on which it is asked to serve. Act on behalf of the Director in his absence. Perform contracted research.

November 2002-January 2005: *Interim Director*, Florida Solar Energy Center (FSEC). Responsible for all matters of policy, planning, budget and personnel. Responsible for a staff of approximately 150 individuals and a budget of approximately \$3 million in state funds plus \$10 million in contracts and grants funds annually. FSEC is the largest and most active state-supported renewable energy and energy efficiency research, training, testing and certification institute in the United States. An institute of the University of Central Florida, the Center functions as the state's energy research, training and certification center.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET 040029-EG+
NO. 040660-EG Exhibit No. 10
Company/ Cases-Plus
Witness: Philip Fairey Resume
Date: 10-10-05

1986-2000: *President*, Building Consultants Group, Inc. A small consulting firm specializing in building forensics. Measurement, diagnosis and remediation of building science problems related to moisture control, indoor air quality, energy use, building materials, design and construction.

1986-1990: *Program Director* for Buildings Research, Research & Development Division, FSEC. Research and development of advanced building energy-efficiency and cooling and dehumidification concepts and systems. Responsibilities include overall program development, supervision of fifteen to twenty research professionals, research contract management and administration, and experimental and analytical buildings and energy research.

1980-1986: *Research Scientist*, Research & Development Division, FSEC. Responsibilities included development of research plans, preparation of major research proposals, supervision of three to five professionals, administration and management of research contracts, design and management of the FSEC Passive Cooling Laboratory, lectures at workshops and seminars, administration of building design competitions, responses to public inquiries and analytical and experimental research.

1979-1980: *General Manager*, Building Systems, Inc. Responsible for design and construction of factory-built modular homes in the Carolinas.

1975-1979: *Owner*, Piedmont Shelters, Inc. Responsible for design and construction of custom solar homes in the Carolinas.

1969-1973: *1st Lieutenant*, U.S. Army. Administrative officer for U.S. Army Depot, Federal Republic of Germany.

RESEARCH EXPERIENCE

Principal responsibility for 30 research contracts totaling more than \$11 million.

Experimental and analytical expertise in fields of moisture transport and control, roof and attic systems, radiant barrier technology, advanced cooling and dehumidification systems, natural ventilation systems, pressure and air flow control systems, building energy-efficiency and conservation systems, industrialized housing systems, indoor air quality (IAQ), utility Demand Side Management (DSM) and building energy analysis software tool development.

Initiated, developed and guided FSEC's building science research programs since 1980. Developed research basis for performance of Radiant Barrier Systems (RBS) resulting in creation of new energy conservation alternatives. Initiated research on moisture sorption in buildings, proved its importance and guided development of FSEC 3.0, a sophisticated hourly building simulation software model for these and other complex building science phenomena. Conceived and developed a novel, high-efficiency, solar-driven desiccant dehumidification and cooling system. Conceived an effective enthalpy storage drywall

system capable of overcoming intermittent heat and moisture loads in buildings. Guided FSEC's research on uncontrolled pressure and airflow phenomena in buildings, participating in the development of field and laboratory research projects and directing the development of detailed simulation and modeling capabilities. Conceived, developed and patented photocatalytic VOC destruction methods and devices. Conceived and developed the Florida Building Energy-Efficiency Rating System and the *EnergyGauge*[®] building energy analysis software tools.

HONORS AND AWARDS

U.S. Patents #5,604,339 and #5,744,407

RESNET Lifetime Achievement Award, 2003

Researcher of the Year, University of Central Florida (UCF) Foundation, 1987

College Award for Excellence in Research, UCF Foundation, 1987

National Award for Innovation in Energy, U.S. Department of Energy, 1984

College Award for Excellence in Research, UCF Foundation, 1983

Outstanding Student Award, Clemson University, 1974

EDUCATION

Master, City and Regional Planning, Clemson University, 1975

B.A., Architecture, Clemson University, 1969

OTHER PROFESSIONAL ACTIVITIES

ASHRAE Member: Research Chairman, TC 4.4, *Thermal and Moisture Transmission*, 1988-89; Chairman, TC 4.9, *Building Envelope Systems*, 1989-1991; Member, ANSI/ASHRAE Standard 140-2001 Standards Project Committee, *Standard Method of Test for the Evaluation of Building Energy Analysis Computer Programs*, 2001-present

Energy TAC Member, Florida Building Commission, 1998-present

RESNET Member: Chairman, *Training and Certification Task Force*, 2000-2005; Chairman, *Software Evaluation Task Force*, 2000-2005; Board of Directors member, 1998-present; President, 2004-present.

ASTM C-16 Member: Chairman, C-16.21 Task Group 101 on *Radiant Barrier Systems*, 1988-91

HERS Council Technical Committee Member: December 1995-96

Florida Green Building Coalition Founding Member; Chairman, Standards Committee, 1999-present.

CONSULTING EXPERIENCE

CH2M Hill, Orlando, Florida, October 1991 to 1999

New Jersey Housing Authority, February to September 1997

Crews & Bodiford, PA, August 1996 to June 1997

Hughes Masonry, Louisville, KY, December 1992 to July 1995

Sinkler & Boyd, P.A., Charleston, SC, December 1992 to July 1995

Holland & Knight, Orlando, FL, July 1994 to March 1996

Moody, Salzman & Robertson, Gainesville, FL, May 1993-May 1994

Ryland Homes, Columbia, MD, April 1993

Piper & Marbury, Washington, DC, April 1993

Myrtle Beach Air Force Base, Myrtle Beach, SC, August 1993

Pulte Home Corporation, Bloomfield Hills, MI, March 1993

Honigan, Miller Schwartz & Cohn, Detroit, MI, March 1993

Barton Malow Company, Rochester, MN, February 1992

Frost & Dale, P.A., Bartow, FL, February 1992

Arvida Contractors Limited, West Palm Beach, FL, February 1991

Boose, Casey, Ciklin, et al., West Palm Beach, FL, February 1991

William Lyon Company, Newport Beach, CA, May 1990

Newport Hotel Associates, Washington, DC, April 1990

CBY Associates, Washington, DC, 1989-90

University of Minnesota, Mechanical Engineering College, 1987-90

General Electric Company, 1988

Howard Johnson Company, Inc., 1988

MAJOR RESEARCH CONTRACTS

Florida Energy Plan, Florida Energy Office, *Project Manager*, May 2003 - January

2004 (\$249,000)

Florida Energy Smart Schools Program, Florida Energy Office, *Project Manager*,

December 2001-present (\$542,997)

NASEO Energy Smart Schools Project, National Association of State Energy Offices,

Project Manager, May 2001-present (\$1,285,794)

AHU Location Multiplier Development Project, Florida Department of Community

Affairs, *Principal Investigator*, November 2000-March 2001 (\$15,000)

Operation Open for Business, Florida Department of Community Affairs, *Project*

Manager, March 1999-December 2000 (\$275,000)

Long-Term Community Redevelopment, Florida Department of Community Affairs,

Project Manager, March 1999-December 2000 (\$235,000)

Desiccant Algorithms for Florida's Commercial Building Code, Gas Research Institute,

Project Manager, April 1998-May 2001 (\$238,000)

DOE/SEP Special Codes and Standards Project, U.S. Department of Energy (DOE)
and Florida Energy Office, *Project Manager*, April 1998-March 2001 (\$316,000)

End-Use Monitoring for FPC, Florida Power Corporation, *Project Manager*, February
1998- March 2001 (\$550,000)

Florida Building Energy Rating System Privatization, Florida Energy Office, *Project
Manager*, November 1995-December 1999 (\$900,000)

Energy Efficient New Homes Program (Energy Star), U.S. Environmental Protection
Agency, *Project Manager*, October 1995-November 1999 (\$913,745)

***Comparison of Duct System Computer Models That Could Provide Input to the
Thermal Distribution Standard Method of Test (SPC152P)***, American Society of
Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) and
Brookhaven National Laboratory (BNL), *Investigator*, October 1995-September
1996 (\$90,000)

Florida Building Assessment Systems Initiative, Florida Energy Office, *Principal
Investigator*, June 1995-September 1996 (\$75,000)

Analysis of Energy Efficiency Options for the Abacoa Development Project,
MacArthur Foundation, *Investigator*, May-September 1995 (\$26,000)

Florida Building Energy-Efficiency Rating Systems, Florida Department of

Community Affairs, *Principal Investigator*, September 1993-June 1995

(\$200,000)

FPL BuildSmart Research Project, Florida Power & Light Company, *Project Manager*,

July 1993-December 1995 (\$1,035,000)

Uncontrolled Air Flow in Non-Residential Buildings, Florida Energy Office, *Project*

Manager, October 1992-April 1996 (\$500,000)

Evaluation of Available Insulation Technologies, Florida Power & Light Company,

Principal Investigator, September 1992-August 1993 (\$115,000)

Duct Repair Training Program, Florida Energy Office, *Project Manager*, July 1991-

January 1993 (\$150,000)

Solar Cooling Research Project, U.S. Department of Energy, San Francisco Operations

Office, *Principal Investigator*, October 1986-September 1991 (\$2,000,000)

End-Use Energy Research and Development, Florida Power & Light Company, *Project*

Manager, December 1986-December 1991 (\$750,000)

Moisture Research and Analysis in Buildings, Materials and Systems, Gas Research Institute, *Project Manager*, January 1987-July 1990 (\$600,000)

Testing of a Low Emissivity Paint for Energy Performance, SOLEC, Inc., Princeton, NJ, *Principal Investigator*, March-October 1986 (\$2,000)

Hybrid Building Cooling and Dehumidification Through Desiccant-Enhanced Nocturnal Radiation, U.S. Department of Energy, San Francisco Operations Office, *Principal Investigator*, August 1984-April 1986 (\$44,680)

Residential Conservation Strategies for Hot, Humid Climates, U.S. Department of Energy, San Francisco Operations Office, *Co-Principal Investigator*, March 1984-January 1987 (\$155,000)

Analysis of Residential Passive Design Techniques for the Florida Model Energy Code, University of Florida, *Co-Principal Investigator*, September 1983-December 1984 (\$13,000)

Passive Cooling/Gas Technology Characterization and Development, Gas Research Institute, Chicago, IL, *Project Manager*, February 1983-January 1986 (\$278,209)

Passive Design of Florida Residences, Florida Power & Light Company, *Principal Investigator*, October 1982-April 1983 (\$15,000)

Ventilated Walls and "Ice House" Roof Application - Louisiana Solar Design and Development Project, Louisiana State University Office of Building Research,
Principal Investigator February-November 1982 (\$5,000)

Passive Solar and Low Energy Building Design Residential Demonstration Project,
Florida Public Service Commission, *Solar Lab Manager*, September 1981-
October 1982 (\$125,000) subcontract from University of Central Florida)

Passive Cooling by Natural Ventilation, U.S. Department of Energy, *Principal Investigator*, September 1980-September 1983 (\$405,000)

PUBLICATIONS

U.S. Patents

Ali T_Raissi, Nazim Z. Muradov and Philip W. Fairey, III, *Method of Photocatalytic Destruction of Harmful Volatile Compounds at Emitting Surfaces*, U.S. Patent #5,604,339, issued February 18, 1997

Ali T_Raissi, Nazim Z. Muradov and Philip W. Fairey, III, *Photocatalytic Face Mask*, U.S. Patent #5,744,407, issued April 28, 1998

Books and Book Chapters

Fairey, P., *Rational Building Design for Hot, Humid Caribbean Climates*. Building Consultants Group, Merritt Island, FL, March 1990.

Chandra, S., P. Fairey and M. Houston, *Cooling with Ventilation*, Solar Energy Research Institute, Golden, CO, December 1986.

Fairey, P. *Multi-family Building: Designs for Warm, Humid Climates*, Solstice Publications, Miami-Dade Community College, Miami, FL, June 1986.

Chandra, S. and P. Fairey, *Building For the Tropics*, Cape Canaveral, FL, October 1982.

Peer-Reviewed Technical Articles

Fairey, P., D. Parker, B. Wilcox and M. Lombardi, "Climate Impacts on Heating Seasonal Performance Factor (HSPF) and Seasonal Energy Efficiency Ratio (SEER) for Air Source Heat Pumps." Accepted for publication: *ASHRAE Transactions*, American Society of Heating, Refrigerating and Air Conditioning Engineers, Atlanta GA, June 2004.

Lombardi, Matthew, Parker, Danny, Vieira, Robin, Fairey, Philip, "Geographic Variation in Potential of Rooftop Residential Photovoltaic Electric Power Production in the United States," Proceedings of ACEEE 2004 Summer Study on Energy Efficiency in Buildings, American Council for an Energy Efficient Economy, Washington, DC, August 2004.

Gu, L., M.V. Swami and P. Fairey, "System Interactions in Forced-air Heating and Cooling Systems, Part II: Continuous Fan Operation." *ASHRAE Transactions*,

Vol. 109, Part 2, pp. 371_379, American Society of Heating, Refrigerating and Air Conditioning Engineers, Atlanta GA, January 2004.

Gu, L., M.V. Swami and P. Fairey, "System Interactions in Forced-Air Heating and Cooling Systems, Part I: Equipment Efficiency Factors." *ASHRAE Transactions*, Vol 109, Part I, pp. 475_484. American Society of Heating, Refrigerating and Air Conditioning Engineers, Atlanta GA, January 2003.

Fairey, P., R. K. Vieira, D. S. Parker, B. Hanson, P. A. Broman, J. B. Grant, B. Fuehrlein and L. Gu, "EnergyGauge USA: A Residential Building Energy Simulation Design Tool." *Thirteenth Symposium on Improving Building Systems in Hot and Humid Climates Proceedings*, Texas A&M University, College Station, TX, May 2002.

Vieira, R. K., J. E. Cummings, P. Fairey and K. Hannani, "How to Calculate Financial Information for Home Energy Raters, Lenders and Savvy home Buyers." *1998 ACEEE Summer Study on Energy Efficiency Proceedings*, American Council for an Energy-Efficient Economy, Washington, DC, August 1998.

Gu, L., P. Fairey, M. Swami and J. E. Cummings, "Modeling the Interactions Between Air Distribution Systems, Building Envelopes and the Outdoor Environment in Typical Hot, Humid Climate Residences." *Thermal Envelopes VII Proceedings*, Clearwater Beach, FL, December 1998.

Gu, L., M. Swami, J. E. Cummings and P. Fairey, "Comparison of Duct System Computer Model with Measured Data in a Residential Attic with Duct System." *ASHRAE Transactions*, Toronto, Canada, June 1998.

Gu, L., M. Swami, P. Fairey and J. E. Cummings, "Comparison of Duct System Computer Models that Could Provide Input to the Thermal Distribution Standard Method of Test (SPC-152P)." *ASHRAE Transactions*, San Francisco, CA, January 1998.

Parker, D., P. Fairey and J. McIlvaine, "Energy Efficient Office Building Design for a Hot and Humid Climate: Florida's New Energy Center." *ASHRAE Journal*, Vol. 39, No. 4, pp. 49-58, American Society of Heating, Refrigerating and Air-Conditioning Engineers, Atlanta, GA, April 1997.

Cummings, J. B., C. R. Withers, N. Moyer, P. Fairey and B. McKendry, "Field Measurement of Uncontrolled Air Flow and Depressurization in Restaurants," *ASHRAE Transactions*, Vol. 102, Pt. 1, American Society of Heating Refrigerating and Air-Conditioning Engineers, Atlanta, GA, 1996.

Withers, C. R., J. B. Cummings, N. Moyer, P. Fairey and B. McKendry, "Energy Savings from Repair of Uncontrolled Air Flow in Eighteen Small Commercial Buildings,"

American Society of Heating, Refrigerating and Air-Conditioning Engineers,

ASHRAE Transactions, Vol. 102, Part 2, pp. 549-561, Atlanta, GA, 1996.

DuBose, G., D. Odom and P. Fairey, "Moisture Problems: Why HVAC Commissioning Procedures Don't Work in Humid Climates." *ASHRAE Journal*, American Society of Heating, Refrigerating and Air-Conditioning Engineers, Atlanta, GA, December 1993.

Gu, L., M. Swami and P. Fairey, "Generalized Theoretical Model of Combined Heat, Air and Moisture Transfer in Porous Media." *Fourth Annual Symposium on Multiphase Transport in Porous Media Proceedings*, 1993 American Society of Mechanical Engineers (ASME) Winter Meeting, New Orleans, LA, December 1993.

Tyson, J., P. Fairey and C. Withers, "Elevated Radon Levels in Ambient Air." *Indoor Air '93 Proceedings*, Helsinki, Finland, July 1993.

Parker, D., P. Fairey and L. Gu, "Simulation of the Effects of Duct Leakage and Heat Transfer Upon Residential Space Cooling Energy Use." *Energy and Buildings*, Vol. 20, No. 2, pp. 97-113, Elsevier Press, Lausanne, Switzerland, 1993.

Fairey, P., and M. Swami, "Attic Radiant Barrier Systems: A Sensitivity Analysis of Performance Parameters," *International Journal of Energy Research*, Vol. 16, pp. 1-12, John Wiley & Sons, Ltd., New York, NY, January 1992.

Parker, D., P. Fairey and L. Gu, "A Stratified Air Model for Simulation of Attic Thermal Performance." *Insulation Materials: Testing and Applications*, Volume 2, ASTM STP 1116, R. S. Graves and D. C. Wysocki, Eds., American Society of Testing and Materials, Philadelphia, PA, 1991.

Fairey, P., "Seasonal Prediction of Roof-Mounted Attic Radiant Barrier System Performance From Measured Test Data." *ACEEE 1990 Summer Study on Energy Efficiency in Buildings Proceedings*, Volume 1, American Council for an Energy-Efficient Economy, Washington, DC, 1990.

Swami, M., P. Fairey, A. Kerestecioglu, "An Analytical Assessment of the Desiccant-Enhanced Radiative Cooling Concept." *Performance of the Exterior Envelopes of Buildings IV Proceedings*, American Society of Heating, Refrigerating and Air-Conditioning Engineers, Atlanta, GA, December 1989.

Kerestecioglu, A., M. Swami, P. Fairey, L. Gu and S. Chandra, "Modeling Heat, Moisture and Contaminant Transport in Buildings: Toward a New Generation Software." *Building Simulation '89 Proceedings*, Vancouver, BC, Canada, June 1989.

Fairey, P., and M. Swami, "Analysis of Attic Radiant Barrier Systems Using Mathematical Models," *Fifth Annual Symposium on Improving Building Energy Efficiency in Hot and Humid Climates Proceedings*, Houston, TX, September 1988.

Shih, J., and P. Fairey, "Ventilated Walls and Ice House Roof Applications in Hot-Humid Climates," *10th Triennial Congress of the International Council for Building Research Proceedings*, CIB.86, Vol. 6, Washington, DC, September 1986.

Fairey, P., S. Chandra and A. Kerestecioglu, "Ventilative Cooling in Southeastern Residences: A Parametric Analysis," *Thermal Performance of the Exterior Envelopes of Buildings III Proceedings*, ASHRAE/DIE/BTECC Conference, Clearwater Beach, FL, December 1985.

Kerestecioglu, A., P. Fairey and S. Chandra, "Algorithms to Predict Detailed Moisture Effects in Buildings," *Thermal Performance of the Exterior Envelopes of Buildings III Proceedings*, ASHRAE/DOE/BTECC Conference, Clearwater Beach, FL, December 1985.

Fairey, P., "The Measured Side-by-Side Performance of Attic Radiant Barrier Systems in Hot-Humid Climates," *19th International Thermal Conductivity Conference Proceedings*, Cookeville, TN, October 1985.

- Rish, J., J. Roux and P. Fairey, "The Resistance of Fibrous Insulations Undergoing Coupled Conduction and Radiation Heat Transfer," *19th International Thermal Conductivity Conference Proceedings*, Cookeville, TN, October 1985.
- Fairey, P., and A. Kerestecioglu, "Dynamic Modeling of Combined Thermal and Moisture Transport in Buildings: Effect on Cooling Loads and Space Conditions," *ASHRAE Transactions*, Vol. 91, Pt. 2, 1985.
- Fairey, P., S. Chandra, R. Vieira, A. Kerestecioglu and S. Kalaghchy, "Auxiliary Cooling Loads in Passively Cooled Buildings: An Experimental Research Study," *1st Annual Symposium on Efficient Utilization of Energy in Residential and Commercial Buildings Proceedings*, College Station, TX, August 1984.
- Chandra S., P. Fairey, M. Houston and A. Kerestecioglu, "Wingwalls to Improve Natural Ventilation: Full-Scale Results and Design Strategies," *Passive Solar Journal*, Vol. 2, No. 2, 1983.
- Fairey, P., G. Ventre, M. Houston, M. Khattar and M. Girgis, "The Thermal Performance of Selected Building Envelope Components in Warm, Humid Climates," *1983 ASME Solar Division Conference Proceedings*, Orlando, FL, April 1983.

Chandra, S., A. Kerestecioglu, P. Fairey and W. Cromer, "Comparison of Model and

Full-Scale Natural Ventilation," *International Workshop on Wind Tunnel*

Modeling Criteria and Techniques of the National Bureau of Standards

Proceedings, 1982.

Fairey, P., "Effects of Infrared Radiation Barriers on the Effective Thermal Resistance of

Building Envelopes," *ASHRAE/DOE Conference on Thermal Performance of the*

Exterior Envelopes of Buildings II Proceedings, Las Vegas, NV, December 1982.

Ventre, G., P. Fairey, M. Khattar and R. Walker, "Establishing a Design and Data Base

for Passive/Hybrid Solar Cooling in Warm, Humid Climate," *4th Annual ASME*

Solar Energy Division Technical Conference Proceedings, Albuquerque, New

Mexico, 1982.

Fairey, P., "Florida Retrofit Options," *International Conference on Energy Resources and*

Conservation Related to Built Environment Proceedings, Vol. 2, Pergamon Press,

New York, December 1980.

Other Technical Publications

Fairey, P., R. Vieira, M. Elder, C. Kettles, J. Tait, et.al., "Florida's Energy Future:

Opportunities for Our Economy, Environment and Security." Final Report,

Florida Solar Energy Center, Cocoa, FL, January 16, 2004.

Fairey, P., "An Analysis of Greenhouse Cookpot Design Considerations for Low_Cost Solar Cookers." FSEC_CR_1283_01, Florida Solar Energy Center, Cocoa, FL, October 29, 2001.

Parker, D. S., and P. W. Fairey, "Preliminary Evaluation of Energy_Efficiency Improvements to Modular Classrooms." FSEC_CR_1272_01, Florida Solar Energy Center, Cocoa, FL, September 2001.

Fairey, P., J. Tait, D. Goldstein, D. Tracey, M. Holtz and R. Judkoff, "The HERS Rating Method and the Derivation of the Normalized Modified Loads Method." FSEC_RR_54_00, Florida Solar Energy Center, Cocoa, FL, October 11, 2000.

Fairey, P., R. Vieira, and D. Parker, "Validation of EnergyGauge® USA Using the HERS BESTEST." FSEC_RR_55_00, Florida Solar Energy Center, Cocoa, FL, October 17, 2000.

Fairey, P., et al., "National Rater Training and Certifying Standard." Residential Energy Services Network, Oceanside, CA, October 2000.

Fairey, P., et al., "National Home Energy Rating System Technical Guidelines." Residential Energy Services Network, Oceanside, CA, September 1999.

Fairey, P., M. Anello, L. Gu, D. Parker, M. Swami and R. Vieira, "Comparison of EnGauge 2.0 Heating and Cooling Load Predictions with the HERS BESTEST Criteria." Report #FSEC-CR-983-98, Florida Solar Energy Center, Cocoa, FL, January 1998.

Gu, L., M. Swami, P. Fairey, J. E. Cummings and S. Awwad, "Comparison of Duct System Computer Models that Could Provide Input to the Thermal Distribution Standard Method of Test (SPC-152P)," Final Report #FSEC-CR-925-95, Florida Solar Energy Center, Cocoa, FL, November 1996.

Cummings, J., C. Withers, N. Moyer, P. Fairey and B. McKendry, "Uncontrolled Air Flow in Non-Residential Buildings," Report #FSEC-CR-878-96, Florida Solar Energy Center, Cocoa, FL, April 1996.

Fairey, P., "A Comparative Analysis of Present and Proposed Rating Methods for Computing HERS Scores (Revised)," Research Report #FSEC-RR-41-96, Florida Solar Energy Center, Cocoa, FL, April 1996.

Cummings, J. B., C. R. Withers, N. Moyer, P. Fairey and B. McKendry, "Uncontrolled Air Flow in Non-Residential Buildings," Final Contract Report #FSEC-CR-878-96, Florida Solar Energy Center, Cocoa, FL, April 1996.

McIlvaine, J. E. R., D. Parker and P. Fairey, "Analysis of Energy Efficiency Options for the Abacoa Development Project," Final Contract Report #FSEC-CR-842-95, Florida Solar Energy Center, Cocoa, FL, September 1995.

Fairey, P., "Florida Building Energy-Efficiency Rating System: Development of Rating Methods for Existing Residential Buildings," Final Contract Report #FSEC-CR-821-95, Florida Solar Energy Center, Cocoa, FL, June 1995.

Fairey, P., and R. Vieira, "Florida Building Energy-Efficiency Rating Systems: Progress and Remaining Issues." Proceedings of *Third National Conference on New Construction Programs for Demand Side Management*, Boston, MA, March 1995.

Fairey, P., D. Parker, M. Anello, L. Gu and M. Swami, "Evaluation of Available Insulation Technologies." Proprietary Contract Report, #FSEC-CR-751-94, October 1994.

Fairey, P., D. Parker and M. Anello, "Florida Building Energy-Efficiency Rating System: Public Building Rating System Methodology." Contract Report #FSEC-CR-702-94, March 21, 1994.

Parker, D., and P. Fairey, "Florida Building Energy-Efficiency Rating System: Development of Uniform Rating System." Contract Report #FSEC-CR-690-93, December 10, 1993.

Parker, D., and P. Fairey, "Florida Building Energy-Efficiency Rating System: Development of Draft Information Brochure." Contract Report FSEC-CR-689-93, December 1993.

Swami, M. V., A. Rudd, L. Gu, S. Chandra and P. Fairey, "Revision of the Florida Residential Energy Code: Draft Summary of Findings and Proposed Phase II Work." Contract Report, November 30, 1993.

Fairey, P., D. Parker, M. Anello, L. Gu and T. Stedman, "Evaluation of Available Insulation Technologies." Draft Contract Report (confidential), September 20, 1993.

Fairey, P., L. Gu and V. Vailoor, "The Efficacy of Attic Technology, Inc's *Solar Without Panels*." Contract Report FSEC-CR-615-93 (confidential), August 30, 1993.

Parker, D., P. Fairey, C. Gueymard, R. McCluney, J. McIlvaine and T. Stedman, "Rebuilding for Efficiency: Improving the Energy Use of Reconstructed Residences in South Florida." Contract Report, FSEC-CR-562-92, December 1992.

Fairey, P., "Losing Energy in the Southeast," *Fine Homebuilding*, May 1991.

DuBose, G., D. Odom and P. Fairey, "Moisture Problems: Why HVAC Commissioning Procedures Don't Work in Humid Climates." CH2M Hill, Orlando, Florida, 1991.

Beal, D., and P. Fairey, "Innovative Floor Radiant Barrier Systems." Contract Report, FSEC-CR-252-89, December 1989.

Kerestecioglu, A., P. Brahma and P. Fairey, "Computerized Material Moisture Property Data Base," Contract Report, FSEC-CR-286-89, October 1989.

Kerestecioglu, A., M. Swami, P. Brahma, L. Gu, P. Fairey and S. Chandra, "Florida Software for Environmental Calculations," *FSEC 1.1 Users Manual*, FSEC-GP-38-89, August 1989.

Chandra, S., M. Swami, A. Rudd, P. Fairey, D. Beal and A. Kerestecioglu. "Solar Cooling Research Project: Second Year," Contract Report, FSEC-CR-255-89, February 1989.

Swami, M., A. Rudd, P. Fairey, S. Patil, A. Kerestecioglu and S. Chandra, "An Analysis of the Desiccant-Enhanced Radiative Cooling Concept and a Description of the Diurnal Test Facility," Contract Report, FSEC-CR-237-88, February 1989.

Kerestecioglu, A., M. Swami, R. Dabir, N. Razzaq and P. Fairey, "Theoretical and Computational Investigation of Algorithms for Simultaneous Heat and Moisture Transport in Buildings," Contract Report, FSEC-CR-191-88, October 1988.

Fairey, P., M. Swami and D. Beal, "RBS Technology - Task 3 Report," Contract Report, FSEC-CR-211-88, April 26, 1988.

Swami, M. V., and P. W. Fairey, "Comparative Testing of a Low-Emissivity Paint," SOLEC, Inc., Final Report (Proprietary) FSEC-CR-155-86, October 1986.

Fairey, P., A. Kerestecioglu, R. Vieira, M. Swami and S. Chandra, "Latent and Sensible Load Distributions in Conventional and Energy-Efficient Residences," Gas Research Institute, Final Report, FSEC-CR-153-86, May 1986.

Fairey, P., R. Vieira and A. Kerestecioglu, "Desiccant-Enhanced Nocturnal Radiation - A New Passive Cooling Concept," *Concrete Masonry Solar Architectural Quarterly*, Vol. 6. No. 2, National Concrete Masonry Association, May 1986.

Fairey, P., A. Kerestecioglu and R. Vieira, "Analytical Investigation of the Desiccant-Enhanced Nocturnal Radiation Cooling Concept," U.S. Department of Energy, Final Report, FSEC-CR-152-86, April 30, 1986.

Fairey, P., and M. Swami, "The Comparative Thermal Performance of Rustic Shingle as a Retrofit Option in Hot-Humid Climates," Classic Products, Inc., Final Report, FSEC-CR-143-86, January 1986.

Fairey, P., A. Kerestecioglu and R. Vieira, "Desiccant-Enhanced Nocturnal Radiation: A New Passive Cooling Concept," Proceedings of *10th National Passive Conference*, American Solar Energy Society (ASES), Raleigh, NC, October 1985.

Chandra, S., P. Fairey and M. Swami, "A Review and Comparative Analysis of Energy Conservation Techniques to Reduce Residential Air Conditioning Loads in the Southeast," U.S. Department of Energy, Contract Report FSEC-CR-126-85, Florida Solar Energy Center, Cape Canaveral, FL, June 28, 1985.

Chandra, S., P. Fairey and M. Houston, "Analysis of Residential Passive Design Techniques for the Florida Model Energy Code," University of Florida, Final Report, FSEC-CR-113-84, December 1984.

Vieira, R., S. Chandra and P. Fairey, "Residential Cooling Loads in Hot, Humid Climates," Proceedings of *9th National Passive Solar Conference*, Columbus, Ohio, September 1984.

Fairey, P., "Radiant Barriers for Cooler Houses," *Solar Age Magazine*, July 1984.

- Chandra, S., P. Fairey and M. Houston, "A Handbook for Designing Ventilated Buildings," U.S. Department of Energy, Final Report, FSEC-CR-93-83, September 1983.
- Fairey, P., "Ventilated Walls and 'Ice House' Roofs Application," Louisiana Solar Design and Data Development Project, Final Report, FSEC-CR-65-82, November 1982.
- Fairey, P., et al., "Passive Solar and Low-Energy Building Design Residential Conservation Demonstration Project," Florida Public Service Commission, Final Report, October 1982.
- Fairey, P., and S. Kalaghchy, "Evaluation of Thermocouple Installation and Mounting Techniques for Surface Temperature Measurement in Dynamic Environments," Proceedings of *7th National Passive Solar Conference*, Knoxville, TN, August/September 1982.
- Houston, M., P. Fairey and E. Gonzales, "Computer Simulations of East/West Wall Design Options for Warm, Humid Climates," Proceedings of *7th National Passive Solar Conference*, ASES, August 1982.
- Houston, M., M. Khattar and P. Fairey, "Field Monitoring of Passive Cooling Retrofit Strategies for Warm, Humid Climates," Proceedings of *Annual ASES Conference*, June 1982.

Chandra, S., and P. Fairey, "Passive Cooling by Natural Ventilation: A Literature Review," Final Report, FSEC CR-37-82, January 1982.

Chandra, S., and P. Fairey, "Passive Cooling by Natural Ventilation: A Review and Research Plan," Proceedings of *Annual AS/ISES Conference*, 1981.

Fairey, P., and W. Bettencourt, "LaSucka -- A Wind Driven Ventilation Augmentation and Control Device," Proceedings of *1st International Passive/Hybrid AS/ISES Cooling Conference*, Pergamon Press, New York, November 1981.

Fairey, P., "Passive Cooling Retrofit Applications for Residential Concrete Block Structures in Warm, Humid Climates," Proceedings of *Annual AS/ISES Conference*, Philadelphia, PA, May 1981.

Chandra, S., C. Cromer, P. Fairey, C. Kettles and M. Khatter, "Recommended Audit Procedures for Renewable Energy Measures for the Florida Residential Conservation Service (RCS) Program," Report #FSEC-TT-80-5, December 1980.

Fairey, P., "Human Comfort," Passive Cooling Workshop of *5th National Passive Conference*, Amherst, MA, October 1980.

Fairey, P., "Effective Roof Overhang Design," *Solar Engineering Magazine*, July 1980.

Chandra, S., P. Fairey, A. Bowen, J. E. Cermak and J. A. Peterka, "Passive Cooling by Natural Ventilation - A Review and Research Plan," Proceedings of *Annual AS/ISES Conference*, Philadelphia, PA, May 1980.

Public Information Documents

Fairey, P., "Economic Energy Savings Potential for Florida Utilities," Testimony before Subcommittee on Public Utilities, Committee on Regulated Services & Technology, Florida House of Representatives, Tallahassee, FL, September 1991.

Fairey, P., and R. McCluney, "Techniques for Shading Walls and Windows," Design Note, FSEC-DN-8, Florida Solar Energy Center, Cape Canaveral, FL, 1986.

Fairey, P., "Designing and Installing Radiant Barrier Systems," Design Note, FSEC-DN-7, Florida Solar Energy Center, Cape Canaveral, FL, 1984.

Fairey, P., "Radiant Energy Transfer and Radiant Barrier Systems in Buildings," Design Note, FSEC-DN-6, Florida Solar Energy Center, Cape Canaveral, FL, 1984.

Fairey, P., "Passive Cooling and Human Comfort," Design Note, FSEC-DN-5, Florida Solar Energy Center, Cape Canaveral, FL, 1981.

Fairey, P., "Concepts in Passive Design #1: Roof Overhangs," Design Note, FSEC-DN-1, Florida Solar Energy Center, Cape Canaveral, FL, 1981.

Video Presentations

"Radiant Barriers: How They Work and How to Install Them," FSEC Producer, Cape Canaveral, FL, June 3, 1986, videotape.

Solstice: Building and Living in a Warm, Humid Climates, "Multifamily Buildings - Designs for a Warm Humid Climate," Miami Dade Community College Producer, Miami, FL, June 1, 1986, various dates, The Learning Channel.

A House for all Seasons, "Keeping It Cool," KRMA-TV Producer, Denver, CO, February 16, 1986, various dates, The Corporation for Public Broadcasting.

For Your Information, "FYI #42," Florida Public Television Producer, Tallahassee, FL, February 1985, various dates, Florida Public Broadcasting Network.

Upclose, "Passive Solar Energy," SC E-TV Producer, Columbia, SC, January 9, 1981, various dates, The Corporation for Public Broadcasting.

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET 040029-EG &

NO. 040660-EG Exhibit No. 11

Company/ Calcs-Plus

Witness: Neil Moyer stipulated (NM-1)

Date: 10-10-05 Resume

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26

Resume

Neil Moyer

Florida Solar Energy Center

Principle Research Engineer

1679 Clearlake Road

Cocoa, Florida 32922-5703

nmoyer@fsec.ucf.edu

Building Science Consultant

4780 Wild Turkey Rd

Mims, Florida 32754

reyomlien@aol.com

EDUCATION

California State University Sacramento, 1981, Electrical & Electronic Engineering (Bachelor of Science Degree)

State University New York at Morrisville, 1979, Engineering Science (Associates of Science Degree)

EMPLOYMENT BACKGROUND

1999- Present Florida Solar Energy Center

1996-1998 Building Science Corp., Westford, MA. Building diagnostician, senior researcher and trainer

1994-1996 Self employed building diagnostician and trainer

1985-1994 Natural Florida Retrofit, Inc., Montverde, FL. Energy conservation contracting & training

CURRENT ACTIVITIES

- Principal Investigator - Building America Industrialized Housing Partnership. Providing technical assistance that results in the construction of thousands of energy- efficient industrialized houses

1 every year to at least Energy Star Standards while enhancing durability, indoor air quality and cost
2 effectiveness.

3 • Principal Researcher - Energy Smart Schools. Assist in development and delivery of advanced
4 building science training, certification, and support for design, engineering, and facilities
5 professionals who are involved in the construction and maintenance of Florida's school facilities.

6 • Principal Investigator - Retrofit of hurricane damaged residences in east central Florida. Five
7 homes will undergo a pre-retrofit analysis and testing to determine the current energy usage profile
8 and expected energy savings, enhanced comfort, indoor air quality and related benefits.

9

10 **CAPABILITIES**

11 • Building diagnostics, including energy, moisture, and IAQ problems. The buildings range from
12 homes that are small single story low-income shelters to large multi-story multi-million dollar
13 complexes.

14 • Commercial building diagnostics, including moisture and IAQ problems. This includes small
15 single story office buildings to large multi-story multi-million dollar complexes.

16 • Training building diagnostics tools (blower door, duct tester, infrared, tracer gas) and techniques
17 (building & duct airtightness, pressure & moisture diagnostics,).

18

19 **PRESENTATIONS (partial listing)**

20 • Energy Managers Workshop

21 • Introduction to building diagnostics: Duct systems

22 • ALA Health House Builder Introduction

23 • Energy Star Homes Forum

24 • State of Florida Energy Gauge Class 1 Training & Re-certification Training

25 • Energy & Environmental Building Association Conferences (EEBA)

26 • Affordable Comfort Conferences

27 • Florida Environmental Balancing Bureau (FEBB) Recertification Seminar

- 1 • Duct Diagnostics and Repair Seminars
- 2 • Diagnosing Moisture Problems
- 3 • IAQ - Avoiding the Problem
- 4 • Florida Dept of Education: Designing the Failure Proof Building
- 5 • ASHRAE: Ventilation in Hot Humid Climates
- 6 • USDOE Building America: Project highlights
- 7 • Broan-Nutone: Ventilation in SE USA
- 8 • American Lung Association Health House: Certification Program
- 9 • Huber Engineering: Building Envelope System

10

11 **ACHIEVEMENTS**

- 12 • Instructor/trainer ALA's Health House Program
- 13 • Co-author and instructor 2-week course on FSEC's 'Designing the Failure Proof Building'.
- 14 • Residential building consultant/diagnostician dealing with moisture / mold / mildew related
- 15 problems, indoor air quality issues, and air distribution problems and complaints. Major clients
- 16 include Pulte Homes, Town and Country Homes, Cambridge, Homes, DiVosta Homes, Palm
- 17 Harbor Homes, Southern Energy Homes, Environments For Living, and Hovnanian Enterprises.
- 18 • Revised and teach the Florida EnergyGauge Class 1 Rater Training Program. (Rater #392)
- 19 • Presenter-trainer for EEBA, Affordable Comfort, FSEC, and AEC (Alternate Energy
- 20 Corporation). Residential and commercial buildings: includes building pressure diagnostics,
- 21 airtightness testing, zonal thermal and air boundaries, air distribution system diagnostics, and
- 22 combustion safety diagnostics.
- 23 • Developed and implemented short and long term monitoring protocols for the Building Science
- 24 Consortium's involvement in DOE's Building America project.
- 25 • Investigation of Cooling and Dehumidification Energy Use and Indoor Thermal Conditions in
- 26 Polk County Schools Permanent Replacement Classroom Buildings
- 27 • Co-diagnostics of numerous commercial building failures (either moisture related and/or indoor
- 28 air quality problems) caused by rain penetration and/or building/zonal pressures. These including

1 state and federal office buildings, courthouses (state and county), computer facilities (state and
2 insurance), educational facilities (elementary, secondary, high school and colleges - both state and
3 private), hotels and motels (private), nursing home facilities (private) and museums (state).

- 4 • Received EEBA's 1993 Joule Award for Innovation which significantly impacts the building
5 industry.
- 6 • Designed and developed MAD-AIR™ models [Mechanical Air Distribution And Interacting
7 Relationships]. These models show the zonal pressure interactions of duct system leaks, interior
8 door closure, and building airtightness. Currently manufactured and sold by a private company.
- 9 • Designed and prototyped a multi-channel computer controlled pressure differential monitoring
10 system. Capable of measuring six channels of differential pressure with 0.1 pascal resolution and
11 displaying on laptop computer screen in "EKG" format.
- 12 • Co-developed many diagnostic testing protocols including pressure differential testing techniques
13 used in residential and commercial buildings, including those currently being used in the
14 "Uncontrolled Air Flow" project funded by the State of Florida.
- 15 • Team member of numerous residential/commercial duct & envelope failure assessment &
16 monitoring projects: FSEC-Florida and AEC-North Carolina.
- 17 • Certified Thermographer # 1613 Infrasppection Institute
- 18 • Co-developed and trained duct leakage classes for FSEC-FP&L, City of Lakeland, City of
19 Gainesville, Duke Power, Florida Power Corp, Virginia Power, North Carolina Power, Alternate
20 Energy Corporation, State of Maine, and Bonneville Power.

21

22 PUBLICATIONS (partial listing)

- 23 • Hodgson, A.T., N. Moyer and D. Beal (2005). "Effect of residential ventilation techniques for hot
24 and humid climates on indoor concentrations and emission rates of volatile organic compounds."
25 February 2005, LBNL-57030, Lawrence Berkeley National Laboratory, Berkeley, CA.
- 26 • Chasar, D., Moyer, N., McIlvaine, J., Beal, D. and Chandra, S. (2004). "Energy Star Manufactured
27 Homes: The Plant Certification Process," Proceedings of ACEEE 2004 Summer Study, American
28 Council for an Energy Efficient Economy, Washington, DC, August 2004. *Peer reviewed*

- 1 • Chasar, D., Moyer, N., Chandra, S., Rotvold, L., Applegren, R. (2004). "Cold Climate Case Study;
2 High Efficiency North Dakota Twin Homes," Performances of Exterior Envelopes of Whole
3 Buildings IX International Conference, Clearwater Beach, Florida, December 2004. *Peer reviewed*
- 4 • Chandra, Subrato, Danny Parker, David Beal, David Chasar, Eric Martin, Janet McIlvaine, Neil
5 Moyer (2004). Alleviating Moisture Problems in Hot, Humid Climate Housing. Position Paper for
6 NSF Housing Research Agenda Workshop, UCF Feb. 12-14, 2004.
- 7 • McGinley, W. Mark, Alaina Jones, Carolyn Turner, Subrato Chandra, David Beal, Danny Parker,
8 Neil Moyer, Janet McIlvaine (2004). Optimizing Manufactured Housing Energy Use. Symposium
9 on Improving Building Systems in Hot and Humid Climates, Richardson, Texas, May 17-19,
10 2004.
- 11 • McIlvaine, Janet, David Beal, Neil Moyer, Dave Chasar, Subrato Chandra (2004). Achieving
12 Airtight Ducts in Manufactured Housing. Symposium on Improving Building Systems in Hot and
13 Humid Climates, Richardson, Texas, May 17-19, 2004. Report No. FSEC-CR-1323-03.
- 14 • Moyer, Neil, Chasar, Dave, Hoak, Dave, Chandra, Subrato (2004). "Assessing Six Residential
15 Ventilation Techniques in Hot and Humid Climates," Proceedings of ACEEE 2004 Summer Study
16 on Energy Efficiency in Buildings, American Council for an Energy Efficient Economy,
17 Washington, DC, August 2004. *Peer reviewed*
- 18 • Moyer, N., "Moisture Problems in Manufactured Housing," Home Energy Magazine, March/April
19 2002
- 20 • Moyer, N., Beal, D., Chasar, D., McIlvaine, J., Chandra, S., "Moisture problems in manufactured
21 housing - - probable causes and cures", ASHRAE IAQ 2001, November 4-7, 2001, San Francisco,
22 CA
- 23 • Chandra, S., Moyer, N.A., Beal, D., Chasar, D., McIlvaine, J., Withers, C., "The Building
24 America Industrialized Housing Partnership (BAIHP): Enhancing energy efficiency, durability
25 and indoor air quality of industrialized housing", XXIX IAHS World Congress on Housing,
26 Ljubljana, Slovenia, May 21-25, 2001
- 27 • Cummings, J., D. Shirey, C. Withers, R. Raustad, and N. Moyer. "Evaluating the Impacts of
28 Uncontrolled Air Flow and HVAC Performance Problems on Florida's Commercial and

- 1 Institutional Buildings”, Final Report, FSEC-CR-1210-00
- 2 • Parker, D.S., J.K. Sonne, J.R. Sherwin, and N. Moyer, November 2000. "Comparative Evaluation
- 3 of the Impact of Roofing Systems on Residential Cooling Energy Demand." Contract Report
- 4 FSEC-CR-1220-00, Florida Solar Energy Center, Cocoa, FL.
- 5 • Cummings, J.B., C.R. Withers, N. Moyer. 1999. "Field Research to Verify the Accuracy of the Air
- 6 Leakage computation Methodology of the ASHRAE Standard 152P; Final Report" FSEC-CR-
- 7 1083-99 Florida Solar Energy Center, Cocoa, FL, May 1999.
- 8 • Cummings, J.B., C.R. Withers, N. Moyer, P. Fairey, and B. McKendry. 1997. "Uncontrolled Air
- 9 Flow in Nonresidential Buildings". *Environment Professional*. Volume 3, Number 9. September
- 10 1997.
- 11 • Cummings, J.B., C.R. Withers, N. Moyer, P. Fairey, and B. McKendry. "Field Measurement of
- 12 Uncontrolled Air Flow and Depressurization in Restaurants". Given at 1996 ASHRAE Symposia.
- 13 *ASHRAE Transactions*, 1996, Vol.102, Part 1, p.859.
- 14 • Tooley, J.J. and Moyer, N., The Duct Handbook: a Practical Field Guide and Reference, Building
- 15 Science Corporation, Montverde, FL, 1996.
- 16 • Cummings, J.B., C.R. Withers, P. Fairey, B. McKendry, and N.A. Moyer, 1995, "Indoor Air
- 17 Quality Impacts of Uncontrolled Air Flow and Depressurization in Eight Commercial Buildings in
- 18 Central Florida". Proceedings of the Eighth Annual Indoor Air Pollution Conference. Tulsa, OK,
- 19 September, 1995.
- 20 • Cummings, J.B., Tooley, J.J., and Moyer, N., Duct Doctoring: Diagnosis and Repair of Duct
- 21 System Leaks , Florida Solar Energy Center, Cape Canaveral, Florida, May 1993.
- 22
- 23
- 24
- 25



STATE OF FLORIDA
DEPARTMENT OF COMMUNITY AFFAIRS

EMERGENCY MANAGEMENT • HOUSING AND COMMUNITY DEVELOPMENT • RESOURCE PLANNING AND MANAGEMENT

LAWTON CHILES
Governor

JAMES F. MURLEY
Secretary

December 18, 1996

Joanne Weber
Codes and Standards Section
Department of Community Affairs
Sadowski Building
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399-2100

Re: Building Energy Efficiency Rating Act

Dear Joanne:

You have advised me that an organization that evaluates buildings for energy efficiency has entered the State of Florida to pursue that activity here, and that the organization has announced that it will not use the rating calculations allowed by the Department under the Building Energy Efficiency Rating Act, but those of another state. You have asked me to advise you on the legal validity of the use of rating calculations other than those approved by the Department under the authority of the Act.

In the Act the Legislature intended "to provide for a statewide uniform system for rating the energy efficiency of buildings" in the State of Florida. § 553.991, Fla. Stat. (1995). In addition, the Legislature gave the Department authority to implement the Act by the adoption of "a statewide uniform building energy-efficiency rating system" by formal rulemaking. § 553.992, Fla. Stat. (1995). Upon its adoption, the system must "[p]rovide a uniform rating scale of the efficiency of buildings" based on annual usage. § 553.995(1)(a), Fla. Stat. (1995). What is more, the Act states that the system must enable the consumer to compare "the relative energy efficiency of buildings upon the sale of new or existing . . . buildings." § 553.995(2), Fla. Stat. (1995). It further states that "[a]ll ratings shall be determined using tools and procedures" approved by the Department. § 553.998, Fla. Stat. (1995). The rules of the Department rules approve one rating system which applies to all new and existing buildings in the State

2555 SHUMARD OAK BOULEVARD • TALLAHASSEE, FLORIDA 32399-2100

FLORIDA REG AREA OF CRITICAL STATE CONCERN
FIELD OFFICE
7756 Overseas Highway, Suite 211
Merritt, Florida 32955-1127

SOUTH FLORIDA RECOVERY OFFICE
P.O. Box 4022
8620 N.W. 35th Street
Miami, Florida 33187-4021

GREEN SWAMP AREA OF CRITICAL STATE CONCERN
FIELD OFFICE
135 East Summerlin
Gainesville, Florida 32630-4601

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET 040029-EG+

NO. 040660-EG Exhibit No. 12

Company/Calcs - Plus

Witness: Rick Dixon Stipulated

Date: 10-10-05

Joanne Weber
December 18, 1996
Page 2

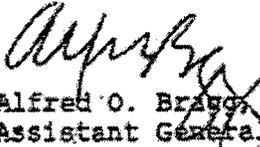
within the respective residential, commercial and governmental categories. Fla. Admin. Code R. 9B-60.004(1) (1996). The rules reiterate the uniformity requirements of the Act. Fla. Admin. Code R. 9B-60.002(11) (1996). The only variations allowed in the ratings are those that consider differences in "local climate conditions, construction . . . and building use." *Id.*

This mandate for uniformity permeates the Act and the rules that implement it. It is evident that the Legislature intended all ratings to be performed in accordance with the system approved by the Department. Not only is this evident from § 553.995(1)(a) and the other references to the uniformity requirement, but also from the recurrent requirements that all buildings be rated in accordance with the system approved by the Department. What is more, the consumer cannot very well compare the efficiencies of buildings, as § 553.995(2) contemplates, if he or she is faced with a choice between different buildings which have been rated under different systems. It was that very situation the Act was intended to prevent.

It is therefore my opinion that the use of any ratings system for buildings in this State in place of the one allowed by the Department under the authority of the Act is a violation of the Act. Given that the use of such a system also violates the rules which implement the Act, the violation may be redressed by an action for injunction in Circuit Court under the Administrative Procedure Act, as amended. See § 120.69(1)(a), Fla. Stat. (1996 Supp.). Based on my present information, my recommendation to the Secretary would be to take such action.

Please call me if you have any questions or if I may be of further assistance.

Very truly yours,


Alfred O. Bragg, III
Assistant General Counsel

cc: Richard W. Dixon
Mo A. Madani



ORIGINAL
FILE COPY

STATE OF FLORIDA
DEPARTMENT OF COMMUNITY AFFAIRS

EMERGENCY MANAGEMENT • HOUSING AND COMMUNITY DEVELOPMENT • RESOURCE PLANNING AND MANAGEMENT

LAWTON CHILES
Governor

JAMES F. MURPHY
Secretary

March 15, 1996

Ms. Susan F. Clark, Chairman
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, Florida 32309-0862

Dear Chairman Clark:

We fully support the Commission's efforts to update your rules concerning energy audits by public utilities in Florida. The proposed amendments contained in the Notice of Rulemaking under Docket No. 960025-EG, and the repeal of unnecessary provisions, provide an opportunity for all of us engaged in encouraging energy efficiency in Florida to improve our economy and regulatory climate.

We would like to suggest that the Commission follow the recommendations of the Building Code Task Force, created pursuant to the current Memorandum of Understanding between the Commission and the Department of Community Affairs, as accepted by the Commission at its February 20th Internal Affairs meeting. Specifically, the recommendation made on page 11 as follows:

- ICK
- FA
- PP 1
- AF
- MU
- TR
- IG 1
- IG
- 5
- 1
-
- 1
-
-
-

"Finally, we would recommend that utilities adopt the state BERS rating system as the standard to replace their individual Five-Star Rating programs currently in place. It does not make sense to have different rating scales, especially given the consistency of the BERS program with the building code standards. Since audits will continue to be an ongoing service function of utilities, providing the customer with a standardized rating of their home seems to be an integral part of such a service."

In order to adopt the sense of this recommendation, we would suggest the Commission adopt the attached changes to the proposed rule. To ease evaluation, we have proposed our changes by striking out and underlining language to the rule as proposed rather than as currently in existence. We are committed to improving the computer software which supports both the commercial and residential Building Energy-Efficiency Rating System as specified in Florida Statutes (Section 553.990 et seq.).

DOCUMENT NUMBER - DATE
03145 MAR 15 96
FISC-RECORDS/REPORTING

2740 CENTERVIEW DRIVE • TALLAHASSEE, FLORIDA 32309-2100

FLORIDA RAYS AREA OF CRITICAL STATE CONCERN SOUTH FLORIDA RECOVERY DISTRICT GREEN SWAMP AREA OF CRITICAL STATE CONCERN

FIELD OFFICE P.O. Box #022 FIELD OFFICE

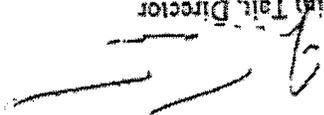
2798 Overseas Highway, Suite 212 8600 N.W. 14th Street 151 East Tennessee

Maitland, Florida 32856-2237 Maitland, Florida 32751-4021 Tallahassee, Florida 32303-4641

Attachments

Jimi Tait, Director
Florida Energy Office

Rick Dixon, Administrator
Florida Building Codes & Standards



Sincerely,

If you have any further questions or desire greater information about our plans, please do not hesitate to request.

We have further attached a letter from our contractor, the Florida Solar Energy Center, on planned improvements to the software which will make readily available and which will be easily comparable to meet the standards set by the Commission for Class A audits. We also plan to be in compliance with any national standards or guidelines issued and anticipate more effective national market and financing strategy to implement energy efficiency programs at both the residential and commercial levels. Florida is recognized as a leader in these efforts. We believe both the public utilities and the public generally will be well served by the adoption of these proposed changes.

Letter to Chairman Clark, March 15, 1996, page 2

State of Florida



Public Service Commission

-M-E-M-O-R-A-N-D-U-M-

DATE: January 17, 1996

TO: William D. Talbott, Executive Director

FROM: ^{J. W. D.}
James W. Dean, Conservation Technologies Specialist

SUBJECT: Report of the Building Code Task Force

**CRITICAL INFORMATION: PLACE ON THE FEBRUARY 20TH
INTERNAL AFFAIRS. REQUEST COMMISSION ACCEPTANCE OF THE
REPORT. NO CRITICAL DATES**

You may recall during the conservation goals hearings that there was much debate on the role of mandatory building codes to achieve additional demand energy savings above those levels contained in the utility goals. To further explore this issue, the Commissioners directed that a staff level work group be formed with the Department of Community Affairs to assess possible changes to the code and recommend any legislative actions we felt appropriate. Attached is the report of that work group.

We are requesting the Commission accept the conclusions of the report. In summary, we are not recommending any changes to either the existing code standards or the administration and enforcement of the code.

Please schedule this item for the February 20th Internal Affairs.

JWD:jn

xc. Joe Jenkins w/attachment
Lee Colson w/attachment
Mike Haff w/attachment
Rick Dixon (DCA) w/attachment

**ROLE OF MANDATORY BUILDING CODES IN
ACHIEVING ENERGY EFFICIENCY GOALS**

Report of the Staff Task Force

Florida Public Service Commission

and

Department of Community Affairs

**Tallahassee, Florida
January 1996**

EXECUTIVE SUMMARY

As a result of the Conservation Goals docket, a staff working group of the Florida Public Service Commission and the Department of Community Affairs was formed. The goal of this group was to assess what contribution the state thermal building codes could make in meeting additional demand and energy goals above those efforts of the utility sponsored efficiency programs. The task force reached the following conclusions:

- It is not possible under existing statutory constraints to make the state thermal efficiency codes more stringent than currently required by the Department of Community Affairs.
- While non-compliance with the code does occur, empirical evidence indicates the level of non-compliance is low and that the majority of builders do meet the standards prescribed by regulations.
- Utilities should continue to support the building code by offering seminars and training programs directed toward the design, building, and trades industries.
- The recently enacted Building Energy Rating (BER) system provides a statewide standard to score the efficiency of both new and existing buildings. The BER system should replace the individual ratings used pursuant to the Five Star Rating programs required by Commission Rule 25-17.0555.
- New efficiency technologies and building standards are promoted by way of "credit" points used to meet code standards.

At this time, it does not appear feasible to require tighter thermal standards for Florida's new construction market. In addition, Federal appliance standards preempt states from adopting standards more rigorous than the Federal standards. Thus, utility efficiency programs targeted toward specific market niches appear to be the most promising avenue to achieve additional demand and energy savings.

Role of Mandatory Building Codes in Achieving Energy Efficiency Goals

One of the difficult issues during the conservation goals docket was identifying the role and contribution of the state building codes in promoting energy efficiency. The debate revolved around the potential for codes to achieve energy efficiency in new residential and commercial construction via regulatory standards instead of utilities developing programs for the new construction markets.

Order No. PSC-94-1313-FOF-EG, Adoption of Numeric Conservation Goals, directed staff of the Public Service Commission to join with staff from the Department of Community Affairs and review the current status of Florida's building codes in respect to energy efficiency. The two agencies formed a task force to "evaluate the cost-effectiveness of the building code, possible revisions to the building code, evaluation of code compliance methodologies and the possibility of legislation to promote and encourage energy efficient building procedures." (Order, p. 54). This report contains the results of that evaluation.

BACKGROUND

The Florida legislature created the thermal building code requirements in 1980. The Florida Thermal Efficiency Code (the Code) is codified at Chapter 553.900 - 553.912, Florida Statutes. It directs the Department of Community Affairs to develop, implement and maintain a uniform state energy code for new construction and substantially renovated buildings. Inspection and enforcement responsibilities under the Code are retained by local building officials. It is important to recognize that these statutes specify that the standards adopted by the DCA must be "cost-effective to the consumer." This cost effectiveness standard becomes an important constraint in using mandatory standards to achieve efficiency goals.

The FPSC has had an enduring interest in using the building code as a vehicle to advance our own energy efficiency goals pursuant to the Florida Energy Efficiency and Conservation Act (366.80, Florida Statutes). Since 1981 the legislature has transferred some \$1.9 million from the FPSC Regulatory Trust Fund to the DCA for code development and

administration. For FY 94/95, the legislature discontinued the intergovernmental funding between the FPSC and the DCA.

RESIDENTIAL CODE

In 1984, the FPSC in conjunction with the electric utilities offered major revisions to the existing residential code standards. After the appropriate rulemaking process, the DCA adopted these revisions and implemented them by way of a two-year phase-in to allow builders time to adapt to the much tighter standards. The first phase of the new standards tightened the code by approximately 25 percent from the minimum baseline standards. Phase two would have resulted in additional tightening of the code by 25 percent.

During the interim of the phase one standards, the DCA contracted with the University of Florida to do a comprehensive analysis of the residential code. The results of these efforts were adopted by rule and essentially supplanted the FPSC/utility revisions that were in effect. The effective implementation date was 1986 for these revised standards.

This new code package included the now familiar Energy Performance Index (EPI) for each of the three climate zones in Florida. For each climate zone a baseline, energy efficient building was designed as the minimum standard that all new homes must meet. This baseline home had a calculated Energy Performance Index of 100 points. The EPI should be viewed as analogous to an energy budget in that the lower the EPI the lower the projected energy usage for a given home. All newly constructed homes must meet a minimum EPI level of 100 points or less to comply with the code, but the Code allows great flexibility as to the combination of equipment and thermal standards that can be installed to meet this minimum.

Understanding the methodology used to set these standards is important in answering the question are there further cost-effective efficiency improvements available through stricter code standards. Recall, the statute requires the Code to be cost-effective for the home buyer; the statute does not permit other tests such as the rate impact test or total resource test to be used as the basis for setting standards. Several key assumptions were made in the original work. First, a life cycle cost approach was used. A life cycle analysis assumes that any efficiency measure incorporated into the code would be recovered in

energy savings over a 30 year period. This technique maximizes the recovery period and thereby permits higher levels of efficiency to be cost-effective. Second, it was assumed that electric rates would increase in excess of six percent per annum over the analysis period. Last, the code set the strictest standards for the building envelope.

Since efficiency measures are interactive, that is, one system affects the performance of others, it is necessary to prioritize the measures in order of cost-effectiveness. For example, the mandated standards for cooling equipment will be dramatically affected by the thermal properties of the house. A cost-effective level for an air conditioning system would result in a much higher efficiency standard if the house were poorly insulated. However, if the insulation is adequate then a substantial amount of the potential energy savings would be captured by this efficiency measure and a lower efficiency air conditioner would be selected. This is an inherent optimization problem when analyzing interactive effects of thermal systems.

Thus, the DCA standards were designed to optimize first on the structural features of the baseline home. Such features included insulation levels, the area of exposed glass, and shading coefficients. The rationale for optimizing first on these attributes is straightforward -- these kinds of efficiency improvements are permanent and can not be easily removed, do not degrade over time nor are their impacts mitigated due to the occupants' behavior or energy consuming choices. Next, minimum efficiency standards for heating, cooling and water heating equipment were incorporated into the baseline home using the same set of economic parameters. At that time, the result of this effort pushed SEER¹ levels for air conditioners higher than the market averages and resulted in very high efficient electric water heaters being installed as the baseline equipment.

The combination of these structural measures and equipment efficiency standards became the code minimums for the baseline 100 EPI home. This is the standard for which all homes must be built. Keep in mind, by definition and by result, this was the "most cost-effective" standard given the assumptions used.

¹Seasonal Energy Efficiency Ratings - a standard rating of air conditioners and heat pumps that is linear in respect to efficiency. A high SEER will require less energy than a lower rated SEER unit to do the same amount of cooling.

The DCA adopted two approaches to allow builders to meet this 100 EPI standard - a prescriptive approach and a performance approach. Under the prescriptive approach, a builder must construct a home with specific efficiency standards which may not be altered by the builder. For example, a typical home in North Florida could meet the prescriptive code by installing R-30 insulation in the attic, having R-19 insulated walls, having a slab-on-grade foundation, having no more than 15 percent glass to floor ratio, meeting the infiltration and duct insulation standards, and meeting the mandated equipment levels. Again, no deviation from these standards would be permitted under the prescriptive approach.

As an alternative, builders could meet the Code standards by use of a "performance calculation." Under this approach, a personal computer based simulation is used to calculate the EPI based on the interactions of various equipment and thermal systems. This approach allows the builder to "trade-off" more efficient level equipment with structural changes to the house such as installing a higher glass-to-floor ratio. In either case, each "as-built" home would have an overall energy usage budget that is equal to or less than the baseline home. Other measures and equipment such as heat recovery units or higher SEER air conditioners could be installed and "credits" would be given for higher efficient equipment or envelope improvements. Specific credits are also given for technologies such as solar water heating, ceiling fans, and natural gas. These will tend to lower the overall EPI ranking, thereby resulting in a more efficient structure. This performance approach allows builders great flexibility to customize a home to meet the demands of the homeowners in terms of features and design considerations.

COMMERCIAL CODE

Because of the vast differences in energy consumption patterns, occupancy patterns, and unique uses of commercial buildings, a single one-code-fits-all approach is not a desirable code compliance model for this market. For example, an unconditioned storage warehouse has a dramatically different set of energy needs than a commercial office park with space conditioning, lighting and water heating loads. Thus, a Florida specific code for every type of building is simply not an obtainable regulatory goal for the Code. For this

reason, national codes have been adopted as part of the building and trades industries through a process known as "consensus adoption." Relevant architectural, engineering, and building firms review acceptable engineering standards, equipment, climate conditions and construction practices and through a set of technical review committees, these standards are adopted as national codes.

The American Society of Heating, Refrigeration and Air Condition Engineers (ASHRAE) has developed a consensus commercial code entitled ASHRAE 90.1. This code has been adopted by the DCA, with a few Florida specific standards, as the minimum construction and efficiency standards for Florida's commercial construction industry.

IMPACT OF NATIONAL APPLIANCE STANDARDS

In 1987, Congress passed the National Appliance Energy Conservation Act and in 1992 passed the Energy Policy Act. Both of these set a variety of minimum efficiency standards for specific types of residential and commercial end-use equipment including air conditioners, furnaces, hot water systems and lighting. A requirement of these statutes preempts states from adopting appliance standards more stringent than those adopted pursuant to the Federal legislation. These events had a major impact on the Florida building code.

The standards required for heat pumps and air conditioners under the Federal standards exceeded those required in the baseline house. Because the baseline home in each climate zone was first optimized on structural features, the higher level of equipment mandated by Federal standards was not cost-effective for the baseline homes. In essence, the Federal standards explicitly increased the overall efficiency of new homes in Florida beyond what could have been justified under the Florida statutes. Moreover, a host of smaller appliances such as ranges, stoves, dishwashers, and refrigerators and freezers not covered under the Florida Code now must meet the Federal standards. This results in even more efficient appliances being purchased when a contractor installs appliances. In general, the stringent structural thermal requirements contained in the Florida code coupled with more efficient equipment mandated by Federal standards results in an overall combination of energy efficiency features substantially more strict than standards that could meet the statutory constraint embodied in 553.900, Florida Statutes.

NEW TECHNOLOGIES:

Mr. Richard Dixon, Section Administrator of the Building Code at the DCA, testified during the goals docket on the role of new technologies and how they are incorporated in the Code. He explained that his review of 28 potential measures indicated that none were likely to be adopted as mandatory standards during the current code revision process. He commented that the measures reviewed would not likely be made a formal requirement since most of the technologies were recognized by the Code as offsets under the performance compliance approach or, the technology was not widely adopted by the building and trades industries.

Mr. Dixon indicated that many new technologies are introduced into the code by way of "credit" points to meet the minimum EPI standard. In other words, new technologies are encouraged by allowing builders to incorporate them into homes and be given credit toward the EPI standard. Technologies that have been incorporated into the code in this manner include radiant barriers, solar water heating, heat recovery, ceiling fans and natural gas for space and water heating. In addition, some common construction practices such as tighter infiltration standards and higher insulation levels are incorporated into the code in a similar fashion.

Florida code standards are changed if national codes such as the Council of American Building Officials Model Energy Code are modified and these national standards are more strict than the existing Florida standards. Mr. Dixon testified that, consistent with building code mandates, the current code was a minimum standard of acceptable performance. Through the triennial code revisions, new standards will be incorporated as appropriate. However, because of the stringent efficiency levels currently embodied in the Code, it was unlikely that substantially higher efficiency standards will be incorporated in the immediate future unless Federal law or the national consensus codes are made more stringent.²

²For example, ASHRAE is proposing a new 90.2 standard called Energy/Efficient Design of New Low-Rise Residential Buildings.

ROLE OF FLORIDA UTILITIES:

With the passage of FEECA in 1980, Florida utilities viewed the new home market as one market segment that could be targeted to help achieve their mandated energy and demand goals. A number of new home programs were developed, some of which predate FEECA, which offered either incentives or awards to builders and home buyers who constructed homes to efficiency design levels prescribed by the host utility. As the size and cost of these programs increased, the Commission moved in the direction of using the mandatory code standards in place of the voluntary programs on the part of the utilities to achieve energy and demand savings.

To this end, the major electric utilities were instrumental in developing the technical standards that were ultimately adopted by the DCA in the 1984 code revision process. With the formal adoption of the 1986 Code, most utility new home programs were phased out or modified to reduce their cost. Most utilities continued to offer workshops and training as a customer service function to builders, contractors, and trade allies.

As a result of the most recent conservation goal setting docket, several utilities have proposed new home programs that are purportedly designed to complement the objectives of the Code by targeting incremental demand savings above that which would occur due to meeting the baseline EPI standards. Several utilities have programs that target air conditioning duct leakage (Gulf Power, Florida Power Corporation, Tampa Electric Company, Florida Power & Light). In addition, Florida Power & Light has a multi-year study to examine efficiency improvements in new construction and to monitor compliance with code standards. Both TECO and Florida Power Corp have proposed programs targeted to builders to continue their activities in the new construction arena. Gulf is promoting a new technology – ground source heat pumps – which offers substantially higher cooling and heating efficiencies coupled with better humidity control. Gulf Power Company continues to operate the Good Cents Program, but does not seek recovery of their expenses through the Conservation Cost Recovery clause. They do recover some costs through base rates.

In addition, utilities have both formally and informally sponsored seminars, industry trade exhibits, and other customer service functions to train and educate builders and

contractors about the standards and compliance mechanisms associated with the Code. These efforts have not been systematic, and since the elimination of utility new home programs are generally not done under the auspices of a commission approved conservation program.

CODE ENFORCEMENT:

Enforcement and inspection of the code standards are delegated to local building officials. The local officials have jurisdiction for both health and safety standards and the thermal efficiency standards. There has been much anecdotal evidence to suggest that these inspectors generally viewed the health and safety standards as their most important priority and in some cases gave either a cursory or no inspection of the energy standards and equipment efficiencies. Hard empirical evidence documenting the extent of non-compliance with the Code has not been systematically collected.

Fortunately, as part of the FPL New Home Program, detailed data was taken from a sample of 423 newly constructed homes specifically addressing the level of non-compliance. FPL calculated the EPI for these homes and compared them to the EPI reported to the building department at time of construction. Approximately 23% of the homes had EPIs above the 100 EPI minimum. On average these homes exceeded the minimum EPI by 5 percent. Conversely, a number of homes reported EPIs higher than the actuals for the site built house. It appears that a number of builders do not take full credit for those efficiency measures actually installed in the home and therefore could have claimed a lower EPI value. Given the imprecision of some of the input values used to calculate the EPI value, these results tend to suggest that for the most part builders in the counties studied by FPL are complying with the Code and variations around the 100 point minimum are inconsequential.

BUILDING ENERGY RATING SYSTEMS

Chapter 553.990-998, Florida Statutes, requires the Department of Community Affairs to develop a standardized rating system to evaluate the energy efficiency of commercial, residential and public buildings. The rating system must be consistent with the

energy code and national rating systems. These systems are being developed to encourage the use of efficiency ratings in the home mortgage market. While the rating system is completely voluntary, the objective of this statute is to make available information about the thermal performance of buildings, especially at time of sale. In doing so, it is hoped that energy efficiency will become an important marketing attribute and thereby encourage more efficient buildings. Finally, the DCA is responsible for training and certifying the people who perform the ratings.

The Building Efficiency Rating (BER) system is expected to largely replace FPSC Rule 25-17.0555 (Five Star Rating). The Five Star Rating is a similar rating concept implemented by the utilities, but only applies to residential homes. Requests for such ratings from customers have been sparse. There is no standardization under the Five Star program and the utilities have not heavily marketed the concept. With the entrance of the state into this area, standardized ratings, and a solid technical basis for evaluating both commercial and residential structures, it is anticipated that the BER program will experience greater success than its utility counterpart.

CONCLUSIONS:

It is staff's opinion that it is not possible to make the current baseline home, which is the foundation of all existing residential standards, substantially more stringent. This assessment is based on the current requirement contained in 533.900 Florida Statutes which requires any new code to be cost-effective to the home buyer. In fact, if the code were re-evaluated there is some possibility that technical work could support a relaxation in the current standards due to the decline in real electric prices. The original code was first optimized on the envelope standards. Then the new Federal National Appliance Standards superseded -- and exceeded -- those equipment standards contained in the 1986 Code revision process. This resulted in a combination of thermal envelope standards and equipment efficiencies higher than could reasonably be expected to be adopted if the code were revised today. While it is true that there is more efficient equipment available today, the newer technology generally carries a premium price over the baseline equipment installed in homes. Thus, based on a consumer's cost-effectiveness standard, the likely result

of a major code revision would be to reduce the envelope standard. In Florida, this would result in a larger glass-to-floor ratio or lower insulation levels which would result in a higher energy budget for the baseline home.

Second, the only systematic survey of code compliance seems to suggest while some improvements could be made in achieving code standards, builders are not blatantly ignoring the minimum standards dictated by the Code. Only one in four homes surveyed by FPL did not meet the minimum EPI and the average non-compliant home had a calculated EPI of 105. Given today's political environment, a new legislative initiative effort to improve code enforcement is probably not a realistic objective. DCA has not sought additional legislative powers to enhance code enforcement. Their strategy has instead focused on using education and training to teach builders and contractors why code compliance leads to a better product for the customer and to assist the local building departments in understanding how to enforce the Code. In addition, the DCA has provided personal computer based compliance tools which are both easy to use and allow the builder to use the EPI standards as a design tool to improve the energy performance of the home. FPL's field studies indicate this voluntary compliance and education approach has worked reasonably well, given the caveat that FPL's study only covered a limited number of counties.

Furthermore, the current standards contained in both the residential and commercial codes are not static standards. The standards are constantly being revised based on changes to the national codes such as the ASHRAE 90.1 and 90.2 standards. This year, for example, the DCA has contracted with the Florida Solar Energy Center to explore modifying HVAC duct multipliers, credits for ceiling fans, infiltration standards, and new technologies. If appropriate, such changes will be adopted into the Code under the auspices of good design and construction practice.

From the programs submitted as a result of the Conservation Goals Docket it appears that utilities have identified niche areas involving new construction where they believe that cost-effective demand savings remain. These types of program activities have the flexibility to maximize or optimize savings based on the demand savings associated with efficiency measures. Thus, a strict consumer-based cost-effective test is not a constraint. Even programs targeted at demand savings must contain some energy savings for non-

demand billed customers or they will not participate. However, with careful marketing and program standards, utilities can use incentives to entice builders and consumers to take incremental efficiency measures that generate demand savings for the utility but may not pass a strict consumer cost effective standard. This appears to be the case with the new home programs. A case in point might be in the area of proper air conditioning sizing. FPL's new home study indicated substantial oversizing of air conditioning systems was occurring in many residential units.

The synergy of the utilities' maximizing demand related savings and the Code itself maximizing energy related savings creates a double benefit for Florida consumers. They get an energy efficient home and, in many cases, additional utility enticements to install demand reducing measures. It is our opinion that the combination of these two functions have, for the time being, exhausted the potential of the Code to achieve additional demand and energy savings. There are a number of factors that could change this prognosis. These factors include technology change that either lowers first time equipment cost or dramatically improves energy performance, sharply increasing real electric prices, mandatory time-of-use or demand based rates for commercial and residential customers, or changes in building materials and construction practices that improves thermal performance. None of these factors appear on the near term horizon.

We would encourage utilities to be creative in continuing their support and training activities related to the Code. The involvement of utility service representatives with the building, design, construction, and trade ally communities in promoting the benefits of energy efficiency and code compliance is an important customer service function. While it may not be easy to design a specific cost-effective program that would qualify for conservation cost recovery, such practices might be appropriate service related functions eligible for full recovery in rate cases assuming usual prudence standards are met.

Finally, we would recommend that utilities adopt the state BERS rating system as the standard to replace their individual Five-Star Rating programs currently in place. It does not make sense to have different rating scales, especially given the consistency of the BERS program with the building code standards. Since audits will continue to be an ongoing service function of utilities, providing the customer with a standardized rating of their home seems to be an integral part of such a service.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET 040629-EG +
NO. 040660-EG Exhibit No. 13
Company/FPL
Witness: Daniel J. Haywood
Date: 10-10-05

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

BEFORE THE PUBLIC SERVICE COMMISSION

In re: Petition for approval of modifications to BuildSmart Program by Florida Power & Light Company.

DOCKET NO. 040660-EG

In re: Petition for approval of numeric conservation goals by Florida Power & Light Company.

DOCKET NO. 040029-EG

DATED: September 20, 2005

**Original
Transcript**

DEPOSITION OF THE WITNESS

DANIEL J. HAYWOOD

700 Universe Boulevard

Juno Beach, Florida

Monday, September 26, 2005

9:35 a.m. - 11:43 a.m.

Before Janette P. Hert, RPR, RMR, CRR

and Notary Public, State of Florida

APPEARANCES:

LAW OFFICE OF WILLIAM J. TAIT, JR.

By WILLIAM J. TAIT, JR., ESQUIRE

1061 Windwood Way

Tallahassee, Florida 32311

(850) 878-0500

jimtait@comcast.net

APPEARANCES Continued on Page 2.

#13

1 APPEARANCES Continued:

2

FLORIDA POWER & LIGHT COMPANY

3

By PATRICK M. BRYAN, ESQUIRE

700 Universe Boulevard

4

Juno Beach, Florida 33408-0420

(561) 304-5134

5

patrick_bryan@fpl.com

6

7

OFFICE OF THE GENERAL COUNSEL

FLORIDA PUBLIC SERVICE COMMISSION

8

By MARTHA CARTER BROWN, ESQUIRE, and

ADRIENNE VINING, ESQUIRE

9

2540 Shumard Oak Boulevard

Tallahassee, Florida 32399-0850

10

(850) 413-6187

(via telephone)

11

12

Also Present: Mr. Steven R. Sim

Ms. Judy Harlow (via telephone)

13

Ms. Lee Colson (via telephone)

Ms. Jeanette Sickel (via telephone)

14

15

16

17

18

19

20

21

22

23

24

25

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

I N D E X

WITNESS:

DANIEL J. HAYWOOD

Page

DIRECT EXAMINATION BY MR. TAIT 4

CROSS-EXAMINATION BY MS. BROWN 78

E X H I B I T S

Marked

Deposition Exhibit No. 1 80

1 THEREUPON,

2 DANIEL J. HAYWOOD,

3 called as a witness and being by the undersigned

4 Notary Public first duly sworn, testified as

5 follows:

6

7 DIRECT EXAMINATION

8 BY MR. TAIT:

9 Q. Do you mind if I call you Dan?

10 A. Oh, that's fine.

11 Q. Okay. Dan, I'm Jim.

12 Have you been deposed before.

13 A. No, I have not.

14 Q. You haven't. Well, this will be a new
15 experience for you, except I'll have to note I
16 noted that you just graduated with your master's,
17 I guess, in business administration?

18 A. Yes.

19 Q. So this will be probably similar to one
20 of your case study outlines --

21 A. Okay.

22 Q. -- that your professors put you through
23 the hoops I'm assuming many, many times at the
24 University of Florida.

25 A. Yes.

1 Q. So kind of just look at it in that
2 direction.

3 Particularly the guidelines in
4 depositions are that you have to give verbal
5 responses so the court reporter can record them.
6 She won't record nods or anything like that.

7 A. Yes.

8 Q. So I'll ask you to verbally respond.

9 This will be, as far as I'm concerned,
10 very informal, and, like I said, hopefully we can
11 build on your experience, and I can learn a lot
12 through a case study kind of approach.

13 So can you just kind of briefly give
14 your name and some of your background?

15 A. Yes, my name is Daniel J. Haywood, but
16 Dan is fine.

17 My background specifically at Florida
18 Power & Light?

19 Q. That's fine.

20 A. Working backwards, I'm currently in the
21 marketing department at Florida Power & Light, and
22 my responsibilities currently include market
23 research for a variety of FPL projects.

24 Preceding that -- well, actually I've
25 been in marketing then for several years. My

1 roles also included product development and then
2 general business marketing.

3 Preceding my work within the marketing
4 department, I was a customer service
5 representative for large governmental and large
6 business accounts.

7 And before that, I was a new
8 construction representative, a designer within
9 FPL's -- what was at the time called new
10 construction and operations group, so essentially
11 working with builders to implement electric
12 facilities for new developments, new homes, so
13 forth. So I spent several years in that group as
14 well, and then I started within the company --

15 Q. Was that like designing distribution
16 facilities?

17 A. Correct, yes.

18 Q. Not particularly individual housing, you
19 know, but distribution --

20 A. Yes, distribution facilities to service
21 homes and neighborhoods.

22 MR. BRYAN: Let me just remind you, wait
23 until Jim finishes his question, so you're not
24 talking over him because Janette --

25 Q. (BY MR. TAIT) And I'll have to do the

1 same, so we'll work on that.

2 MR. BRYAN: -- because it's very
3 difficult for Janette to get that when you're both
4 talking.

5 THE WITNESS: Yes.

6 Q. (BY MR. TAIT) So have you had -- then I
7 noted that you have your master's in business
8 administration and your bachelor's, I guess, in
9 electric engineering?

10 A. Yes.

11 Q. How about any other training? Have you
12 had any training like in building sciences or
13 anything like that?

14 A. I have had training within FPL related
15 to demand-side management and a wide range of
16 training over the years.

17 Q. I noticed you're a licensed engineer.
18 Have you obtained a rater's certification or
19 anything like that, Florida Building Rater?

20 A. No, I have not.

21 Q. And you pretty well explained your
22 current job.

23 What I'd like to do next is maybe go
24 into the BuildSmart steps, you know, how your
25 program is organized and how you looked at it when

1 you worked on the modifications on reviewing the
2 current program.

3 So what I'll do maybe is to ask a series
4 of questions and outline my understanding of what
5 it is, and then I hope you will correct me or stop
6 me and elucidate if I'm kind of not getting the
7 full point.

8 It's focused on the builders; is that
9 correct?

10 A. It is focused -- you mean the current
11 program?

12 Q. Yes, the current program and as
13 modified, both.

14 A. Okay. It is focused on the builders and
15 the home buyers.

16 Q. Okay. In what way is it focused on the
17 home buyers?

18 A. Through education of energy efficiency,
19 awareness of energy efficiency. We define it from
20 a marketing standpoint as a customer chain,
21 meaning, to reach the home buyer, you have to work
22 through the builder in this particular market. So
23 we have to reach out to both.

24 Q. Okay. As you focus on the builders --
25 and, as I understand, the program modifications

1 are to try to increase your ability to focus on
2 the production builder as well as the custom
3 builder?

4 A. Correct.

5 Q. -- do you provide them with any market
6 studies on the impact of energy efficiency
7 differentiation in the marketplace?

8 A. I don't know.

9 Q. In other words, how they can -- can they
10 sell their homes better with energy efficiency or
11 not?

12 A. We provide them with advice.

13 Q. Okay. What kind of advice do you
14 provide them?

15 A. We provide them with education regarding
16 the potential benefits that a home buyer may
17 derive from having an energy efficient home,
18 essentially why that would appeal to a home buyer,
19 and we also explain to them why that's important
20 to them as a builder.

21 Q. Okay. When you say you explain why it's
22 important to them as a builder, do you then kind
23 of, from your marketing background, put yourself
24 in the place of a builder and say: This is why
25 you can market this home easier, better, faster

1 for your own benefit?

2 That's what I kind of mean by the area
3 of market studies on the impact of differentiating
4 the home buyers' energy efficiency.

5 A. I don't know if we specifically describe
6 it to the builder that way.

7 Q. What you do is you provide the builder a
8 market label; would that be a fair statement?

9 A. I'm not familiar with that term, "market
10 label." We provide the builder and the home buyer
11 with essentially certification that the home has
12 met BuildSmart standards.

13 Q. Okay. And what does it -- can you
14 describe what it means to meet BuildSmart
15 standards under the current program and then
16 further under the modified program?

17 A. There's a number of criteria as
18 described in the current program standards, and
19 then there's a range of criteria within the
20 modified program standards.

21 Q. Okay. Let me just interrupt you there.
22 We'll get into that in detail later on.

23 A. Okay.

24 Q. It's my understanding, through the
25 current program, that you provide a label to a

1 home that a builder can use to describe the home
2 to a home buyer and the home buyer can rely on,
3 and that is a label of gold, silver, or bronze
4 that basically means the home is either 30 percent
5 more efficient than the Florida Building Code
6 minimum home of its type, 20 percent is silver,
7 and 10 percent is bronze; is that correct?

8 A. I don't know that we identify to the
9 builder or the home buyer the specific tiers, if
10 we could call it that.

11 I know that we identify that the home
12 meets BuildSmart certification standards, that the
13 home is certified as BuildSmart, and our criteria
14 for certifying the home is as you describe.

15 Q. What would the reason be to have in the
16 current program then the medallion level
17 standards, which were approved back in '97, if
18 it's not to differentiate homes in the
19 marketplace?

20 A. I don't know. Under the proposed
21 modified program, we're seeking to eliminate those
22 tiers. We found that home buyers see those as
23 confusing.

24 Q. You've confused me slightly there. If
25 home buyers find them confusing, yet you say you

1 don't provide them to the home buyers or builders,
2 then how could that be confusing?

3 A. From the perspective -- I was speaking
4 from the perspective of the existing program as it
5 exists today. When we've worked with builders
6 today -- you know, when we work with builders
7 today --

8 Q. Yes.

9 A. -- we speak to the levels from the
10 perspective of discussing with the builder based
11 on the tiers fee structure and the criteria
12 associated with that.

13 So we have to obviously communicate
14 those, those tiered levels from the criteria
15 standpoint of participation.

16 But it is generally not a marketing type
17 positioning that we would provide to the customer
18 because of that confusion that has come about,
19 what we've heard from the past; it's generally
20 something that's not received in the past.

21 Q. Okay. I can now clearly understand.

22 What you've done is you've used the
23 tiered levels kind of as a cost pricing tool with
24 the builders.

25 So it's only important in the program

1 kind of at the current stage to give the builders
2 an idea of the cost pricing that they will pay,
3 you know, for your services under the current
4 program; and you're going to erase all that, as I
5 understand, with the modified program, which is
6 one of the reasons you wanted to go to a
7 nontiered, you know, just BuildSmart certification
8 in the modified program that has no pricing?

9 MR. BRYAN: I'm going to object to the
10 form because it was just a long question --

11 MR. TAIT: Okay.

12 MR. BRYAN: -- if it was a question.
13 But go ahead and answer.

14 THE WITNESS: I didn't understand the
15 question.

16 Q. (BY MR. TAIT) That's fine, please, if
17 you don't understand the question.

18 So I'm understanding that you currently
19 use the gold, silver, and bronze medallion kind of
20 solely to apprise the builders with what they're
21 going to pay for the BuildSmart participation?

22 A. To the degree that I understand the
23 current practices, the operations within the
24 program, that's generally my understanding,
25 although I'm not involved in the day-to-day

1 operations of the program. In the proposed
2 modified program, we would not have those tiers:
3 gold, silver, bronze.

4 Q. And the reason you're doing that is,
5 like you said, to avoid confusion in the
6 marketplace by just having a single label,
7 BuildSmart, and saying, that's more energy
8 efficient than the nonBuildSmart, or that label is
9 your label of an energy efficient home?

10 A. I apologize because I'm not familiar
11 with the term "label." Under the proposed
12 modified program, essentially we would communicate
13 that the home is certified BuildSmart and
14 certified by FPL to be an energy efficient home.

15 Q. Thank you. I think that's clear.

16 As part of your builder education and
17 builder support, general support system, do you
18 inform the builder of and assist the builder in
19 obtaining other sources of support for better
20 building practices vis-a-vis energy efficiency?

21 A. I don't know whether we do that today or
22 not.

23 Q. Okay. For an example, there is programs
24 at the federal level, at the state level,
25 particularly the federal level, Building America,

1 say that you're basically looking to the builder
2 to initiate and that you don't initiate, you know,
3 directing builders to those kind of supporting
4 networks?

5 A. I don't know.

6 Q. Okay. You said that you do it in
7 response to the builder's request.

8 Do you -- as part of your program
9 education when you identify a specific builder who
10 says: I want to be a BuildSmart builder; I want
11 to be your ally, do you provide a set of
12 information to that builder to say: As an ally,
13 we will assist you in getting access to a whole
14 range of wide information about how to build a
15 more energy efficient home?

16 A. I know generally we work with the
17 builder in terms of educating them around Energy
18 Star and Florida Green Building Coalition. I
19 don't know the specifics -- specific practices
20 that currently fall into that.

21 Q. Thank you.

22 Once you sign up a builder as an ally,
23 what kind of disclosures and agreements do you
24 make with those builders?

25 A. The builder is required to sign a

1 participation agreement.

2 Q. And does FPL make any disclosure of any
3 of its interests, or it's just assumed that
4 Florida Power & Light is there as a supporting
5 utility entity?

6 A. I don't know.

7 Q. When do you assign a representative to
8 work with the builder ally?

9 If I could maybe follow up, would it be
10 part of their signing that participation
11 agreement?

12 At that time, you say: Well, this is
13 the person that will -- or do you create a system
14 to where you have an individual assigned as a
15 customer service rep for a builder ally?

16 A. When the builder would initially contact
17 Florida Power & Light related to the BuildSmart
18 program, there would be -- we're structured
19 currently as a local or a territorial type basis.

20 So if the builder is building homes
21 within a specific territory, they would either
22 contact the BuildSmart representative, or if the
23 BuildSmart representative, through outreach
24 activities such as participating in a seminar or a
25 builder show or something like that, makes contact

1 with the builder, they would establish that
2 relationship on a local basis. So it's
3 territorial in nature today.

4 Q. Great. Thank you. That's a great
5 answer.

6 How many representatives do you have
7 that are BuildSmart reps, and can you broadly
8 describe the various territories?

9 A. I could broadly describe the
10 territories. I don't know the exact count.

11 Q. Okay.

12 A. We have a territory in the northern-most
13 part of Florida.

14 As we come down, we have another
15 territory; I guess you could call it kind of the
16 central east coast of Florida.

17 We have another territory within what we
18 consider the Treasure Coast area, which is
19 immediately north of Palm Beach County.

20 Then we have territories in Palm Beach
21 County and territories in Dade and Broward, but I
22 don't know the exact boundaries within those
23 counties.

24 And then along the west coast of
25 Florida, we have a territory in what would be

1 southwestern-most Florida and a couple of
2 territories then to the north of that.

3 Q. Okay. And basically each territory, as
4 Florida Power & Light has created them, has at
5 least one rep, if not more?

6 A. Yes.

7 Q. Okay. So with a signed-up builder ally
8 and, as you said, a representative relationship,
9 then when they identify a specific home, what
10 actions does Florida Power & Light BuildSmart take
11 at that time?

12 A. I'm not sure what you mean by
13 "identify," sir. I'm sorry.

14 Q. Okay. Let me rephrase that.

15 You have two kinds of builders as you've
16 described in your modified program, and you're
17 trying to approach both the production and custom
18 builder.

19 If it is a production builder, then
20 probably the production builder is going to have a
21 set of model homes; and at the time they become a
22 builder ally, then I'm assuming the representative
23 then works with that production builder on
24 characterizing their various models as to what the
25 current e-ratio would be for those models and then

1 how those models could be improved to improve the
2 e-ratio; am I correct?

3 A. You're speaking under the context of the
4 existing program or the proposed program?

5 Q. Existing and proposed.

6 A. Okay. Under the existing program, up
7 until fairly recently -- at least you had
8 mentioned production builders, so I guess you're
9 looking for responses as to production builders?

10 Q. Why don't we just work -- I think it
11 would probably be easiest to work each individual
12 one.

13 A. Okay. It has been territorial in
14 nature. So we would work with whoever the
15 appropriate local, if we can call it, community
16 builder representative would be to understand the
17 type of community they're building to, again,
18 educate them on the BuildSmart program, educate
19 them on the options they have within the existing
20 BuildSmart program, and then understand their
21 interest in participating within the program.

22 We would then seek from them the ability
23 to obtain home plans in the production builder
24 environment. That would typically be based on
25 models.

1 We would analyze those models and
2 provide recommendations back to the builder
3 regarding what specific measures they could
4 potentially implement to meet BuildSmart, existing
5 BuildSmart requirements, and then we would seek
6 their participation in the production builder
7 program.

8 Q. Then my understanding is, how that would
9 be carried out under the current program is you
10 would then feed back to them your report at the
11 various medallion levels, in other words, the
12 gold, silver, bronze medallion, 10 percent, 20
13 percent, 30 percent better, and suggest to them if
14 they choose to try to get to the gold level, then
15 they wouldn't have to pay anything, but if they
16 choose to get to the 10 percent, or bronze level,
17 they'd have to pay \$175, as I understand, and then
18 silver is \$50 or whatever.

19 A. Silver is currently \$75.

20 Q. \$75. So basically what you just
21 described is kind of the way that would go. And
22 then with the modification of the program, then
23 you wouldn't be worrying about pricing and you
24 wouldn't be worried about accomplishing anything
25 other than at least a 10 percent savings if it was

1 a prescriptive program that they agreed to or a 20
2 percent savings if they joined in what you call
3 the flexible side of the program?

4 A. No, I wouldn't characterize that we
5 wouldn't be worrying about anything other than
6 achieving 10 percent.

7 Under the modified program, the two
8 approaches are not really designed to be tiers, so
9 to speak, as you might compare it to the existing
10 program.

11 The two approaches are really designed
12 to meet the specific needs that we identify
13 related to production builders versus custom
14 builders.

15 So, under the modified program, it would
16 be obvious to us whether it's a production or
17 custom builder.

18 But we would -- in the production
19 builder approach, we would go in, understand the
20 builder's needs. They could either do the
21 flexible or prescriptive approach.

22 There's no limitation to what a
23 production builder could participate in, but our
24 understanding, given the current market, so to
25 speak, as it relates to the production builder

1 environment, is that the production -- it's a
2 significant achievement to get the production
3 builder to move into what we would design as our
4 prescriptive approach, to move them up that energy
5 efficiency curve into a prescriptive approach.

6 In the prescriptive approach, being that
7 it would be designed for the production builder
8 environment, we would provide similar analysis
9 services as I described related to the existing
10 program around the model homes.

11 We would show them what it would take --
12 well, they would know from the prescriptive
13 requirements what it would take to participate at
14 the prescriptive level.

15 What we heard from our builders is
16 that -- from the production builders is that they
17 want that certainty.

18 They want to know, if they build around
19 these certain measures, all of their homes will be
20 certified, that they didn't like the, quote,
21 unquote, "It depends." So prescriptive provides
22 that degree of certainty to them.

23 But within the selling approach that we
24 would have, we would also be looking to them to go
25 beyond just those basic measures if it's practical

1 for them to do so.

2 Our intent is to move them along the
3 energy efficiency curve, but our analyses would
4 involve the simple explanation of what the
5 prescriptive approach requires and then what they
6 could potentially do beyond that.

7 Does that answer the question?

8 Q. Yes, that answers it fine.

9 And in the custom build area, it would
10 be -- what would be your approach in the custom
11 build area?

12 A. What we understand from our research on
13 custom builders is, just by their very nature,
14 they serve a clientele that is more demanding,
15 discriminating, wants more hands-on type
16 assistance with choosing options that might go
17 into a custom home.

18 Our approach with custom builders would
19 be to give them, you know, what we would call that
20 hands-on service.

21 The flexible approach, based on our
22 modeling, is a -- it's a more resource-intensive
23 approach.

24 We would expect, number one, you're
25 going to have a lower number of homes per builder

1 because it is the custom market, and we do
2 anticipate having to spend more one-on-one time
3 with both the builder and the home buyer, thus,
4 you could call it a higher performance threshold.

5 If we're going to be spending more time
6 with that builder to maintain program
7 cost-effectiveness, we would need the appropriate
8 impacts associated with that.

9 But we do expect the custom approach to
10 be more hands-on, so to speak, in the area of
11 energy analysis, home buyer/builder education, and
12 so forth.

13 In the production environment, you do
14 achieve economies of scale, and that's what we
15 expect to achieve there.

16 Q. Okay. So this would be -- basically
17 we've discussed kind of the context of what I
18 would call plan review and strategizing and
19 getting some sort of an agreement, understanding
20 on the part of the builder, be it production or
21 custom, that this is what they plan to do at the
22 house that is a specific home that they're going
23 to build in a specific location?

24 A. I believe so.

25 Q. Okay. Now when that's decided, then

1 what actions does the BuildSmart program
2 representative take now that you've identified:
3 This specific home is going to go into this
4 specific location?

5 A. Under the current program?

6 Q. Under both current and modified.

7 A. Okay. Under the current program, the
8 territorial rep is responsible for the range of
9 BuildSmart activities, so to speak.

10 So that same representative then would
11 be responsible for coordinating with the builders,
12 trade contractors, making sure that, as they need
13 to, they understand the requirements if they've
14 never been exposed to our requirements before,
15 monitoring the construction of that home, and then
16 ultimately inspecting the home, if there's
17 deficiencies in the home, communicating those
18 deficiencies back to the builder and the trade
19 contractors, and then reinspecting as necessary to
20 certify the home.

21 Upon certification, then we would issue
22 a certification package to the -- ultimately to
23 the home buyer, but that may or may not go through
24 the builder first.

25 Q. At what point in time do you provide

1 e-ratios, for an example, to the builder?

2 A. I don't know that we provide e-ratios
3 specifically to the builder. We calculate the
4 e-ratios, I would say, for internal purposes of
5 qualifying the home.

6 But my understanding is it's not our
7 practice to give the e-ratio to a builder, so to
8 speak. It's more for qualification purposes for
9 internal BuildSmart currently.

10 Q. Okay. Let's maybe go through that
11 process. I can see that. Let's go through that
12 process.

13 At the time you've developed the model
14 home plan review and/or the custom home plan
15 review, you've kind of put in a series of data
16 into your databank under the EnergyGauge program,
17 I would guess, and you've calculated an e-ratio of
18 that home as planned; is that a fair statement,
19 although you retained it internally, and I
20 understand you haven't given it to anybody else,
21 but your internal rep would have this as an
22 e-ratio and he would say: Okay. This home will
23 meet BuildSmart e-ratio standards, would you say?

24 A. The BuildSmart representative would do
25 an energy calculation specifically to determine

1 whether it meets BuildSmart criteria.

2 Q. Okay. And now I'm going to search in
3 this series of questions as to when he does that
4 calculation and when he does any recalculations.

5 So he does an initial calculation on the
6 plan review to tell the builder: Okay. If you
7 build according to plan, we'll back you on a
8 BuildSmart certification?

9 A. I don't know if it transpires in that
10 exact manner.

11 Q. Well, when and how do they give the
12 builder the go-ahead under the current program
13 that they will be BuildSmart participants for that
14 particular individual home and that they'll have
15 to pay or not pay the current fee?

16 A. There is an initial plan analysis, but I
17 don't know if it means they just look at the
18 plans, do a calculation, and say: This is what --
19 you're either eligible to participate or not.

20 There may be initial analyses that are
21 done obviously to say: Here is the upgrades that
22 you are required to perform to participate in
23 BuildSmart.

24 Q. Which, when they say: Here are the
25 upgrades you would be required to perform and you

1 agree to perform those upgrades, then you would
2 run a recalculation to say: Yeah, you've met
3 BuildSmart standards; you've met -- on your plans,
4 you've met the standards on your planned activity
5 for that particular house?

6 A. I don't know if the process exactly
7 transpires in that manner as currently practiced.

8 Q. The next stage then would be for the
9 representative to look at the house as built, not
10 as planned, and I guess that would be your -- you
11 know, what you would classify as your inspection
12 services.

13 Can you kind of describe that?

14 Okay. You've planned the house, and
15 you've talked to the subcontractors, and everybody
16 has got their plans in mind, and you've got the
17 location, and you start building the house. Can
18 you take me from that point forward to final
19 certification?

20 A. I can describe it to you generally in
21 current -- as currently practiced today. The home
22 construction begins. Our representative, either
23 through a communication with the builder trades or
24 field visits, checks on the status of those homes,
25 and then at the appropriate time in the home

1 construction cycle, they would perform a physical
2 inspection of the home.

3 Q. And then the data resulting from that
4 physical inspection is then reinputted into your
5 BuildSmart, I guess, database, report, whatever,
6 and a final e-ratio is then calculated on that
7 home?

8 A. My understanding is they do track the
9 specific, if you could call it, as-built measures
10 in the home. The database is updated to reflect
11 that at the point of what would be considered a
12 final inspection.

13 Q. Okay. How about the modified program,
14 is it any different as far as the process? I mean
15 there may be different -- but would that be the
16 same process for the modified?

17 A. The process for the modified program --
18 I'll describe it. The process for the modified
19 program --

20 (Mr. Sim entered the room.)

21 THE WITNESS: -- would include the same
22 monitoring of the construction cycle, would
23 include the field inspections of the home, the
24 noting of any deficiencies identified related to
25 BuildSmart criteria at the point of field

1 inspection, and then would include inputting of
2 the measures included within the home either at
3 the prescriptive level or, you know, whether it be
4 flexible, a wide range of measures, and then that
5 data would be updated and tracked within the
6 BuildSmart database.

7 Q. (BY MR. TAIT) And, at that point, in
8 both the current program and the modified program
9 is kind of your so-called final certification:
10 This is a BuildSmart home, and also in the current
11 program: This is a BuildSmart home, and it has
12 and it meets one of the three medallion levels,
13 and we will charge you or not charge you a fee, to
14 the builder, for that home?

15 A. I'm sorry, could you ask the question on
16 the current program again, and then I can answer
17 it?

18 Q. Okay. The current program would be,
19 okay, when you got all those final inspection
20 results plugged in, you then calculate the
21 e-ratio, and then you basically inform the
22 builder, number one: Yes, based on the e-ratio
23 and other factors which we will get into later,
24 you have a BuildSmart home, and we will certify
25 that; and then, secondly, under the current

1 program, the basic medallion level that that home
2 has reached, you say: Well, we will charge you
3 this fee for our services in that home, or: We
4 will charge you no fee because you reached the
5 gold level of 30 percent?

6 A. Yes, for the existing program, that's
7 correct, we would calculate the -- again, the
8 internal e-ratio value, and we would communicate
9 to the builder what the fee is as it relates to
10 BuildSmart qualifications purposes.

11 Q. For the modified program, all you have
12 to do then is just, in essence, would be what I
13 call a pass/fail: Yes, you're a BuildSmart home;
14 no, you're not a BuildSmart home, because you
15 don't have to worry about fees or levels or
16 anything of that as far as the medallion level.
17 It's just: Yes, you qualified technically under
18 all our specifications of BuildSmart, or: No, you
19 don't.

20 A. Yes, assuming that they correct all
21 deficiencies and they pass final certification.
22 Right.

23 Q. Yes. What I'm saying is that I'm
24 assuming that when you said final certification,
25 it's that when you've identified deficiencies in

1 your inspections that you have -- those have been
2 corrected and the corrected data has been entered
3 and they still then as-built pass your e-ratio
4 test along with your other technical specs?

5 A. Yes.

6 Q. My next question I think you've answered
7 in great part.

8 It's basically: What is in your
9 database at Florida Power & Light for the
10 BuildSmart program?

11 A. The database contains a wide range of
12 information. I don't believe I can specifically
13 describe it all, but I could generally describe
14 it.

15 Q. Please do, generally.

16 A. It would include participant data as it
17 relates to the builder. It would -- that's one
18 primary category. The other primary category
19 would be all of the measures that we documented
20 related to that home at the point of final
21 inspection.

22 Q. Would it also include the number of
23 contacts, visits, hours for your own calculations
24 as to your allocation of staff time?

25 A. I don't know if it includes that.

1 Q. But it would include all of the
2 underlying data that leads to calculating the
3 e-ratio?

4 A. I don't know what all the underlying
5 data is. I know it includes the measures within
6 that home. I don't know if it includes all of
7 that.

8 Q. Well, the basic building data for the
9 home, which is, I guess, your basic building file
10 under EnergyGauge?

11 A. Correct.

12 Q. And then, like you said, the measures
13 that have been applied.

14 Okay. I think I now have -- and I
15 really appreciate you working me through this,
16 kind of an understanding of the steps and services
17 that are provided.

18 I'd like to go into technical
19 specifications. It kind of is a broad area, both,
20 again, the current and modified program.

21 Now we've discussed the medallion levels
22 in the current program, and I think we've pretty
23 well handled that.

24 What are your technical -- and that's 10
25 percent, 20 percent, or 30 percent better than the

1 Florida Building Code minimum house of the same
2 type and 10 percent for prescriptive and 20
3 percent for flexible programs in your modified
4 program --

5 A. Was --

6 Q. -- on e-ratios. So that's what I would
7 call the e-ratio technical spec.

8 A. Was there a question with that, I'm
9 sorry?

10 Q. No, that was a statement. Am I
11 correct?

12 A. Yes, but if I could clarify again, the
13 e-ratio is calculated for internal BuildSmart
14 purposes. So it's based on calculations that are
15 performed internally, the e-ratio that's
16 calculated internally for calculation purposes.

17 Q. And externally, all you do is indicate
18 pass/fail to the builder and to the homeowner:
19 This home is a BuildSmart home; this home is not a
20 BuildSmart home?

21 A. Under the proposed program, correct.

22 Q. Under the proposed program.

23 And, as you said, even under the current
24 program, your final kind of statement back, except
25 for your charging of price to the builder for a

1 fee, is really: This is a BuildSmart home; this
2 is not a BuildSmart home, as far as the home buyer
3 is concerned?

4 A. That's my general understanding of the
5 practice today.

6 Q. How about technical specifications in --
7 let me just list them, the different categories,
8 and you can say yes no -- building tightness, in
9 other words, the tightness of the external
10 structure of the home?

11 A. I don't know.

12 Q. How about lighting, are there any
13 technical specifications as to lighting?

14 A. I don't know.

15 Q. Are there any technical specifications
16 as to glazing, in other words, window treatment?

17 A. I don't know.

18 Q. That's fine.

19 A. I'm sorry.

20 Q. If you don't know, we'll just make a
21 note, and then you can make a note to yourself.

22 How about equipment, any technical
23 specifications as to equipment?

24 A. I believe there are specifications
25 related to some forms of equipment, correct.

1 Q. Can you tell me what forms you think are
2 included?

3 A. I don't recall those off the top of my
4 head.

5 Q. To me, the most obvious one would be air
6 conditioning, heating.

7 A. Correct. Correct.

8 Q. How about ducts and installation?

9 A. Correct, yes, there are standards
10 related to that.

11 Q. What would be the standards related to
12 insulation?

13 A. I don't know. I apologize.

14 Q. Let me just say, if you don't know,
15 that's fine. I don't know myself, and I've been
16 trying to read and study all this stuff too, so I
17 can certainly understand that.

18 What about ducts?

19 A. The duct standard is -- I can't
20 explicitly state it, but it relates to a threshold
21 of performance.

22 Q. Can you recall what that threshold is?

23 A. It's five percent. The threshold is
24 five percent.

25 Q. Five percent or less leakage; is that a

1 fair statement? I mean what does the five percent
2 relate to, duct leakage?

3 A. It relates to duct leakage, correct.

4 Q. What tools -- I'm just going through
5 these different categories in my mind.

6 What tools are used in the BuildSmart
7 program by the representatives? And "tools" being
8 probably not your database computer management
9 systems that you've built but more the field
10 tools.

11 A. I do know there's a range of tools. I
12 don't believe I could specifically describe the
13 full range of tools that --

14 Q. Well, let me begin by saying: You use
15 the EnergyGauge program as your basic field
16 software collection program and calculation
17 program for the e-ratio?

18 A. Yes.

19 Q. Do you use the EnergyGauge program to
20 give you some ideas of improvements that could be
21 done to that model for the production builder or
22 to that custom home for a custom builder? I know
23 that EnergyGauge has that capacity.

24 A. Yes, I know they use that as a tool. I
25 don't know specifically how they use that tool to

1 do that.

2 Q. Okay. Thank you.

3 And then for duct testing, you use the
4 pressure pan methodology for testing leakage, duct
5 leakage?

6 A. For -- yes.

7 Q. What other tools can you recall that
8 they use, say, in the field?

9 A. I know that in the past they used, I
10 believe it would be called the duct tester for
11 midpoint inspections when those were requested
12 under the existing program.

13 Q. So they'd use the duct tester or I think
14 it's called the duct blaster for midpoint
15 inspections?

16 A. Correct.

17 (There was a brief interruption.)

18 Q. (BY MR. TAIT) Are the other --

19 MR. BRYAN: Can we take a break for one
20 second? I'm sorry.

21 MR. TAIT: Can we just go off the record
22 for a second?

23 THE REPORTER: Sure.

24 (A recess was taken at 10:24 a.m.)

25 (Back on the record at 10:27 a.m.)

1 Q. (BY MR. TAIT) Then to go to kind of the
2 next kind of large category of issues that maybe
3 we can -- performance measures, you testified in
4 your testimony that you worked on calculating what
5 I would call the performance measures.

6 The three that I'm particularly
7 interested in looking at is the kilowatt summer
8 savings, the kilowatt winter savings, and the
9 kilowatt-hour annual savings.

10 I know Mr. Sim will testify on these as
11 well later, but since you worked on the program,
12 can you describe, you know, what each of those are
13 and then how you arrived at those figures?

14 We'll start with kilowatt-hour summer.

15 A. Okay. I don't remember the specific
16 kilowatt-hour value, if that's what you are
17 looking for.

18 Q. I can give it to you. It's -- just a
19 second. I'll look it up.

20 It's your appendix table. It's in Table
21 III, DJH, the appendix to your initial testimony.

22 A. Okay.

23 Q. Your summer per customer kilowatt-hour
24 is 0.78 kilowatts.

25 A. That value was derived from estimating

1 the impacts for the various types of homes that
2 would participate in those programs.

3 So you would have, for example, the
4 prescriptive homes and the flexible homes. The
5 BuildSmart program is based on -- the demand and
6 energy impacts are based on a very comprehensive
7 model that was developed at the beginning of the
8 program.

9 FPL, I guess you could call it,
10 sponsored or caused the -- a very significant
11 pilot -- I'm sorry, program development that
12 included a number of activities such as
13 engineering modeling, analyses, building analyses,
14 and a very large end-use metering study that
15 developed, what I would call, the demand and
16 energy engine of the program, a table that
17 identifies summer and winter kW impacts, as well
18 as kilowatt-hour impacts for various climate
19 regions and also corresponding to the range of
20 BuildSmart-calculated EPI or e-ratio values.

21 Over the period of years subsequent to
22 the initial program development, that model has
23 been updated, I believe, numerous times via
24 additional engineering modeling, additional
25 metered studies.

1 And ultimately those impacts have been
2 progressively updated over time to keep current
3 with code and building market characteristics.

4 So I used that as the basis for
5 developing these impacts, using that model, using
6 historic BuildSmart participation data.

7 Aligned with what we expect to be
8 participation in both the prescriptive and
9 flexible approaches, we were able to calculate
10 forecasted per unit energy and demand impacts for
11 prescriptive and flexible, and then through an
12 initial analysis whereby we weighted these
13 impacts, we were able to come and arrive at these
14 values as indicated here.

15 Q. As I note, the values, you know, remain
16 stable through the time period in question.

17 Are these different values than the
18 current program has?

19 A. I don't know.

20 Q. Okay. As we were discussing some of
21 your steps that you went through, you did say that
22 there were some times when you would have quality
23 control and checking of data and those kind of
24 issues.

25 So I'd like to kind of focus maybe on

1 the mechanisms that Florida Power & Light uses for
2 its quality control.

3 And what I call quality control is kind
4 of a very broad context of also internal checks as
5 to whether or not the reported data for the
6 individual home is correct or not.

7 In this area, what kind of
8 qualifications do you have for your BuildSmart
9 representative?

10 And I'm assuming the BuildSmart
11 representative is your primary field data
12 collector?

13 A. That assumption is correct.

14 The BuildSmart representatives are
15 required to go through internal Florida Power &
16 Light training related to residential energy
17 systems, duct testing.

18 Also, it's been FPL's practice, upon a
19 new representative coming into the program, as
20 soon as practically able, to receive training
21 through the -- I guess it would be called the BERS
22 certification program.

23 Q. Offered by Florida Solar Energy Center,
24 I think is the primary training, but there may be
25 others.

1 A. I don't know.

2 Q. We discussed, as we went through the
3 service steps, that there were various points
4 where there was inputted data, field data from the
5 particular home.

6 Are there any internal steps that
7 Florida Power & Light uses to check the validity
8 of that data, and how do they do that, or
9 identify, I should say, any errors in data
10 inputting?

11 A. The data is periodically reviewed,
12 participant data, for example, by program
13 management.

14 In general, the measures documented
15 within the database are evaluated by a consultant
16 that we use to periodically evaluate it. I don't
17 know that I can describe everything that's
18 included within that evaluation.

19 Q. Are they periodically evaluated by the
20 consultant primarily to give you some updated
21 ideas about what we just discussed as your
22 performance criteria, that is, to tell you whether
23 this set of measures that you used to calculate
24 the kilowatt-hour demand savings and the kilowatt
25 savings demand -- I mean the kilowatt-hour

1 savings, it goes into that constant review of that
2 database or calculation? Is that kind of the
3 purpose of the consultant review?

4 A. That would be one of the purposes.

5 Q. Does the consultant then -- or do you
6 identify data -- do you identify data errors
7 identified in particular representatives' work as
8 part of the supervisory, managerial effort to
9 review their products as individuals?

10 A. I don't know. I know there is
11 peer-to-peer type work -- circumstances in which
12 more experienced reps will work with newer, less
13 experienced reps to oversee their work.

14 There's also a significant -- as I
15 mentioned before, a significant amount of training
16 that goes into training the BuildSmart
17 representatives to capture and record data
18 adequately.

19 Q. Okay.

20 A. And every home is inspected, and that's
21 our current practice.

22 Q. As you said, every home is inspected.
23 Does the BuildSmart managerial administrative
24 system sample the data that's collected on every
25 home -- sample the particular home data to make

1 sure that it kind of accurately represents those
2 homes?

3 Do they have a system or a mechanism to
4 either sample or to check individually all of that
5 data that's entered?

6 A. I don't know that they check it
7 individually or sample it. I don't know.

8 Q. Or if it just stays in the system
9 however it's in the system without any further
10 check?

11 A. I don't know.

12 Q. Okay. Moving right along -- we're doing
13 good. You may not think we're doing good, but we
14 are doing good.

15 Are you familiar with the three tests
16 for cost-effectiveness, that is RIM, TRC, and
17 participant?

18 A. I am familiar that those are the three
19 tests.

20 Q. Okay. As you were designing -- I'll
21 move to another one.

22 As you were designing the BuildSmart
23 modifications and reviewing and looking at the
24 current program, did you build any alternative
25 scenarios as to how BuildSmart could operate?

1 A. Yes, I did look at different scenarios.

2 Q. Can you describe some of the scenarios
3 that perhaps you looked at?

4 A. I'm trying to rattle my memory banks
5 here.

6 I would have looked at them within the
7 context of what I call an activity based model
8 that I built.

9 So I could work through scenarios just
10 through this individual model, but I believe I
11 looked at a scenario where all the homes would be
12 prescriptive or all the homes might be flexible to
13 make sure that those two components could stand on
14 their feet, so to speak.

15 I recall looking at other scenarios. I
16 just don't recall what they specifically were.

17 Q. In the process of your work in your
18 current job, have you looked at other utility
19 programs of similar nature to BuildSmart?

20 A. Yes.

21 Q. Which ones have you particularly looked
22 at?

23 A. I looked at Progress Energy program.
24 I've spoken with Orlando Utilities, Gainesville
25 Regional Utilities, and Jacksonville Electric, and

1 then there may have been others too. I don't
2 recall. I recall I focused on Florida. I don't
3 really recall who else.

4 Q. I know Tallahassee is going through a
5 fairly major round.

6 Have you discussed it at all with the
7 Tallahassee strategic planner or manager, whoever?

8 A. I don't recall speaking with
9 Tallahassee.

10 Q. How about any of the other states,
11 programs of any of the other states?

12 A. I reviewed a RESNET study on Energy Star
13 programs in other states.

14 Q. But you haven't had any particular
15 discussions with any individual either state or
16 utility in another state?

17 A. I have spoken with Energy Star.

18 It's interesting; Energy Star, as I
19 understand it, is operated primarily by a
20 consultant, and that consultant also, I guess,
21 operates programs in other states.

22 That's my understanding. I'm not
23 specifically -- I don't specifically know the
24 nature of those contractual relationships. That's
25 my general understanding.

1 Q. Would it be fair to say that Florida
2 Power & Light is facing a continued expansion of
3 electric demand in its territories?

4 A. That's my understanding.

5 Q. Did you look at any scenarios where you
6 would look to try to increase the cost-benefit
7 results from the RIM test and decrease the
8 cost-benefit test from the participant test?

9 A. I don't recall.

10 Q. I'm going to go to your rebuttal
11 testimony, and I'm particularly going to go to
12 Page 17.

13 A. Okay.

14 Q. These series of questions that kind of
15 began on the bottom of 16 and went to 17 and the
16 top of Page 18 are kind of going towards the
17 activity of Florida Power & Light in what I would
18 call the broad quality control mechanisms.

19 You say that Florida Power & Light is
20 ultimately responsibility for ensuring that
21 BuildSmart fulfills the program requirements and
22 goals approved by the commission.

23 MR. BRYAN: Excuse me, can you tell me
24 what page you're on?

25 MR. TAIT: On Page 17, I'm sorry.

1 MR. BRYAN: Thank you.

2 MR. TAIT: The answer is on Line 4.

3 MR. BRYAN: Thank you.

4 Q. (BY MR. TAIT) And we discussed in some
5 of your answers the way that Florida Power & Light
6 carries out that responsibility.

7 Do you have anything to add to those
8 previous answers you made in relation to this?

9 A. No.

10 Q. Okay. Then on Line 17, you go into the
11 inspection.

12 Are you familiar or aware of how often
13 deficiencies are identified and corrected, and are
14 there any particular measures that the
15 representatives report back that are the most
16 difficult?

17 A. I don't know.

18 Q. Would there be anybody at FPL that looks
19 at that kind of issue, as to what the field reps
20 are generally experiencing in the field as far as
21 deficiencies upon their inspections, and then does
22 Florida Power & Light feed back to the field
23 representatives, through the field representatives
24 to the builder community: These are the
25 particular areas that you need to get more

1 proficient in building practices?

2 A. The second part of the question, our
3 individual BuildSmart representatives certainly
4 know the deficiencies because they're responsible
5 for communicating that back to the builder and the
6 trade contractors to ensure that those
7 deficiencies are corrected.

8 So on a local basis, they would be
9 working constantly, and it is a constant job, to
10 make sure the deficiencies are corrected.

11 Generally, your first part of the
12 question, I don't know.

13 Q. To your knowledge, there is no mechanism
14 at Florida Power & Light to allow that feedback
15 loop to come back up and be generalized and then
16 fed back down again as far as the ways to identify
17 and correct and avoid those deficiencies?

18 MR. BRYAN: Can I ask, what
19 deficiencies -- for this part of the question,
20 what deficiencies are you referring to?

21 MR. TAIT: Just any that he notes, to
22 notify the builder of the deficiency and that they
23 will not certify the home.

24 MR. BRYAN: Okay. Thank you.

25 THE WITNESS: Well, we notify the

1 builders of the deficiencies. A home can't be
2 BuildSmart certified unless those deficiencies are
3 corrected. So it is dealt with on, so to speak, a
4 case-by-case basis.

5 I don't know that I understand the
6 benefit of looking at it globally because it's our
7 expectation that it be corrected, you know, before
8 the home is certified.

9 Q. (BY MR. TAIT) So basically what you're
10 saying is, there is no -- that you deal with
11 deficiencies on a case-by-case, individualized
12 basis in an individualized home basis, and there
13 is no mechanism to identify constantly reoccurring
14 deficiencies across a wide range of homes?

15 MR. BRYAN: Object to the form.

16 But you can answer.

17 THE WITNESS: No, in the sense that our
18 current practice, through the -- the BuildSmart
19 representatives meet on a monthly basis and, in
20 discussing, shared learnings is generally a
21 component of those discussions.

22 I am aware that they've had specific
23 shared discussions on issues they have encountered
24 in the field, although I couldn't elaborate on all
25 of them, but I had mentioned earlier kind of that

1 peer-to-peer type work that occurs, and that
2 results in more experience being gained throughout
3 the group, best practices, so to speak.

4 Q. (BY MR. TAIT) Exactly, best practices.

5 And do you create like a best practices
6 kind of education, slash, discussion manual back
7 to what we talked about, your initial builder
8 education system?

9 A. Yes.

10 Q. So that does get -- so if you go back to
11 some of your basic builder education, you identify
12 to the builders as to where they may or may not be
13 failing in their practices to accomplish best
14 practices?

15 A. Yes, we communicate regularly with the
16 builder. And I need to emphasize, it's often the
17 trade contractor that we have to work with to get
18 that.

19 I'll also note that we do rely on
20 information that comes from credible outside
21 sources too, such as Building America had recently
22 produced a best practices manual that was
23 disseminated within the BuildSmart group.

24 I received a copy of it too. They sent
25 it. And I thought that was a very good manual as

1 well.

2 Q. That was a perfect segue into my next
3 whole major area, which is not only looking at
4 other utility programs, but do you look at other
5 sources of data to improve your BuildSmart program
6 performance and performance measures?

7 A. Yes.

8 Q. In specific then, have you reviewed
9 other testimony in this case from other witnesses?

10 A. Yes.

11 Q. And, in particular, maybe we can follow
12 up on the DS Exhibit 1.

13 Do you have a copy of that available.

14 A. I do not.

15 Q. I have kind of a beginning, updated one.

16 MR. TAIT: Why don't I share it with
17 you, and I'd like to maybe mark this as an exhibit
18 to the deposition.

19 MR. BRYAN: Can I ask you, Mr. Tait,
20 when you say "beginning, updated exhibit," what
21 does that mean?

22 MR. TAIT: You'll be receiving that
23 later this afternoon in an answered series of
24 interrogatories.

25 MR. BRYAN: All right. Just for the

1 record, the deadline for submitting testimony was
2 September 19th. So we'll allow this, allow the
3 witness to use it for purposes of the deposition,
4 but --

5 MR. TAIT: That's correct.

6 MR. BRYAN: -- I have an objection to
7 any updated exhibit, or at least we'll reserve all
8 objections to same.

9 MR. TAIT: Yes, I can clearly understand
10 you reserving those objections to that, and I may
11 be offering this as a cross-examination exhibit as
12 well.

13 MR. BRYAN: But you understand,
14 Mr. Haywood has testified he's reviewed other
15 testimony.

16 MR. TAIT: Yes.

17 MR. BRYAN: And I think you didn't ask
18 him specifically Mr. Stroer's. I think the answer
19 would be yes, but that implies that he reviewed
20 the exhibit that was attached to that testimony
21 and not necessarily what's in front of him.

22 MR. TAIT: Well, I mean since he didn't
23 have the testimony in front of him, this exhibit,
24 I would represent, is relatively similar to that
25 exhibit, perhaps some very few modifications that

1 are not any modifications in the underlying data
2 but rather in some presentation format --

3 MR. BRYAN: Okay. We'll --

4 MR. TAIT: -- but based on that
5 representation and based on your reserving your
6 objections.

7 Q. (BY MR. TAIT) I'd like to maybe just
8 quickly go through it. I think you'll recognize
9 the data from your previous looking at the
10 response.

11 Particularly what he identified was, to
12 just put this in a broad context, a series -- this
13 was feedback based on his ratings of a series of
14 BuildSmart homes in a particular new community,
15 the Venetian new community by WCI Builders or
16 Development or whatever their denomination is.

17 Are you familiar with that one?

18 A. With that community?

19 Q. Yes.

20 A. I'm familiar with WCI and with the fact
21 that they've developed that community.

22 Q. And that community that they developed
23 is, quote, a BuildSmart community, in other words,
24 they desired to qualify every home within that
25 community with the BuildSmart program?

1 A. I don't know that. I'm not that
2 familiar with it.

3 Q. Well, I'll represent that that's what is
4 represented on the Web, on their Web page, and
5 what they represent to the public is that the
6 community qualifies as BuildSmart.

7 MR. BRYAN: I'll object to the form, if
8 that was a question.

9 MR. TAIT: Certainly.

10 Q. (BY MR. TAIT) Would you believe?

11 What was identified in this exhibit --
12 which basically, in general form and data, was
13 given to you, as I recall, on August the 5th and
14 was again submitted as an exhibit in the direct
15 testimony of Mr. Stroer on August 12th.

16 What actions did you take upon reviewing
17 that exhibit?

18 A. I reviewed it.

19 Q. Did you discuss it with anybody?

20 A. Yes.

21 Q. What were the results of that
22 discussion?

23 MR. BRYAN: Are you excluding
24 discussions he had with his attorneys?

25 MR. TAIT: Excluding discussions with

1 attorneys.

2 MR. BRYAN: Thank you.

3 MR. TAIT: I saw that coming. You're
4 right.

5 THE WITNESS: Could I take a moment,
6 please?

7 MR. TAIT: Sure can.

8 Can we go off the record just a moment?

9 THE REPORTER: Sure.

10 (A recess was taken at 10:58 a.m.)

11 (Back on the record at 11:00 a.m.)

12 Q. (BY MR. TAIT) Okay. As you said,
13 you've reviewed this exhibit, and you had
14 discussions within FPL about it.

15 What were your opinions and the results
16 of those discussions?

17 A. The opinion is, looking through this
18 data, that there's really not enough information
19 to provide the ability to really come to any
20 conclusions on our part.

21 Q. Did you discuss the exhibit and perhaps
22 the lack of adequate data with the originator,
23 Mr. Stroer?

24 A. I don't recall what we specifically
25 discussed regarding the lack of data.

1 Q. Okay. Did you disclose or discuss the
2 items in this exhibit at all with your BuildSmart
3 contractor ally?

4 A. Absolutely not. This data, from my
5 perspective, is confidential. I'm a little bit
6 surprised that it was released.

7 Q. Confidential in what way?

8 A. It represents WCI as the client, and it
9 represents their community. I was not
10 specifically aware that they've released this data
11 for public consumption, and I did not want to
12 personally intervene in that.

13 Q. Okay. As you were looking at the data
14 list, there's clearly a blank spot on one of the
15 columns, and that is relative to the BuildSmart
16 medallion level.

17 Did you communicate or discuss with
18 Mr. Stroer at all how or why that blank spot would
19 be there and could -- or how it could be filled
20 in -- actually you have to go to that as-built,
21 the next table down the line.

22 A. I don't know what page you're on. I'm
23 sorry, I don't see the location you're speaking
24 of.

25 Q. Page 4.

1 A. 1, 2, 3, 4.

2 Okay.

3 Q. Did you discuss with Mr. Stroer why that
4 blank column was there and any ways to fill it in?

5 A. What blank column? Would you --

6 Q. About the BuildSmart medallion level of
7 that particular --

8 A. I don't recall having that discussion.

9 Q. Okay.

10 A. I don't know that I've ever seen this
11 table with like number signs and everything on it
12 before. I don't recall that.

13 Q. Yes, it is a cleaned up version kind of
14 of the Excel spreadsheets that you were provided
15 on August the 5th and August the 12th.

16 Then you indicated, I think, in your
17 rebuttal testimony -- Table 2 in his testimony
18 that relates to the alternative -- the so-called,
19 quote, alternative program, and that's on Page
20 4 --

21 MR. BRYAN: Whose testimony, Mr. Tait?

22 MR. TAIT: This is Mr. Haywood's
23 testimony, rebuttal testimony.

24 MR. BRYAN: Okay.

25 Q. (BY MR. TAIT) Page 3, at the bottom of

1 Page 3, the question is: Do you believe
2 Mr. Klongerbo's suggested alternative to the
3 proposed modified BuildSmart program is a more
4 cost-effective alternative?

5 And then the answer begins on Page 4 of
6 his testimony.

7 You say that you think the marketing
8 administrative costs, which I think were -- well,
9 let me go back to the top paragraph where you say
10 the data is unsubstantiated and does not detail
11 assumptions.

12 A. That was my interpretation, correct.

13 Q. As I recall the data, they took exactly
14 the cost data and assumed the same program results
15 as an alternative scenario, and the alternative
16 scenario that they built was that 25 percent of
17 the cost values that you had had for the modified
18 program would go to marketing and administration,
19 67 percent or so would go to individual home
20 service costs related to the individual builder
21 and individual home, and that like 8 percent, as I
22 recall, would go to what they call quality
23 control; am I correct?

24 MR. BRYAN: Let me --

25 THE WITNESS: I don't know. I don't

1 have the table in front of me.

2 Q. (BY MR. TAIT) Oh, you don't have the
3 table in front of you? I'm sorry.

4 (Hands document.)

5 MR. TAIT: And I'll go ahead and offer
6 that. That's, again, subject to the same
7 objections as the first exhibit.

8 That one is the same basic data but does
9 have some additional calculations on it, and it
10 will be available through the interrogatory
11 responses this afternoon.

12 MR. BRYAN: Okay. Just for the record,
13 I will reserve all objections with respect to this
14 exhibit.

15 I also object to the form of the
16 question as it assumes facts not in evidence.

17 But if you can answer, go ahead.

18 THE WITNESS: I don't recall seeing any
19 bases whatsoever for these assumptions of 25
20 percent, 67 percent, 8 percent.

21 So, quite frankly, I didn't know that
22 Mr. Klongerbo assumed what activities and what
23 level of activities were assumed with each of
24 these -- with these categories.

25 Q. (BY MR. TAIT) Okay. I think you've

1 answered that particular question.

2 In your opinion, what is the key to
3 builder participation within the BuildSmart
4 program?

5 What are the key market factors,
6 marketing factors that Florida Power & Light has
7 to gain greater builder participation?

8 A. The key factors in a broad marketing
9 sense apply to this program as well. You have to
10 design the program to meet the needs of the
11 market. So it takes a deep understanding of the
12 market to do that.

13 And what we identified within the
14 redesigned proposed modified program was that the
15 market is represented not only by the ultimate
16 customer, the home buyer, but also by the builder.
17 So our program must be designed to not only meet
18 the needs of home buyers but to also meet the
19 needs of builders.

20 And then once you have a program that's
21 designed well to do that, there is a significant
22 amount of work required to build awareness and
23 educate the market on the program and on the
24 underlying benefits of the program.

25 Q. Okay. Could you turn to your DJH 1,

1 which is the exhibit to your initial testimony on
2 July 15th that goes to the point that you're
3 making?

4 A. This represents part of it, yes.

5 Q. Okay. Yes. Could you elucidate and
6 expand?

7 You say it represents part of it. Is
8 there additional factors that you'd like to
9 include on either or both?

10 A. In both the home buyer case and the home
11 builder case, we identified the submarkets are
12 custom and production.

13 Q. Is there any major difference in the
14 submarkets?

15 A. Yes, I believe I described that in my
16 testimony. It's on Page 7, beginning -- my
17 response is beginning on Line 2.

18 The key difference being with custom
19 builders, they tend to build smaller volumes of
20 high-end homes.

21 Their customers, as we discussed
22 earlier, I believe, tend to be more discriminating
23 and less sensitive to price.

24 What we would typically see in the
25 custom builder market is the builder reacting to

1 customer-specific needs, so to speak, building a
2 product to meet the needs of that specific home
3 buyer.

4 Custom builders tend to have a greater
5 degree of flexibility, and our experience has been
6 that custom builders tend to package, so to speak,
7 energy-efficient upgrades as what we would call an
8 optional feature.

9 So if the customer wants it, the custom
10 builders are willing to deliver, it and they would
11 provide it as an option with appropriate markup.

12 The production builder market, as it's
13 labeled, will build a typical range --

14 (Cellular telephone interruption.)

15 MR. TAIT: Excuse me.

16 Can we just stop for a second and go off
17 the record?

18 THE REPORTER: Sure.

19 (A recess was taken at 11:13 a.m.)

20 (Back on the record at 11:13 a.m.)

21 THE WITNESS: Production builders, they
22 design a product for what they believe will meet
23 the needs of a -- if we could call it a broader
24 audience.

25 So they design a product -- our

1 experience has been and our market research has
2 told us that production builders, just by the very
3 nature of what they do, they don't like to make a
4 lot of changes.

5 When they do offer optional features,
6 it's usually a very limited range. They are
7 extremely risk-averse to anything that could
8 potentially disrupt the construction building
9 cycle.

10 And if they perceive any degree of
11 significant risk towards that construction cycle
12 delivery date, they are very apprehensive about
13 making changes or building features into their
14 home.

15 We also found with production builders
16 that they would often lean towards, because of the
17 nature of the way they build homes, they would
18 often lean towards providing an upgrade as what we
19 would call a standard feature.

20 So the goal with production builders is
21 really to, again, educate them, show them the
22 benefits of energy-efficient measures, and get
23 them to incorporate that into their typical home
24 design.

25 And then they see great incentive in

1 that. They're willing to take that step because
2 they see the incentive as being the ability that
3 they have to either differentiate themselves in a
4 market that is just on the beginning of that
5 energy efficiency curve or, in a market where
6 other builders have already moved in that
7 direction, meet the competition, so to speak.

8 Q. (BY MR. TAIT) In order to do that, that
9 requires a basic provision of information, I
10 guess. That keys off of information. I really
11 don't see information particularly identified here
12 as the key needs.

13 Would it be a fair statement that, in
14 order to move those marketplaces, you need to have
15 basic, reliable, accurate, verifiable information
16 that's trusted by the builder and by the home
17 buyer?

18 A. Yes, and information is one of the ways
19 you deliver the key needs.

20 Q. How do you see the BuildSmart program is
21 doing that?

22 MR. BRYAN: Proposed or current?

23 MR. TAIT: Both.

24 THE WITNESS: I can speak to the
25 proposed program.

1 Q. (BY MR. TAIT) Okay. Please.

2 A. The proposed program, having recognized
3 the needs of production builders versus custom
4 builders, custom builders tend to build in, let's
5 say, a local area, so to speak.

6 We also know we're going to have to
7 provide lots of hands-on support to meet the needs
8 of them and the home buyers.

9 We will deliver on those informational
10 awareness, education, outreach, promotion. We'll
11 deliver on all of that through our local
12 representatives, the relationship, and the
13 activities performed by the local BuildSmart
14 representative assigned to work with that builder,
15 supported by, if we can call it, the BuildSmart
16 infrastructure marketing support, public relations
17 support, general program management.

18 That's typically how we would provide
19 that information. Our strategy is built off of
20 both delivering information through the builder,
21 what we would call a push strategy, and also
22 communicating through various media out to the
23 home buyer audience, which we would call a pull
24 strategy.

25 In the custom market, it's going to very

1 much be leaning towards more of a push because of
2 that marketing nature of the custom builder's
3 relationship with the home buyer.

4 In the production builder market under
5 the proposed program, we will have relationships
6 via the term we use today is the channel manager.

7 We recognize the decision-making
8 structure and production builder environment is
9 different than a custom builder environment, and
10 the way that a production builder communicates
11 with their broader audience is different than the
12 one on one that goes through the custom builder
13 market.

14 So we would have, in essence, for our
15 major -- what we envision for our major production
16 builder is that we would hope to enroll in any
17 approved proposed modified program would be
18 essentially a single point of contact relationship
19 at the production builder decision-making level.

20 And that single point of contact would
21 be responsible for the fairly intensive work
22 that's going to be required in developing and
23 implementing marketing plans to suit the
24 production builder's needs and then working with
25 that production builder collaboratively to

1 implement strategies to communicate and build
2 awareness within their broader target market.

3 So the distinction being it will be
4 one-on-one local relationships for custom and a
5 channel management relationship with production,
6 all of that supported by appropriate marketing
7 public relations, the type of support that goes
8 into communicating your message to your audience.

9 Q. I'd like to go back to the Dennis Stroer
10 Exhibit 1, and you had made a statement that that
11 data was -- that there was some data that you felt
12 was missing in that to help you in evaluation.

13 The one data though that is clear in
14 that is the duct data, as I recall. It clearly
15 indicates what is identified as as-built
16 significant failures in meeting the technical
17 specifications of BuildSmart ducts at five
18 percent.

19 Would you see that as correct?

20 A. No, I can't agree with that because I --
21 this is Mr. -- apparently, I believe, Mr. Stroer's
22 data.

23 Q. Yes, it is.

24 A. I have no way to compare this to our
25 data to come to any conclusion such as what you're

1 indicating.

2 Q. In what way do you have no way to
3 compare it to your data?

4 A. This just lists -- I don't know what
5 house -- I mean there's a -- it's a community
6 with, I believe, over 400 homes.

7 This is a subset of -- apparently a
8 subset of those homes. I don't know; are these
9 the worst homes, the best homes? I don't know
10 what the case is.

11 But I don't know which home is which. I
12 don't know which -- Line 50, I don't know which
13 house that is. I have no way to compare that to
14 our own data on that home.

15 Q. Is there --

16 MR. TAIT: Can we go off the record,
17 please?

18 THE REPORTER: Sure.

19 (A recess was taken at 11:23 a.m.)

20 (Back on the record at 11:25 a.m.)

21 Q. (BY MR. TAIT) Mr. Haywood, earlier I
22 asked, did you try to take measures to address
23 your concerns about the data in Exhibit 1 upon
24 receiving it on August 5th and again on August
25 12th.

1 And so my question is -- you've just
2 again raised a basic question that it was hard for
3 you to compare this particular data with the
4 Florida Power & Light BuildSmart database, and,
5 equally so, it was the difficulty of the
6 petitioners to compare the data that they had with
7 your database because the two databases were very
8 dependent.

9 Did you make any attempts with
10 Mr. Stroer to try to figure out ways in which
11 these two databases could be compared to give you
12 the answers that you need?

13 A. Not to my recollection, but if you could
14 keep in mind that obviously this is quite a bit of
15 data.

16 I needed to understand just what I could
17 understand out of it, which obviously was nothing
18 at the house level, but I don't recall having a
19 conversation with Mr. Stroer about exchanging
20 data.

21 Again, I have serious confidentiality
22 concerns about this. I have not spoken with WCI,
23 the client, but our experience in working with
24 them has been that we maintain the confidentiality
25 of their data at the highest level.

1 I would not release their data into
2 public domain without their specific approval, and
3 I'm not aware -- I am not personally aware that
4 they've given specific approval for their data to
5 be released by Mr. Stroer into public domain.

6 Q. You've raised that several times. Have
7 you had any discussions with the WCI
8 representatives about the confidentiality, your
9 concerns about the confidentiality of this data?

10 A. No, I have not. I respect the
11 relationship that Mr. Stroer has with WCI.

12 Mr. Stroer, BuildSmart, and WCI are
13 partners together. This is a very successful
14 community for us to at least begin to explore the
15 collaborative vision that I have through the
16 modified, proposed modified program.

17 I'm very sensitive to the relationship
18 that Mr. Stroer would have with WCI. I would not
19 intervene in that relationship.

20 Q. Would you believe that I understand that
21 and that I think that's the reason Mr. Stroer
22 basically released the data to you on August the
23 5th prior to any sort of public release as well?

24 A. What's the question? I'm sorry.

25 Q. Would you believe I do understand that

1 Q. What additional components would you
2 require?

3 A. I don't know. I would have to sit down
4 and map out the analysis plan, you know, what
5 would it take to draw a valid conclusion from this
6 data. I have not done that yet.

7 Q. Based on receiving the exhibit back in
8 August, did you have any discussions with the
9 BuildSmart representatives in that territory?

10 A. I speak with BuildSmart representatives
11 in that area on an intermittent basis. I don't
12 recall having specific discussions one way or
13 another about this specific data.

14 Q. Since the release of the data to you on
15 August the 5th, have you had any discussions with
16 the BuildSmart representatives in that territory
17 relative to their duct testing procedure and
18 results of their certification of ducts in this
19 community or otherwise in the territory?

20 A. I don't recall the specific nature. We
21 talk about a lot of things regularly. I don't
22 recall having a specific discussion personally of
23 this full table, so to speak, personally.

24 Q. When you received that table on August
25 the 5th and again received an Excel spreadsheet

1 copy after August the 12th, did you share that
2 spreadsheet copy and/or table with anybody else
3 at Florida Power & Light other than your
4 attorneys?

5 A. When the data was released as an
6 exhibit, it was shared with at least the program
7 manager. The program manager has been involved in
8 reviewing this data as well.

9 Q. And who is the program manager?

10 A. Holly Duquette.

11 Q. You did not release it to any other
12 person at Florida Power & Light other than your
13 attorneys and other than Holly Duquette?

14 A. It was released as an exhibit, so I
15 can't characterize it as me releasing it. Anyone
16 who would have had access to the exhibit would
17 have been able to review it.

18 Q. Is there anybody that you informed about
19 the exhibit and asked for their comments?

20 A. I informed Holly Duquette about it and
21 asked for her comments, and she may have spoken
22 with others as well.

23 Q. But, to your knowledge, you don't know
24 whether she spoke to others or not, or do you know
25 if she spoke to others?

1 A. I believe she spoke with others, yes.

2 Q. I know it's hearsay, but that's all
3 right; it's administrative.

4 What did she report back to you as to
5 any concerns that she had with that exhibit and
6 any steps that she was taking in relationship to
7 that exhibit?

8 A. She reported back to me the same or
9 similar concerns that I noted to you.

10 Q. Do you know if she took any steps to
11 address those concerns of hers as vis-a-vis
12 talking to Mr. Stroer or talking to anybody
13 outside of Florida Power & Light?

14 A. She spoke -- I believe she spoke with a
15 contractor we use who is a specialist in this type
16 of work, but I don't know who else she spoke to
17 beyond that.

18 Q. Thank you.

19 MR. TAIT: Can we just pause for a few
20 seconds, take a short break?

21 THE REPORTER: Sure.

22 (A recess was taken at 11:35 a.m.)

23 (Back on the record at 11:38 a.m.)

24 MR. BRYAN: We're back on.

25 I don't have any questions.

1 Martha?

2 MS. BROWN: Yes, I'm here.

3 MR. TAIT: Do you have any questions?

4 MS. BROWN: I just have a couple of
5 follow-up questions to some of the things that you
6 were asking him, and they're very general.

7

8 CROSS-EXAMINATION

9 BY MS. BROWN:

10 Q. Mr. Haywood, Mr. Tait asked you a series
11 of questions, and he would refer to the BuildSmart
12 ally, builder ally.

13 Are you familiar with that term "ally"?
14 Is it one that you usually use with respect to the
15 BuildSmart program?

16 A. No, our general terminology is
17 "participating builder," but I believe I
18 understood the context of it.

19 Q. Well, could you explain it to me?

20 A. Sure, a participating builder would be a
21 builder who we have met with, informed them of our
22 program criteria and requirements.

23 And based upon that, they're assigned
24 actually an agreement with Florida Power & Light
25 to adhere to a number of agreement clauses which

1 would allow them to participate in our program.

2 So ultimately once they sign that
3 agreement, they are a participating builder.
4 Going forward, they can build homes and request
5 that those homes be certified BuildSmart upon
6 completion and final inspection.

7 Q. Do those -- all right. I'm just
8 speaking of the term "ally" a little bit as we are
9 allies together against somebody else, like
10 against --

11 MR. TAIT: No, the axis doesn't exist.

12 Q. (BY MS. BROWN) Well, I just wanted to
13 make sure that that was not the context you
14 understood this term.

15 A. No, I believe all of the stakeholders
16 are allies in the energy efficient business. We
17 all have to work together to make this happen.

18 Q. Okay. The other question we have has to
19 do with the duct testing and the program that
20 Florida Power & Light has, the duct system testing
21 and repair program.

22 Are you familiar within that?

23 A. I am generally familiar with it, but --

24 Q. It's for existing homes; is that
25 correct?

1 A. We do have a program, a duct testing and
2 repair program for existing homes, that is
3 correct.

4 Q. Would the testing done be similar to
5 what's done for BuildSmart?

6 A. Correct. The testing protocol used in
7 that program, to my understanding, is similar to
8 what is used for final inspection within
9 BuildSmart.

10 MS. BROWN: All right. Thank you.
11 That's all we have.

12 THE WITNESS: Thank you.

13 MR. BRYAN: Is that it?

14 Okay. Mr. Haywood will waive the
15 reading and signing.

16 THE REPORTER: Okay. Thank you.

17 MR. BRYAN: And we're done.

18 (Deposition Exhibit No. 1 was marked for
19 identification by the reporter.)

20 (Thereupon, the deposition concluded at
21 or about the hour of 11:43 a.m.)

22

23

24

25

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

CERTIFICATE OF OATH

THE STATE OF FLORIDA,)
)
COUNTY OF PALM BEACH.)

I, the undersigned authority, certify that
witness personally appeared before
me and was duly sworn.

WITNESS my hand and official seal this 29 day
of Sept. 2005.

Janette P. Hert

Janette P. Hert, RPR, RMR, CRR
Notary Public, State of Florida.
My Commission No. DD176040
Expires: February 8, 2007



Janette P. Hert
MY COMMISSION # DD176040 EXPIRES
February 8, 2007
BONDED THRU TROY FAIN INSURANCE, INC.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

CERTIFICATE

THE STATE OF FLORIDA,)
)
COUNTY OF PALM BEACH.)

I, Janette P. Hert, Registered Professional Reporter, Registered Merit Reporter, and Certified Realtime Reporter, certify that I was authorized to and did stenographically report the deposition of Daniel Haywood; that a review of the transcript was not requested; and that the transcript is a true and complete record of my stenographic notes.

I further certify that I am not a relative, employee, attorney, or counsel of any of the parties, nor am I a relative or employee of any of the parties' attorney or counsel connected with the action, nor am I financially interested in the action.

DATED this 29 day of Sept. 2005.

Janette P. Hert

Janette P. Hert, RPR, RMR, CRR
Notary Public, State of Florida.

Docket Nos. 040029-EG and 040660-EG
 Petitioner's Cross Examination Exhibit
 for Hearing held on October 10, 2005
 No.

Table 1: Homebuyer and Homebuilder Key Needs

<i>Homebuyer's Primary Needs</i>	<i>Homebuilder's Primary Needs</i>
<i>Quality and performance in their home (no problems)</i>	<i>Selling homes with high margins (including options)</i>
<i>Affordability</i>	<i>Cost control</i>
<i>Conduct business with a reputable builder</i>	<i>Differentiating products and services</i>
<i>Choices and options in upgrades</i>	<i>Delivering on schedule</i>
<i>Home value to appreciate</i>	<i>Satisfying customers</i>
<i>Energy efficiency</i>	
Key decision information that is reliable and accurate, credible, consistent and understandable	Key decision information that is reliable and accurate, credible, consistent and understandable
Labeling information to give easy and simple home comparison	Comparative Information to differentiate home
Information to access better financing	Information to allow access to better financing to buyer
Information on the energy efficient measures employed in home	Information to select cost-effective energy efficient measures
Building Durability	Liability Issues
Health And Safety	Insurance Issues
Indoor Air Quality	Reduce Call Backs/Warranty Issues
Payback of Energy Efficiency Upgrades	
Insurance Issues	

Italicized language from initial testimony of Daniel J. Haywood filed on July 15, 2005, in Docket Nos. 040029-EG, 040660-EG denominated Exhibit DJH-1

Bold language added by Petitioners for their Cross Examination exhibit

FLORIDA PUBLIC SERVICE COMMISSION
 DOCKET 040029-EG
 NO. 040660-EG Exhibit No. 14
 Company/ FPL
 Witness: Daniel J. Haywood
 Date: 10-10-05

#14

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET 040029-EG+
NO. 040660-EG-Exhibit No. 15
Company/ FPL
Witness: Daniel J. Haywood
Date: 10-10-05

Docket Nos. 040029-EG and 040660-EG
 Petitioner's Cross Examination Exhibit
 for Hearing held on October 10, 2005

No.

Table 2: Summary Comparison of Program Components and Features

Italicized language from initial testimony of Daniel J. Haywood filed on July 15, 2005, in Docket Nos. 040029-EG, 040660-EG denominated Exhibit DJH-2

Bold language added by Petitioners for their Cross Examination exhibit

Step		Existing Program		Redesigned Program	
				"Flexible" Approach	"Prescriptive" Approach
1	Program marketing	Marketing to homebuyers (BuildSmart® label) Market to Builders	Same but focus on "production builders"	Focus on "production" builders	
2	<i>Dwelling types</i>	<i>Single family detached</i>	<i>Single family detached</i> <i>Single family attached homes</i>	<i>same</i>	
3	Builder participation	Sign agreement	Same	Same	
4	FPL disclosures	FPL discloses Participation requirements and fees	FPL discloses Participation requirements; no fees	Same	
5	<i>Participation Requirements</i>	<i>Install measures to reach one of three levels tied to energy performance- Bronze, Silver or Gold</i>	<i>Install measures that exceed "Prescriptive" approach requirements and result in an e-Ratio score < .81</i>	<i>Install prescriptive measures targeted in an e-Ratio score < .91</i>	
5A	<i>Applicable measures</i>	<ul style="list-style-type: none"> • <i>Flexible measures</i> • <i>Wide range of measures</i> 	<ul style="list-style-type: none"> • <i>Flexible measures</i> • <i>Wide range of measures</i> 	<i>Prescriptive measures</i>	
6	<i>Participation Costs</i>	<i>Combination of cost of measures + BuildSmart fees (for Bronze and Silver homes only)</i>	<i>Cost of measures</i>	<i>same</i>	
6A	<i>Fees</i>	<i>Gold = \$0</i> <i>Silver = \$75</i> <i>Bronze = \$175</i>	<ul style="list-style-type: none"> • <i>No fees</i> 	<i>same</i>	

#15

7	Add. Tech. requirement-Ducts	Duct leakage <5% based upon square footage (a/k/a "Qn")	Same	Same
8	Participation with other programs	Limited with Energy Star; Florida Green Building Standards Certification	Energy Star promotion incentive	None
8A	<i>ENERGY STAR®</i>	<i>Limited participation</i>	<i>Increased promotion via builder incentives up to \$50/home for qualifying BuildSmart homes that also achieve ENERGY STAR® certification</i>	<i>N/A</i>
9	Initial review	Initial review from builder's plans	Initial review from builder's plans	Initial review from builder's plans
9A	Tools used	Energy Gauge FPL Data Bank Additional?	Same	Same
9b	<i>Energy Performance Analysis (e-ratio)</i>	<i>Performed for each participating home</i>	<i>Performed for each participating home</i>	<i>Based on analysis of model home design (worst case)</i>
9C	Results of initial review and review of improvement options	Performed for each participating home (uses Energy Gauge improvement program)	Same	Based on analysis of model home design
9D	Results of initial review after specific home identified	Performed for each participating home with orientation factors and proposed measures and placed in FPL data base only; used to base fees from builder)	Same	Should be same but not clear (home orientation should be added)

9E	Code compliance submission	No—not included in Basic Service?	No	No
10	Inspections	FPL reserves the right to perform a series of inspections on each home	FPL reserves the right to perform a series of inspections on each home	same
10A	Tools used	Ducts—pressure pan Ducts (when rated) Duct “blaster” Additional?	Same	Same
10B	Inspections	FPL inspects all visually and approx 75% ducts are tested and less than 5% have mid-point	Same except no mid-point offered (only Basic Service)	Same except no mid-point offered (only Basic Service)
10C	Final EPA (e-ratio)	Following inspection and placed in FPL data base only; not provided builder or homebuyer	Same	Same
11	Certification	FPL certifies that home meets BuildSmart® standards	Same	Same
11A	Rating	If requested—389 from 2000-2005	Same?	No
12	Reports			
12A	PSC	Annually to PSC; every 5 years Goals and program review	Same	Same
12B	Homebuilder	Certification and invoices for fees	Certification	Same
12C	Homebuyer	Only through homebuilder	Same	Same
14	Monitoring check points	At time of entry to FPL Data Bank	Same	Same
14A	Tools used	FPL Data Bank Outside consultant	Same	Same

- Q. In table 3 of the Direct testimony of Daniel J. Haywood, filed on July 15, 2005, (Appendix DJH-3), projected demand and energy savings for the BuildSmart program was presented by year. Please provide a breakdown as to the savings projected in each of the two categories to be used by the modified program: prescriptive and flexible.
- A. Please see attached document.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET 040660-EG
NO. 040660-EG Exhibit No. 16
Company/ FPL
Witness: Daniel J. Haywood
Date: 10-10-05

#16

Table 3: Projected Demand and Energy Savings

Year	Annual Number of Participants	Per Customer KWh	Per Customer Winter	Per Customer Summer	Total Annual KWh	Total Annual Winter	Total Annual Summer
2005	3,816	1,460	0.88	0.78	5,570,995	3,358	2,976
2006	5,344	1460	0.88	0.78	7,801,510	4,702	4,168
2007	6,945	1460	0.88	0.78	10,139,700	6,112	5,417
2008	8,335	1460	0.88	0.78	12,168,370	7,334	6,501
2009	9,170	1460	0.88	0.78	13,388,200	8,070	7,153
2010	10,084	1460	0.88	0.78	14,722,348	8,874	7,865
2011	10,084	1460	0.88	0.78	14,722,348	8,874	7,865
2012	10,084	1460	0.88	0.78	14,722,348	8,874	7,865
2013	10,084	1460	0.88	0.78	14,722,348	8,874	7,865
2014	10,084	1460	0.88	0.78	14,722,348	8,874	7,865

Year	Annual Number of Participants	Total Participation		
		Total Annual kWh	Total Annual Winter kW	Total Annual Summer kW
2005	3,816	5,570,995	3,358	2,976
2006	5,344	7,801,510	4,702	4,168
2007	6,945	10,139,700	6,112	5,417
2008	8,335	12,168,370	7,334	6,501
2009	9,170	13,388,200	8,070	7,153
2010	10,084	14,722,348	8,874	7,865
2011	10,084	14,722,348	8,874	7,865
2012	10,084	14,722,348	8,874	7,865
2013	10,084	14,722,348	8,874	7,865
2014	10,084	14,722,348	8,874	7,865

Year	Annual Number of Participants	Prescriptive Participation		
		Total Annual kWh	Total Annual Winter kW	Total Annual Summer kW
2005	3,086	3,656,910	2,222	1,944
2006	4,356	5,161,860	3,136	2,744
2007	5,681	6,731,985	4,090	3,579
2008	6,802	8,060,370	4,897	4,285
2009	7,509	8,898,165	5,406	4,731
2010	8,276	9,807,060	5,959	5,214
2011	8,276	9,807,060	5,959	5,214
2012	8,276	9,807,060	5,959	5,214
2013	8,276	9,807,060	5,959	5,214
2014	8,276	9,807,060	5,959	5,214

Year	Annual Number of Participants	Flexible Participation		
		Total Annual kWh	Total Annual Winter kW	Total Annual Summer kW
2005	730	1,914,085	1,136	1,032
2006	988	2,639,650	1,566	1,424
2007	1,264	3,407,715	2,022	1,838
2008	1,533	4,108,000	2,437	2,216
2009	1,661	4,490,035	2,664	2,422
2010	1,808	4,915,288	2,915	2,651
2011	1,808	4,915,288	2,915	2,651
2012	1,808	4,915,288	2,915	2,651
2013	1,808	4,915,288	2,915	2,651
2014	1,808	4,915,288	2,915	2,651

% PARTICIPATION

Docket Nos. 040029-EG and 040660-EG
 Petitioner's Cross Examination Exhibit
 for Hearing held on October 10, 2005

YEAR	Annual # of Participants	% of Total	TOTAL PARTICIPATION				No. Total
			Total Annual kWh	% of Total	Total annual Winter KW	% of Total	
2005	3,816		5,570,995		3,358		2,976
2006	5,344		7,801,510		4,702		4,168
2007	6,945		10,139,700		6,112		5,417
2008	8,335		12,168,370		7,334		6,501
2009	9,170		13,338,200		8,070		7,153
2010	10,084		14,722,348		8,874		7,865
2011	10,084		14,722,348		8,874		7,865
2012	10,084		14,722,348		8,874		7,865
2013	10,084		14,722,348		8,874		7,865
2014	10,084		14,722,348		8,874		7,865

YEAR	Annual # of Participants	% of Total	PRESCRIPTIVE PARTICIPATION				% of Total	
			Total Annual kWh	% of Total	Total annual Winter KW	% of Total		Total annual Summer KW
2005	3,086	81%	3,656,910	66%	2,222	66%	1,944	65%
2006	4,356	82%	5,161,860	66%	3,136	67%	2,744	66%
2007	5,681	82%	6,731,985	66%	4,090	67%	3,579	66%
2008	6,802	82%	8,060,370	66%	4,897	67%	4,285	66%
2009	7,509	82%	8,898,165	67%	5,406	67%	4,731	66%
2010	8,276	82%	9,807,060	67%	5,959	67%	5,214	66%
2011	8,276	82%	9,807,060	67%	5,959	67%	5,214	66%
2012	8,276	82%	9,807,060	67%	5,959	67%	5,214	66%
2013	8,276	82%	9,807,060	67%	5,959	67%	5,214	66%
2014	8,276	82%	9,807,060	67%	5,959	67%	5,214	66%

YEAR	Annual # of Participants	% of Total	FLEXIBLE PARTICIPATION				% of Total	
			Total Annual kWh	% of Total	Total annual Winter KW	% of Total		Total annual Summer KW
2005	730	19%	1,914,085	34%	1,136	34%	1,032	35%
2006	988	18%	2,639,650	34%	1,566	33%	1,424	34%
2007	1,264	18%	3,407,715	34%	2,022	33%	1,838	34%
2008	1,533	18%	4,108,000	34%	2,437	33%	2,216	34%
2009	1,661	18%	4,490,035	34%	2,664	33%	2,422	34%
2010	1,808	18%	4,915,288	33%	2,915	33%	2,651	34%
2011	1,808	18%	4,915,288	33%	2,915	33%	2,651	34%
2012	1,808	18%	4,915,288	33%	2,915	33%	2,651	34%
2013	1,808	18%	4,915,288	33%	2,915	33%	2,651	34%
2014	1,808	18%	4,915,288	33%	2,915	33%	2,651	34%

kWh/KW

Docket Nos. 040029-EG and 040660-EG
Petitioner's Cross Examination Exhibit
for Hearing held on October 10, 2005

No.

YEAR	Annual # of Participants	Total Annual kWh	Total annual Winter KW	kWh saved by winter KW	Total annual Summer KW	kWh saved by summer KW
2005	3,816	5,570,995	3,358	1,659	2,976	1,872
2006	5,344	7,801,510	4,702	1,659	4,168	1,872
2007	6,945	10,139,700	6,112	1,659	5,417	1,872
2008	8,335	12,168,370	7,334	1,659	6,501	1,872
2009	9,170	13,338,200	8,070	1,653	7,153	1,865
2010	10,084	14,722,348	8,874	1,659	7,865	1,872
2011	10,084	14,722,348	8,874	1,659	7,865	1,872
2012	10,084	14,722,348	8,874	1,659	7,865	1,872
2013	10,084	14,722,348	8,874	1,659	7,865	1,872
2014	10,084	14,722,348	8,874	1,659	7,865	1,872

YEAR	Annual # of Participants	Total Annual kWh	Total annual Winter KW	kWh saved by winter KW	Total annual Summer KW	kWh saved by summer KW
2005	3,086	3,656,910	2,222	1,646	1,944	1,881
2006	4,356	5,161,860	3,136	1,646	2,744	1,881
2007	5,681	6,731,985	4,090	1,646	3,579	1,881
2008	6,802	8,060,370	4,897	1,646	4,285	1,881
2009	7,509	8,898,165	5,406	1,646	4,731	1,881
2010	8,276	9,807,060	5,959	1,646	5,214	1,881
2011	8,276	9,807,060	5,959	1,646	5,214	1,881
2012	8,276	9,807,060	5,959	1,646	5,214	1,881
2013	8,276	9,807,060	5,959	1,646	5,214	1,881
2014	8,276	9,807,060	5,959	1,646	5,214	1,881

YEAR	Annual # of Participants	Total Annual kWh	Total annual Winter KW	kWh saved by winter KW	Total annual Summer KW	kWh saved by summer KW
2005	730	1,914,085	1,136	1,685	1,032	1,855
2006	988	2,639,650	1,566	1,686	1,424	1,854
2007	1,264	3,407,715	2,022	1,685	1,838	1,854
2008	1,533	4,108,000	2,437	1,686	2,216	1,854
2009	1,661	4,490,035	2,664	1,685	2,422	1,854
2010	1,808	4,915,288	2,915	1,686	2,651	1,854
2011	1,808	4,915,288	2,915	1,686	2,651	1,854
2012	1,808	4,915,288	2,915	1,686	2,651	1,854
2013	1,808	4,915,288	2,915	1,686	2,651	1,854
2014	1,808	4,915,288	2,915	1,686	2,651	1,854

SAVINGS PER PARTICIPANT (UNIT SAVINGS)

Docket Nos. 040029-EG and 040660-EG
 Petitioner's Cross Examination Exhibit
 for Hearing held on October 10, 2005

YEAR	Annual # of Participants	Total Annual kWh	TOTAL PARTICIPATION		No.		
			kWh savings per participant	Total annual Winter KW	Total annual Summer KW	winter KW avoid per participant	
2005	3,816	5,570,995	1,460	3,358	0.88	2,976	0.78
2006	5,344	7,801,510	1,460	4,702	0.88	4,168	0.78
2007	6,945	10,139,700	1,460	6,112	0.88	5,417	0.78
2008	8,335	12,168,370	1,460	7,334	0.88	6,501	0.78
2009	9,170	13,338,200	1,455	8,070	0.88	7,153	0.78
2010	10,084	14,722,348	1,460	8,874	0.88	7,865	0.78
2011	10,084	14,722,348	1,460	8,874	0.88	7,865	0.78
2012	10,084	14,722,348	1,460	8,874	0.88	7,865	0.78
2013	10,084	14,722,348	1,460	8,874	0.88	7,865	0.78
2014	10,084	14,722,348	1,460	8,874	0.88	7,865	0.78

YEAR	Annual # of Participants	Total Annual kWh	PRESCRIPTIVE PARTICIPATION		No.		
			kWh savings per participant	Total annual Winter KW	Total annual Summer KW	winter KW avoid per participant	
2005	3,086	3,656,910	1,185	2,222	0.72	1,944	0.63
2006	4,356	5,161,860	1,185	3,136	0.72	2,744	0.63
2007	5,681	6,731,985	1,185	4,090	0.72	3,579	0.63
2008	6,802	8,060,370	1,185	4,897	0.72	4,285	0.63
2009	7,509	8,898,165	1,185	5,406	0.72	4,731	0.63
2010	8,276	9,807,060	1,185	5,959	0.72	5,214	0.63
2011	8,276	9,807,060	1,185	5,959	0.72	5,214	0.63
2012	8,276	9,807,060	1,185	5,959	0.72	5,214	0.63
2013	8,276	9,807,060	1,185	5,959	0.72	5,214	0.63
2014	8,276	9,807,060	1,185	5,959	0.72	5,214	0.63

YEAR	Annual # of Participants	Total Annual kWh	FLEXIBLE PARTICIPATION		No.		
			kWh savings per participant	Total annual Winter KW	Total annual Summer KW	winter KW avoid per participant	
2005	730	1,914,085	2,622	1,136	1.56	1,032	1.41
2006	988	2,639,650	2,672	1,566	1.59	1,424	1.44
2007	1,264	3,407,715	2,696	2,022	1.60	1,838	1.45
2008	1,533	4,108,000	2,680	2,437	1.59	2,216	1.45
2009	1,661	4,490,035	2,703	2,664	1.60	2,422	1.46
2010	1,808	4,915,288	2,719	2,915	1.61	2,651	1.47
2011	1,808	4,915,288	2,719	2,915	1.61	2,651	1.47
2012	1,808	4,915,288	2,719	2,915	1.61	2,651	1.47
2013	1,808	4,915,288	2,719	2,915	1.61	2,651	1.47
2014	1,808	4,915,288	2,719	2,915	1.61	2,651	1.47

Q.

Identify and describe in detail the number of participants by year as follows:

- a. Number of participating builders;
- b. Number of qualified homes built by each builder;
- c. The reported energy efficiency achieved as a percentage of improvement over the Florida Residential Energy Efficiency Code for each qualified home and as an average for each participating builder;

A.

- A. 2000 225 Builders
- 2001 284 Builders
- 2002 222 Builders
- 2003 155 Builders
- 2004 148 Builders
- 2005 76 Builders

B. Please see attachment 1 which details the number of builders by year and the total number of homes associated with each builder.

C. Please refer to the chart below. The energy efficiency for each level is as follows: bronze 10%, silver 20%, gold 30%.

	2000	2001	2002	2003	2004	2005	Total
Level							
Bronze	212	335	286	325	317	276	1751
Gold	189	387	384	498	722	309	2489
Silver	304	481	633	844	994	551	3807
Total							8047

Regarding the average energy efficiency by participating builder by year, please see attachment 2.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET 040029-EG +
NO. 040660-EG Exhibit No. 17
Company/ FPL
Witness: Daniel J. Haywood
Date: 10-10-05

#17

SUMMARY FROM INTERROGATORY 4-PRODUCTION BUILDERS (High Volume Builders)

NAME		2000	2001	2002	2003	2004	mid-2005	TOTAL
Centex Builders [includes Wayne Homes division]	TOTAL	7	6	21	1	37	14	86
	GOLD	1	0	1	0	0	1	3
	SILVER	1	6	5	1	11	0	24
	BRONZE	5	0	15	0	26	13	59
Discovery Homes	TOTAL	16	30	36	44	50	18	194
	GOLD	2	3	8	27	30	7	77
	SILVER	4	9	24	17	20	11	85
	BRONZE	10	18	4	0	0	0	32
Engle Homes	TOTAL	26	34	74	23	12	0	169
	GOLD	1	5	12	2	1		21
	SILVER	15	17	53	18	1		104
	BRONZE	10	12	9	3	10		44
Fretwell Homes	TOTAL	3	25	20	20	14	20	102
	GOLD	3	24	20	17	4	6	74
	SILVER	0	1	0	3	10	14	28
	BRONZE	0	0	0	0	0	0	0
Gibraltar Homes	TOTAL	24	21	23	27	20	22	137
	GOLD	12	17	18	7	6	2	62
	SILVER	12	4	4	19	12	14	65
	BRONZE	0	0	1	1	2	6	10
Habitat for Humanity* [includes Broward, Collier, Greater Miami, Halifax, Jupiter, South PB, Treasure Coast, Venice and WPB chapters]	TOTAL	54	99	130	127	119	56	585
	GOLD	0	1	0	7	51	18	77
	SILVER	28	59	84	118	68	38	395
	BRONZE	26	39	46	2	0	0	113
Joyal Construction	TOTAL	1	8	38	27	36	25	135
	GOLD	1	1	10	1	1	2	16
	SILVER		6	26	21	29	16	98
	BRONZE		1	2	5	6	7	21
Kemick Construction	TOTAL	7	28	24	16	34	15	124
	GOLD	6	23	22	10	11	3	75
	SILVER	1	5	2	6	20	10	44
	BRONZE					3	2	5
Lee Wetherington Homes	TOTAL	0	6	8	98	81	40	233
	GOLD		4	4	21	20	10	59
	SILVER		2	4	71	48	24	149
	BRONZE				6	13	6	25
Lowell Homes, Inc.	TOTAL	12	46	0	0	0	0	58
	GOLD	0	0					0
	SILVER	1	2					3
	BRONZE	11	44					55
M/I Homes of Palm Beach	TOTAL	1	58	92	75	99	23	348
	GOLD		5	21	27	47	12	112
	SILVER	1	49	70	47	52	11	230
	BRONZE		4	1	1			6
Masterpiece Homes*	TOTAL	8	28	23	111	153	103	426
	GOLD	3	27	4	16	14	6	70
	SILVER	4	1	6	85	129	81	306
	BRONZE	1	0	13	10	10	16	50

NAME		2000	2001	2002	2003	2004	mid-2005	TOTAL
Mercedes Homes* [includes Mercedes/Treas Coast]	TOTAL	1	48	132	173	189	85	628
	GOLD	0	4	16	84	109	22	235
	SILVER	1	44	106	72	73	63	359
	BRONZE	0	0	10	17	7	0	34
Neal Communities of SW FL	TOTAL	0	0	0	53	82	102	237
	GOLD				6	9	7	22
	SILVER				36	48	64	148
	BRONZE				11	25	31	67
Raymond O. Garcia, Gen. Contractor	TOTAL	13	9	10	6	10	11	59
	GOLD	13	9	7	5	8	11	53
	SILVER	0	0	3	1	2	0	6
	BRONZE	0	0	0	0	0	0	0
Royal Professional Builders* [includes Royal/Preserve & Treas Coast]	TOTAL	122	136	126	135	107	74	700
	GOLD	4	1	4	3	2	1	15
	SILVER	78	104	84	43	54	34	397
	BRONZE	40	31	38	89	51	39	288
Schwab Custom Homes	TOTAL	2	12	10	19	10	0	53
	GOLD	1	11	8	18	8		46
	SILVER	1	1	2	1	2		7
	BRONZE	0	0	0	0	0		0
Tim Towles Corporation	TOTAL	42	44	35	18	22	9	170
	GOLD	16	17	14	5	13	5	70
	SILVER	11	18	17	6	7	3	62
	BRONZE	15	9	4	7	2	1	38
U S Home* [includes Sara/Mana and @Rivendell]	TOTAL	4	13	22	143	204	90	476
	GOLD	2	5	9	13	36	22	87
	SILVER	1	5	13	55	111	32	217
	BRONZE	1	3		75	57	36	172
WCI* [includes Evergrene, Gradens, Old Palms and Venetian]	TOTAL	0	0	1	191	387	293	872
	GOLD	0	0	1	50	103	71	225
	SILVER	0	0	0	106	211	109	426
	BRONZE	0	0	0	35	73	113	221
TOTAL MAJOR BUILDERS *[total of above top 20 builders under BuildSmart program, all averaging at least 10 homes per year and 6* more than 84]	TOTAL	343	651	825	1307	1666	1000	5792
	GOLD	65	157	179	319	473	206	1399
	SILVER	159	333	503	726	908	524	3153
	BRONZE	119	161	143	262	285	270	1240
TOTAL ALL BUILDERS	# BLDRS	225	284	222	155	148	76	
	TOTAL	705	1203	1303	1667	2033	1136	8047
	GOLD	189	387	384	498	722	309	2489
	SILVER	304	481	633	844	994	551	3807
% MAJOR OF TOTAL	BRONZE	212	335	286	325	317	276	1751
	# BLDRS	7%	6%	7%	12%	11%	22%	
	TOTAL	48.65%	54.11%	63.32%	78.40%	81.95%	88.03%	71.98%
	GOLD	34.39%	40.57%	46.61%	64.06%	65.51%	66.67%	56.21%
SILVER	52.30%	69.23%	79.46%	86.02%	91.35%	95.10%	82.82%	
	BRONZE	56.13%	48.06%	50.00%	80.62%	89.91%	97.83%	70.82%

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET 040029-EG+
NO. 040660-EG-Exhibit No. 18
Company/ FFL
Witness: Steven R. Sim Depo.
Date: 10-10-05

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

BEFORE THE PUBLIC SERVICE COMMISSION

In re: Petition for
approval of modifications
to BuildSmart Program
by Florida Power & Light
Company.

DOCKET NO. 040660-EG
DOCKET NO. 040029-EG
DATED: September 20, 2005

In re: Petition for
approval of numeric
conservation goals by
Florida Power & Light
Company.

**Original
Transcript**

DEPOSITION OF THE WITNESS

STEVEN R. SIM

700 Universe Boulevard
Juno Beach, Florida
Monday, September 26, 2005
12:17 p.m. - 1:17 p.m.
Before Janette P. Hert, RPR, RMR, CRR
and Notary Public, State of Florida

APPEARANCES:

LAW OFFICE OF WILLIAM J. TAIT, JR.
By WILLIAM J. TAIT, JR., ESQUIRE
1061 Windwood Way
Tallahassee, Florida 32311
(850) 878-0500
jimtait@comcast.net

APPEARANCES Continued on Page 2.

7/15

1 APPEARANCES Continued:

2

FLORIDA POWER & LIGHT COMPANY

3

By PATRICK M. BRYAN, ESQUIRE

700 Universe Boulevard

4

Juno Beach, Florida 33408-0420

(561) 304-5134

5

patrick_bryan@fpl.com

6

7

OFFICE OF THE GENERAL COUNSEL

FLORIDA PUBLIC SERVICE COMMISSION

8

By MARTHA CARTER BROWN, ESQUIRE, and

ADRIENNE VINING, ESQUIRE

9

2540 Shumard Oak Boulevard

Tallahassee, Florida 32399-0850

10

(850) 413-6187

(via telephone)

11

12

Also Present: Mr. Daniel J. Haywood

Ms. Judy Harlow (via telephone)

13

Ms. Lee Colson (via telephone)

Ms. Jeanette Sickel (via telephone)

14

15

16

17

18

19

20

21

22

23

24

25

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

I N D E X

WITNESS:

STEVEN R. SIM

Page

DIRECT EXAMINATION BY MR. TAIT

4

CROSS-EXAMINATION BY MS. BROWN

32

E X H I B I T S

Marked

None.

1 THEREUPON,

2 STEVEN R. SIM,

3 called as a witness and being by the undersigned

4 Notary Public first duly sworn, testified as

5 follows:

6

7 DIRECT EXAMINATION

8 BY MR. TAIT:

9 Q. Can you please state your name and
10 address for the record, please?

11 A. My name is Steve Sim. My business
12 address is 9250 West Flagler Street, Miami,
13 Florida, Florida Power & Light Company.

14 Q. Mr. Sim, may I call you Steve?

15 A. Yes, sir.

16 Q. I'm Jim.

17 Can you -- have you had any
18 depositions -- you've been participating in
19 depositions before?

20 A. Yes.

21 Q. So you know the basic rules as to you
22 have to give a verbal answer?

23 A. Yes.

24 Q. All right. Can you just briefly give
25 us some of your background in your current

1 position?

2 A. Yes. My background, when I started
3 within the company, was in the area of designing
4 demand-side management programs and monitoring
5 them.

6 Since that time, I have been in what
7 is -- used to be known as the system planning
8 department, currently known as the resource
9 assessment and planning department, as a
10 supervisor in charge of the resource planning
11 group.

12 Q. Okay. You were present during a lot of
13 the testimony of Mr. Haywood, so I'll ask you some
14 fairly short open questions, and then feel free to
15 kind of give a longer response if you desire.

16 When did you begin designing demand-side
17 management program?

18 A. Approximately within a year after
19 joining the company.

20 Q. And you joined the company?

21 A. The tail end of '79. So it would have
22 been the early '80s I would have been designing
23 DSM programs.

24 Q. So that would mean that you are very
25 familiar with the Florida Energy Efficiency and

1 Conservation Act and its initial program designs
2 and further program designs following initial ones
3 I believe in 1985?

4 A. I was very familiar with FEECA at the
5 time I was in that position, was very familiar
6 with the programs that were designed in the early
7 '80s, somewhat less familiar with programs that
8 have been designed since that time.

9 Q. Did you participate in any Florida Power
10 & Light program designs relating to new
11 construction following the adoption of FEECA in
12 1985?

13 A. I believe, subject to check, depending
14 on the date the program design would have started,
15 but it would have been close to '85. The answer
16 would be yes, and that would be FPL's passive home
17 program.

18 Q. Passive home program, that was new
19 construction?

20 A. That's correct.

21 Q. But it was a very specific area of new
22 construction, not kind of a whole house program?

23 A. It was both specific and whole house.

24 Q. Was that program approved by the Public
25 Service Commission?

1 A. Yes, it was.

2 Q. Did the Public Service Commission
3 approve any other new construction program prior
4 to BuildSmart, in your knowledge?

5 A. I don't recall. I had no participation
6 in such a program.

7 Q. Did you participate at all in the study
8 leading up to the development of the BuildSmart
9 program and in the initial design of the
10 BuildSmart program?

11 A. No, no participation in the design
12 stages of the program.

13 Q. What has been your participation in
14 the -- have you participated at all subsequent to
15 the initial approval of the BuildSmart program on
16 a statewide basis? As I recall, it was in 1997.

17 A. I'm sorry, could you repeat the
18 question?

19 Q. Have you participated at all in the
20 cost-effectiveness studies conducted on the
21 BuildSmart program since 1997?

22 A. Yes.

23 Q. So you're familiar with the
24 cost-effectiveness studies subsequent to 1997 up
25 to including the current program and also the

1 modifications to the current program that are
2 proposed?

3 A. I wouldn't say I am currently familiar
4 with all of the cost-effective analysis that has
5 been done since 1997. I participated in them or
6 people operating under my supervision participated
7 in them from '97 on.

8 Q. Okay. That's fair.

9 We can refer to your exhibits, I guess,
10 to your testimony.

11 MR. TAIT: We're referring to the July
12 15th initial testimony of Dr. Sim.

13 Q. (BY MR. TAIT) Can you explain to us the
14 three different cost-effectiveness tests that you
15 performed on the BuildSmart program as modified?

16 A. Yes, the three tests are those that are
17 in the commission's approved cost-effectiveness
18 methodology. One is the rate impact measure or
19 RIM test, R-I-M. The other one is the total
20 resource cost test or TRC test, and the third is
21 the participant test.

22 Q. Can you explain, in general context, the
23 various cost factors and the various benefit
24 factors that are involved in each of those three
25 tests?

1 A. Yes, I'll certainly try. We'll start
2 with the participant test first, because it is
3 somewhat different than the other two.

4 It's designed to look at the costs and
5 benefits that are felt, so to speak, by the
6 participant, meaning the benefits would be reduced
7 electric bills, plus any incentives that the
8 company might give.

9 Those two together generally constitute
10 the benefits of that program or the benefits to
11 the participant in the DSM program.

12 The costs would be the out-of-pocket
13 costs, both the one-time capital and any O&M costs
14 that the participant would incur to first secure
15 and then to operate and maintain the equipment
16 connected to the program.

17 Let me switch on to the -- over to the
18 RIM and TRC tests. Those two tests take not a
19 customer perspective as did the participant test;
20 it takes a broader view looking at costs and
21 benefits incurred not just by the participant.

22 For both of those two tests, the benefit
23 side of the equation is identical. It looks at,
24 as a benefit, any avoided capital cost for
25 generation, any avoided variable and fixed O&M

1 cost for generation. It looks at fuel not burned
2 in the unit, and it also looks at system fuel
3 impacts from not having built the avoided
4 generating unit.

5 In addition, there are avoided capital
6 and O&M cost for transmission, facilities that
7 would otherwise have been built as well as for
8 capital and O&M for distribution facilities that
9 otherwise would have been built.

10 And that fairly well summarizes the two
11 or the benefits side of the equation for those two
12 programs -- or two cost-effectiveness tests,
13 excuse me.

14 Now where those two cost-effectiveness
15 tests differ are on the cost side of the equation.
16 Both of them have an administrative cost,
17 primarily the staffing, et cetera, that the
18 utility needs to expend for the program.

19 The RIM test also includes any
20 incentives that are paid by the utility to the
21 program participants and also takes into account
22 the lost revenues that are incurred by the energy
23 conservation program's savings.

24 So to summarize for the RIM test,
25 administrative costs, incentive payments, and lost

1 revenues.

2 For the TRC test, as mentioned before,
3 they have administrative costs. They do not
4 include incentives. They do not include lost
5 revenues, but they do include the participant
6 out-of-pocket costs that are the same as in the
7 participant test.

8 And I think that fairly well summarizes
9 the basics of the three tests.

10 Q. Thank you. That's a great summary,
11 Steve. I appreciate that.

12 What were the results of the RIM test
13 for the modified BuildSmart program?

14 A. Let me check the exhibit.

15 Q. We're turning to Exhibit --

16 A. It's the last page of my exhibit.

17 The benefit-to-cost ratio was 1.06 to 1.

18 Q. Which means that for every dollar
19 invested in the program, the RIM benefits are
20 \$1.06?

21 A. Yes.

22 Q. And what about the TRC?

23 A. The TRC test results were 1.10 to 1.

24 Q. And the participant?

25 A. Was 1.75 to 1.

1 Q. Do you recall or do you know what the
2 RIM, TRC, and participant test results were on the
3 current program?

4 A. No, I don't.

5 Q. Okay. But that is something relatively
6 easy to find?

7 A. It would be in FPL's filings for that
8 program in previous years.

9 Q. Okay. So we don't know what the changes
10 are from the current program to the modified
11 program as far as the results to each of those
12 tests?

13 A. I don't recall at present, that's
14 correct.

15 Q. Have you looked at the results of other
16 utilities' calculations of the -- of RIM test
17 benefits for their new construction programs,
18 other utilities in Florida?

19 A. No, and I typically do not look at such
20 results for other utilities because their benefits
21 for certain and generally their costs for programs
22 are significantly different.

23 I know for a fact that the benefits side
24 of the equation is considerably different for FPL
25 as it is for TECO or Progress or other utilities

1 in the state.

2 Q. So generally what you're saying is that
3 their position vis-a-vis avoided generation and
4 also their infrastructure already built is
5 obviously significantly different as far as the
6 benefit results?

7 A. That's correct. The type of generation
8 they would build, the timing of when they would
9 build their unit, and the impacts on their system
10 fuel use is considerably different from one
11 utility to another.

12 Q. Did you do any calculations as to the
13 various factors that were involved in calculating
14 the direct program performance results of the
15 BuildSmart program, that is, kilowatts in the
16 summer and winter demand and then also the
17 kilowatt-hour energy saved, the source of those
18 figures?

19 A. We use the inputs that are provided to
20 us as a department as an input into our
21 calculations, so we take them and use them.

22 Q. But you take them as given to you and
23 don't test them yourself independently as to
24 whether they're accurate or not?

25 A. With the exception of looking at them

1 and seeing, on a sanity check basis, was a decimal
2 point slipped, does it fall within the normal
3 range for what we are used to seeing for programs,
4 we do no testing beyond that. That's the
5 responsibility of the program developers.

6 Q. Do you do any -- when you're running a
7 particular set of figures, do you run any
8 alternative figures kind of as sanity checks under
9 the programs?

10 In other words, do you vary by 10
11 percent or 15 percent the various inputted figures
12 to see how sensitive those figures are to your
13 test?

14 A. No, because that's not really needed. I
15 mean you can look at the benefit-to-cost ratios
16 and you can see how much of a cushion, so to
17 speak, you would have in a given program.

18 Q. As you noted, the RIM test has
19 administrative costs and incentives paid. Those
20 combined areas are most normally cost recovered
21 under the energy cost recovery clause by the
22 utility?

23 A. That's correct.

24 Q. And the lost revenues are, quote, not
25 recovered through any direct charge mechanism?

1 A. That's correct.

2 Q. Since the -- did you run any sensitivity
3 analysis or alternative or were you requested to
4 run any alternative scenario analysis of what
5 would be the impact of reducing those equity
6 recovered costs, the administrative and incentives
7 paid costs, and placing it on the participant to
8 see what would result in those various benefit
9 factors, the cost-benefit ratios?

10 A. The answer to that would be no at the
11 time that we performed the cost-effectiveness runs
12 for the program filing.

13 Q. Did you prepare any cost-effectiveness
14 runs during the period of time that the BuildSmart
15 modification scenarios were being built back at
16 the program office?

17 A. Can you define, please, what you mean by
18 the modification scenario?

19 Q. Well, in their review of the current
20 program, did you run any alternative scenarios as
21 they were looking to various options to modify the
22 program to provide them some guidance for program
23 modification design decisions?

24 A. I think the answer is a qualified yes,
25 with this explanation: For all of the program

1 measures and all of the programs themselves, we
2 typically start looking just at the benefits side
3 of the program.

4 In other words, we want to know, given
5 what you think you're going to get, kW and kWh
6 reduction and what that translates to in terms of
7 lost revenues, we analyze the program with no
8 administrative costs and no incentive costs, in
9 essence, to figure out the bucket of dollars
10 you've got of benefits that exceed costs.

11 And then that information goes back to
12 the program designers for all of the programs, and
13 they figure out the best way to spend that money
14 between the admin costs and the incentive
15 payments.

16 Q. If, as you said, the participant
17 benefits are 1.75 -- cost-benefit analysis is a
18 ratio of 1.75, for every dollar spent, benefits to
19 the participant are \$1.75, almost two to one, if
20 you lowered those benefits to the participant by
21 half, what impact would that have on the RIM
22 analysis?

23 A. We're discussing the modified BuildSmart
24 program only here?

25 Q. It can be -- yes, for right now, we can

1 do either current or modified or just generally a
2 program.

3 A. I'll answer the question for the
4 modified BuildSmart program because it's probably
5 as simple as an example as you can get.

6 Q. Okay.

7 A. We're paying no incentives there. So if
8 we were to lower the benefits side, we would be
9 lowering the bill savings.

10 What it would tend to do is then shrink
11 the participant benefit-to-cost ratio, and it
12 would tend to have several impacts on the RIM
13 test.

14 It would -- because we're lowering the
15 kilowatt-hour savings, which would be the only way
16 you would lower the bill savings, you would lower
17 the lost revenues, which would tend to push up
18 RIM.

19 You would also lower the kilowatt-hour
20 driven fuel savings for the program, which would
21 tend to push down RIM.

22 Where it would end out, I don't know.

23 Q. As you were running the alternative
24 scenarios, as you identified, to figure out what
25 the bucket of dollars would be appropriate to

1 spend in the equity cost recovery, did you attempt
2 to run any analysis to show that a smaller bucket
3 of dollars could basically result in higher RIMs
4 and lower participant cost?

5 A. Not in the example I just gave because
6 there were no incentive dollars being paid. The
7 only way we could have done it for this program
8 would have been to go back and say: The
9 kilowatt-hour assumption or kilowatt-hour
10 reduction assumption that you gave us, could it be
11 lowered? And that, we did not do. That is an
12 input into our process.

13 Q. Yes, not only the kilowatt-hour but also
14 I'm assuming you're talking also about the
15 kilowatt demand reductions?

16 A. Well, the kilowatt demand reduction
17 would have no impact on the participant test.
18 Therefore, it would have not impacted the
19 participant test at all if that input had been
20 changed.

21 Q. I'm still trying to work my mind around
22 that concept.

23 So what you're saying is that if you
24 reduce the administrative costs of the program,
25 then you believe the per unit cost -- no, that the

1 overall kilowatt-hour reduction would be reduced?

2 A. No, sir.

3 Q. Okay.

4 A. There's no direct correlation between
5 how many dollars we spend for administration and
6 what the kilowatt-hour reduction of that program
7 is.

8 Q. So can we go back through these
9 equations one more time?

10 A. Certainly.

11 Q. Can you go back and explain to me if you
12 ran the alternative scenario of reducing the
13 administrative costs in the modified program how
14 it would impact RIM?

15 A. Well, first you refer to it as an
16 alternative scenario.

17 Q. Okay.

18 A. I don't view that as an accurate term.
19 What I described was an initial step in the
20 cost-effectiveness analysis we did for all
21 measures and all programs at the beginning of the
22 last DSM goals and DSM plan work, where we simply
23 ran the program with the projected kW and kWh
24 impacts with no admin costs and no incentive
25 costs.

1 Now could you ask your question again,
2 please, and I'll try to take it from that point
3 and answer it?

4 Q. Okay. Then you're building the specific
5 program design that will hopefully provide the
6 kilowatt-hour savings and the kilowatt demand
7 savings that I guess you projected for the goal
8 statement as a mandatory goal for that individual
9 program?

10 A. I would respectfully disagree because I
11 view program design as being defined by the
12 program designers as to what measures or, in this
13 case, building envelope changes would be made, and
14 they use that as a starting point to get their kW
15 and kWh reduction estimates.

16 What we do is, if you believe you're
17 going to get that, here's what it's worth to FPL
18 and to its customers from a benefit-to-cost
19 standpoint.

20 And the benefits exceed the lost revenue
21 costs by "X," and that "X" is the bucket you've
22 got to spend in order to first cover your
23 administrative costs and then to pay any
24 incentives that you might wish to pay.

25 Q. Okay. So we have this bucket of

1 dollars. Now you can also make a program design
2 choice as to take that bucket of dollars and
3 assign a part of that bucket of dollars to the
4 participant costs and reduce your administrative
5 costs which would then increase the basic RIM
6 results?

7 A. If you -- all things else equal, I would
8 agree if you lower the administrative costs of the
9 program, the RIM test ratio goes up, because your
10 benefits have stayed the same and your costs have
11 decreased.

12 But if you assign benefits out of that
13 bucket of dollars to the participant, you're, in
14 essence, paying either an incentive or a higher
15 incentive to the participant, which raises the
16 benefits side of the participant test, but it adds
17 cost to the RIM test. So you're now bringing the
18 RIM ratio back down.

19 Q. No, I clearly understand that, but what
20 I'm basically saying is that, we're not going
21 to --

22 (Mr. Haywood left the room.)

23 Q. (BY MR. TAIT) -- we're going to
24 actually reduce that bucket of dollars for the
25 administrative incentive payments.

1 And I understand that if you -- instead
2 of -- I guess just to go to the modified program,
3 to make it real simple, as I understand from
4 Mr. Haywood's testimony, the basic cost is \$400
5 administratively per home participant
6 participating in the program.

7 If you took that \$400 and reduced it to
8 \$300 and you took \$100 of that and you put it on
9 the participant cost, everything else being equal,
10 it would drive down the participant cost-benefit
11 ratio by a -- let me take it one step further.

12 As I understand also, the program
13 involves also approximately \$750 of participant
14 cost.

15 So what you do is you make the \$750
16 participant cost \$850 and you make the
17 administrative costs and have no incentives in the
18 new program \$300 plus your lost revenues.

19 And everything else being equal, if you
20 can run a program providing the same participant
21 rate and the same cost savings per measure per
22 unit, would that not increase the RIM and lower
23 the participant cost-benefit ratios?

24 A. There are an awful lot of ifs in that
25 statement.

1 Q. Yes, I'm trying to make as few ifs
2 as possible.

3 A. And I'm trying to follow it.

4 (Mr. Haywood entered the room.)

5 THE WITNESS: We're in agreement that if
6 you -- taking it one step at a time, if you lower
7 the admin costs, the RIM test goes up.

8 If you then increase the costs that are
9 borne by the participant, the participant test
10 ratio drops. I think we're in agreement there.

11 My experience, going way back to when I
12 was a program designer, is, once you start making
13 changes in how you operate a program and design
14 it, you're likely to change the kW and kWh
15 reductions that the program will achieve.

16 So, therefore, both tests, particularly
17 the RIM test, may change and may change
18 significantly.

19 Q. (BY MR. TAIT) However, in this case, if
20 we can prove that the kW demand and the kWh energy
21 savings are relatively the same whether you're
22 operating the current program or the modified
23 program, that statement may not hold true for this
24 particular program?

25 A. Again, I would say that's a very big if.

1 Q. But evidently as they were modifying the
2 program and significantly probably changing the
3 participant test, because they shifted a number of
4 cost factors from the participant on to the
5 administrative side, that didn't seem to change
6 their basic ratio they reported to you. That's my
7 understanding. And I'll have to check out those
8 figures.

9 So if you just reversed that, provided
10 that you can still get the same participation rate
11 level -- and I understand that that would be a
12 program design choice and decision.

13 If you're a program designer, you would
14 say: Can I get my penetration rate and can I get
15 my number of participants at that level, at the
16 same level but spending less money.

17 MR. BRYAN: I'm going to object to the
18 form of the question.

19 You can answer it if you can.

20 THE WITNESS: I was about to ask if
21 there was a question in that.

22 Q. (BY MR. TAIT) Yes, the question in that
23 is -- well, I guess you've already answered it by
24 saying there's a lot of ifs, and that would be one
25 of the if equations that we would have to clarify

1 in order to meet the answer that you gave me,
2 which is, yes, RIM would go up and participant
3 would go down given all other factors holding the
4 same.

5 Would you believe that?

6 A. I will agree that there are a lot of ifs
7 in the assumption that you're making. You also
8 made, as part of those statements, an assumption
9 that there was a direct correlation between admin
10 costs and participant equipment and O&M costs, and
11 I don't believe that is generally the case in DSM
12 programs. So that would add one more if on to the
13 kind of litany of ifs we have gone through.

14 Q. Well, what you call participant
15 equipment costs would be probably appropriately
16 denominated in a classic DSM program, but in a
17 program like BuildSmart, would not equipment costs
18 also include the cost of participating in the
19 program, like the fees that were charged by the
20 BuildSmart program?

21 Those costs would have been and in the
22 past were included as participant costs under the
23 current BuildSmart program, were they not?

24 MR. BRYAN: Just object to the form,
25 again.

1 Q. (BY MR. TAIT) Okay. But were they not?
2 Were not the BuildSmart fees that were charged the
3 participant included as costs in the current
4 BuildSmart program?

5 A. You're comparing the modified BuildSmart
6 program to its predecessor?

7 Q. I'm just asking you: In the predecessor
8 program, which incorporated participant fees, are
9 not participant fees included in participant costs
10 beyond equipment?

11 A. I do not know.

12 Q. So we would -- in order to answer that
13 question, we would have to go back to the RIM test
14 on the existing current program and see if those
15 fees were included in the cost of participant with
16 the participant test?

17 A. I'll answer yes with the following
18 clarification: I think you simply have to go back
19 and see what is included in the administrative
20 costs.

21 Q. Given your experience as both a program
22 designer and a test calculator, how would you
23 treat participant fees in evaluating a participant
24 cost and a RIM cost and a TRC cost?

25 A. Can you repeat the question, please?

1 Q. How would you -- where would you place
2 participant fees that are paid by the participants
3 in a program as cost in the RIM and as cost in the
4 participant test?

5 A. If it is strictly an out-of-pocket cost
6 to the participant, it has no impact on the RIM
7 test. It would simply be a cost borne in the
8 participant test as it -- again, on the cost side
9 of that calculation.

10 Q. If you were including administrative
11 costs in the RIM test, what items would be
12 involved in that? Would participant fees
13 collected directly from the participant be
14 included as a cost, administrative cost for the
15 RIM test?

16 A. I'll answer the question hypothetically
17 because I don't know the details behind the
18 administrative costs in this program.

19 It's possible that monies taken into the
20 program to offset the company's other
21 administrative costs, the staffing of the program,
22 the people who run the program, the advertising,
23 et cetera, it's conceivable that those could have
24 been taken in and netted out to produce a net
25 admin cost.

1 Q. And if that was true, then that would
2 produce higher end test results given the equality
3 of all of the factors?

4 A. Yes, and lower participant test results.

5 Q. And lower participant test results.

6 Let's go on to another subject which you
7 addressed in your rebuttal testimony.

8 I understand that there are three tests,
9 criteria approved by the Public Service
10 Commission.

11 One of our witnesses did offer a
12 suggestion that there was -- as you reflected at
13 times, you put together a sanity analysis when
14 you're reviewing documentation or directed inputs
15 that were given to you by program people.

16 I think he suggested an appropriate
17 sanity test just to check generally the validity
18 of any program by a utility would be cents per
19 kilowatt-hours.

20 And basically he was suggesting if the
21 program costs more in cents per kilowatt-hours
22 than the actual charge in cents per kilowatt-hours
23 on the consumer, then why should we even be
24 engaged in the program?

25 MR. BRYAN: Is there a question?

1 Q. (BY MR. TAIT) Yes, the question is:
2 Why should we even be engaged in a program that
3 costs more in cents per kilowatt-hours than the
4 tariff charges in cents per kilowatt-hours?

5 MR. BRYAN: I'll just object to the
6 form.

7 But you can answer.

8 THE WITNESS: Okay.

9 As stated in my rebuttal testimony, the
10 cents per kilowatt-hour or dollars per kW hour
11 perspective on a program is taking only a partial
12 look at the total impacts of a DSM program, and,
13 in fact, takes probably -- it takes a look at what
14 is probably the most -- the least meaningful side
15 or impact of the DSM programs.

16 Case in point for your example, if you
17 were to take a dollars per kWh perspective on
18 FPL's load management programs, you would get a
19 fairly high number.

20 But those programs and any DSM program
21 that has a significant kW contribution has a much
22 greater chance of being cost-effective simply
23 because it is the kW reduction that avoids the
24 generation you would have to build to meet the
25 people owed.

1 It avoids the transmission, distribution
2 facilities you would have to build to meet the
3 people owed, and that kW reduction impact is
4 completely missed in this dollars per
5 kilowatt-hour perspective.

6 MR. TAIT: Right now, let's go off the
7 record for a second.

8 THE REPORTER: Okay.

9 (A recess was taken at 1:00 p.m.)

10 (Back on the record at 1:02 p.m.)

11 Q. (BY MR. TAIT) Briefly, I'm struggling
12 with -- you know, I can certainly understand, as
13 you said, the results when you're looking at the
14 load management program which virtually has no kWh
15 reduction but has dramatic kW reduction potential
16 anyway.

17 But when you're dealing with kind of a
18 whole house program like BuildSmart, wouldn't kind
19 of a sanity check to say that what you're saving
20 in the whole house in dollars per kilowatt-hour
21 should come closer to being equal to the program
22 costs per kilowatt-hours?

23 A. Can you rephrase the question, please?

24 Q. Okay.

25 Wouldn't you say that the savings per

1 kilowatt-hours should be relatively -- for a
2 sanity check, relatively equal to what the cost of
3 providing the kilowatt-hours to that house would
4 be?

5 A. You're referring to a dollars per
6 kilowatt-hour kind of unit of measurement?

7 Q. Yes.

8 A. If I understand your question correctly,
9 I would still answer no, because I could design a
10 program -- two programs that had identical dollars
11 per kilowatt-hour costs, one of which, though, if
12 it got all of my kilowatt-hour savings at night
13 due to lighting, due to timers on pool pumps,
14 et cetera, would be saving me no kW, but yet I
15 could design another program that picked up the
16 kilowatt-hour savings during the day and also got
17 a half a kW from each participant.

18 So I've got zero kW and I've got a half
19 a kW for the two programs, but both have an
20 identical dollars per kilowatt-hour cost, but yet
21 one would be significantly more beneficial to the
22 utility and to the rate payers being the one with
23 the kW reduction.

24 Q. Yes. Thank you. That helps me kind of
25 clear out some of the cobwebs in my mind. Thank

1 you.

2 MR. TAIT: I think that would be all.

3 Martha, do you have any questions?

4 Hello?

5 MS. BROWN: I'm here. I'm here.

6 MR. TAIT: Oh, okay. I thought we lost
7 you again.

8 MS. BROWN: No, we were just discussing
9 something at the other end of the table. I do
10 have a few questions, but I don't think they'll
11 take more than ten minutes, all right?

12 MR. BRYAN: Okay.

13

14

CROSS-EXAMINATION

15 BY MS. BROWN:

16 Q. Dr. Sim, this is Martha Brown with the
17 Commission staff.

18 How are you?

19 A. I am fine, Martha. Thank you.

20 Q. I think we asked if you could bring a
21 copy of FPL's demand-side management annual report
22 for 2004 with you.

23 Did you bring that?

24 A. Yes, I have one that is dated February
25 22nd, 2005.

1 Q. That's the one.

2 A. Okay.

3 Q. We have a few questions to ask you
4 related to that report.

5 The BuildSmart conservation program
6 information is contained, a lot of it, on Page 8
7 of the report.

8 Can you go there?

9 A. Okay. I have it in front of me.

10 Q. All right. From that chart, can you
11 tell me how much energy and demand savings the
12 BuildSmart conservation program contributed to the
13 annual cumulative conservation goal for 2004?

14 I'm looking for the kilowatt-hour
15 savings and the kilowatt --

16 A. Yes. I'm trying to do the math in my
17 head to make sure I can answer this accurately.

18 My understanding is, in the middle of
19 the page where it says Annual Demand and Energy
20 Savings, that the values they have, summer kW
21 reduction, winter kW reduction, and kilowatt-hour
22 reduction, are what was achieved in calendar year
23 2004 with the sign-ups that took place in those 12
24 months.

25 Q. All right. So that the kilowatt-hour

1 savings was 3,646,182?

2 A. I'm looking on the left-hand side,
3 Martha.

4 The per installation, I believe those
5 are the numbers.

6 Now to get to program total, let me see
7 if I can get there.

8 For 2004, the actual number of program
9 participants in Column F was -- let's call it 2000
10 for rounding --

11 Q. Okay.

12 A. -- times .96 at the metered summer kW
13 reduction would get you just under 2,000.

14 So it looks like 1,948 is what was
15 contributed by that program in 2004, subject to a
16 check of my math.

17 Q. Okay.

18 A. And the numbers directly under that, the
19 2198 would have been the winter kW reduction. And
20 the kilowatt-hour reduction would have been the
21 3.6 million number you mentioned earlier.

22 Q. All right. Thanks.

23 Does this report contain the utilities'
24 programs cost for installation and net benefits?

25 A. I think the answer is yes and no. It

1 does appear to include some of the cost of the
2 program.

3 The net benefits, I don't recognize that
4 number, and I'm not familiar with how that would
5 have been calculated. So I would have to hold
6 judgment on the benefits side.

7 Q. All right. And hold on just a minute,
8 please.

9 Dr. Sim, on that page, at the very
10 bottom, it says Net Benefits of Measures Installed
11 During the Reporting Period, and then over on the
12 far right it says \$119.

13 A. Yes.

14 Q. Is this what you're not certain of, how
15 this number was arrived at?

16 A. That's correct. Our department doesn't
17 file this report, so I am not certain as to how
18 that number was derived.

19 Q. All right. Do you know who would know?

20 A. Probably folks in what --

21 THE WITNESS: Is it the POM or PMO
22 department?

23 MR. HAYWOOD: PMO.

24 Q. (BY MS. BROWN) Which is?

25 A. It's our old marketing department. They

1 have a new acronym. I believe Dan Haywood is in
2 that department.

3 Q. Oh, all right. Thank you.

4 Also on the same page, it shows that
5 FPL's total number of customers, 3,600,000-plus,
6 only 43,000 were eligible for the BuildSmart
7 program; is that correct?

8 A. Looking at Columns B and C, that's what
9 it says.

10 Q. From your answer, I suspect you would
11 like us to ask Mr. Haywood why that is?

12 A. I'll just say that I'm not familiar with
13 how the total number of eligible customers was
14 derived.

15 Q. Okay. What portion of FPL's recently
16 approved demand and energy savings goal will be
17 met by the expected savings by the modified
18 BuildSmart program?

19 A. Off the top of my head, I couldn't
20 answer that question.

21 Q. Ballpark?

22 A. If I recall correctly, the DSM goals for
23 the ten-year period running through 2009 are on
24 the order of, again, ballpark, 750 megawatts of
25 summer demand reduction.

1 If you take into account that we are
2 already nearing the end of 2005, it would leave
3 you, I think, four remaining years for any new
4 program to contribute towards those goals.

5 Let me go to the cost-benefit analysis
6 that's in the back of my testimony, and I'll try
7 to give you a rough estimate as to what the
8 contribution would be.

9 Q. A rough estimate is fine.

10 A. To keep the math simple, let's just
11 assume that we've got a 1 kW reduction per
12 participant.

13 Q. All right.

14 A. And the cumulative number of
15 participants through 2009 is listed at a little
16 under 34,000.

17 So, again, rounding off, you're talking
18 ballpark, 34 megawatts out of roughly 750
19 megawatts.

20 Q. All right. Well, thanks very much.

21 Subject to check, that's fine.

22 Now is it your understanding that all of
23 FPL's customers are eligible for a BERS audit?

24 A. I'm sorry, Martha, I'm not familiar with
25 BERS audits. I just can't answer that question.

1 Q. All right. Are you familiar with the
2 cost to FPL to perform them?

3 A. No.

4 Q. Okay. Who do you think would be?

5 A. I would say, of our witnesses, that
6 limits it down to Mr. Haywood.

7 Q. Okay. Hold on just a minute. I think
8 I'm about done here.

9 Dr. Sim, how familiar are you with the
10 residential conservation service audit? Do you
11 know how many FPL performed on BuildSmart homes?
12 Probably not.

13 A. No, I don't.

14 Q. Mr. Haywood would.

15 Are you familiar with the Outstanding
16 Achievement Award that FPL received from the
17 Environmental Protection Agency in 2005?

18 A. No, I'm not.

19 Q. All right. I'll ask Mr. Haywood.

20 But this one I think you probably can
21 answer. In its prehearing statement, Calcs-Plus
22 cited an advertising number of 4,615,000-plus
23 dollars as FPL's advertising expense. That's 4
24 million.

25 Are you familiar with that?

1 You don't happen to have their
2 prehearing statement with you, do you?

3 A. I don't have the prehearing statement
4 with me, but I recall reading a \$4 million number.

5 Q. Right. Is this \$4 million number
6 correct, in your opinion, and is it for all of
7 FP&L's advertising expense?

8 A. I don't know. I don't deal with the
9 demand-side management advertising dollars.

10 MS. BROWN: All right. Well, I think
11 that's all we have. Thanks.

12 THE WITNESS: Thank you.

13 MR. BRYAN: Okay.

14 And this is Pat. We have no questions,
15 and we'll waive the reading and signing.

16 Is that okay with you, Doctor?

17 THE WITNESS: (Nods head up and down.)

18 MR. BRYAN: Okay.

19 MS. BROWN: All right. Thanks very
20 much.

21 MR. BRYAN: Thank you.

22 MR. TAIT: Hold on, Martha, for just a
23 second.

24 Can we go off the record?

25 MS. BROWN: Oh, yes, I want to speak to

1 the court reporter to tell her that our clerk will
2 be contacting them to get copies of these
3 depositions.

4 THE REPORTER: Okay.

5 (Thereupon, the deposition concluded at
6 or about the hour of 1:17 p.m.)

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

CERTIFICATE

THE STATE OF FLORIDA,)
)
COUNTY OF PALM BEACH.)

I, Janette P. Hert, Registered Professional Reporter, Registered Merit Reporter, and Certified Realtime Reporter, certify that I was authorized to and did stenographically report the deposition of Steven Sim; that a review of the transcript was not requested; and that the transcript is a true and complete record of my stenographic notes.

I further certify that I am not a relative, employee, attorney, or counsel of any of the parties, nor am I a relative or employee of any of the parties' attorney or counsel connected with the action, nor am I financially interested in the action.

DATED this 29 day of Sept 2005.

Janette P. Hert

Janette P. Hert, RPR, RMR, CRR
Notary Public, State of Florida.

Florida Power & Light Company
Docket No. 010002-EG
Staff's First Set of Interrogatories
Question No. 2

- Q. Please provide the RIM, TRC, and participant cost-effective test for each conservation measure or project that was approved by the Commission in Docket No. 991788-EG. Please use the latest assumptions.**
- A. The table below summarizes the results of cost-effectiveness tests of FPL's current demand side management programs using the latest set of assumptions current at the time the tests were run.**

Program	RIM	Participant	TRC
C/I Heating Ventilating & Air Conditioning	1.41	1.60	1.95
C/I Efficient Lighting	1.37	1.82	2.44
C/I Building Envelope	1.29	1.30	1.46
Business On Call	2.63	Infinite	7.63
C/I Demand Reduction	2.22	Infinite	11.50
Residential Air Conditioning	1.25	1.69	1.44
Residential Building Envelope	1.50	2.88	2.77
Duct System Testing & Repair	1.32	2.63	2.08
Residential New Construction (BuildSmart)	1.58	1.12	1.24
Residential On Call	1.74	Infinite	5.75
Business Custom Incentive	Project Specific	Project Specific	Project Specific

Attachment 2 contains the cost-effectiveness analysis for each of these programs.

FLORIDA PUBLIC SERVICE COMMISSION
 DOCKET 040029-EG +
 NO. 040660-EG Exhibit No. 19
 Company/ FPL
 Witness: Steven R. Sim
 Date: 10-10-05

Com 19

RESULTS OF FPL'S COST EFFECTIVENESS TESTS ON THEIR BUILDSMART® PROGRAM

KEY FACTORS

COMPARISON WITH 2000 PROGRAM (CURRENT) AND PROPOSED 2005 PROGRAM (MODIFIED)

YEAR	Participants	Participant Cost	Utility Cost	Participant Unit cost	Utility Unit cost		
2000 (current) program (October 3, 2001 filed with PSC)**						CURRENT PROGRAM	
2001	2,572	\$2,780,000	\$816,000	\$1,081	\$317	TEST RESULTS	
2002	3,181	\$3,498,000	\$1,034,000	\$1,100	\$325	RIM	1.58
2003	3,128	\$3,536,000	\$1,046,000	\$1,130	\$334	TRC	1.24
2004	3,078	\$3,578,000	\$1,058,000	\$1,162	\$344	PARTICIPANTS	1.12
4 year ave	2,990	\$3,348,000	\$988,500	\$1,118	\$330		
2005 (modified) program (October 21, 2004 filed with PSC)**						MODIFIED PROGRAM	
2005	3,816	\$2,815,000	\$1,555,000	\$738	\$407	TEST RESULTS	
2006	5,343	\$4,023,000	\$2,223,000	\$753	\$416	RIM	1.06
2007	6,945	\$5,345,000	\$2,953,000	\$770	\$425	TRC	1.10
2008	8,335	\$6,574,000	\$3,632,000	\$789	\$436	PARTICIPANTS	1.75
2009	9,170	\$7,430,000	\$4,105,000	\$810	\$448		
4 year ave	6,722	\$5,237,400	\$2,893,600	\$772	\$426		
2000 (current) program actual results***							
		[program fees only]					
2001	1409	\$57,440	\$911,221	\$41	\$647		
2001	1475	\$59,975	\$581,609	\$41	\$394		
2003	1230	\$132,050	\$593,996	\$107	\$483		
2004	2318	\$98,224	\$1,032,589	\$42	\$445		
4 year ave	1,608	\$86,922	\$779,854	\$58	\$492		

*FPL answer to staff interrogatory 2 in Docket No. 010002-EG

**FPL expert testimony in docket 040029-EG

***FPL expert testimony in dockets 020002-EG; 030002-EG; and 040002-EG

Residential New Construction

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER kW REDUCTION AT METER	0.95 kW
(2) GENERATOR kW REDUCTION PER CUSTOMER	1.28 kW
(3) kW LINE LOSS PERCENTAGE	9.87 %
(4) GENERATOR kWh REDUCTION PER CUSTOMER	1,536.9 kWh
(5) kWh LINE LOSS PERCENTAGE	7.54 %
(6) GROUP LINE LOSS MULTIPLIER	1.0000
(7) CUSTOMER kWh INCREASE AT METER	0.0 kWh

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM	24 YEARS
(2) GENERATOR ECONOMIC LIFE	25 YEARS
(3) T&D ECONOMIC LIFE	35 YEARS
(4) K FACTOR FOR GENERATION	1.73488
(5) K FACTOR FOR T & D	1.57859

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECURRING COST PER CUSTOMER	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER	*** \$/CUST
(3) UTILITY COST ESCALATION RATE	*** %**
(4) CUSTOMER EQUIPMENT COST	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE	*** %**
(6) CUSTOMER O & M COST	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE	*** %**
(8) INCREASED SUPPLY COSTS	*** \$/CUST/YR
(9) SUPPLY COSTS ESCALATION RATES	*** %**
(10) UTILITY DISCOUNT RATE	8.61 %
(11) UTILITY AFUDC RATE	9.93 %
(12) UTILITY NON RECURRING REBATE/INCENTIVE	*** \$/CUST
(13) UTILITY RECURRING REBATE/INCENTIVE	*** \$/CUST
(14) UTILITY REBATE/INCENTIVE ESCALATION RATE	*** %

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR	2001
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT	2005
(3) IN-SERVICE YEAR FOR AVOIDED T&D	2004-2005
(4) BASE YEAR AVOIDED GENERATING COST	497 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST	56 \$/kW
(6) BASE YEAR DISTRIBUTION COST	37 \$/kW
(7) GEN, TRAN & DIST COST ESCALATION RATE	2.07 %**
(8) GENERATOR FIXED O & M COST	46 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE	3.80 %**
(10) TRANSMISSION FIXED O & M COST	2.59 \$/kW
(11) DISTRIBUTION FIXED O & M COST	3.15 \$/kW
(12) T&D FIXED O&M ESCALATION RATE	3.80 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS	0.004 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE	2.50 %**
(15) GENERATOR CAPACITY FACTOR	81% ** (In-service year)
(16) AVOIDED GENERATING UNIT FUEL COST	2.87 CENTS PER kWh** (In-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE	0.58 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON FUEL COST IN CUSTOMER BILL	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL	*** \$/kW/MO
(4) DEMAND CHARGE ESCALATION RATE	*** %

* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK
** VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)
*** PROGRAM COST CALCULATION VALUES ARE SHOWN ON PAGE 2

* INPUT DATA - PART 1 CONTINUED
 PROGRAM METHOD SELECTED: REV_REQ
 PROGRAM NAME: BuildSmart - 2005

YEAR	(1) UTILITY PROGRAM COSTS WITHOUT INCENTIVES \$(000)	(2) UTILITY INCENTIVES \$(000)	(3) OTHER UTILITY COSTS \$(000)	(4) TOTAL UTILITY PROGRAM COSTS \$(000)	(5) ENERGY CHARGE REVENUE LOSSES \$(000)	(6) DEMAND CHARGE REVENUE LOSSES \$(000)	(7) PARTICIPANT EQUIPMENT COSTS \$(000)	(8) PARTICIPANT O&M COSTS \$(000)	(9) OTHER PARTICIPANT COSTS \$(000)	(10) TOTAL PARTICIPANT COSTS \$(000)
2001	818	285	0	1,101	149	0	2,760	0	0	2,760
2002	1,034	352	0	1,387	454	0	3,498	0	0	3,498
2003	1,046	346	0	1,392	742	0	3,536	0	0	3,536
2004	1,058	341	0	1,398	1,038	0	3,576	0	0	3,576
2005	0	0	0	0	1,161	0	0	0	0	0
2006	0	0	0	0	1,142	0	0	0	0	0
2007	0	0	0	0	1,138	0	0	0	0	0
2008	0	0	0	0	1,145	0	0	0	0	0
2009	0	0	0	0	1,152	0	0	0	0	0
2010	0	0	0	0	1,145	0	0	0	0	0
2011	0	0	0	0	1,140	0	0	0	0	0
2012	0	0	0	0	1,149	0	0	0	0	0
2013	0	0	0	0	1,154	0	0	0	0	0
2014	0	0	0	0	1,159	0	0	0	0	0
2015	0	0	0	0	1,161	0	0	0	0	0
2016	1,195	285	0	1,480	1,164	0	4,040	0	0	4,040
2017	1,514	352	0	1,866	1,172	0	5,120	0	0	5,120
2018	1,527	346	0	1,873	1,188	0	5,162	0	0	5,162
2019	1,539	341	0	1,880	1,200	0	5,205	0	0	5,205
2020	0	0	0	0	1,213	0	0	0	0	0
2021	0	0	0	0	1,225	0	0	0	0	0
2022	0	0	0	0	1,239	0	0	0	0	0
2023	0	0	0	0	1,251	0	0	0	0	0
2024	0	0	0	0	1,264	0	0	0	0	0

NOM	9,730	2,648	0	12,377	25,644	0	32,897	0	0	32,897
NPV	4,954	1,507	0	6,461	10,535	0	16,750	0	0	16,750

* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK

** NEGATIVE COSTS WILL BE CALCULATED AS POSITIVE BENEFITS FOR TRC AND RIM TESTS

**CALCULATION OF GEN K-FACTOR
PROGRAM METHOD SELECTED REV_REQ
PROGRAM NAME: BuildSmart - 2005**

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
MID-YEAR RATE BASE \$(000)	DEBT \$(000)	PREFERRED STOCK \$(000)	COMMON EQUITY \$(000)	INCOME TAXES \$(000)	OTHER TAXES & INSURANCE \$(000)	DEPREC. \$(000)	DEFERRED TAXES \$(000)	TOTAL FIXED CHARGES \$(000)	PRESENT WORTH FIXED CHARGES \$(000)	CUMULATIVE PW FIXED CHARGES \$(000)	
2005	9,792	335	0	630	424	239	388	3	2,018	2,018	2,018
2006	9,340	319	0	601	283	239	388	126	1,955	1,800	3,819
2007	8,835	302	0	569	281	239	388	107	1,885	1,598	5,417
2008	8,350	286	0	537	279	239	388	89	1,818	1,419	6,836
2009	7,881	270	0	507	277	239	388	72	1,753	1,260	8,095
2010	7,428	254	0	478	274	239	388	57	1,690	1,118	9,213
2011	6,990	239	0	450	270	239	388	43	1,629	992	10,208
2012	6,566	225	0	422	266	239	388	30	1,570	881	11,088
2013	6,149	210	0	396	252	239	388	28	1,512	781	11,867
2014	5,733	196	0	369	235	239	388	28	1,454	691	12,559
2015	5,317	182	0	342	218	239	388	28	1,396	611	13,170
2016	4,901	168	0	315	201	239	388	28	1,339	540	13,710
2017	4,485	153	0	289	184	239	388	28	1,281	475	14,185
2018	4,069	139	0	262	168	239	388	28	1,223	418	14,603
2019	3,653	125	0	235	151	239	388	28	1,165	367	14,970
2020	3,237	111	0	208	134	239	388	28	1,107	321	15,290
2021	2,822	96	0	182	117	239	388	28	1,050	280	15,570
2022	2,406	82	0	155	100	239	388	28	992	244	15,814
2023	1,990	68	0	128	83	239	388	28	934	211	16,025
2024	1,574	54	0	101	67	239	388	28	876	182	16,208
2025	1,198	41	0	77	131	239	388	(51)	824	158	16,366
2026	901	31	0	58	196	239	388	(131)	783	138	16,504
2027	643	22	0	41	188	239	388	(131)	747	121	16,625
2028	386	13	0	25	177	239	388	(131)	711	106	16,732
2029	129	4	0	8	167	239	388	(131)	675	93	16,825

IN SERVICE COST (\$000) 9,898
 IN SERVICE YEAR 2005
 BOOK LIFE (YRS) 25
 EFFEC. TAX RATE 38.575
 DISCOUNT RATE 8.61%
 OTAX & INS RATE 2.46%

CAPITAL STRUCTURE

DEBT	45%	7.60	%
P/S	0%	0.00	%
C/S	55%	11.70	%

K-FACTOR = CPWFC / IN-SVC COST = 1.73488

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION
 PROGRAM METHOD SELECTED: REV_REQ
 PROGRAM NAME: BuildSmart - 2005

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	ACCUMULATED BOOK DEPR FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS 1/LIFE	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX (9)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2005	3.75%	345	345	388	388	338	338	3	1,236	0	0	0	3	(287)
2006	7.22%	885	1,010	388	776	338	677	126	1,236	0	0	0	126	(161)
2007	6.68%	615	1,625	388	1,164	338	1,015	107	1,236	0	0	0	107	(54)
2008	6.18%	589	2,195	388	1,552	338	1,354	89	1,236	0	0	0	89	35
2009	5.71%	526	2,721	388	1,940	338	1,692	72	1,236	0	0	0	72	107
2010	5.28%	487	3,208	388	2,327	338	2,031	57	1,236	0	0	0	57	165
2011	4.89%	450	3,658	388	2,715	338	2,369	43	1,236	0	0	0	43	208
2012	4.52%	417	4,075	388	3,103	338	2,708	30	1,236	0	0	0	30	238
2013	4.46%	411	4,486	388	3,491	338	3,046	28	1,236	0	0	0	28	266
2014	4.46%	411	4,897	388	3,879	338	3,385	28	1,236	0	0	0	28	294
2015	4.46%	411	5,308	388	4,267	338	3,723	28	1,236	0	0	0	28	322
2016	4.46%	411	5,718	388	4,655	338	4,061	28	1,236	0	0	0	28	350
2017	4.46%	411	6,129	388	5,043	338	4,400	28	1,236	0	0	0	28	378
2018	4.46%	411	6,540	388	5,431	338	4,738	28	1,236	0	0	0	28	406
2019	4.46%	411	6,951	388	5,819	338	5,077	28	1,236	0	0	0	28	434
2020	4.46%	411	7,362	388	6,207	338	5,415	28	1,236	0	0	0	28	462
2021	4.46%	411	7,773	388	6,595	338	5,754	28	1,236	0	0	0	28	490
2022	4.46%	411	8,184	388	6,982	338	6,092	28	1,236	0	0	0	28	518
2023	4.46%	411	8,595	388	7,370	338	6,431	28	1,236	0	0	0	28	546
2024	4.46%	411	9,006	388	7,758	338	6,769	28	1,236	0	0	0	28	574
2025	2.23%	206	9,212	388	8,146	338	7,108	(51)	1,236	0	0	0	(51)	522
2026	0.00%	0	9,212	388	8,534	338	7,446	(131)	1,236	0	0	0	(131)	392
2027	0.00%	0	9,212	388	8,922	338	7,785	(131)	1,236	0	0	0	(131)	261
2028	0.00%	0	9,212	388	9,310	338	8,123	(131)	1,236	0	0	0	(131)	131
2029	0.00%	0	9,212	388	9,698	338	8,461	(131)	1,236	0	0	0	(131)	0

SALVAGE / REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(289)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	1,236
BOOK DEPR RATE - 1/USEFUL LIFE	4.00%

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION
PROGRAM METHOD SELECTED: REV_REQ
PROGRAM NAME: BuildSmart - 2005

(1)	(2)	(3)	(4)	(5) END OF YEAR NET PLANT IN SERVICE	(5a)* ACCUMULATED DEPRECIATION	(5b)* ACCUMULATED DEF TAXES	(6) BEGINNING YEAR RATE BASE	(7) ENDING OF YEAR RATE BASE	(8) MID-YEAR RATE BASE
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	DEFERRED TAX \$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
2005	3.75%	345	3	9,310	388	(287)	9,987	9,587	9,792
2006	7.22%	665	126	8,922	778	(161)	9,597	9,083	9,340
2007	6.68%	615	107	8,534	1,164	(54)	9,083	8,568	8,835
2008	6.18%	569	89	8,146	1,552	35	8,588	8,111	8,350
2009	5.71%	528	72	7,758	1,940	107	8,111	7,651	7,881
2010	5.29%	487	57	7,370	2,327	165	7,651	7,206	7,428
2011	4.89%	450	43	6,982	2,715	208	7,206	6,775	6,990
2012	4.52%	417	30	6,595	3,103	238	6,775	6,357	6,566
2013	4.46%	411	28	6,207	3,491	266	6,357	5,941	6,149
2014	4.46%	411	28	5,819	3,879	294	5,941	5,525	5,733
2015	4.46%	411	28	5,431	4,267	322	5,525	5,109	5,317
2016	4.46%	411	28	5,043	4,655	350	5,109	4,693	4,901
2017	4.46%	411	28	4,655	5,043	378	4,693	4,277	4,485
2018	4.46%	411	28	4,267	5,431	406	4,277	3,861	4,069
2019	4.46%	411	28	3,879	5,819	434	3,861	3,445	3,653
2020	4.46%	411	28	3,491	6,207	462	3,445	3,029	3,237
2021	4.46%	411	28	3,103	6,595	490	3,029	2,614	2,822
2022	4.46%	411	28	2,715	6,982	518	2,614	2,198	2,408
2023	4.46%	411	28	2,327	7,370	546	2,198	1,782	1,990
2024	4.46%	411	28	1,940	7,758	574	1,782	1,366	1,574
2025	2.23%	208	(51)	1,552	8,146	522	1,366	1,029	1,198
2026	0.00%	0	(131)	1,164	8,534	392	1,029	772	901
2027	0.00%	0	(131)	776	8,922	261	772	515	643
2028	0.00%	0	(131)	388	9,310	131	515	257	386
2029	0.00%	0	(131)	(0)	9,698	0	257	0	129

* Column not specified in workbook

AVOIDED T&D AND PROGRAM FUEL SAVINGS
 PROGRAM METHOD SELECTED: REV_REQ
 PROGRAM NAME : BuildSmart - 2005

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(8a)*
YEAR	AVOIDED TRANSMISSION CAP COST \$(000)	AVOIDED TRANSMISSION O&M COST \$(000)	TOTAL AVOIDED TRANSMISSION COST \$(000)	AVOIDED DISTRIBUTION CAP COST \$(000)	AVOIDED DISTRIBUTION O&M COST \$(000)	TOTAL AVOIDED DISTRIBUTION COST \$(000)	PROGRAM FUEL SAVINGS \$(000)	PROGRAM OFF-PEAK PAYBACK \$(000)
2001	0	0	0	0	0	0	99	0
2002	35	9	44	21	10	31	299	0
2003	79	21	99	46	23	69	547	0
2004	120	33	153	71	36	107	772	0
2005	159	46	205	94	51	145	639	0
2006	153	48	201	80	52	143	608	0
2007	147	49	197	87	54	141	656	0
2008	141	51	193	84	56	140	980	0
2009	136	53	189	80	59	139	928	0
2010	131	56	186	77	61	138	892	0
2011	125	58	184	74	64	138	911	0
2012	120	61	181	71	67	138	909	0
2013	115	63	179	68	70	138	914	0
2014	110	66	176	65	73	138	939	0
2015	105	69	174	62	76	138	947	0
2016	100	72	172	59	79	138	961	0
2017	95	75	170	56	83	139	979	0
2018	90	79	169	53	87	140	988	0
2019	85	82	167	50	90	141	1,010	0
2020	80	86	166	47	95	142	1,025	0
2021	75	90	164	44	99	143	1,036	0
2022	70	94	164	41	103	144	1,035	0
2023	65	98	163	38	108	146	1,042	0
2024	61	103	163	36	113	149	1,054	0

NOM.	2,397	1,462	3,859	1,416	1,606	3,023	20,870	0
NPV	1,085	509	1,594	641	559	1,200	8,274	0

* THESE VALUES REPRESENT THE COST OF THE INCREASED FUEL CONSUMPTION DUE TO GREATER OFF-PEAK ENERGY USAGE. USED FOR LOAD SHIFTING PROGRAMS ONLY.

AVOIDED GENERATING BENEFITS
 PROGRAM METHOD SELECTED: REV_REQ
 PROGRAM NAME: BuildSmart - 2005

YEAR	(2) AVOIDED GEN UNIT CAPACITY COST \$(000)	(3) AVOIDED GEN UNIT FIXED O&M \$(000)	(4) AVOIDED GEN UNIT VARIABLE O&M \$(000)	(5) AVOIDED GEN UNIT FUEL COST \$(000)	(6) REPLACEMENT FUEL COST \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)
2001	0	0	0	0	0	0
2002	0	0	0	0	0	0
2003	0	0	0	0	0	0
2004	0	0	0	0	0	0
2005	2,018	812	5	3,104	3,747	2,193
2006	1,855	840	5	3,187	3,845	2,143
2007	1,885	870	5	3,239	3,917	2,082
2008	1,818	903	5	3,433	4,108	2,051
2009	1,753	940	5	3,618	4,346	1,970
2010	1,690	979	6	3,800	4,412	2,082
2011	1,629	1,023	6	3,905	4,417	2,148
2012	1,570	1,069	6	3,915	4,435	2,125
2013	1,512	1,117	6	4,023	4,535	2,123
2014	1,454	1,166	6	4,049	4,448	2,227
2015	1,398	1,219	6	4,045	4,468	2,199
2016	1,339	1,274	6	4,050	4,421	2,248
2017	1,281	1,330	6	4,098	4,465	2,249
2018	1,223	1,390	6	4,199	4,602	2,216
2019	1,165	1,452	6	4,211	4,504	2,330
2020	1,107	1,517	6	4,337	4,715	2,254
2021	1,050	1,584	6	4,467	4,884	2,223
2022	992	1,656	7	4,588	4,870	2,272
2023	934	1,730	7	4,712	5,057	2,325
2024	876	1,808	7	4,841	5,153	2,379

NOM	28,647	24,680	117	79,822	89,450	43,816
NPV	11,648	8,060	41	27,861	31,610	15,800

INPUT DATA - PART 2
 PROGRAM METHOD SELECTED : REV_REQ
 PROGRAM NAME: BuildSmart - 2005

(1)	(2)	(3)	(4)	(5)	(6)*	(7)	(8)	(9)
YEAR	CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	UTILITY AVERAGE SYSTEM FUEL COST (C/kWh)	AVOIDED MARGINAL FUEL COST (C/kWh)	INCREASED MARGINAL FUEL COST (C/kWh)	REPLACEMENT FUEL COST (C/kWh)	PROGRAM KW EFFECTIVENESS FACTOR	PROGRAM kWh EFFECTIVENESS FACTOR
2001	2,572	2,572	4.26	4.71	4.32	0.00	1.00	1.00
2002	5,753	5,753	3.77	4.32	3.84	0.00	1.00	1.00
2003	8,881	8,881	3.48	4.33	3.57	0.00	1.00	1.00
2004	11,959	11,959	3.47	4.29	3.55	0.00	1.00	1.00
2005	11,959	11,959	3.41	4.11	3.48	3.48	1.00	1.00
2006	11,959	11,959	3.44	4.35	3.52	3.48	1.00	1.00
2007	11,959	11,959	3.40	4.17	3.48	3.55	1.00	1.00
2008	11,959	11,959	3.57	4.85	3.67	3.60	1.00	1.00
2009	11,959	11,959	3.60	4.48	3.68	3.72	1.00	1.00
2010	11,959	11,959	3.62	4.37	3.72	3.70	1.00	1.00
2011	11,959	11,959	3.67	4.45	3.77	3.72	1.00	1.00
2012	11,959	11,959	3.69	4.45	3.78	3.83	1.00	1.00
2013	11,959	11,959	3.77	4.50	3.86	3.92	1.00	1.00
2014	11,959	11,959	3.80	4.60	3.90	3.94	1.00	1.00
2015	11,959	11,959	3.98	4.69	4.06	4.07	1.00	1.00
2016	11,959	11,959	4.12	4.80	4.18	4.18	1.00	1.00
2017	11,959	11,959	4.22	4.89	4.29	4.28	1.00	1.00
2018	11,959	11,959	4.32	4.96	4.38	4.43	1.00	1.00
2019	11,959	11,959	4.40	5.07	4.47	4.47	1.00	1.00
2020	11,959	11,959	4.52	5.17	4.59	4.68	1.00	1.00
2021	11,959	11,959	4.62	5.24	4.68	4.85	1.00	1.00
2022	11,959	11,959	4.69	5.27	4.75	4.93	1.00	1.00
2023	11,959	11,959	4.78	5.32	4.83	5.02	1.00	1.00
2024	11,959	11,959	4.87	5.40	4.82	5.11	1.00	1.00

* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS.
 THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.

TOTAL RESOURCE COST TEST
 PROGRAM METHOD SELECTED: REV_REQ
 PROGRAM NAME: BuildSmart - 2005

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
YEAR	INCREASED SUPPLY COSTS \$(000)	UTILITY PROGRAM COSTS \$(000)	PARTICIPANT PROGRAM COSTS \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	AVOIDED GEN UNIT BENEFITS \$(000)	AVOIDED T&D BENEFITS \$(000)	PROGRAM FUEL SAVINGS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2001	0	816	2,760	0	3,576	0	0	99	0	99	(3,477)	(3,477)
2002	0	1,034	3,498	0	4,532	0	75	299	0	374	(4,159)	(7,308)
2003	0	1,046	3,538	0	4,582	0	169	547	0	716	(3,867)	(10,584)
2004	0	1,058	3,578	0	4,634	0	260	772	0	1,033	(3,601)	(13,395)
2005	0	0	0	0	0	2,193	350	839	0	3,381	3,381	(10,985)
2006	0	0	0	0	0	2,143	343	908	0	3,394	3,394	(8,719)
2007	0	0	0	0	0	2,062	338	856	0	3,276	3,276	(6,724)
2008	0	0	0	0	0	2,051	333	980	0	3,363	3,363	(4,837)
2009	0	0	0	0	0	1,970	328	928	0	3,226	3,226	(3,171)
2010	0	0	0	0	0	2,082	324	892	0	3,279	3,279	(1,612)
2011	0	0	0	0	0	2,146	321	911	0	3,378	3,378	(133)
2012	0	0	0	0	0	2,125	319	909	0	3,352	3,352	1,219
2013	0	0	0	0	0	2,123	316	914	0	3,353	3,353	2,463
2014	0	0	0	0	0	2,227	314	939	0	3,480	3,480	3,653
2015	0	0	0	0	0	2,199	312	947	0	3,458	3,458	4,741
2016	0	1,195	4,040	0	5,235	2,248	311	981	0	3,520	(1,715)	4,244
2017	0	1,514	5,120	0	6,635	2,249	309	979	0	3,537	(3,098)	3,418
2018	0	1,527	5,162	0	6,689	2,218	308	988	0	3,513	(3,178)	2,638
2019	0	1,539	5,205	0	6,744	2,330	308	1,010	0	3,647	(3,097)	1,937
2020	0	0	0	0	0	2,254	307	1,025	0	3,586	3,586	2,684
2021	0	0	0	0	0	2,223	307	1,036	0	3,567	3,567	3,368
2022	0	0	0	0	0	2,272	308	1,035	0	3,615	3,615	4,008
2023	0	0	0	0	0	2,325	309	1,042	0	3,676	3,676	4,603
2024	0	0	0	0	0	2,379	312	1,054	0	3,745	3,745	5,163

NOM	0	9,730	32,897	0	42,627	43,816	6,882	20,870	0	71,567	28,941
NPV	0	4,954	16,750	0	21,704	15,800	2,794	8,274	0	26,868	5,163

Discount Rate:
 Benefit/Cost Ratio (Col(11) / Col(6)) :

0.61 %

0.61

PARTICIPANT COSTS AND BENEFITS
 PROGRAM METHOD SELECTED: REV_REQ
 PROGRAM NAME: BuildSmart - 2005

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
YEAR	SAVINGS IN PARTICIPANTS BILLS \$(000)	TAX CREDITS \$(000)	UTILITY REBATES \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	CUSTOMER EQUIPMENT COSTS \$(000)	CUSTOMER O&M COSTS \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2001	244	0	285	0	529	2,780	0	0	2,780	(2,230)	(2,230)
2002	744	0	352	0	1,096	3,498	0	0	3,498	(2,402)	(4,442)
2003	1,217	0	346	0	1,563	3,536	0	0	3,536	(1,873)	(6,115)
2004	1,701	0	341	0	2,042	3,576	0	0	3,576	(1,534)	(7,312)
2005	1,903	0	0	0	1,903	0	0	0	0	1,903	(5,945)
2006	1,872	0	0	0	1,872	0	0	0	0	1,872	(4,706)
2007	1,866	0	0	0	1,866	0	0	0	0	1,866	(3,589)
2008	1,878	0	0	0	1,878	0	0	0	0	1,878	(2,516)
2009	1,889	0	0	0	1,889	0	0	0	0	1,889	(1,541)
2010	1,878	0	0	0	1,878	0	0	0	0	1,878	(648)
2011	1,869	0	0	0	1,869	0	0	0	0	1,869	171
2012	1,883	0	0	0	1,883	0	0	0	0	1,883	930
2013	1,891	0	0	0	1,891	0	0	0	0	1,891	1,632
2014	1,900	0	0	0	1,900	0	0	0	0	1,900	2,281
2015	1,903	0	0	0	1,903	0	0	0	0	1,903	2,880
2016	1,908	0	285	0	2,193	4,040	0	0	4,040	(1,847)	2,344
2017	1,922	0	352	0	2,274	5,120	0	0	5,120	(2,846)	1,585
2018	1,947	0	346	0	2,293	5,182	0	0	5,182	(2,868)	881
2019	1,987	0	341	0	2,307	5,205	0	0	5,205	(2,898)	226
2020	1,989	0	0	0	1,989	0	0	0	0	1,989	640
2021	2,008	0	0	0	2,008	0	0	0	0	2,008	1,025
2022	2,031	0	0	0	2,031	0	0	0	0	2,031	1,383
2023	2,050	0	0	0	2,050	0	0	0	0	2,050	1,718
2024	2,072	0	0	0	2,072	0	0	0	0	2,072	2,026

NOM	42,532	0	2,648	0	45,180	32,897	0	0	32,897	12,282
NPV	17,270	0	1,507	0	18,777	16,750	0	0	16,750	2,026

In Service of Gen Unit:
 Discount Rate :
 Benefit/Cost Ratio (Col(6) / Col(10))

2005
 8.61 %

RATE IMPACT TEST
 PROGRAM METHOD SELECTED: REV_REQ
 PROGRAM NAME: BuildSmart - 2005

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
YEAR	INCREASED SUPPLY COSTS \$(000)	UTILITY PROGRAM COSTS \$(000)	INCENTIVES \$(000)	REVENUE LOSSES \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	AVOIDED GEN UNIT & FUEL BENEFITS \$(000)	AVOIDED T&D BENEFITS \$(000)	REVENUE GAINS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2001	0	818	285	149	0	1,250	99	0	0	0	99	(1,151)	(1,151)
2002	0	1,034	352	454	0	1,840	289	75	0	0	374	(1,467)	(2,502)
2003	0	1,046	348	742	0	2,135	547	169	0	0	716	(1,419)	(3,705)
2004	0	1,058	341	1,038	0	2,436	772	260	0	0	1,033	(1,404)	(4,800)
2005	0	0	0	1,161	0	1,161	3,032	350	0	0	3,381	2,221	(3,204)
2006	0	0	0	1,142	0	1,142	3,050	343	0	0	3,394	2,252	(1,714)
2007	0	0	0	1,138	0	1,138	2,938	338	0	0	3,276	2,137	(412)
2008	0	0	0	1,145	0	1,145	3,031	333	0	0	3,363	2,216	832
2009	0	0	0	1,152	0	1,152	2,898	328	0	0	3,226	2,074	1,904
2010	0	0	0	1,145	0	1,145	2,954	324	0	0	3,279	2,133	2,918
2011	0	0	0	1,140	0	1,140	3,058	321	0	0	3,378	2,238	3,898
2012	0	0	0	1,149	0	1,149	3,034	319	0	0	3,352	2,204	4,786
2013	0	0	0	1,154	0	1,154	3,037	318	0	0	3,353	2,200	5,802
2014	0	0	0	1,159	0	1,159	3,166	314	0	0	3,480	2,321	6,396
2015	0	0	0	1,161	0	1,161	3,146	312	0	0	3,458	2,297	7,119
2016	0	1,195	285	1,164	0	2,644	3,209	311	0	0	3,520	876	7,372
2017	0	1,514	352	1,172	0	3,039	3,228	309	0	0	3,537	498	7,505
2018	0	1,527	348	1,188	0	3,081	3,204	308	0	0	3,513	452	7,816
2019	0	1,539	341	1,200	0	3,080	3,340	308	0	0	3,647	568	7,745
2020	0	0	0	1,213	0	1,213	3,279	307	0	0	3,586	2,373	8,239
2021	0	0	0	1,225	0	1,225	3,259	307	0	0	3,567	2,341	8,687
2022	0	0	0	1,239	0	1,239	3,308	308	0	0	3,615	2,377	9,107
2023	0	0	0	1,251	0	1,251	3,367	309	0	0	3,678	2,426	9,501
2024	0	0	0	1,264	0	1,264	3,433	312	0	0	3,745	2,481	9,872

NOM.	0	9,730	2,648	25,944	0	38,322	64,685	6,682	0	0	71,567	33,246
NPV	0	4,954	1,507	10,535	0	16,995	24,074	2,794	0	0	26,869	9,872

Discount Rate **8.01 %**
 Benefit/Cost Ratio (Col(12) / Col(7)) :

2004 (MCO)
~~ENR~~
PROGRAM

PROJECT 99-1788
2nd INTERIOR
RIM-1.58
TRC-1.24
PMTIC-1.12

RESIDENTIAL NEW CONSTRUCTION

INPUT DATA - PART I CONTINUED
PROGRAM METHOD SELECTED: REV_REQ
PROGRAM NAME: New Construction (BuildSmartH)

I. PROGRAM DEMAND SAVINGS & LINE LOSSES

(1) CUSTOMER KW REDUCTION AT METER	0.80 kW
(2) GENERATOR KW REDUCTION PER CUSTOMER	1.07 kW
(3) KW LINE LOSS PERCENTAGE	9.53 %
(4) GENERATOR KVA REDUCTION PER CUSTOMER	1,577.18 kVA
(5) kWh LINE LOSS PERCENTAGE	7.43 %
(6) GROUP LINE LOSS MULTIPLIER	1.60
(7) CUSTOMER kWh INCREASE AT METER	0.00 kWh

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR THE CONSERVATION PROGRAM	26 YEARS
(2) GENERATOR ECONOMIC LIFE	25 YEARS
(3) T&D ECONOMIC LIFE	31 YEARS
(4) K FACTOR FOR GENERATION	1.65516
(5) K FACTOR FOR T & D	1.65761

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NON RECURRING COST PER CUSTOMER	*** \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER	*** \$/CUST
(3) UTILITY COST ESCALATION RATE	*** %**
(4) CUSTOMER EQUIPMENT COST	*** \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE	*** %**
(6) CUSTOMER O & M COST	*** \$/CUST/YR
(7) CUSTOMER O & M COST ESCALATION RATE	*** %**
(8) INCREASED SUPPLY COSTS	*** \$/CUST/YR
(9) SUPPLY COSTS ESCALATION RATES	*** %**
(10) UTILITY DISCOUNT RATE	7.93 %
(11) UTILITY AFUDC RATE	7.94 %
(12) UTILITY NON RECURRING REBATE/INCENTIVE	*** \$/CUST
(13) UTILITY RECURRING REBATE/INCENTIVE	*** \$/CUST
(14) UTILITY REBATE/INCENTIVE ESCALATION RATE	*** %

IV. AVOIDED GENERATOR AND T&D COSTS

(1) BASE YEAR	2004
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT	2010
(3) IN-SERVICE YEAR FOR AVOIDED T&D	2007-2010
(4) BASE YEAR AVOIDED GENERATING COST	485.29 \$/kW
(5) BASE YEAR AVOIDED TRANSMISSION COST	84.37 \$/kW
(6) BASE YEAR DISTRIBUTION COST	23.05 \$/kW
(7) GEN, TRAN & DIST COST ESCALATION RATE	3.00 %**
(8) GENERATOR FIXED O & M COST	27.78 \$/kW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE	4.24 %**
(10) TRANSMISSION FIXED O & M COST	2.47 \$/kW
(11) DISTRIBUTION FIXED O & M COST	1.43 \$/kW
(12) T&D FIXED O&M ESCALATION RATE	4.24 %**
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS	0.018 CENTS/kWh
(14) GENERATOR VARIABLE O&M COST ESCALATION RATE	1.88 %**
(15) GENERATOR CAPACITY FACTOR	47% ** (in-service year)
(16) AVOIDED GENERATING UNIT FUEL COST	3.70 CENTS PER kWh** (in-service year)
(17) AVOIDED GEN UNIT FUEL COST ESCALATION RATE	3.14 %**

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON FUEL COST IN CUSTOMER BILL	*** CENTS/kWh
(2) NON-FUEL COST ESCALATION RATE	*** %
(3) DEMAND CHARGE IN CUSTOMER BILL	*** \$/kW/MO
(4) DEMAND CHARGE ESCALATION RATE	*** %

* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKSHEET
** VALUE SHOWN IS FOR FIRST YEAR ONLY (VALUE VARIES OVER TIME)
*** PROGRAM COST CALCULATION VALUES AND SHOWS ON SHEET 2

* INPUT DATA -- PART I CONTINUED
 PROGRAM METHOD SELECTED: REV_RBQ
 PROGRAM NAME: New Construction (Sub66SmartTRC)

YEAR	(1) UTILITY PROGRAM COSTS WITHOUT INCENTIVES \$(000)	(2) UTILITY INCENTIVES \$(000)	(3) OTHER UTILITY COSTS \$(000)	(4) TOTAL UTILITY PROGRAM COSTS \$(000)	(5) ENERGY CHARGE REVENUE LOSSES \$(000)	(6) DEMAND CHARGE REVENUE LOSSES \$(000)	(7) PARTICIPANT EQUIPMENT COSTS \$(000)	(8) PARTICIPANT O&M COSTS \$(000)	(9) OTHER PARTICIPANT COSTS \$(000)	(10) TOTAL PARTICIPANT COSTS \$(0)
2004	0	0	0	0	0	0	0	0	0	
2005	1,555	0	0	1,555	210	0	2,815	0	2,815	
2006	2,223	0	0	2,223	714	0	4,023	0	4,023	
2007	2,953	0	0	2,953	1,378	0	5,345	0	5,345	
2008	3,632	0	0	3,632	2,333	0	6,574	0	6,574	
2009	4,105	0	0	4,105	3,212	0	7,430	0	7,430	
2010	0	0	0	0	3,729	0	0	0	0	
2011	0	0	0	0	3,739	0	0	0	0	
2012	0	0	0	0	3,703	0	0	0	0	
2013	0	0	0	0	3,822	0	0	0	0	
2014	0	0	0	0	3,822	0	0	0	0	
2015	0	0	0	0	3,847	0	0	0	0	
2016	0	0	0	0	3,857	0	0	0	0	
2017	0	0	0	0	3,891	0	0	0	0	
2018	0	0	0	0	3,960	0	0	0	0	
2019	0	0	0	0	3,998	0	0	0	0	
2020	2,354	0	0	2,354	4,037	0	4,260	0	4,260	
2021	3,408	0	0	3,408	4,076	0	6,169	0	6,169	
2022	4,582	0	0	4,582	4,116	0	8,293	0	8,293	
2023	5,688	0	0	5,688	4,156	0	10,295	0	10,295	
2024	6,475	0	0	6,475	4,196	0	11,719	0	11,719	
2025	0	0	0	0	4,237	0	0	0	0	
2026	0	0	0	0	4,278	0	0	0	0	
2027	0	0	0	0	4,319	0	0	0	0	
2028	0	0	0	0	4,361	0	0	0	0	
2029	0	0	0	0	4,404	0	0	0	0	
<hr/>										
NOM	36,974	0	0	36,974	88,377	0	66,922	0	0	66,922
REV	16,704	0	0	16,704	32,319	0	30,234	0	0	30,234

* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK
 ** NEGATIVE COSTS WILL BE CALCULATED AS POSITIVE BENEFITS FOR TRC AND RIM TESTS

CALCULATION OF GEN K-FACTOR
PROGRAM METHOD SELECTED REV REQ
PROGRAM NAME: New Construction (BuildSmartR)

(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
REQ-YEAR RATE BASE \$(000)	DEBT \$(000)	PREFERRED STOCK \$(000)	COMMON EQUITY \$(000)	INCOME TAXES \$(000)	PROPERTY TAX \$(000)	PROPERTY INSURANCE \$(000)	DEPREC. \$(000)	DEFERRED TAXES \$(000)	TOTAL FIXED CHARGES \$(000)	PRESENT WORTH FIXED CHARGES \$(000)	CUMULATIVE PW FIXED CHARGES \$(000)	REPLACEMENT COST BASIS FOR PROPERTY INSURANCE \$(000)
2010	23,065	706	0	1,395	523	0	901	1	3,925	3,925	3,925	22,321
2011	22,164	678	0	1,341	593	443	901	296	4,342	4,023	7,948	23,196
2012	20,967	642	0	1,269	594	424	901	250	4,172	3,581	11,530	23,892
2013	19,817	606	0	1,199	593	406	901	207	4,008	3,188	14,718	24,609
2014	18,709	572	0	1,132	590	387	901	168	3,849	2,837	17,554	25,347
2015	17,640	540	0	1,067	586	369	901	131	3,696	2,523	20,078	26,107
2016	16,608	508	0	1,005	581	351	901	97	3,547	2,244	22,322	26,891
2017	15,610	478	0	944	574	332	901	66	3,403	1,995	24,316	27,697
2018	14,643	448	0	886	542	314	901	61	3,263	1,772	26,088	28,528
2019	13,681	419	0	828	506	295	901	61	3,124	1,572	27,660	29,384
2020	12,719	389	0	770	469	277	901	61	2,984	1,391	29,032	30,266
2021	11,757	360	0	711	433	258	901	61	2,845	1,229	30,281	31,174
2022	10,795	330	0	653	396	240	901	61	2,706	1,083	31,364	32,109
2023	9,834	301	0	595	360	221	901	61	2,568	952	32,316	33,072
2024	8,872	271	0	537	323	203	901	61	2,429	834	33,150	34,064
2025	7,910	242	0	479	286	184	901	61	2,290	729	33,879	35,086
2026	6,948	213	0	420	250	166	901	61	2,152	635	34,514	36,139
2027	5,986	183	0	362	213	148	901	61	2,013	550	35,064	37,223
2028	5,024	154	0	304	177	129	901	61	1,875	475	35,539	38,340
2029	4,062	124	0	246	140	111	901	61	1,737	407	35,946	39,490
2030	3,100	95	0	188	293	92	901	(129)	1,599	348	36,294	40,675
2031	2,328	71	0	141	454	74	901	(319)	1,485	299	36,593	41,895
2032	1,746	53	0	106	432	55	901	(319)	1,397	261	36,854	43,152
2033	1,164	36	0	70	410	37	901	(319)	1,308	226	37,080	44,446
2034	582	18	0	35	388	18	901	(319)	1,220	195	37,275	45,780

IN SERVICE COST (\$000)	22,521
IN SERVICE YEAR	2010
BOOK LIFE (YRS)	25
EFFEC. TAX RATE	38.575
DISCOUNT RATE	7.9%
PROPERTY TAX	2.03%
PROPERTY INSURANCE	0.39%

CAPITAL STRUCTURE		
SOURCE	WEIGHT	COST
DEBT	45%	6.80 %
FFB	0%	0.00 %
C/S	55%	11.00 %

K-FACTOR = CPWFC / IN-SVC COST = 1.63516

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION
 PROGRAM/METHOD SELECTED: REV_REQ
 PROGRAMNAME: New Construction (BuildSmartR)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
YEAR	TAX DEPRECIATION SCHEDULE	TAX DEPRECIATION \$(000)	ACCUMULATED TAX DEPRECIATION \$(000)	BOOK DEPRECIATION \$(000)	ACCUMULATED BOOK DEPRECIATION \$(000)	BOOK DEPRECIATION FOR DEFERRED TAX \$(000)	ACCUMULATED BOOK DEPR FOR DEFERRED TAX \$(000)	DEFERRED TAX DUE TO DEPRECIATION \$(000)	TOTAL EQUITY AFUDC \$(000)	BOOK DEPR RATE MINUS MLIFE	(10)*(11) TAX RATE \$(000)	SALVAGE TAX RATE \$(000)	ANNUAL DEFERRED TAX \$(9)-(12)+(13) \$(000)	ACCUMULATED DEFERRED TAX \$(000)
2010	3.75%	827	827	901	901	826	826	1	1,868	0	0	0	1	(544)
2011	7.22%	1,393	2,420	901	1,892	826	1,652	296	1,868	0	0	0	296	(248)
2012	6.68%	1,473	3,894	901	2,792	826	2,478	290	1,868	0	0	0	250	1
2013	6.18%	1,364	5,257	901	3,693	826	3,304	267	1,868	0	0	0	207	269
2014	5.71%	1,261	6,518	901	4,594	826	4,131	168	1,868	0	0	0	168	376
2015	5.29%	1,166	7,684	901	5,485	826	4,957	131	1,868	0	0	0	131	507
2016	4.89%	1,079	8,762	901	6,306	826	5,783	97	1,868	0	0	0	97	605
2017	4.52%	998	9,760	901	7,207	826	6,609	66	1,868	0	0	0	66	671
2018	4.46%	985	10,745	901	8,107	826	7,435	61	1,868	0	0	0	61	732
2019	4.46%	984	11,729	901	9,008	826	8,261	61	1,868	0	0	0	61	793
2020	4.46%	985	12,713	901	9,909	826	9,087	61	1,868	0	0	0	61	854
2021	4.46%	984	13,698	901	10,810	826	9,913	61	1,868	0	0	0	61	915
2022	4.46%	985	14,682	901	11,711	826	10,739	61	1,868	0	0	0	61	976
2023	4.46%	984	15,667	901	12,612	826	11,566	61	1,868	0	0	0	61	1,037
2024	4.46%	985	16,651	901	13,512	826	12,392	61	1,868	0	0	0	61	1,098
2025	4.46%	984	17,635	901	14,413	826	13,218	61	1,868	0	0	0	61	1,159
2026	4.46%	985	18,620	901	15,314	826	14,044	61	1,868	0	0	0	61	1,221
2027	4.46%	984	19,604	901	16,215	826	14,870	61	1,868	0	0	0	61	1,282
2028	4.46%	985	20,589	901	17,116	826	15,696	61	1,868	0	0	0	61	1,343
2029	4.46%	984	21,573	901	18,016	826	16,522	61	1,868	0	0	0	61	1,404
2030	2.23%	492	22,065	901	18,917	826	17,348	(129)	1,868	0	0	0	(129)	1,275
2031	0.00%	0	22,065	901	19,818	826	18,174	(319)	1,868	0	0	0	(319)	956
2032	0.00%	0	22,065	901	20,719	826	19,001	(319)	1,868	0	0	0	(319)	638
2033	0.00%	0	22,065	901	21,620	826	19,827	(319)	1,868	0	0	0	(319)	319
2034	0.00%	0	22,065	901	22,521	826	20,653	(319)	1,868	0	0	0	(319)	0

SALVAGE/REMOVAL COST	0.00
YEAR SALVAGE / COST OF REMOVAL	2029
DEFERRED TAXES DURING CONSTRUCTION (SEE PAGE 5)	(545)
TOTAL EQUITY AFUDC CAPITALIZED (SEE PAGE 5)	1,868
BOOK DEPR RATE - USEFUL LIFE	4.00%

83

DEFERRED TAX AND MID-YEAR RATE BASE CALCULATION
 PROGRAM METHOD SELECTED: REV. REG.
 PROGRAM NAME: New Construction (Substantiated)

(1)	(2)	(3)	(4)	(5)	(5b)	(6)	(7)	(8)
YEAR	TAX SCHEDULE	TAX DEPRECIATION - DEPRECIATION	DEFERRED TAX	PLANT IN SERVICE	ACCUMULATED DEPRECIATION	ACCUMULATED DEF. TAXES	BEGINNING RATE BASE	MID-YEAR RATE BASE
	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
2010	3,759	827	1	22,521	901	(544)	22,664	22,664
2011	7,226	1,593	296	21,620	1,802	(248)	20,967	21,566
2012	6,696	1,473	250	20,719	2,702	1	19,817	20,392
2013	6,196	1,364	207	19,818	3,603	209	18,817	19,263
2014	5,716	1,261	168	18,917	4,504	376	17,640	18,176
2015	5,296	1,166	131	18,016	5,405	507	17,600	17,120
2016	4,896	1,079	97	17,116	6,306	605	16,608	16,109
2017	4,526	998	66	16,215	7,207	671	15,610	15,177
2018	4,196	985	61	15,314	8,107	732	14,643	14,162
2019	4,469	984	61	14,413	9,008	793	13,681	13,200
2020	4,469	985	61	13,512	9,909	854	12,719	12,238
2021	4,469	984	61	12,612	10,810	915	11,757	11,276
2022	4,469	985	61	11,711	11,711	976	10,795	10,316
2023	4,469	984	61	10,810	12,612	1,037	9,834	9,353
2024	4,469	985	61	9,909	13,512	1,098	8,872	8,391
2025	4,469	984	61	9,008	14,413	1,159	7,910	7,429
2026	4,469	985	61	8,107	15,314	1,221	6,948	6,487
2027	4,469	984	61	7,207	16,215	1,282	5,986	5,505
2028	4,469	985	61	6,306	17,116	1,343	5,024	4,543
2029	4,469	984	61	5,405	18,016	1,404	4,062	3,581
2030	2,239	492	(129)	4,504	18,917	1,475	3,100	2,714
2031	0.00%	0	0	3,603	19,818	956	2,328	2,037
2032	0.00%	0	0	2,702	20,719	638	1,746	1,455
2033	0.00%	0	0	1,802	21,620	319	1,164	873
2034	0.00%	0	0	901	22,521	0	582	291

* Column not specified in workbook

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(3) PLANT ESCALATION RATE	(4) CUMULATIVE ESCALATION FACTOR	(5) YEARLY EXPENDITURE (%)	(6) ANNUAL SPENDING (\$/kW)	(7) CUMULATIVE AVERAGE SPENDING (\$/kW)
2004	-6	0.00%	1.000	0.00%	0.00	0.00
2005	-5	3.00%	1.030	0.00%	0.00	0.00
2006	-4	3.00%	1.061	16.00%	82.38	41.19
2007	-3	3.00%	1.093	30.00%	159.09	161.92
2008	-2	3.00%	1.126	32.00%	174.78	328.85
2009	-1	3.00%	1.159	22.00%	123.77	478.13

(1) YEAR	(2) NO. YEARS BEFORE IN-SERVICE	(8) CUMULATIVE SPENDING WITH AFUDC (\$/kW)	(8a)* DEBT AFUDC (\$/kW)	(8b)* CUMULATIVE DEBT AFUDC (\$/kW)	(9) YEARLY TOTAL AFUDC (\$/kW)	(9a)* CUMULATIVE TOTAL AFUDC (\$/kW)	(9b)* CONSTRUCTION PERIOD INTEREST (\$/kW)	(9c)* CUMULATIVE CPI (\$/kW)	(9d)* DEFERRED TAXES (\$/kW)	(9e)* CUMULATIVE DEFERRED TAXES (\$/kW)	(10)	(11)
											INCREMENTAL YEAR-END BOOK VALUE (\$/kW)	CUMULATIVE YEAR-END BOOK VALUE (\$/kW)
2004	-6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2005	-5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2006	-4	41.19	1.26	1.26	3.23	3.23	2.80	2.80	(0.39)	(0.39)	85.60	85.60
2007	-3	165.15	5.07	6.33	12.99	16.22	11.20	14.00	(2.36)	(2.96)	172.08	257.69
2008	-2	345.08	10.65	16.98	27.29	43.51	23.31	37.32	(4.89)	(7.84)	202.07	459.75
2009	-1	521.64	16.20	33.18	41.51	85.02	35.85	72.37	(7.27)	(15.11)	165.28	625.03
			33.18		85.02		72.37		(15.11)		625.03	

LANT COSTS 485.29
FUDC RATE 7.84%

	BOOK BASIS	BOOK BASIS FOR DEF TAX	TAX BASIS
CONSTRUCTION CASH	19,457	19,457	19,457
EQUITY AFUDC	1,868		
DEBT AFUDC	1,196	1,196	
CPI			2,607
TOTAL	22,521	20,653	22,065

* Column not specified in workbook

INPUT DATA -- PART 2
 PROGRAM METHOD SELECTED : REV_REQ
 PROGRAM NAME: New Construction (BuildSmartR)

(1)	(2)	(3)	(4)	(5)	(6)*	(7)	(8)	(9)
YEAR	CUMULATIVE TOTAL PARTICIPATING CUSTOMERS	ADJUSTED CUMULATIVE PARTICIPATING CUSTOMERS	UTILITY AVERAGE SYSTEM FUEL COST (C/kWh)	AVOIDED MARGINAL FUEL COST (C/kWh)	INCREASED MARGINAL FUEL COST (C/kWh)	REPLACEMENT FUEL COST (C/kWh)	PROGRAM KWH EFFECTIVENESS FACTOR	PROGRAM KWH EFFECTIVENESS FACTOR
2004	0	0	4.22	5.16	4.52	0.00	1.00	1.00
2005	3,816	3,816	3.88	4.69	4.15	0.00	1.00	1.00
2006	9,159	9,159	3.77	4.68	4.04	0.00	1.00	1.00
2007	16,104	16,104	3.71	4.52	3.96	0.00	1.00	1.00
2008	24,439	24,439	3.66	4.61	3.92	0.00	1.00	1.00
2009	33,609	33,609	3.79	4.77	4.05	0.00	1.00	1.00
2010	33,609	33,609	3.90	4.72	4.14	5.14	1.00	1.00
2011	33,609	33,609	4.17	4.99	4.42	5.31	1.00	1.00
2012	33,609	33,609	4.18	5.11	4.41	4.92	1.00	1.00
2013	33,609	33,609	4.31	5.31	4.56	4.83	1.00	1.00
2014	33,609	33,609	4.39	5.43	4.64	4.91	1.00	1.00
2015	33,609	33,609	4.55	5.71	4.81	4.98	1.00	1.00
2016	33,609	33,609	4.69	5.86	4.94	5.27	1.00	1.00
2017	33,609	33,609	4.77	5.97	5.03	6.18	1.00	1.00
2018	33,609	33,609	4.92	6.19	5.18	6.59	1.00	1.00
2019	33,609	33,609	5.06	6.35	5.31	5.84	1.00	1.00
2020	33,609	33,609	5.16	6.54	5.43	5.71	1.00	1.00
2021	33,609	33,609	5.26	6.67	5.52	5.71	1.00	1.00
2022	33,609	33,609	5.50	6.98	5.77	6.49	1.00	1.00
2023	33,609	33,609	5.57	6.90	5.83	7.93	1.00	1.00
2024	33,609	33,609	5.66	6.97	5.92	8.04	1.00	1.00
2025	33,609	33,609	5.76	7.05	6.01	8.15	1.00	1.00
2026	33,609	33,609	5.87	7.12	6.10	8.26	1.00	1.00
2027	33,609	33,609	5.97	7.20	6.20	8.37	1.00	1.00
2028	33,609	33,609	6.07	7.27	6.29	8.49	1.00	1.00
2029	33,609	33,609	6.18	7.35	6.39	8.60	1.00	1.00

* THIS COLUMN IS USED ONLY FOR LOAD SHIFTING PROGRAMS WHICH SHIFT CONSUMPTION TO OFF-PEAK PERIODS.
 THE VALUES REPRESENT THE OFF PEAK SYSTEM FUEL COSTS.

AVOIDED GENERATING BENEFITS
 PROGRAM METHOD SELECTED: REV_REQ
 PROGRAM NAME: New Construction (BuildSmartE)

YEAR	(2) AVOIDED GEN UNIT CAPACITY COST \$(000)	(3) AVOIDED GEN UNIT FIXED O&M \$(000)	(4) AVOIDED GEN UNIT VARIABLE O&M \$(000)	(5) AVOIDED GEN UNIT FUEL COST \$(000)	(6) REPLACEMENT FUEL COST \$(000)	(7) AVOIDED GEN UNIT BENEFITS \$(000)
2004	0	0	0	0	0	0
2005	0	0	0	0	0	0
2006	0	0	0	0	0	0
2007	0	0	0	0	0	0
2008	0	0	0	0	0	0
2009	0	0	0	0	0	0
2010	3,925	1,279	31	5,437	7,561	3,111
2011	4,342	1,336	53	9,329	12,995	2,066
2012	4,172	1,396	55	9,619	12,188	3,054
2013	4,008	1,460	57	9,844	11,988	3,580
2014	3,849	1,526	58	10,166	12,166	3,433
2015	3,696	1,597	58	10,423	12,056	3,719
2016	3,547	1,669	61	11,067	12,885	3,458
2017	3,403	1,742	61	11,067	14,029	1,643
2018	3,263	1,817	62	11,292	15,460	973
2019	3,124	1,898	64	11,710	13,722	3,874
2020	2,984	1,984	65	11,967	13,201	3,800
2021	2,845	2,075	66	12,064	12,933	4,117
2022	2,706	2,169	69	12,965	14,869	3,039
2023	2,568	2,261	65	12,225	16,548	570
2024	2,429	2,360	66	12,353	16,401	807
2025	2,290	2,463	66	12,483	16,254	1,049
2026	2,152	2,575	67	12,615	16,109	1,299
2027	2,013	2,692	68	12,748	15,965	1,555
2028	1,875	2,814	69	12,882	15,823	1,817
2029	1,737	2,942	70	13,017	15,681	2,085

NOB	60,929	40,836	1,228	225,275	279,436	48,850
NPV	22,741	12,103	392	71,194	88,732	17,699

GM

AVOIDED T&D AND PROGRAM FUEL SAVINGS
 PROGRAM METHOD SELECTED: REV_RBQ
 PROGRAM NAME: New Construction (BuildSmartR)

(1) YEAR	(2) AVOIDED TRANSMISSION CAP COST \$(000)	(3) AVOIDED TRANSMISSION O&M COST. \$(000)	(4) TOTAL AVOIDED TRANSMISSION COST \$(000)	(5) AVOIDED DISTRIBUTION CAP COST \$(000)	(6) AVOIDED DISTRIBUTION O&M COST \$(000)	(7) TOTAL AVOIDED DISTRIBUTION COST \$(000)	(8) PROGRAM FUEL SAVINGS \$(000)	(8a)* PROGRAM OFF-PEAK PAYBACK \$(000)
2004	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	157	0
2006	67	11	78	14	5	18	538	0
2007	159	27	187	32	12	44	1,003	0
2008	278	50	328	56	21	78	1,666	0
2009	420	79	499	85	34	119	2,473	0
2010	573	114	687	116	49	165	2,782	0
2011	552	119	671	112	51	163	2,924	0
2012	531	124	655	108	53	161	3,023	0
2013	510	130	640	103	56	159	3,157	0
2014	490	136	626	99	58	158	3,232	0
2015	471	142	613	95	61	156	3,420	0
2016	452	148	601	92	64	155	3,506	0
2017	434	155	588	88	66	154	3,574	0
2018	415	162	577	84	69	153	3,713	0
2019	397	169	565	80	72	153	3,802	0
2020	378	176	555	77	76	152	3,931	0
2021	360	184	544	73	79	152	4,012	0
2022	341	193	534	69	83	152	4,200	0
2023	323	201	524	65	86	152	4,108	0
2024	305	210	514	62	90	152	4,138	0
2025	286	219	505	58	94	152	4,169	0
2026	268	229	497	54	98	153	4,200	0
2027	250	239	490	51	103	154	4,231	0
2028	234	250	484	47	107	155	4,261	0
2029	219	262	481	44	112	157	4,292	0

NOM.	8,714	3,729	12,443	1,766	1,601	3,367	80,510	0
NPV	3,609	1,198	4,807	731	514	1,246	28,079	0

* THESE VALUES REPRESENT THE COST OF THE INCREASED FUEL CONSUMPTION DUE TO GREATER OFF-PEAK ENERGY USAGE. USED FOR LOAD SHIFTING PROGRAMS ONLY.

TOTAL RESOURCE COST TEST
 PROGRAM METHOD SELECTED: REV_RBQ
 PROGRAM NAME: New Construction (BulkSmartR)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
YEAR	INCREASED SUPPLY COSTS \$(000)	UTILITY PROGRAM COSTS \$(000)	PARTICIPANT PROGRAM COSTS \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	AVOIDED GEN UNIT BENEFITS \$(000)	AVOIDED T&D BENEFITS \$(000)	PROGRAM FUEL SAVINGS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2004	0	0	0	0	0	0	0	0	0	0	0	0
2005	0	1,555	2,815	0	4,370	0	0	157	0	157	(4,213)	(3,903)
2006	0	2,223	4,023	0	6,246	0	96	538	0	634	(5,612)	(8,721)
2007	0	2,953	5,345	0	8,298	0	231	1,003	0	1,234	(7,064)	(14,340)
2008	0	3,632	6,574	0	10,206	0	406	1,666	0	2,072	(8,134)	(20,334)
2009	0	4,105	7,430	0	11,534	0	618	2,473	0	3,091	(8,444)	(26,099)
2010	0	0	0	0	0	3,111	852	2,782	0	6,745	6,745	(21,832)
2011	0	0	0	0	0	2,066	833	2,924	0	5,823	5,823	(18,419)
2012	0	0	0	0	0	3,054	815	3,023	0	6,893	6,893	(14,675)
2013	0	0	0	0	0	3,380	799	3,157	0	7,336	7,336	(10,984)
2014	0	0	0	0	0	3,433	783	3,232	0	7,448	7,448	(7,512)
2015	0	0	0	0	0	3,719	769	3,420	0	7,908	7,908	(4,096)
2016	0	0	0	0	0	3,458	756	3,506	0	7,720	7,720	(1,006)
2017	0	0	0	0	0	1,643	743	3,574	0	5,959	5,959	1,204
2018	0	0	0	0	0	973	730	3,713	0	5,417	5,417	3,065
2019	0	0	0	0	0	3,074	718	3,802	0	7,594	7,594	5,482
2020	0	2,354	4,260	0	6,613	3,800	707	3,931	0	8,438	1,825	6,020
2021	0	3,408	6,169	0	9,577	4,117	696	4,012	0	8,826	(751)	5,815
2022	0	4,582	8,293	0	12,874	3,039	686	4,200	0	7,925	(4,949)	4,562
2023	0	5,688	10,295	0	15,983	570	676	4,108	0	5,353	(10,630)	2,068
2024	0	6,475	11,719	0	18,194	807	666	4,138	0	5,611	(12,583)	(667)
2025	0	0	0	0	0	1,049	657	4,169	0	5,875	5,875	516
2026	0	0	0	0	0	1,299	649	4,200	0	6,148	6,148	1,663
2027	0	0	0	0	0	1,555	643	4,231	0	6,429	6,429	2,775
2028	0	0	0	0	0	1,817	639	4,261	0	6,718	6,718	3,851
2029	0	0	0	0	0	2,085	638	4,292	0	7,015	7,015	4,892

NOM	0	36,974	66,922	0	103,896	48,050	15,810	80,510	0	144,369	40,473
NPV	0	16,704	30,234	0	46,938	17,699	6,053	28,079	0	51,830	4,892

Discount Rate:
 Benefit/Cost Ratio (Col(11) / Col(6)) :

7.93 %
 1.10

63

PROGRAM NAME: New Construction (Subpart 1)
 PROGRAM METHOD SELECTED: HYB, NHO

YEAR	PARTICIPANT COSTS AND BENEFITS											
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
SAVINGS IN BILLS	TAX CREDITS	UTILITY REBATES	OTHER BENEFITS	TOTAL BENEFITS	CUSTOMER EQUIPMENT COSTS	CUSTOMER O&M COSTS	OTHER COSTS	TOTAL COSTS	NET BENEFITS	DISCOUNTED NET BENEFITS		
\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
2004	0	0	0	0	0	0	0	0	0	0	0	0
2005	345	0	0	0	345	2,815	(2,470)	0	0	(2,228)	0	0
2006	1,171	0	0	0	4,023	(4,853)	(4,737)	0	0	(2,728)	0	0
2007	2,259	0	0	0	3,345	(4,023)	(2,853)	0	0	(2,728)	0	0
2008	3,660	0	0	0	6,574	(2,913)	(2,191)	0	0	(2,228)	0	0
2009	5,266	0	0	0	7,430	(2,164)	(1,816)	0	0	(2,228)	0	0
2010	6,113	0	0	0	8,113	(2,164)	(1,816)	0	0	(2,228)	0	0
2011	6,130	0	0	0	8,130	(2,164)	(1,816)	0	0	(2,228)	0	0
2012	6,202	0	0	0	8,202	(2,164)	(1,816)	0	0	(2,228)	0	0
2013	6,266	0	0	0	8,266	(2,164)	(1,816)	0	0	(2,228)	0	0
2014	6,266	0	0	0	8,266	(2,164)	(1,816)	0	0	(2,228)	0	0
2015	6,307	0	0	0	8,307	(2,164)	(1,816)	0	0	(2,228)	0	0
2016	6,323	0	0	0	8,323	(2,164)	(1,816)	0	0	(2,228)	0	0
2017	6,379	0	0	0	8,379	(2,164)	(1,816)	0	0	(2,228)	0	0
2018	6,492	0	0	0	8,492	(2,164)	(1,816)	0	0	(2,228)	0	0
2019	6,555	0	0	0	8,555	(2,164)	(1,816)	0	0	(2,228)	0	0
2020	6,618	0	0	0	8,618	(2,164)	(1,816)	0	0	(2,228)	0	0
2021	6,682	0	0	0	8,682	(2,164)	(1,816)	0	0	(2,228)	0	0
2022	6,747	0	0	0	8,747	(2,164)	(1,816)	0	0	(2,228)	0	0
2023	6,813	0	0	0	8,813	(2,164)	(1,816)	0	0	(2,228)	0	0
2024	6,879	0	0	0	8,879	(2,164)	(1,816)	0	0	(2,228)	0	0
2025	6,946	0	0	0	8,946	(2,164)	(1,816)	0	0	(2,228)	0	0
2026	7,013	0	0	0	9,013	(2,164)	(1,816)	0	0	(2,228)	0	0
2027	7,081	0	0	0	9,081	(2,164)	(1,816)	0	0	(2,228)	0	0
2028	7,150	0	0	0	9,150	(2,164)	(1,816)	0	0	(2,228)	0	0
2029	7,219	0	0	0	9,219	(2,164)	(1,816)	0	0	(2,228)	0	0
NOM	144,881	0	0	0	144,881	6,922	66,922	0	0	77,958	0	77,958
NPV	52,981	0	0	0	52,981	30,234	30,234	0	0	22,747	0	22,747
In Percent of Gen Util:												
Discount Rate:												
Benefit/Cost Ratio (Col(6) / Col(10))												
2010												
7.93 %												
1.75												

RATE IMPACT TEST
PROGRAM METHOD SELECTED: REV_REQ
PROGRAM NAME: New Construction (BuildSmartR)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
YEAR	INCREASED SUPPLY COSTS \$(000)	UTILITY PROGRAM COSTS \$(000)	INCENTIVES \$(000)	REVENUE LOSSES \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	AVOIDED GEN UNIT & FUEL BENEFITS \$(000)	AVOIDED T&D BENEFITS \$(000)	REVENUE GAINS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2004	0	0	0	0	0	0	0	0	0	0	0	0	0
2005	0	1,355	0	210	0	1,765	157	0	0	0	157	(1,609)	(1,490)
2006	0	2,223	0	714	0	2,937	538	96	0	0	634	(2,303)	(3,467)
2007	0	2,953	0	1,378	0	4,331	1,003	231	0	0	1,234	(3,098)	(5,931)
2008	0	3,632	0	2,233	0	5,865	1,666	406	0	0	2,072	(3,793)	(8,726)
2009	0	4,105	0	3,212	0	7,317	2,473	618	0	0	3,091	(4,226)	(11,612)
2010	0	0	0	3,729	0	3,729	5,893	852	0	0	6,745	3,016	(9,704)
2011	0	0	0	3,739	0	3,739	4,990	833	0	0	5,823	2,084	(8,482)
2012	0	0	0	3,783	0	3,783	6,077	815	0	0	6,893	3,110	(6,793)
2013	0	0	0	3,822	0	3,822	6,537	799	0	0	7,336	3,513	(5,826)
2014	0	0	0	3,822	0	3,822	6,665	783	0	0	7,448	3,626	(3,335)
2015	0	0	0	3,847	0	3,847	7,139	769	0	0	7,908	4,061	(1,381)
2016	0	0	0	3,857	0	3,857	6,965	756	0	0	7,720	3,864	(35)
2017	0	0	0	3,891	0	3,891	5,217	743	0	0	5,959	2,068	732
2018	0	0	0	3,960	0	3,960	4,686	730	0	0	5,417	1,457	1,233
2019	0	0	0	3,998	0	3,998	6,875	718	0	0	7,594	3,595	2,377
2020	0	2,354	0	4,037	0	6,391	7,731	707	0	0	8,438	2,048	2,981
2021	0	3,408	0	4,076	0	7,484	8,129	696	0	0	8,826	1,341	3,348
2022	0	4,582	0	4,116	0	8,697	7,239	686	0	0	7,925	(772)	3,152
2023	0	5,688	0	4,156	0	9,844	4,677	676	0	0	5,353	(4,491)	2,099
2024	0	6,475	0	4,196	0	10,671	4,945	666	0	0	5,611	(5,060)	999
2025	0	0	0	4,237	0	4,237	5,218	657	0	0	5,875	1,638	1,329
2026	0	0	0	4,278	0	4,278	5,499	649	0	0	6,148	1,870	1,678
2027	0	0	0	4,319	0	4,319	5,786	643	0	0	6,429	2,110	2,042
2028	0	0	0	4,361	0	4,361	6,079	639	0	0	6,718	2,357	2,420
2029	0	0	0	4,404	0	4,404	6,377	638	0	0	7,015	2,612	2,808

NOM.	0	36,974	0	88,377	0	125,351	128,560	15,810	0	0	144,369	19,019
NPV	0	16,704	0	32,319	0	49,023	45,778	6,033	0	0	51,830	2,808

Discount Rate 7.93 %
Benefit/Cost Ratio (Col(12) / Col(7)) : 1.06

9/26 CLARIFIED COPY USED IN DISCOVERY

Docket Nos. 040029-EG and 040660-EG
Petitioner's Cross Examination Exhibit
for Hearing held on October 10, 2005

No.

FPL REPORTED FOLLOWING BUILDSMART HOMES IN ZIPCODE 34275

See response to interrogatory #8*

*located at page:		16	21	27	29			
		2001	2002	2003	2004	2005 to date		
GOLD	NONE	NONE		2	3	1	6	1.32%
SILVER	NONE		1	93	103	66	262	57.46%
BRONZE	NONE	NONE		35	75	78	188	41.23%
TOTAL			1	130	181	145	456	100.00%
C+ SAMPLE								
GOLD		0	0	0	0	0	0	0.00%
SILVER		0	0	0	0	0	0	0.00%
BRONZE		0	0	2	2	2	6	4.51%
FAILS duct; passes 10%				5	9	3	17	12.78%
FAILED 10%			0	14	58	38	110	82.71%
TOTAL		0	0	21	69	43	133	100.00%
							29%	

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET 040029-EG
NO. 040660-EG Exhibit No. 20
Company/ CalCS Plus
Witness: Dennis Stroer
Date: 10-10-05

Tested Build Smart Community* [ALL DATA AS-BUILT]

Sorted by year; then e-ratio; ducts

YEAR	Home Identifier	Address*	Build Smart proc Medallion*	E-Ratio As-Built	HERS Score	Sq Ft of living area	CFM25 TOTAL	Qn of TOTAL	AHU Rated Air Flow	Duct Leak Total %	CFM25 OUT	Duct Leak Out %	No. Qn of OUT
GOLD MEDALLION HOMES: 0.7 E-RATIO OR LOWER													
NONE													
SILVER MEDALLION HOMES: 0.71 TO 0.80 E-RATIO													
NONE													
BRONZE MEDALLION HOMES: 0.81-0.90 E-RATIO													
2003													
2004	116	WCI-34275	###	0.89	85.1	1482	131	0.088	1200	10.92%	53	4.42%	0.035762
2005	108	WCI-34275	###	0.90	85.3	3085	204	0.066	2200	9.27%	105	4.77%	0.034036
PASSES E-RATIO BUT FAILS DUCT STANDARDS													
2006	101	WCI-34275	###	0.90	85	1482	140	0.094	1000	14.00%	50.5	5.05%	0.034076
2006	89	WCI-34275	###	0.89	85.2	1994	163	0.082	1200	13.58%	64	5.33%	0.032096
2007	60	WCI-34275	###	0.89	84.8	1994	202	0.101	1200	16.83%	79.5	6.63%	0.03987
2008	59	WCI-34275	###	0.90	85.1	1994	154.5	0.077	1200	12.88%	81.5	6.79%	0.040873
2009	36	WCI-34275	###	0.90	84.8	1994	174	0.087	1200	14.50%	98	8.17%	0.049147
2004													
2005	134	WCI-34275	###	0.89	86.5	1994	140	0.070	1200	11.67%	31	2.58%	0.015547
2005	127	WCI-34275	###	0.89	85.5	2889	299	0.103	2600	11.50%	99.25	3.82%	0.034354
PASSES E-RATIO BUT FAILS DUCT STANDARDS													
2006	84	WCI-34275	###	0.89	84.5	1994	222	0.111	1200	18.50%	67	5.58%	0.033601
2007	79	WCI-34275	###	0.89	86.2	1994	110	0.055	1200	9.17%	70	5.83%	0.035105
2008	77	WCI-34275	###	0.90	85.1	1482	125	0.084	1000	12.50%	59	5.90%	0.039811
2009	70	WCI-34275	###	0.89	84.9	1994	177	0.089	1400	12.64%	88.5	6.32%	0.044383
2010	65	WCI-34275	###	0.90	85	1482	137	0.092	1000	13.70%	65	6.50%	0.04386
2011	49	WCI-34275	###	0.89	85.1	1994	166.5	0.084	1200	13.88%	90.5	7.54%	0.045386
2012	29	WCI-34275	###	0.90	83.7	1351	150.5	0.111	1200	12.54%	103.5	8.63%	0.07661
2013	11	WCI-34275	###	0.90	85.2	1482	116.5	0.079	1000	11.85%	109.5	11.85%	0.073887
2014	3	WCI-34275	###	0.90	82	1351	244	0.181	1000	24.40%	161.5	16.15%	0.119541
2005													
2006	110	WCI-34275	###	0.89	85.4	3085	282	0.091	2200	12.82%	103.5	4.70%	0.033549
2007	106	WCI-34275	###	0.90	84.7	1082	126	0.116	1000	12.60%	48	4.80%	0.044362
PASSES E-RATIO BUT FAILS DUCT STANDARDS													
2007	68	WCI-34275	###	0.89	84.8	1994	198	0.099	1400	14.14%	89	6.36%	0.044634
2008	32	WCI-34275	###	0.90	85	1482	133	0.090	1000	13.30%	83.5	8.35%	0.056343
2009	23	WCI-34275	###	0.90	84.8	1482	146	0.099	1000	14.60%	94	9.40%	0.063428
HOMES THAT FAIL TO MEET BUILSMART TECHNICAL STANDARDS													
2003													
1	94	WCI-34275	###	0.92	84.7	1482	138	0.093	1000	13.80%	52	5.20%	0.035088
2	4	WCI-34275	###	0.95	81.6	1478	271	0.183	1000	27.10%	148.5	14.85%	0.100474
3	128	WCI-34275	###	0.96	83.6	1082	84.5	0.078	1000	8.45%	38	3.80%	0.03512
4	103	WCI-34275	###			1994	157	0.079	1200	13.08%	59	4.92%	0.029589
5	115	WCI-34275	###	0.98	83.1	1994	169.5	0.085	1200	14.13%	53.5	4.46%	0.02683
6	107	WCI-34275	###	0.97	82.9	1482	120	0.081	1000	12.00%	48	4.80%	0.032389
7	78	WCI-34275	###	0.95	83.3	1478	160	0.108	1000	16.00%	58.5	5.85%	0.039581
8	113	WCI-34275	###	0.96	85.1	1082	213	0.197	1000	21.30%	45	4.50%	0.04159
9	45	WCI-34275	###	0.91	83.4	1351	162	0.120	1000	16.20%	76	7.60%	0.058255
10	46	WCI-34275	###	0.92	84.3	1482	163.5	0.110	1000	16.35%	76	7.60%	0.051282
11	16	WCI-34275	###	0.92	83.4	1478	186	0.126	1200	15.50%	124	10.33%	0.083897
12	96	WCI-34275	###	0.97	84.1	1082	117	0.108	1200	9.75%	62	5.17%	0.057301
13	130	WCI-34275	###	0.98	84.4	1082	76	0.070	1200	6.33%	41	3.42%	0.037893
14	87	WCI-34275	###	0.95	84.4	1663	154	0.093	1200	12.83%	65	5.42%	0.039086
2004													
15	27	WCI-34275	###	0.95	83	1478	181	0.122	1000	18.10%	88	8.80%	0.05954
16	123	WCI-34275	###	0.96	83.4	1691	101	0.060	1200	8.42%	51	4.25%	0.03016
17	55	WCI-34275	###	0.92	83.9	1478	150.5	0.102	1000	15.05%	71.5	7.15%	0.048376
18	52	WCI-34275	###	0.97	84.1	1663	157	0.094	1000	15.70%	73	7.30%	0.043897
19	21	WCI-34275	###	0.95	84.1	1663	178	0.107	1000	17.80%	96	9.60%	0.057727
20	81	WCI-34275	###	0.97	83.5	1269	135.5	0.107	1000	13.55%	57	5.70%	0.044917
21	57	WCI-34275	###	0.97	83.4	1269	141.5	0.112	1000	14.15%	69.5	6.95%	0.054768
22	37	WCI-34275	###	1.05	82.8	1691	150	0.089	1200	12.50%	98	8.17%	0.057954
23	122	WCI-34275	###	1.02	84.6	1082	103.5	0.096	1000	10.35%	43	4.30%	0.039741
24	124	WCI-34275	###	1.05	84.1	1269	122	0.096	1000	12.20%	41	4.10%	0.032309
25	85	WCI-34275	###	0.95	83.7	1478	129	0.087	1200	10.75%	67	5.58%	0.045332
26	121	WCI-34275	###	1.05	81.8	1691	117	0.069	1200	9.75%	52	4.33%	0.030751
27	120	WCI-34275	###	0.92	86.1	1691	225	0.133	1200	18.75%	52	4.33%	0.030751
28	104	WCI-34275	###	0.92	84.8	1482	112	0.076	1000	11.20%	49	4.90%	0.033063
29	42	WCI-34275	###	0.98	82.5	2556	379	0.148	2000	18.95%	158	7.90%	0.061815
30	98	WCI-34275	###	1.00	83.9	1691	143	0.085	1200	11.92%	61.5	5.13%	0.036369
31	40	WCI-34275	###	0.96	83.1	2556	363.5	0.142	2000	18.18%	159	7.95%	0.062207
32	99	WCI-34275	###	0.96	85.4	3085	219	0.071	2200	9.95%	112.5	5.11%	0.036467
33	75	WCI-34275	###	0.96	82.2	2889	457.5	0.158	2800	17.60%	156.5	6.02%	0.054171
34	53	WCI-34275	###	0.96	83.4	2556	326	0.128	2000	16.30%	145	7.25%	0.056729
35	82	WCI-34275	###	1.05	82.9	1691	148.5	0.088	1000	14.85%	56.5	5.65%	0.033412
36	95	WCI-34275	###	1.01	82.9	1269	142	0.112	1200	11.83%	62	5.17%	0.048857
37	33	WCI-34275	###	0.93	83.4	2195	295.5	0.135	1600	18.47%	133.5	8.34%	0.06082
38	41	WCI-34275	###	0.94	81.7	2195	432	0.197	1600	27.00%	127	7.94%	0.057859
39	51	WCI-34275	###	0.96	83.4	2556	244	0.095	1600	15.25%	118	7.38%	0.046166
40	8	WCI-34275	###	1.05	82.5	1691	178	0.105	1000	17.80%	119	11.90%	0.070373
41	64	WCI-34275	###	0.91	84.7	1482	139.5	0.094	1000	13.95%	65.5	6.55%	0.044197
42	92	WCI-34275	###	0.98	83.6	1269	117	0.092	1000	11.70%	52.5	5.25%	0.041371
43	97	WCI-34275	###	0.96	83.9	1269	130.5	0.103	1000	13.05%	51.5	5.15%	0.040583

44	73	WCI-34275	###	0.92	84.7	1482	136	0.092	1000	13.60%	61	6.10%	0.041161
45	131	WCI-34275	###	0.96	84.8	1691	111	0.066	1200	9.25%	41	3.42%	0.024246
46	111	WCI-34275	###	0.97	84.1	1691	96	0.057	1000	9.60%	47	4.70%	0.027794
47	117	WCI-34275	###	0.92	84.8	1691	129	0.076	1200	10.75%	53	4.42%	0.031342
48	14	WCI-34275	###	0.97	82.9	2889	381	0.132	2000	19.05%	212.5	10.63%	0.073555
49	50	WCI-34275	###	0.98	83.4	2889	288.5	0.100	2000	14.43%	149.5	7.48%	0.051748
50	112	WCI-34275	###	1.00	85.1	2889	173.75	0.060	2400	7.24%	110	4.58%	0.038075
51	20	WCI-34275	###	0.96	83.7	2889	293	0.101	2000	14.65%	192	9.60%	0.066459
52	9	WCI-34275	###	0.92	83	1478	212.5	0.144	1200	17.71%	134	11.17%	0.090663
53	34	WCI-34275	###	0.98	83.7	2889	259.5	0.090	2000	12.98%	166.5	8.33%	0.057632
54	35	WCI-34275	###	0.95	84.4	1663	152	0.091	1200	12.67%	98	8.17%	0.05893
55	13	WCI-34275	###	0.95	83.7	1663	208.5	0.125	1000	20.85%	107	10.70%	0.064342
56	118	WCI-34275	###	0.98	84.4	3282	284	0.087	3000	9.47%	132.34	4.41%	0.040323
57	24	WCI-34275	###	0.95	84.1	1663	178	0.107	1000	17.80%	93.5	9.35%	0.056224
58	105	WCI-34275	###	0.92	85.1	1994	192	0.096	1400	13.71%	68	4.86%	0.034102
59	74	WCI-34275	###	0.93	84.7	1663	159.5	0.096	1200	13.29%	73	6.08%	0.043897
60	86	WCI-34275	###	0.92	85.1	1994	130.5	0.065	1200	10.88%	65	5.42%	0.032598
61	69	WCI-34275	###	0.94	84.8	1663	133.5	0.080	1200	11.13%	76	6.33%	0.045701
62	17	WCI-34275	###	0.92	83	1478	213.5	0.144	1200	17.79%	120	10.00%	0.081191
63	119	WCI-34275	###	1.01	84.4	3085	195	0.063	2200	8.86%	97	4.41%	0.031442
64	43	WCI-34275	###	0.97	83.4	2556	304	0.119	2000	15.20%	154.5	7.73%	0.060446
65	90	WCI-34275	###	0.99	84.8	1691	117	0.069	1200	9.75%	64	5.33%	0.037847
66	31	WCI-34275	###	0.98	83.4	2889	290	0.100	2000	14.50%	167.5	8.38%	0.057979
67	80	WCI-34275	###	0.92	85.2	1478	98	0.066	1000	9.80%	57	5.70%	0.038566
68	109	WCI-34275	###	0.93	86	1994	141.5	0.071	1200	11.79%	57	4.70%	0.028586
69	6	WCI-34275	###	0.95	83.8	1663	200	0.120	1000	20.00%	137	13.75%	0.082381
70	10	WCI-34275	###	0.93	84.7	1663	157	0.094	1000	15.70%	111	11.10%	0.066747
71	44	WCI-34275	###	0.92	83.9	1478	151.5	0.103	1000	15.15%	76	7.60%	0.051421
72	61	WCI-34275	###	0.97	83.8	2889	262.5	0.091	2000	13.13%	132.5	6.63%	0.045864
2005													
73	76	WCI-34275	###	0.99	83.3	1691	132	0.078	1200	11.00%	72	6.00%	0.042578
74	58	WCI-34275	###	0.96	83.2	1082	116	0.107	1000	11.60%	69	6.90%	0.063771
75	100	WCI-34275	###	0.96	84.6	1082	94	0.087	1000	9.40%	51	5.10%	0.047135
76	102	WCI-34275	###	0.95	85.7	1691	117.5	0.069	1200	9.79%	60	5.00%	0.035482
77	5	WCI-34275	###	0.95	83.7	1663	207.5	0.125	1000	20.75%	144	14.40%	0.08659
78	25	WCI-34275	###	0.95	83.5	1663	210	0.126	1000	21.00%	92	9.20%	0.055322
79	19	WCI-34275	###	0.91	83.4	1351	159	0.118	1200	13.25%	118.5	9.88%	0.067713
80	12	WCI-34275	###	0.93	84.4	1663	180	0.108	1200	15.00%	129	10.75%	0.077571
81	133	WCI-34275	###	0.97	84.2	1994	109	0.055	1400	7.79%	38	2.71%	0.019057
82	126	WCI-34275	###	1.02	84.3	1994	136.5	0.088	1200	11.38%	46	3.83%	0.023069
83	47	WCI-34275	###	0.95	83.8	1663	187	0.112	1000	18.70%	75.5	7.55%	0.0454
84	66	WCI-34275	###	0.98	84	2889	215.5	0.075	2000	10.78%	129	6.45%	0.044652
85	67	WCI-34275	###	0.98	84.7	2889	191	0.066	2000	9.55%	128.5	6.43%	0.044479
86	83	WCI-34275	###	1.01	84.1	1269	83	0.065	1000	8.30%	56.5	5.65%	0.044523
87	88-see72	WCI-34275	###	ne address	83.9	1269	71.5	0.056	1000	7.15%	54	5.40%	0.042553
88	72	WCI-34275	###	0.98	84.7	1082	98.5	0.091	1000	9.85%	61.5	6.15%	0.056839
89	56	WCI-34275	###	0.96	83.8	2556	281	0.110	2000	14.05%	142.5	7.13%	0.055751
90	39	WCI-34275	###	0.98	83.7	1269	116	0.091	1000	11.60%	80	8.00%	0.063042
91	54	WCI-34275	###	0.98	83.7	1269	110	0.087	1000	11.00%	72	7.20%	0.056738
92	30	WCI-34275	###	0.98	83.5	1269	125.5	0.099	1000	12.55%	86	8.60%	0.06777
93	48	WCI-34275	###	0.96	83.5	1082	105.5	0.098	1000	10.55%	75.5	7.55%	0.069778
93	63	WCI-34275	###	0.91	85.2	1482	108	0.073	1000	10.80%	66	6.60%	0.044534
94	26	WCI-34275	###	0.96	83.6	2556	305	0.119	2000	15.25%	180	9.00%	0.070423
95	18	WCI-34275	###	0.97	83.5	2556	398.5	0.156	2000	19.93%	198.5	9.93%	0.07766
96	15	WCI-34275	###	0.97	83.5	2556	336	0.131	2000	16.80%	209.5	10.48%	0.081964
97	1	WCI-34275	###	0.95	78.2	1663	386.5	0.232	1200	32.21%	234.5	19.54%	0.14101
98	2	WCI-34275	###	0.94	84	1663	402.5	0.242	1200	33.54%	224	18.67%	0.134696
99	38	WCI-34275	###	0.95	83.1	1478	301	0.204	1200	25.08%	96.5	8.04%	0.065291
100	62	WCI-34275	###	1.01	84.1	1269	99	0.078	1000	9.90%	66	6.60%	0.052009
101	125	WCI-34275	###	0.97	83.7	1691	140.5	0.083	2000	7.03%	77.5	3.88%	0.045831
102	129	WCI-34275	###	0.96	84.8	1269	147.5	0.116	2000	7.38%	73.5	3.68%	0.05792
103	71	WCI-34275	###	0.97	83.2	1269	213.5	0.168	1000	21.35%	61.5	6.15%	0.048463
104	7	WCI-34275	###	0.92	83.7	1478	326	0.221	1200	27.17%	143.5	11.96%	0.097091
105	93	WCI-34275	###	1.05	82	1691	223.5	0.132	1400	15.96%	73	5.21%	0.04317
106	91	WCI-34275	###	0.98	83	1269	201	0.158	1400	14.36%	74	5.29%	0.058314
107	114	WCI-34275	###	0.96	81.1	1269	152	0.120	1400	10.86%	62.5	4.46%	0.049251
108	28	WCI-34275	###	1.02	83.4	1691	144	0.085	1200	12.00%	104	8.67%	0.061502
109	132	WCI-34275	###	1.00	85.2	2889	202	0.070	2006	10.07%	68	3.39%	0.023538
110	22	WCI-34275	###	0.94	84.9	1663	130	0.078	1200	10.83%	113	9.42%	0.067949

*WCI community at zipcode 34275 that is a designated BuildSmart community with 456 certified homes (GOLD-6 (1.3%); SILVER-262 (57.5%); and BRONZE-188 (41.2%))

Residential New Construction TECHNICAL SPECIFICATIONS OF ELIGIBILITY

BuildSmart™

- Air distribution system must meet the following criteria:

Trade Ally Program Star

Sealing of the ducted air distribution system may have a maximum cfm

Effective: June 1, 2000

leakage of five percent (5%) of the air-conditioned square footage of the

Florida Power & Light Company

home at the final inspection and three percent (3%) at the mid-point

Residential New Construction BuildSmart™

inspection. State of Florida Energy Code approved closure systems must

Trade Ally Program Standards

be used for all duct system connections.

Docket Nos. 040029-EG and 040660-EG
 Petitioner's Cross Examination Exhibit
 for Hearing held on October 10, 2005
 No.

FPL REPORTED FOLLOWING BUILDSMART HOMES IN ZIPCODE 34275

See response to interrogatory #8*

		*located at page:		16	21	27	29		
		2001	2002	2003	2004	2005 to date			
GOLD	NONE	NONE		2	3	1	6	1.32%	
SILVER	NONE		1	93	103	66	262	57.46%	
BRONZE	NONE	NONE		35	75	78	188	41.23%	
TOTAL			1	130	181	145	456	100.00%	
C+ SAMPLE									
GOLD		0	0	0	0	0	0	0.00%	
SILVER		0	0	0	0	0	0	0.00%	
BRONZE		0	0	2	2	2	6	4.51%	
FAILS duct; passes 10%				5	9	3	17	12.78%	17.29%
FAILED 10%			0	14	58	38	110	82.71%	
TOTAL		0	0	21	69	43	133	100.00%	
							29%		

Tested Build Smart Community* [ALL DATA AS-BUILT]
 Sorted by year; then e-ratio;ducts

YEAR	Home Identifier	Address*	Build Smart proo Medallion*	E-Ratio As-Built	HERS Score	Sq Ft of living area	CFM25 TOTAL	Qn of TOTAL	AHU Rated Air Flow	Duct Leak Total %	CFM25 OUT	Duct Leak Out %	Qn of OUT
GOLD MEDALLION HOMES: 0.7 E-RATIO OR LOWER													
NONE													
SILVER MEDALLION HOMES: 0.71 TO 0.80 E-RATIO													
NONE													
BRONZE MEDALLION HOMES: 0.81-0.90 E-RATIO													
2003													
2004	116	WCI-34275	###	0.89	85.1	1482	131	0.088	1200	10.92%	53	4.42%	0.035762
2005	108	WCI-34275	###	0.90	85.3	3085	204	0.066	2200	9.27%	105	4.77%	0.034036
PASSES E-RATIO BUT FAILS DUCT STANDARDS													
2006	101	WCI-34275	###	0.90	85	1482	140	0.094	1000	14.00%	50.5	5.05%	0.034076
2006	89	WCI-34275	###	0.89	85.2	1994	163	0.082	1200	13.58%	64	5.33%	0.032096
2007	60	WCI-34275	###	0.89	84.8	1994	202	0.101	1200	16.83%	79.5	6.63%	0.03987
2008	59	WCI-34275	###	0.90	85.1	1994	154.5	0.077	1200	12.88%	81.5	6.79%	0.040873
2009	36	WCI-34275	###	0.90	84.8	1994	174	0.087	1200	14.50%	98	8.17%	0.049147
2004													
2005	134	WCI-34275	###	0.89	86.5	1994	140	0.070	1200	11.67%	31	2.58%	0.015547
2005	127	WCI-34275	###	0.89	85.5	2889	299	0.103	2600	11.50%	99.25	3.82%	0.034354
PASSES E-RATIO BUT FAILS DUCT STANDARDS													
2006	84	WCI-34275	###	0.89	84.5	1994	222	0.111	1200	18.50%	67	5.58%	0.033601
2007	79	WCI-34275	###	0.89	86.2	1994	110	0.055	1200	9.17%	70	5.83%	0.035105
2008	77	WCI-34275	###	0.90	85.1	1482	125	0.084	1000	12.50%	59	5.90%	0.039811
2009	70	WCI-34275	###	0.89	84.9	1994	177	0.089	1400	12.64%	88.5	6.32%	0.044383
2010	65	WCI-34275	###	0.90	85	1482	137	0.092	1000	13.70%	65	6.50%	0.04386
2011	49	WCI-34275	###	0.89	85.1	1994	166.5	0.084	1200	13.88%	90.5	7.54%	0.045386
2012	29	WCI-34275	###	0.90	83.7	1351	150.5	0.111	1200	12.54%	103.5	8.63%	0.07861
2013	11	WCI-34275	###	0.90	85.2	1482	116.5	0.079	1000	11.65%	109.5	10.95%	0.073887
2014	3	WCI-34275	###	0.90	82	1351	244	0.181	1000	24.40%	161.5	16.15%	0.119541
2005													
2006	110	WCI-34275	###	0.89	85.4	3085	282	0.091	2200	12.82%	103.5	4.70%	0.033549
2007	106	WCI-34275	###	0.90	84.7	1082	126	0.116	1000	12.60%	48	4.80%	0.044362
PASSES E-RATIO BUT FAILS DUCT STANDARDS													
2007	68	WCI-34275	###	0.89	84.8	1994	198	0.099	1400	14.14%	89	6.36%	0.044634
2008	32	WCI-34275	###	0.90	85	1482	133	0.090	1000	13.30%	83.5	8.35%	0.056343
2009	23	WCI-34275	###	0.90	84.8	1482	146	0.099	1000	14.60%	94	9.40%	0.063428
HOMES THAT FAIL TO MEET BUILDSMART TECHNICAL STANDARDS													
2003													
1	94	WCI-34275	###	0.92	84.7	1482	138	0.093	1000	13.80%	52	5.20%	0.035088
2	4	WCI-34275	###	0.95	81.6	1478	271	0.183	1000	27.10%	148.5	14.85%	0.100474
3	128	WCI-34275	###	0.96	83.6	1082	84.5	0.078	1000	8.45%	38	3.80%	0.03512
4	103	WCI-34275	###			1994	157	0.079	1200	13.08%	59	4.92%	0.029589
5	115	WCI-34275	###	0.98	83.1	1994	169.5	0.085	1200	14.13%	53.5	4.46%	0.02683
6	107	WCI-34275	###	0.97	82.9	1482	120	0.081	1000	12.00%	48	4.80%	0.032389
7	78	WCI-34275	###	0.95	83.3	1478	160	0.108	1000	16.00%	58.5	5.85%	0.039581
8	113	WCI-34275	###	0.96	85.1	1082	213	0.197	1000	21.30%	45	4.50%	0.04159
9	45	WCI-34275	###	0.91	83.4	1351	162	0.120	1000	16.20%	76	7.60%	0.056255
10	46	WCI-34275	###	0.92	84.3	1482	163.5	0.110	1000	16.35%	78	7.60%	0.051282
11	16	WCI-34275	###	0.92	83.4	1478	186	0.126	1200	15.50%	124	10.33%	0.083697
12	96	WCI-34275	###	0.97	84.1	1082	117	0.108	1200	9.75%	62	5.17%	0.057301
13	130	WCI-34275	###	0.98	84.4	1082	76	0.070	1200	6.33%	41	3.42%	0.037893
14	87	WCI-34275	###	0.95	84.4	1663	154	0.093	1200	12.83%	65	5.42%	0.039086
2004													
15	27	WCI-34275	###	0.95	83	1478	181	0.122	1000	18.10%	88	8.80%	0.05954
16	123	WCI-34275	###	0.96	83.4	1691	101	0.060	1200	8.42%	51	4.25%	0.03016
17	55	WCI-34275	###	0.92	83.9	1478	150.5	0.102	1000	15.05%	71.5	7.15%	0.048376
18	52	WCI-34275	###	0.97	84.1	1663	157	0.094	1000	15.70%	73	7.30%	0.043897
19	21	WCI-34275	###	0.95	84.1	1663	178	0.107	1000	17.80%	96	9.60%	0.057727
20	81	WCI-34275	###	0.97	83.5	1269	135.5	0.107	1000	13.55%	57	5.70%	0.044917
21	57	WCI-34275	###	0.97	83.4	1269	141.5	0.112	1000	14.15%	69.5	6.95%	0.054768
22	37	WCI-34275	###	1.05	82.8	1691	150	0.089	1200	12.50%	98	8.17%	0.057954
23	122	WCI-34275	###	1.02	84.6	1082	103.5	0.096	1000	10.35%	43	4.30%	0.039741
24	124	WCI-34275	###	1.05	84.1	1269	122	0.096	1000	12.20%	41	4.10%	0.032309
25	85	WCI-34275	###	0.95	83.7	1478	129	0.087	1200	10.75%	67	5.58%	0.045332
26	121	WCI-34275	###	1.05	81.6	1691	117	0.069	1200	9.75%	52	4.33%	0.030751
27	120	WCI-34275	###	0.92	86.1	1691	225	0.133	1200	18.75%	52	4.33%	0.030751
28	104	WCI-34275	###	0.92	84.8	1482	112	0.076	1000	11.20%	49	4.90%	0.033063
29	42	WCI-34275	###	0.98	82.5	2556	379	0.148	2000	18.95%	158	7.90%	0.061815
30	98	WCI-34275	###	1.00	83.9	1691	143	0.085	1200	11.92%	61.5	5.13%	0.036369
31	40	WCI-34275	###	0.96	83.1	2556	383.5	0.142	2000	18.18%	159	7.95%	0.062207
32	99	WCI-34275	###	0.96	85.4	3085	219	0.071	2200	9.95%	112.5	5.11%	0.036467
33	75	WCI-34275	###	0.96	82.2	2889	457.5	0.158	2600	17.60%	156.5	6.02%	0.054171
34	53	WCI-34275	###	0.96	83.4	2556	326	0.128	2000	16.30%	145	7.25%	0.056729
35	82	WCI-34275	###	1.05	82.9	1691	148.5	0.088	1000	14.85%	56.5	5.65%	0.033412
36	95	WCI-34275	###	1.01	82.9	1269	142	0.112	1200	11.83%	62	5.17%	0.048857
37	33	WCI-34275	###	0.93	83.4	2195	295.5	0.135	1600	18.47%	133.5	8.34%	0.06082
38	41	WCI-34275	###	0.94	81.7	2195	432	0.197	1600	27.00%	127	7.94%	0.057859
39	51	WCI-34275	###	0.96	83.4	2556	244	0.095	1600	15.25%	118	7.38%	0.046166
40	8	WCI-34275	###	1.05	82.5	1691	178	0.105	1000	17.80%	119	11.90%	0.070373
41	64	WCI-34275	###	0.91	84.7	1482	139.5	0.094	1000	13.95%	65.5	6.55%	0.044197
42	92	WCI-34275	###	0.98	83.6	1269	117	0.092	1000	11.70%	52.5	5.25%	0.041371
43	97	WCI-34275	###	0.96	83.9	1269	130.5	0.103	1000	13.05%	51.5	5.15%	0.040583

44	73	WCI-34275	###	0.92	84.7	1482	136	0.092	1000	13.60%	61	6.10%	0.041161
45	131	WCI-34275	###	0.96	84.8	1691	111	0.066	1200	9.25%	41	3.42%	0.024246
46	111	WCI-34275	###	0.97	84.1	1691	96	0.057	1000	9.60%	47	4.70%	0.027794
47	117	WCI-34275	###	0.92	84.8	1691	129	0.076	1200	10.75%	53	4.42%	0.031342
48	14	WCI-34275	###	0.97	82.9	2889	381	0.132	2000	19.05%	212.5	10.63%	0.073555
49	50	WCI-34275	###	0.98	83.4	2889	288.5	0.100	2000	14.43%	149.5	7.48%	0.051748
50	112	WCI-34275	###	1.00	85.1	2889	173.75	0.060	2400	7.24%	110	4.58%	0.038075
51	20	WCI-34275	###	0.96	83.7	2889	293	0.101	2000	14.65%	192	9.60%	0.066459
52	9	WCI-34275	###	0.92	83	1478	212.5	0.144	1200	17.71%	134	11.17%	0.090663
53	34	WCI-34275	###	0.98	83.7	2889	259.5	0.090	2000	12.98%	166.5	8.33%	0.057632
54	35	WCI-34275	###	0.95	84.4	1663	152	0.091	1200	12.67%	98	8.17%	0.05893
55	13	WCI-34275	###	0.95	83.7	1663	208.5	0.125	1000	20.85%	107	10.70%	0.064342
56	118	WCI-34275	###	0.98	84.4	3282	284	0.087	3000	9.47%	132.34	4.41%	0.040323
57	24	WCI-34275	###	0.95	84.1	1663	178	0.107	1000	17.80%	93.5	9.35%	0.056224
58	105	WCI-34275	###	0.92	85.1	1994	192	0.096	1400	13.71%	68	4.86%	0.034102
59	74	WCI-34275	###	0.93	84.7	1663	159.5	0.096	1200	13.29%	73	6.08%	0.043897
60	86	WCI-34275	###	0.92	85.1	1994	130.5	0.065	1200	10.88%	65	5.42%	0.032598
61	69	WCI-34275	###	0.94	84.8	1663	133.5	0.080	1200	11.13%	76	6.33%	0.045701
62	17	WCI-34275	###	0.92	83	1478	213.5	0.144	1200	17.79%	120	10.00%	0.081191
63	119	WCI-34275	###	1.01	84.4	3085	195	0.063	2200	8.86%	97	4.41%	0.031442
64	43	WCI-34275	###	0.97	83.4	2556	304	0.119	2000	15.20%	154.5	7.73%	0.060446
65	90	WCI-34275	###	0.99	84.8	1691	117	0.069	1200	9.75%	64	5.33%	0.037847
66	31	WCI-34275	###	0.98	83.4	2889	290	0.100	2000	14.50%	167.5	8.38%	0.057979
67	80	WCI-34275	###	0.92	85.2	1478	98	0.066	1000	9.80%	57	5.70%	0.038566
68	109	WCI-34275	###	0.93	86	1994	141.5	0.071	1200	11.79%	57	4.75%	0.028588
69	6	WCI-34275	###	0.95	83.8	1663	200	0.120	1000	20.00%	137	13.70%	0.082381
70	10	WCI-34275	###	0.93	84.7	1663	157	0.094	1000	15.70%	111	11.10%	0.068747
71	44	WCI-34275	###	0.92	83.9	1478	151.5	0.103	1000	15.15%	78	7.60%	0.051421
72	61	WCI-34275	###	0.97	83.8	2889	262.5	0.091	2000	13.13%	132.5	6.63%	0.045864
2005													
73	76	WCI-34275	###	0.99	83.3	1691	132	0.078	1200	11.00%	72	6.00%	0.042578
74	58	WCI-34275	###	0.96	83.2	1082	116	0.107	1000	11.60%	69	6.90%	0.063771
75	100	WCI-34275	###	0.96	84.6	1082	94	0.087	1000	9.40%	51	5.10%	0.047135
76	102	WCI-34275	###	0.95	85.7	1691	117.5	0.069	1200	9.79%	60	5.00%	0.035482
77	5	WCI-34275	###	0.95	83.7	1663	207.5	0.125	1000	20.75%	144	14.40%	0.08659
78	25	WCI-34275	###	0.95	83.5	1663	210	0.126	1000	21.00%	92	9.20%	0.055322
79	19	WCI-34275	###	0.91	83.4	1351	159	0.118	1200	13.25%	118.5	9.88%	0.087713
80	12	WCI-34275	###	0.93	84.4	1663	180	0.108	1200	15.00%	129	10.75%	0.077571
81	133	WCI-34275	###	0.97	84.2	1994	109	0.055	1400	7.79%	38	2.71%	0.019057
82	126	WCI-34275	###	1.02	84.3	1994	136.5	0.068	1200	11.38%	46	3.83%	0.023069
83	47	WCI-34275	###	0.95	83.8	1663	187	0.112	1000	18.70%	75.5	7.55%	0.0454
84	66	WCI-34275	###	0.98	84	2889	215.5	0.075	2000	10.78%	129	6.45%	0.044652
85	67	WCI-34275	###	0.98	84.7	2889	191	0.066	2000	9.55%	128.5	6.43%	0.044479
86	83	WCI-34275	###	1.01	84.1	1269	83	0.065	1000	8.30%	56.5	5.65%	0.044523
87	88-see72	WCI-34275	###	no address	83.9	1269	71.5	0.056	1000	7.15%	54	5.40%	0.042553
88	72	WCI-34275	###	0.98	84.7	1082	98.5	0.091	1000	9.85%	61.5	6.15%	0.056839
89	56	WCI-34275	###	0.96	83.8	2556	281	0.110	2000	14.05%	142.5	7.13%	0.055751
90	39	WCI-34275	###	0.98	83.7	1269	116	0.091	1000	11.60%	80	8.00%	0.063042
91	54	WCI-34275	###	0.98	83.7	1269	110	0.087	1000	11.00%	72	7.20%	0.056738
92	30	WCI-34275	###	0.98	83.5	1269	125.5	0.099	1000	12.55%	86	8.60%	0.06777
93	48	WCI-34275	###	0.96	83.5	1082	105.5	0.098	1000	10.55%	75.5	7.55%	0.069778
93	63	WCI-34275	###	0.91	85.2	1482	108	0.073	1000	10.80%	66	6.60%	0.044534
94	26	WCI-34275	###	0.96	83.6	2556	305	0.119	2000	15.25%	180	9.00%	0.070423
95	18	WCI-34275	###	0.97	83.5	2556	398.5	0.156	2000	19.93%	198.5	9.93%	0.07766
96	15	WCI-34275	###	0.97	83.5	2556	336	0.131	2000	16.80%	209.5	10.48%	0.081964
97	1	WCI-34275	###	0.95	78.2	1663	386.5	0.232	1200	32.21%	234.5	19.54%	0.14101
98	2	WCI-34275	###	0.94	84	1663	402.5	0.242	1200	33.54%	224	18.67%	0.134696
99	38	WCI-34275	###	0.95	83.1	1478	301	0.204	1200	25.08%	96.5	8.04%	0.065291
100	62	WCI-34275	###	1.01	84.1	1269	99	0.078	1000	9.90%	66	6.60%	0.052009
101	125	WCI-34275	###	0.97	83.7	1691	140.5	0.083	2000	7.03%	77.5	3.88%	0.045831
102	129	WCI-34275	###	0.96	84.8	1269	147.5	0.116	2000	7.38%	73.5	3.68%	0.05792
103	71	WCI-34275	###	0.97	83.2	1269	213.5	0.168	1000	21.35%	61.5	6.15%	0.048463
104	7	WCI-34275	###	0.92	83.7	1478	326	0.221	1200	27.17%	143.5	11.96%	0.097091
105	93	WCI-34275	###	1.05	82	1691	223.5	0.132	1400	15.96%	73	5.21%	0.04317
106	91	WCI-34275	###	0.98	83	1269	201	0.158	1400	14.36%	74	5.29%	0.058314
107	114	WCI-34275	###	0.96	81.1	1269	152	0.120	1400	10.86%	62.5	4.46%	0.049251
108	28	WCI-34275	###	1.02	83.4	1691	144	0.085	1200	12.00%	104	8.67%	0.061502
109	132	WCI-34275	###	1.00	85.2	2889	202	0.070	2006	10.07%	68	3.39%	0.023538
110	22	WCI-34275	###	0.94	84.9	1663	130	0.078	1200	10.83%	113	9.42%	0.067949

*WCI community at zipcode 34275 that is a designated BuildSmart community with 456 certified homes (GOLD-6 (1.3%); SILVER-262 (57.5%); and BRONZE-188 (41.2%))

Residential New Construction TECHNICAL SPECIFICATIONS OF ELIGIBILITY

BuildSmart™

- Air distribution system must meet the following criteria:

Trade Ally Program Star

Sealing of the ducted air distribution system may have a maximum cfm

Effective: June 1, 2000

leakage of five percent (5%) of the air-conditioned square footage of the

Florida Power & Light Company

home at the final inspection and three percent (3%) at the mid-point

Residential New Construction BuildSmart™

inspection. State of Florida Energy Code approved closure systems must

Trade Ally Program Standards

be used for all duct system connections.

Tested Build Smart Community* [ALL DATA AS-BUILT]
 Sorted by as-built e-ratio

RANK BY AS-BUILT E-RATIO	Home Identifier	Build Srrcc Address* dallion*	E-Ratio As-Built	HERS Score	Sq Ft of living area	CFM25 TOTAL	Qn of TOTAL	AHU Rated Air Flow	Duct Leak Total %	CFM25 OUT	Duct Leak Out %	Qn of OUT	
GOLD MEDALLION HOMES: 0.7 E-RATIO OR LOWER													
NONE													
SILVER MEDALLION HOMES: 0.71 TO 0.80 E-RATIO													
NONE													
BRONZE MEDALLION HOMES: 0.81-0.90 E-RATIO													
1	134	WCI-34275	##	0.89	86.5	1994	140	0.070	1200	11.67%	31	2.58%	0.015547
2	127	WCI-34275	##	0.89	85.5	2889	299	0.103	2600	11.50%	99.25	3.82%	0.034354
3	116	WCI-34275	##	0.89	85.1	1482	131	0.088	1200	10.92%	53	4.42%	0.035762
4	110	WCI-34275	##	0.89	85.4	3085	282	0.091	2200	12.82%	103.5	4.70%	0.033549
5	108	WCI-34275	##	0.90	85.3	3085	204	0.066	2200	9.27%	105	4.77%	0.034036
6	106	WCI-34275	##	0.90	84.7	1082	126	0.116	1000	12.60%	48	4.80%	0.044362
PASSES 10% TEST BUT FAILS DUCT STANDARDS													
7	101	WCI-34275	##	0.90	85	1482	140	0.094	1000	14.00%	50.5	5.05%	0.034076
8	89	WCI-34275	##	0.89	85.2	1994	163	0.082	1200	13.58%	64	5.33%	0.032096
9	84	WCI-34275	##	0.89	84.5	1994	222	0.111	1200	18.50%	67	5.58%	0.033601
10	79	WCI-34275	##	0.89	86.2	1994	110	0.055	1200	9.17%	70	5.83%	0.035105
11	77	WCI-34275	##	0.90	85.1	1482	125	0.084	1000	12.50%	59	5.90%	0.039811
12	70	WCI-34275	##	0.89	84.9	1994	177	0.089	1400	12.64%	88.5	6.32%	0.044383
13	68	WCI-34275	##	0.89	84.8	1994	198	0.099	1400	14.14%	89	6.36%	0.044634
14	65	WCI-34275	##	0.90	85	1482	137	0.092	1000	13.70%	65	6.50%	0.04386
15	60	WCI-34275	##	0.89	84.8	1994	202	0.101	1200	16.83%	79.5	6.63%	0.03987
16	59	WCI-34275	##	0.90	85.1	1994	154.5	0.077	1200	12.88%	81.5	6.79%	0.040873
17	49	WCI-34275	##	0.89	85.1	1994	166.5	0.084	1200	13.88%	90.5	7.54%	0.045386
18	36	WCI-34275	##	0.90	84.8	1994	174	0.087	1200	14.50%	98	8.17%	0.049147
19	32	WCI-34275	##	0.90	85	1482	133	0.090	1000	13.30%	83.5	8.35%	0.056343
20	29	WCI-34275	##	0.90	83.7	1351	150.5	0.111	1200	12.54%	103.5	8.63%	0.07661
21	23	WCI-34275	##	0.90	84.8	1482	146	0.099	1000	14.60%	94	9.40%	0.063428
22	11	WCI-34275	##	0.90	85.2	1482	116.5	0.079	1000	11.65%	109.5	10.95%	0.073887
23	3	WCI-34275	##	0.90	82	1351	244	0.181	1000	24.40%	161.5	16.15%	0.119541
FAILS TO MEET BOTH BUILDSMART 10% and DUCT STANDARDS													
24	19	WCI-34275	##	0.91	83.4	1351	159	0.118	1200	13.25%	118.5	9.88%	0.087713
25	45	WCI-34275	##	0.91	83.4	1351	162	0.120	1000	16.20%	76	7.60%	0.056255
26	63	WCI-34275	##	0.91	85.2	1482	108	0.073	1000	10.80%	66	6.60%	0.044534
27	64	WCI-34275	##	0.91	84.7	1482	139.5	0.094	1000	13.95%	65.5	6.55%	0.044197
28	7	WCI-34275	##	0.92	83.7	1478	326	0.221	1200	27.17%	143.5	11.96%	0.097091
29	9	WCI-34275	##	0.92	83	1478	212.5	0.144	1200	17.71%	134	11.17%	0.090663
30	16	WCI-34275	##	0.92	83.4	1478	186	0.126	1200	15.50%	124	10.33%	0.083897
31	17	WCI-34275	##	0.92	83	1478	213.5	0.144	1200	17.79%	120	10.00%	0.081191
32	44	WCI-34275	##	0.92	83.9	1478	151.5	0.103	1000	15.15%	76	7.60%	0.051421
33	46	WCI-34275	##	0.92	84.3	1482	163.5	0.110	1000	16.35%	76	7.60%	0.051282
34	55	WCI-34275	##	0.92	83.9	1478	150.5	0.102	1000	15.05%	71.5	7.15%	0.048376
35	73	WCI-34275	##	0.92	84.7	1482	136	0.092	1000	13.60%	61	6.10%	0.041161
36	80	WCI-34275	##	0.92	85.2	1478	98	0.066	1000	9.80%	57	5.70%	0.038566
37	86	WCI-34275	##	0.92	85.1	1994	130.5	0.065	1200	10.88%	65	5.42%	0.032598
38	94	WCI-34275	##	0.92	84.7	1482	138	0.093	1000	13.80%	52	5.20%	0.035088
39	104	WCI-34275	##	0.92	84.8	1482	112	0.076	1000	11.20%	49	4.90%	0.033063
40	105	WCI-34275	##	0.92	85.1	1994	192	0.096	1400	13.71%	68	4.86%	0.034102
41	117	WCI-34275	##	0.92	84.8	1691	129	0.076	1200	10.75%	53	4.42%	0.031342
42	120	WCI-34275	##	0.92	86.1	1691	225	0.133	1200	18.75%	52	4.33%	0.030751
43	10	WCI-34275	##	0.93	84.7	1663	157	0.094	1000	15.70%	111	11.10%	0.066747
44	12	WCI-34275	##	0.93	84.4	1663	180	0.108	1200	15.00%	129	10.75%	0.077571
45	33	WCI-34275	##	0.93	83.4	2195	295.5	0.135	1600	18.47%	133.5	8.34%	0.06082
46	74	WCI-34275	##	0.93	84.7	1663	159.5	0.096	1200	13.29%	73	6.08%	0.043697
47	109	WCI-34275	##	0.93	86	1994	141.5	0.071	1200	11.79%	57	4.75%	0.028586
48	2	WCI-34275	##	0.94	84	1663	402.5	0.242	1200	33.54%	224	18.67%	0.134696
49	22	WCI-34275	##	0.94	84.9	1663	130	0.078	1200	10.83%	113	9.42%	0.067949
50	41	WCI-34275	##	0.94	81.7	2195	432	0.197	1600	27.00%	127	7.94%	0.057859
51	69	WCI-34275	##	0.94	84.8	1663	133.5	0.080	1200	11.13%	76	6.33%	0.045701
52	1	WCI-34275	##	0.95	78.2	1663	386.5	0.232	1200	32.21%	234.5	19.54%	0.14101
53	4	WCI-34275	##	0.95	81.6	1478	271	0.183	1000	27.10%	148.5	14.85%	0.100474
54	5	WCI-34275	##	0.95	83.7	1663	207.5	0.125	1000	20.75%	144	14.40%	0.08659
55	6	WCI-34275	##	0.95	83.8	1663	200	0.120	1000	20.00%	137	13.70%	0.082381
56	13	WCI-34275	##	0.95	83.7	1663	208.5	0.125	1000	20.85%	107	10.70%	0.084342
57	21	WCI-34275	##	0.95	84.1	1663	178	0.107	1000	17.80%	96	9.60%	0.057727
58	24	WCI-34275	##	0.95	84.1	1663	178	0.107	1000	17.80%	93.5	9.35%	0.056224
59	25	WCI-34275	##	0.95	83.5	1663	210	0.126	1000	21.00%	92	9.20%	0.055322
60	27	WCI-34275	##	0.95	83	1478	181	0.122	1000	18.10%	88	8.80%	0.05954
61	35	WCI-34275	##	0.95	84.4	1663	152	0.091	1200	12.67%	98	8.17%	0.05893
62	38	WCI-34275	##	0.95	83.1	1478	301	0.204	1200	25.08%	96.5	8.04%	0.065291
63	47	WCI-34275	##	0.95	83.8	1663	187	0.112	1000	18.70%	75.5	7.55%	0.0454
64	78	WCI-34275	##	0.95	83.3	1478	160	0.108	1000	16.00%	58.5	5.85%	0.039581
65	85	WCI-34275	##	0.95	83.7	1478	129	0.087	1200	10.75%	67	5.58%	0.045332
66	87	WCI-34275	##	0.95	84.4	1663	154	0.093	1200	12.83%	65	5.42%	0.039086
67	102	WCI-34275	##	0.95	85.7	1691	117.5	0.069	1200	9.79%	60	5.00%	0.035482
68	20	WCI-34275	##	0.96	83.7	2889	293	0.101	2000	14.65%	192	9.60%	0.066459
69	26	WCI-34275	##	0.96	83.6	2556	305	0.119	2000	15.25%	180	9.00%	0.070423
70	40	WCI-34275	##	0.96	83.1	2556	363.5	0.142	2000	18.18%	159	7.95%	0.062207
71	48	WCI-34275	##	0.96	83.5	1082	105.5	0.098	1000	10.55%	75.5	7.55%	0.069778
72	51	WCI-34275	##	0.96	83.4	2556	244	0.095	1600	15.25%	118	7.38%	0.046166
73	53	WCI-34275	##	0.96	83.4	2556	326	0.128	2000	16.30%	145	7.25%	0.056729

74	56	WCI-34275	##	0.96	83.8	2556	281	0.110	2000	14.05%	142.5	7.13%	0.055751
75	58	WCI-34275	##	0.96	83.2	1082	116	0.107	1000	11.60%	69	6.90%	0.063771
76	75	WCI-34275	##	0.96	82.2	2889	457.5	0.158	2600	17.60%	156.5	6.02%	0.054171
77	97	WCI-34275	##	0.96	83.9	1269	130.5	0.103	1000	13.05%	51.5	5.15%	0.040583
78	99	WCI-34275	##	0.96	85.4	3085	219	0.071	2200	9.95%	112.5	5.11%	0.036467
79	100	WCI-34275	##	0.96	84.6	1082	94	0.087	1000	9.40%	51	5.10%	0.047135
80	113	WCI-34275	##	0.96	85.1	1082	213	0.197	1000	21.30%	45	4.50%	0.04159
81	114	WCI-34275	##	0.96	81.1	1269	152	0.120	1400	10.86%	62.5	4.46%	0.049251
82	123	WCI-34275	##	0.96	83.4	1691	101	0.060	1200	8.42%	51	4.25%	0.03016
83	128	WCI-34275	##	0.96	83.6	1082	84.5	0.078	1000	8.45%	38	3.80%	0.03512
84	129	WCI-34275	##	0.96	84.8	1269	147.5	0.116	2000	7.38%	73.5	3.68%	0.05792
85	131	WCI-34275	##	0.96	84.8	1691	111	0.066	1200	9.25%	41	3.42%	0.024246
86	14	WCI-34275	##	0.97	82.9	2889	381	0.132	2000	19.05%	212.5	10.63%	0.073555
87	15	WCI-34275	##	0.97	83.5	2556	336	0.131	2000	16.80%	209.5	10.48%	0.081964
88	18	WCI-34275	##	0.97	83.5	2556	398.5	0.156	2000	19.93%	198.5	9.93%	0.07766
89	43	WCI-34275	##	0.97	83.4	2556	304	0.119	2000	15.20%	154.5	7.73%	0.060446
90	52	WCI-34275	##	0.97	84.1	1663	157	0.094	1000	15.70%	73	7.30%	0.043697
91	57	WCI-34275	##	0.97	83.4	1269	141.5	0.112	1000	14.15%	69.5	6.95%	0.054768
92	61	WCI-34275	##	0.97	83.8	2889	262.5	0.091	2000	13.13%	132.5	6.63%	0.045864
93	71	WCI-34275	##	0.97	83.2	1269	213.5	0.168	1000	21.35%	61.5	6.15%	0.048463
94	81	WCI-34275	##	0.97	83.5	1269	135.5	0.107	1000	13.55%	57	5.70%	0.044917
95	96	WCI-34275	##	0.97	84.1	1082	117	0.108	1200	9.75%	62	5.17%	0.057301
96	107	WCI-34275	##	0.97	82.9	1482	120	0.081	1000	12.00%	48	4.80%	0.032389
97	111	WCI-34275	##	0.97	84.1	1691	96	0.057	1000	9.60%	47	4.70%	0.027794
98	125	WCI-34275	##	0.97	83.7	1691	140.5	0.083	2000	7.03%	77.5	3.88%	0.045831
99	133	WCI-34275	##	0.97	84.2	1994	109	0.055	1400	7.79%	38	2.71%	0.019057
100	30	WCI-34275	##	0.98	83.5	1269	125.5	0.099	1000	12.55%	86	8.60%	0.06777
101	31	WCI-34275	##	0.98	83.4	2889	290	0.100	2000	14.50%	167.5	8.38%	0.057979
102	34	WCI-34275	##	0.98	83.7	2889	259.5	0.090	2000	12.98%	166.5	8.33%	0.057632
103	39	WCI-34275	##	0.98	83.7	1269	116	0.091	1000	11.60%	60	8.00%	0.063042
104	42	WCI-34275	##	0.98	82.5	2556	379	0.148	2000	18.95%	158	7.90%	0.061815
105	50	WCI-34275	##	0.98	83.4	2889	288.5	0.100	2000	14.43%	149.5	7.48%	0.051748
106	54	WCI-34275	##	0.98	83.7	1269	110	0.087	1000	11.00%	72	7.20%	0.056738
107	66	WCI-34275	##	0.98	84	2889	215.5	0.075	2000	10.78%	129	6.45%	0.044652
108	67	WCI-34275	##	0.98	84.7	2889	191	0.066	2000	9.55%	128.5	6.43%	0.044479
109	72	WCI-34275	##	0.98	84.7	1082	98.5	0.091	1000	9.85%	61.5	6.15%	0.056839
110	91	WCI-34275	##	0.98	83	1269	201	0.158	1400	14.36%	74	5.29%	0.058314
111	92	WCI-34275	##	0.98	83.6	1269	117	0.092	1000	11.70%	52.5	5.25%	0.041371
112	115	WCI-34275	##	0.98	83.1	1994	169.5	0.065	1200	14.13%	53.5	4.46%	0.02663
113	118	WCI-34275	##	0.98	84.4	3282	284	0.087	3000	9.47%	132.34	4.41%	0.040323
114	130	WCI-34275	##	0.98	84.4	1082	76	0.070	1200	6.33%	41	3.42%	0.037893
115	76	WCI-34275	##	0.99	83.3	1691	132	0.078	1200	11.00%	72	6.00%	0.042578
116	90	WCI-34275	##	0.99	84.8	1691	117	0.069	1200	9.75%	64	5.33%	0.037847
117	98	WCI-34275	##	1.00	83.9	1691	143	0.085	1200	11.92%	61.5	5.13%	0.036369
118	112	WCI-34275	##	1.00	85.1	2889	173.75	0.060	2400	7.24%	110	4.58%	0.038075
119	132	WCI-34275	##	1.00	85.2	2889	202	0.070	2006	10.07%	68	3.39%	0.023538
FAILS TO PASS STATE BUILDING CODE													
120	62	WCI-34275	##	1.01	84.1	1269	99	0.078	1000	9.90%	66	6.60%	0.052009
121	83	WCI-34275	##	1.01	84.1	1269	83	0.065	1000	8.30%	56.5	5.65%	0.044523
122	95	WCI-34275	##	1.01	82.9	1269	142	0.112	1200	11.83%	62	5.17%	0.048857
123	119	WCI-34275	##	1.01	84.4	3085	195	0.063	2200	8.86%	97	4.41%	0.031442
124	28	WCI-34275	##	1.02	83.4	1691	144	0.085	1200	12.00%	104	8.67%	0.061502
125	122	WCI-34275	##	1.02	84.6	1082	103.5	0.096	1000	10.35%	43	4.30%	0.039741
126	126	WCI-34275	##	1.02	84.3	1994	136.5	0.068	1200	11.38%	46	3.83%	0.023069
127	8	WCI-34275	##	1.05	82.5	1691	178	0.105	1000	17.80%	119	11.90%	0.070373
128	37	WCI-34275	##	1.05	82.8	1691	150	0.089	1200	12.50%	98	8.17%	0.057954
129	82	WCI-34275	##	1.05	82.9	1691	148.5	0.088	1000	14.85%	56.5	5.65%	0.033412
130	93	WCI-34275	##	1.05	82	1691	223.5	0.132	1400	15.96%	73	5.21%	0.04317
131	121	WCI-34275	##	1.05	81.8	1691	117	0.069	1200	9.75%	52	4.33%	0.030751
132	124	WCI-34275	##	1.05	84.1	1269	122	0.096	1000	12.20%	41	4.10%	0.032309
133	86-see72	WCI-34275	##	ne address	83.9	1269	71.5	0.056	1000	7.15%	54	5.40%	0.042553
134	103	WCI-34275	##			1994	157	0.079	1200	13.08%	59	4.92%	0.029589

*WCI community at zipcode 34275 that is a designated BuildSmart community with 456 certified homes (GOLD-6 (1.3%); SILVER-262 (57.5%); and BRONZE-188 (4

Residential New Construction TECHNICAL SPECIFICATIONS OF ELIGIBILITY

BuildSmart™

- Air distribution system must meet the following criteria:

Trade Ally Program Sealing of the ducted air distribution system may have a maximum cfm

Effective: June 1, 2000

Florida Power & Light Company

Residential New Construction Build

Trade Ally Program Standards

leakage of five percent (5%) of the air-conditioned square footage of the

home at the final inspection and three percent (3%) at the mid-point

inspection. State of Florida Energy Code approved closure systems must

be used for all duct system connections.

Tested Build Smart Community* [ALL DATA AS-BUILT]

Sorted by HERS scores

RANK BY

HERS Home Build Score-Ratio HERS Sq Ft of CFM25 Qn of AHU Rated Duct Leak CFM25 Duct Leak Qn of
 Score Identifier Address* Ratio As-Built Score living area TOTAL TOTAL Air Flow Total % OUT Out % OUT

GOLD MEDALLION HOMES: 0.7 E-RATIO OR LOWER

NONE

SILVER MEDALLION HOMES: 0.71 TO 0.80 E-RATIO

NONE

BRONZE MEDALLION HOMES: 0.81-0.90 E-RATIO

ENERGY STAR HOME® QUALIFIED

1	134	WCI-34275	#	0.89	86.5	1994	140	0.070	1200	11.67%	31	2.58%	0.015547
2	79	WCI-34275	#	0.89	86.2	1994	110	0.055	1200	9.17%	70	5.83%	0.035105
3	120	WCI-34275	#	0.92	86.1	1691	225	0.133	1200	18.75%	52	4.33%	0.030751
4	109	WCI-34275	#	0.93	86	1994	141.5	0.071	1200	11.79%	57	4.75%	0.028586

GREEN BUILDING STANDARD ELIGIBLE

1	127	WCI-34275	#	0.89	85.5	2889	299	0.103	2600	11.50%	99.25	3.82%	0.034354
2	110	WCI-34275	#	0.89	85.4	3085	282	0.091	2200	12.82%	103.5	4.70%	0.033549
3	89	WCI-34275	#	0.89	85.2	1994	163	0.082	1200	13.58%	64	5.33%	0.032096
4	49	WCI-34275	#	0.89	85.1	1994	166.5	0.084	1200	13.88%	90.5	7.54%	0.045386
5	116	WCI-34275	#	0.89	85.1	1482	131	0.088	1200	10.92%	53	4.42%	0.035762
6	70	WCI-34275	#	0.89	84.9	1994	177	0.089	1400	12.64%	88.5	6.32%	0.044383
7	60	WCI-34275	#	0.89	84.8	1994	202	0.101	1200	16.83%	79.5	6.63%	0.039987
8	68	WCI-34275	#	0.89	84.8	1994	198	0.099	1400	14.14%	89	6.36%	0.044634
9	84	WCI-34275	#	0.89	84.5	1994	222	0.111	1200	18.50%	67	5.58%	0.033601
10	108	WCI-34275	#	0.90	85.3	3085	204	0.066	2200	9.27%	105	4.77%	0.034036
11	11	WCI-34275	#	0.90	85.2	1482	116.5	0.079	1000	11.65%	109.5	10.95%	0.073887
12	59	WCI-34275	#	0.90	85.1	1994	154.5	0.077	1200	12.88%	81.5	6.79%	0.040873
13	77	WCI-34275	#	0.90	85.1	1482	125	0.084	1000	12.50%	59	5.90%	0.039811
14	32	WCI-34275	#	0.90	85	1482	133	0.090	1000	13.30%	83.5	8.35%	0.056343
15	65	WCI-34275	#	0.90	85	1482	137	0.092	1000	13.70%	65	6.50%	0.04386
16	101	WCI-34275	#	0.90	85	1482	140	0.094	1000	14.00%	50.5	5.05%	0.034076
17	23	WCI-34275	#	0.90	84.8	1482	146	0.099	1000	14.60%	94	9.40%	0.063428
18	36	WCI-34275	#	0.90	84.8	1994	174	0.087	1200	14.50%	98	8.17%	0.049147
19	106	WCI-34275	#	0.90	84.7	1082	126	0.116	1000	12.60%	48	4.80%	0.044362
20	29	WCI-34275	#	0.90	83.7	1351	150.5	0.111	1200	12.54%	103.5	8.63%	0.07661
21	3	WCI-34275	#	0.90	82	1351	244	0.181	1000	24.40%	161.5	16.15%	0.119541
22	63	WCI-34275	#	0.91	85.2	1482	108	0.073	1000	10.80%	66	6.60%	0.044534
23	64	WCI-34275	#	0.91	84.7	1482	139.5	0.094	1000	13.95%	65.5	6.55%	0.044197
24	19	WCI-34275	#	0.91	83.4	1351	159	0.118	1200	13.25%	118.5	9.88%	0.087713
25	45	WCI-34275	#	0.91	83.4	1351	162	0.120	1000	16.20%	76	7.60%	0.056255
26	80	WCI-34275	#	0.92	85.2	1478	98	0.066	1000	9.80%	57	5.70%	0.038566
27	86	WCI-34275	#	0.92	85.1	1994	130.5	0.065	1200	10.88%	65	5.42%	0.032598
28	105	WCI-34275	#	0.92	85.1	1994	192	0.096	1400	13.71%	68	4.86%	0.034102
29	104	WCI-34275	#	0.92	84.8	1482	112	0.076	1000	11.20%	49	4.90%	0.033063
30	117	WCI-34275	#	0.92	84.8	1691	129	0.076	1200	10.75%	53	4.42%	0.031342
31	73	WCI-34275	#	0.92	84.7	1482	136	0.092	1000	13.60%	61	6.10%	0.041161
32	94	WCI-34275	#	0.92	84.7	1482	138	0.093	1000	13.80%	52	5.20%	0.035088
33	46	WCI-34275	#	0.92	84.3	1482	163.5	0.110	1000	16.35%	76	7.60%	0.051282
34	44	WCI-34275	#	0.92	83.9	1478	151.5	0.103	1000	15.15%	76	7.60%	0.051421
35	55	WCI-34275	#	0.92	83.9	1478	150.5	0.102	1000	15.05%	71.5	7.15%	0.048376
36	7	WCI-34275	#	0.92	83.7	1478	326	0.221	1200	27.17%	143.5	11.96%	0.097091
37	16	WCI-34275	#	0.92	83.4	1478	186	0.126	1200	15.50%	124	10.33%	0.083897
38	9	WCI-34275	#	0.92	83	1478	212.5	0.144	1200	17.71%	134	11.17%	0.090663
39	17	WCI-34275	#	0.92	83	1478	213.5	0.144	1200	17.79%	120	10.00%	0.081191
40	10	WCI-34275	#	0.93	84.7	1663	157	0.094	1000	15.70%	111	11.10%	0.066747
41	74	WCI-34275	#	0.93	84.7	1663	159.5	0.096	1200	13.29%	73	6.08%	0.043897
42	12	WCI-34275	#	0.93	84.4	1663	180	0.108	1200	15.00%	129	10.75%	0.077571
43	33	WCI-34275	#	0.93	83.4	2195	295.5	0.135	1600	18.47%	133.5	8.34%	0.06082
44	22	WCI-34275	#	0.94	84.9	1663	130	0.078	1200	10.83%	113	9.42%	0.067949
45	69	WCI-34275	#	0.94	84.8	1663	133.5	0.080	1200	11.13%	76	6.33%	0.045701
46	2	WCI-34275	#	0.94	84	1663	402.5	0.242	1200	33.54%	224	18.67%	0.134696
46	102	WCI-34275	#	0.95	85.7	1691	117.5	0.069	1200	9.79%	60	5.00%	0.035482
47	35	WCI-34275	#	0.95	84.4	1663	152	0.091	1200	12.67%	98	8.17%	0.05893
48	87	WCI-34275	#	0.95	84.4	1663	154	0.093	1200	12.83%	65	5.42%	0.039086
49	21	WCI-34275	#	0.95	84.1	1663	178	0.107	1000	17.80%	96	9.60%	0.057727
50	24	WCI-34275	#	0.95	84.1	1663	178	0.107	1000	17.80%	93.5	9.35%	0.056224
51	6	WCI-34275	#	0.95	83.8	1663	200	0.120	1000	20.00%	137	13.70%	0.082381
52	47	WCI-34275	#	0.95	83.8	1663	187	0.112	1000	18.70%	75.5	7.55%	0.0454
53	5	WCI-34275	#	0.95	83.7	1663	207.5	0.125	1000	20.75%	144	14.40%	0.08659
54	13	WCI-34275	#	0.95	83.7	1663	208.5	0.125	1000	20.85%	107	10.70%	0.064342
55	85	WCI-34275	#	0.95	83.7	1478	129	0.087	1200	10.75%	67	5.58%	0.045332
56	25	WCI-34275	#	0.95	83.5	1663	210	0.126	1000	21.00%	92	9.20%	0.055322
57	78	WCI-34275	#	0.95	83.3	1478	160	0.108	1000	16.00%	58.5	5.85%	0.039581
58	38	WCI-34275	#	0.95	83.1	1478	301	0.204	1200	25.08%	96.5	8.04%	0.065291
59	27	WCI-34275	#	0.95	83	1478	181	0.122	1000	18.10%	88	8.80%	0.05954
60	99	WCI-34275	#	0.96	85.4	3085	219	0.071	2200	9.95%	112.5	5.11%	0.036467
61	113	WCI-34275	#	0.96	85.1	1082	213	0.197	1000	21.30%	45	4.50%	0.04159

62	129	WCI-34275	#	0.96	84.8	1269	147.5	0.116	2000	7.38%	73.5	3.68%	0.05792
63	131	WCI-34275	#	0.96	84.8	1691	111	0.066	1200	9.25%	41	3.42%	0.024246
64	100	WCI-34275	#	0.96	84.6	1082	94	0.087	1000	9.40%	51	5.10%	0.047135
65	97	WCI-34275	#	0.96	83.9	1269	130.5	0.103	1000	13.05%	51.5	5.15%	0.040583
66	56	WCI-34275	#	0.96	83.8	2556	281	0.110	2000	14.05%	142.5	7.13%	0.055751
67	20	WCI-34275	#	0.96	83.7	2889	293	0.101	2000	14.65%	192	9.60%	0.066459
68	26	WCI-34275	#	0.96	83.6	2556	305	0.119	2000	15.25%	180	9.00%	0.070423
69	128	WCI-34275	#	0.96	83.6	1082	84.5	0.078	1000	8.45%	38	3.80%	0.03512
70	48	WCI-34275	#	0.96	83.5	1082	105.5	0.098	1000	10.55%	75.5	7.55%	0.069778
71	51	WCI-34275	#	0.96	83.4	2556	244	0.095	1800	15.25%	118	7.38%	0.046166
72	53	WCI-34275	#	0.96	83.4	2556	326	0.128	2000	16.30%	145	7.25%	0.056729
73	123	WCI-34275	#	0.96	83.4	1691	101	0.060	1200	8.42%	51	4.25%	0.03016
74	58	WCI-34275	#	0.96	83.2	1082	116	0.107	1000	11.60%	69	6.90%	0.063771
75	40	WCI-34275	#	0.96	83.1	2556	363.5	0.142	2000	18.18%	159	7.95%	0.062207
76	75	WCI-34275	#	0.96	82.2	2889	457.5	0.158	2600	17.60%	156.5	6.02%	0.054171
77	133	WCI-34275	#	0.97	84.2	1994	109	0.055	1400	7.79%	38	2.71%	0.019057
78	52	WCI-34275	#	0.97	84.1	1663	157	0.094	1000	15.70%	73	7.30%	0.043897
79	96	WCI-34275	#	0.97	84.1	1082	117	0.108	1200	9.75%	62	5.17%	0.057301
80	111	WCI-34275	#	0.97	84.1	1691	96	0.057	1000	9.60%	47	4.70%	0.027794
81	61	WCI-34275	#	0.97	83.8	2889	262.5	0.091	2000	13.13%	132.5	6.63%	0.045864
82	125	WCI-34275	#	0.97	83.7	1691	140.5	0.083	2000	7.03%	77.5	3.88%	0.045831
83	15	WCI-34275	#	0.97	83.5	2556	336	0.131	2000	16.80%	209.5	10.48%	0.081964
84	18	WCI-34275	#	0.97	83.5	2556	398.5	0.156	2000	19.93%	198.5	9.93%	0.07766
85	81	WCI-34275	#	0.97	83.5	1269	135.5	0.107	1000	13.55%	57	5.70%	0.044917
86	43	WCI-34275	#	0.97	83.4	2556	304	0.119	2000	15.20%	154.5	7.73%	0.060446
87	57	WCI-34275	#	0.97	83.4	1269	141.5	0.112	1000	14.15%	69.5	6.95%	0.054768
88	71	WCI-34275	#	0.97	83.2	1269	213.5	0.168	1000	21.35%	61.5	6.15%	0.048463
89	14	WCI-34275	#	0.97	82.9	2889	381	0.132	2000	19.05%	212.5	10.63%	0.073555
90	107	WCI-34275	#	0.97	82.9	1482	120	0.081	1000	12.00%	48	4.80%	0.032389
91	67	WCI-34275	#	0.98	84.7	2889	191	0.066	2000	9.55%	128.5	6.43%	0.044479
92	72	WCI-34275	#	0.98	84.7	1082	98.5	0.091	1000	9.85%	61.5	6.15%	0.056839
93	118	WCI-34275	#	0.98	84.4	3282	284	0.087	3000	9.47%	132.34	4.41%	0.040323
94	130	WCI-34275	#	0.98	84.4	1082	76	0.070	1200	6.33%	41	3.42%	0.037893
95	66	WCI-34275	#	0.98	84	2889	215.5	0.075	2000	10.78%	129	6.45%	0.044652
96	34	WCI-34275	#	0.98	83.7	2889	259.5	0.090	2000	12.98%	166.5	8.33%	0.057632
97	39	WCI-34275	#	0.98	83.7	1269	116	0.091	1000	11.60%	80	8.00%	0.063042
98	54	WCI-34275	#	0.98	83.7	1269	110	0.087	1000	11.00%	72	7.20%	0.056738
99	92	WCI-34275	#	0.98	83.6	1269	117	0.092	1000	11.70%	52.5	5.25%	0.041371
100	30	WCI-34275	#	0.98	83.5	1269	125.5	0.099	1000	12.55%	86	8.60%	0.06777
101	31	WCI-34275	#	0.98	83.4	2889	290	0.100	2000	14.50%	167.5	8.38%	0.057979
102	50	WCI-34275	#	0.98	83.4	2889	288.5	0.100	2000	14.43%	149.5	7.48%	0.051748
103	115	WCI-34275	#	0.98	83.1	1994	169.5	0.085	1200	14.13%	53.5	4.46%	0.02683
104	91	WCI-34275	#	0.98	83	1269	201	0.158	1400	14.36%	74	5.29%	0.058314
105	42	WCI-34275	#	0.98	82.5	2556	379	0.148	2000	18.95%	158	7.90%	0.061815
106	90	WCI-34275	#	0.99	84.8	1691	117	0.069	1200	9.75%	64	5.33%	0.037847
107	76	WCI-34275	#	0.99	83.3	1691	132	0.078	1200	11.00%	72	6.00%	0.042578
108	132	WCI-34275	#	1.00	85.2	2889	202	0.070	2006	10.07%	68	3.39%	0.023538
109	112	WCI-34275	#	1.00	85.1	2889	173.75	0.060	2400	7.24%	110	4.58%	0.038075
110	98	WCI-34275	#	1.00	83.9	1691	143	0.085	1200	11.92%	61.5	5.13%	0.036369
NOT ELIGIBLE FOR EITHER ENERGY STAR OR GREEN BUILDING CERTIFICATION													
111	119	WCI-34275	#	1.01	84.4	3085	195	0.063	2200	8.86%	97	4.41%	0.031442
112	62	WCI-34275	#	1.01	84.1	1269	99	0.078	1000	9.90%	66	6.60%	0.052009
113	83	WCI-34275	#	1.01	84.1	1269	83	0.065	1000	8.30%	56.5	5.65%	0.044523
114	95	WCI-34275	#	1.01	82.9	1269	142	0.112	1200	11.83%	62	5.17%	0.048857
115	122	WCI-34275	#	1.02	84.6	1082	103.5	0.096	1000	10.35%	43	4.30%	0.039741
116	126	WCI-34275	#	1.02	84.3	1994	136.5	0.068	1200	11.38%	46	3.83%	0.023069
117	28	WCI-34275	#	1.02	83.4	1691	144	0.085	1200	12.00%	104	8.67%	0.061502
118	124	WCI-34275	#	1.05	84.1	1269	122	0.096	1000	12.20%	41	4.10%	0.032309
119	82	WCI-34275	#	1.05	82.9	1691	148.5	0.088	1000	14.85%	56.5	5.65%	0.033412
120	37	WCI-34275	#	1.05	82.8	1691	150	0.089	1200	12.50%	98	8.17%	0.057954
121	8	WCI-34275	#	1.05	82.5	1691	178	0.105	1000	17.80%	119	11.90%	0.070373
122	93	WCI-34275	#	1.05	82	1691	223.5	0.132	1400	15.96%	73	5.21%	0.04317
123	88-see72	WCI-34275	#	dress	83.9	1269	71.5	0.056	1000	7.15%	54	5.40%	0.042553
124	121	WCI-34275	#	1.05	81.8	1691	117	0.069	1200	9.75%	52	4.33%	0.030751
125	41	WCI-34275	#	0.94	81.7	2195	432	0.197	1600	27.00%	127	7.94%	0.057859
126	4	WCI-34275	#	0.95	81.6	1478	271	0.183	1000	27.10%	148.5	14.85%	0.100474
127	114	WCI-34275	#	0.96	81.1	1269	152	0.120	1400	10.86%	62.5	4.46%	0.049251
128	1	WCI-34275	#	0.95	78.2	1663	386.5	0.232	1200	32.21%	234.5	19.54%	0.14101
129	103	WCI-34275	#			1994	157	0.079	1200	13.08%	59	4.92%	0.029589

*WCI community at zipcode 34275 that is a designated BuildSmart community with 456 certified homes (GOLD-6 (1.3%); SILVER-262 (57.5%);

Residential New (TECHNICAL SPECIFICATIONS OF ELIGIBILITY

BuildSmart™

- Air distribution system must meet the following criteria:

Trade Ally Progra Sealing of the ducted air distribution system may have a maximum cfm

Effective: June 1, 2000 leakage of five percent (5%) of the air-conditioned square footage of the

Florida Power & Light Compan home at the final inspection and three percent (3%) at the mid-point

Residential New Construction t inspection. State of Florida Energy Code approved closure systems must

Trade Ally Program Standards be used for all duct system connections.

Tested Build Smart Community* [ALL DATA AS-BUILT]

Sorted by Duct leakage

RANK BY

DUCT LEAKAGE	Home Identifier	Build Sproc Address*	E-Ratio As-Built	HERS Score	Sq Ft of living area	CFM25 TOTAL	Qn of TOTAL	AHU Rated Air Flow	Duct Leak Total %	CFM25 OUT	Duct Leak Out %	Qn of OUT
--------------	-----------------	----------------------	------------------	------------	----------------------	-------------	-------------	--------------------	-------------------	-----------	-----------------	-----------

GOLD MEDALLION HOMES: 0.7 E-RATIO OR LOWER

NONE

SILVER MEDALLION HOMES: 0.71 TO 0.80 E-RATIO

NONE

BRONZE MEDALLION HOMES: 0.81-0.90 E-RATIO

FOLLOWING MEET BUILDSMART TECHNICAL STANDARDS*** and WOULD BE ELIGIBLE FOR FLORIDA CODE CREDIT FOR "TIGHT DUCTS"													
1	134	WCI-34275	##	0.89	86.5	1994	140	0.070	1200	11.67%	31	2.58%	0.015547
FOLLOWING MEET BUILDSMART TECHNICAL STANDARDS*** and WOULD BE ELIGIBLE FOR FLORIDA CODE CREDIT FOR "TIGHT DUCTS"													
2	127	WCI-34275	##	0.89	85.5	2889	299	0.103	2600	11.50%	99.25	3.82%	0.034354
3	116	WCI-34275	##	0.89	85.1	1482	131	0.088	1200	10.92%	53	4.42%	0.035762
4	110	WCI-34275	##	0.89	85.4	3085	282	0.091	2200	12.82%	103.5	4.70%	0.033549
5	108	WCI-34275	##	0.90	85.3	3085	204	0.066	2200	9.27%	105	4.77%	0.034036
6	106	WCI-34275	##	0.90	84.7	1082	126	0.116	1000	12.60%	48	4.80%	0.044362
FOLLOWING FAIL BUILDSMART TECHNICAL STANDARDS*** but WOULD BE ELIGIBLE FOR FLORIDA CODE CREDIT FOR "TIGHT DUCTS" U													
7	109	WCI-34275	##	0.93	86	1994	141.5	0.071	1200	11.79%	57	4.75%	0.028586
8	131	WCI-34275	##	0.96	84.8	1691	111	0.066	1200	9.25%	41	3.42%	0.024246
9	133	WCI-34275	##	0.97	84.2	1994	109	0.055	1400	7.79%	38	2.71%	0.019057
10	111	WCI-34275	##	0.97	84.1	1691	96	0.057	1000	9.60%	47	4.70%	0.027794
11	115	WCI-34275	##	0.98	83.1	1994	169.5	0.085	1200	14.13%	53.5	4.46%	0.026683
12	132	WCI-34275	##	1.00	85.2	2889	202	0.070	2006	10.07%	68	3.39%	0.023538
13	103	WCI-34275	##			1994	157	0.079	1200	13.08%	59	4.92%	0.029589
FOLLOWING DO NOT MEET BUILDSMART TECHNICAL STANDARDS*** NOR BE ELIGIBLE FOR FLORIDA CODE CREDIT FOR "TIGHT DUCTS"													
14	101	WCI-34275	##	0.90	85	1482	140	0.094	1000	14.00%	50.5	5.05%	0.034076
15	89	WCI-34275	##	0.89	85.2	1994	163	0.082	1200	13.58%	64	5.33%	0.032096
16	84	WCI-34275	##	0.89	84.5	1994	222	0.111	1200	18.50%	67	5.58%	0.033601
17	79	WCI-34275	##	0.89	86.2	1994	110	0.055	1200	9.17%	70	5.83%	0.035105
18	77	WCI-34275	##	0.90	85.1	1482	125	0.084	1000	12.50%	59	5.90%	0.039811
19	70	WCI-34275	##	0.89	84.9	1994	177	0.089	1400	12.64%	88.5	6.32%	0.044363
20	68	WCI-34275	##	0.89	84.8	1994	198	0.099	1400	14.14%	89	6.36%	0.044634
21	65	WCI-34275	##	0.90	85	1482	137	0.092	1000	13.70%	65	6.50%	0.04386
22	60	WCI-34275	##	0.89	84.8	1994	202	0.101	1200	16.83%	79.5	6.63%	0.03987
23	59	WCI-34275	##	0.90	85.1	1994	154.5	0.077	1200	12.88%	81.5	6.79%	0.040873
24	49	WCI-34275	##	0.89	85.1	1994	166.5	0.084	1200	13.88%	90.5	7.54%	0.045386
25	36	WCI-34275	##	0.90	84.8	1994	174	0.087	1200	14.50%	98	8.17%	0.049147
26	32	WCI-34275	##	0.90	85	1482	133	0.090	1000	13.30%	83.5	8.35%	0.056343
27	29	WCI-34275	##	0.90	83.7	1351	150.5	0.111	1200	12.54%	103.5	8.63%	0.07661
28	23	WCI-34275	##	0.90	84.8	1482	146	0.099	1000	14.60%	94	9.40%	0.063428
29	11	WCI-34275	##	0.90	85.2	1482	116.5	0.079	1000	11.65%	109.5	10.95%	0.073887
30	3	WCI-34275	##	0.90	82	1351	244	0.181	1000	24.40%	161.5	16.15%	0.119541
31	64	WCI-34275	##	0.91	84.7	1482	139.5	0.094	1000	13.95%	65.5	6.55%	0.044197
32	63	WCI-34275	##	0.91	85.2	1482	108	0.073	1000	10.80%	66	6.60%	0.044534
33	45	WCI-34275	##	0.91	83.4	1351	162	0.120	1000	16.20%	76	7.60%	0.056255
34	19	WCI-34275	##	0.91	83.4	1351	159	0.118	1200	13.25%	118.5	9.88%	0.087713
35	120	WCI-34275	##	0.92	86.1	1691	225	0.133	1200	18.75%	52	4.33%	0.030751
36	117	WCI-34275	##	0.92	84.8	1691	129	0.076	1200	10.75%	53	4.42%	0.031342
37	105	WCI-34275	##	0.92	85.1	1994	192	0.096	1400	13.71%	68	4.86%	0.034102
38	104	WCI-34275	##	0.92	84.8	1482	112	0.076	1000	11.20%	49	4.90%	0.033063
39	94	WCI-34275	##	0.92	84.7	1482	138	0.093	1000	13.80%	52	5.20%	0.035058
40	86	WCI-34275	##	0.92	85.1	1994	130.5	0.065	1200	10.88%	65	5.42%	0.032598
41	80	WCI-34275	##	0.92	85.2	1478	98	0.066	1000	9.80%	57	5.70%	0.038566
42	73	WCI-34275	##	0.92	84.7	1482	136	0.092	1000	13.60%	61	6.10%	0.041161
43	55	WCI-34275	##	0.92	83.9	1478	150.5	0.102	1000	15.05%	71.5	7.15%	0.048376
44	44	WCI-34275	##	0.92	83.9	1478	151.5	0.103	1000	15.15%	76	7.60%	0.051421
45	46	WCI-34275	##	0.92	84.3	1482	163.5	0.110	1000	16.35%	76	7.60%	0.051282
46	17	WCI-34275	##	0.92	83	1478	213.5	0.144	1200	17.79%	120	10.00%	0.081191
47	16	WCI-34275	##	0.92	83.4	1478	186	0.126	1200	15.50%	124	10.33%	0.083897
48	9	WCI-34275	##	0.92	83	1478	212.5	0.144	1200	17.71%	134	11.17%	0.090663
49	7	WCI-34275	##	0.92	83.7	1478	326	0.221	1200	27.17%	143.5	11.96%	0.097091
50	74	WCI-34275	##	0.93	84.7	1663	159.5	0.096	1200	13.29%	73	6.08%	0.043897
51	33	WCI-34275	##	0.93	83.4	2195	295.5	0.135	1600	18.47%	133.5	8.34%	0.06082
52	12	WCI-34275	##	0.93	84.4	1663	180	0.108	1200	15.00%	129	10.75%	0.077571
53	10	WCI-34275	##	0.93	84.7	1663	157	0.094	1000	15.70%	111	11.10%	0.066747
54	69	WCI-34275	##	0.94	84.8	1663	133.5	0.080	1200	11.13%	76	6.33%	0.045701
55	41	WCI-34275	##	0.94	81.7	2195	432	0.197	1600	27.00%	127	7.94%	0.057859
56	22	WCI-34275	##	0.94	84.9	1663	130	0.078	1200	10.83%	113	9.42%	0.067949
57	2	WCI-34275	##	0.94	84	1663	402.5	0.242	1200	33.54%	224	18.67%	0.134896
58	102	WCI-34275	##	0.95	85.7	1691	117.5	0.069	1200	9.79%	60	5.00%	0.035482
59	87	WCI-34275	##	0.95	84.4	1663	154	0.093	1200	12.83%	65	5.42%	0.039086
60	85	WCI-34275	##	0.95	83.7	1478	129	0.087	1200	10.75%	67	5.58%	0.045332
61	78	WCI-34275	##	0.95	83.3	1478	180	0.108	1000	16.00%	58.5	5.85%	0.039581
62	47	WCI-34275	##	0.95	83.8	1663	187	0.112	1000	18.70%	75.5	7.55%	0.0454
63	38	WCI-34275	##	0.95	83.1	1478	301	0.204	1200	25.08%	96.5	8.04%	0.065291
64	35	WCI-34275	##	0.95	84.4	1663	152	0.091	1200	12.67%	98	8.17%	0.05893
65	27	WCI-34275	##	0.95	83	1478	181	0.122	1000	18.10%	88	8.80%	0.05954
66	25	WCI-34275	##	0.95	83.5	1663	210	0.126	1000	21.00%	92	9.20%	0.055322
67	24	WCI-34275	##	0.95	84.1	1663	178	0.107	1000	17.80%	93.5	9.35%	0.056224
68	21	WCI-34275	##	0.95	84.1	1663	178	0.107	1000	17.80%	96	9.60%	0.057727
69	13	WCI-34275	##	0.95	83.7	1663	208.5	0.125	1000	20.85%	107	10.70%	0.064342
70	6	WCI-34275	##	0.95	83.8	1663	200	0.120	1000	20.00%	137	13.70%	0.082361
71	5	WCI-34275	##	0.95	83.7	1663	207.5	0.125	1000	20.75%	144	14.40%	0.08659

72	4	WCI-34275	##	0.95	81.6	1478	271	0.183	1000	27.10%	148.5	14.85%	0.100474
73	1	WCI-34275	##	0.95	78.2	1663	386.5	0.232	1200	32.21%	234.5	19.54%	0.14101
74	128	WCI-34275	##	0.96	83.6	1082	84.5	0.078	1000	8.45%	38	3.80%	0.03512
74	123	WCI-34275	##	0.96	83.4	1691	101	0.060	1200	8.42%	51	4.25%	0.03016
75	114	WCI-34275	##	0.96	81.1	1269	152	0.120	1400	10.86%	62.5	4.46%	0.049251
76	113	WCI-34275	##	0.96	85.1	1082	213	0.197	1000	21.30%	45	4.50%	0.04159
77	100	WCI-34275	##	0.96	84.6	1082	94	0.087	1000	9.40%	51	5.10%	0.047135
78	99	WCI-34275	##	0.96	85.4	3085	219	0.071	2200	9.95%	112.5	5.11%	0.036487
79	97	WCI-34275	##	0.96	83.9	1269	130.5	0.103	1000	13.05%	51.5	5.15%	0.040583
80	51	WCI-34275	##	0.96	83.4	2556	244	0.095	1600	15.25%	118	7.38%	0.046166
81	129	WCI-34275	##	0.96	84.8	1269	147.5	0.116	2000	7.38%	73.5	3.68%	0.05792
82	75	WCI-34275	##	0.96	82.2	2889	457.5	0.158	2600	17.60%	156.5	6.02%	0.054171
83	58	WCI-34275	##	0.96	83.2	1082	116	0.107	1000	11.60%	69	6.90%	0.063771
84	56	WCI-34275	##	0.96	83.8	2556	281	0.110	2000	14.05%	142.5	7.13%	0.055751
85	53	WCI-34275	##	0.96	83.4	2556	326	0.128	2000	16.30%	145	7.25%	0.056729
86	48	WCI-34275	##	0.96	83.5	1082	105.5	0.098	1000	10.55%	75.5	7.55%	0.069778
87	40	WCI-34275	##	0.96	83.1	2556	363.5	0.142	2000	18.18%	159	7.95%	0.062207
88	26	WCI-34275	##	0.96	83.6	2556	305	0.119	2000	15.25%	180	9.00%	0.070423
89	20	WCI-34275	##	0.96	83.7	2889	293	0.101	2000	14.65%	192	9.60%	0.066459
90	125	WCI-34275	##	0.97	83.7	1691	140.5	0.083	2000	7.03%	77.5	3.88%	0.045831
91	107	WCI-34275	##	0.97	82.9	1482	120	0.081	1000	12.00%	48	4.80%	0.032389
92	81	WCI-34275	##	0.97	83.5	1269	135.5	0.107	1000	13.55%	57	5.70%	0.044917
93	71	WCI-34275	##	0.97	83.2	1269	213.5	0.168	1000	21.35%	61.5	6.15%	0.048463
94	61	WCI-34275	##	0.97	83.8	2889	262.5	0.091	2000	13.13%	132.5	6.63%	0.045864
95	52	WCI-34275	##	0.97	84.1	1663	157	0.094	1000	15.70%	73	7.30%	0.043897
96	96	WCI-34275	##	0.97	84.1	1082	117	0.108	1200	9.75%	62	5.17%	0.057301
97	57	WCI-34275	##	0.97	83.4	1269	141.5	0.112	1000	14.15%	69.5	6.95%	0.054768
98	43	WCI-34275	##	0.97	83.4	2556	304	0.119	2000	15.20%	154.5	7.73%	0.060446
99	18	WCI-34275	##	0.97	83.5	2556	398.5	0.158	2000	19.93%	198.5	9.93%	0.07766
100	15	WCI-34275	##	0.97	83.5	2556	336	0.131	2000	16.80%	209.5	10.48%	0.081964
101	14	WCI-34275	##	0.97	82.9	2889	381	0.132	2000	19.05%	212.5	10.63%	0.073555
101	130	WCI-34275	##	0.98	84.4	1082	76	0.070	1200	6.33%	41	3.42%	0.037893
102	118	WCI-34275	##	0.98	84.4	3282	284	0.087	3000	9.47%	132.34	4.41%	0.040323
103	92	WCI-34275	##	0.98	83.6	1269	117	0.092	1000	11.70%	52.5	5.25%	0.041371
104	67	WCI-34275	##	0.98	84.7	2889	191	0.066	2000	9.55%	128.5	6.43%	0.044479
105	66	WCI-34275	##	0.98	84	2889	215.5	0.075	2000	10.78%	129	6.45%	0.044652
106	91	WCI-34275	##	0.98	83	1269	201	0.158	1400	14.36%	74	5.29%	0.058314
107	72	WCI-34275	##	0.98	84.7	1082	98.5	0.091	1000	9.85%	61.5	6.15%	0.056839
108	54	WCI-34275	##	0.98	83.7	1269	110	0.087	1000	11.00%	72	7.20%	0.056738
109	50	WCI-34275	##	0.98	83.4	2889	288.5	0.100	2000	14.43%	149.5	7.48%	0.051748
110	42	WCI-34275	##	0.98	82.5	2556	379	0.148	2000	18.95%	158	7.90%	0.061815
111	39	WCI-34275	##	0.98	83.7	1269	116	0.091	1000	11.60%	80	8.00%	0.063042
112	34	WCI-34275	##	0.98	83.7	2889	259.5	0.090	2000	12.98%	166.5	8.33%	0.057632
113	31	WCI-34275	##	0.98	83.4	2889	290	0.100	2000	14.50%	167.5	8.38%	0.057979
114	30	WCI-34275	##	0.98	83.5	1269	125.5	0.099	1000	12.55%	86	8.60%	0.06777
115	90	WCI-34275	##	0.99	84.8	1691	117	0.069	1200	9.75%	64	5.33%	0.037847
116	76	WCI-34275	##	0.99	83.3	1691	132	0.078	1200	11.00%	72	6.00%	0.042578
117	112	WCI-34275	##	1.00	85.1	2889	173.75	0.060	2400	7.24%	110	4.58%	0.038075
118	98	WCI-34275	##	1.00	83.9	1691	143	0.085	1200	11.92%	61.5	5.13%	0.036369
FOLLOWING FAIL FLORIDA CODE													
119	126	WCI-34275	##	1.02	84.3	1994	136.5	0.068	1200	11.38%	46	3.83%	0.023069
120	119	WCI-34275	##	1.01	84.4	3085	195	0.063	2200	8.86%	97	4.41%	0.031442
121	95	WCI-34275	##	1.01	82.9	1269	142	0.112	1200	11.83%	62	5.17%	0.048857
122	83	WCI-34275	##	1.01	84.1	1269	83	0.065	1000	8.30%	56.5	5.65%	0.044523
123	62	WCI-34275	##	1.01	84.1	1269	99	0.078	1000	9.90%	66	6.60%	0.052009
124	122	WCI-34275	##	1.02	84.6	1082	103.5	0.096	1000	10.35%	43	4.30%	0.039741
125	28	WCI-34275	##	1.02	83.4	1691	144	0.085	1200	12.00%	104	8.67%	0.061502
126	124	WCI-34275	##	1.05	84.1	1269	122	0.096	1000	12.20%	41	4.10%	0.032309
127	121	WCI-34275	##	1.05	81.8	1691	117	0.069	1200	9.75%	52	4.33%	0.030751
128	93	WCI-34275	##	1.05	82	1691	223.5	0.132	1400	15.96%	73	5.21%	0.04317
129	82	WCI-34275	##	1.05	82.9	1691	148.5	0.088	1000	14.85%	56.5	5.65%	0.033412
130	37	WCI-34275	##	1.05	82.8	1691	150	0.089	1200	12.50%	98	8.17%	0.057954
131	8	WCI-34275	##	1.05	82.5	1691	178	0.105	1000	17.80%	119	11.90%	0.070373
DUPLICATE?													
132	88-see72	WCI-34275	## ne address	83.9	1269	71.5	0.056	1000	7.15%	54	5.40%	0.042553	

*WCI community at zipcode 34275 that is a designated BuildSmart community with 456 certified homes (GOLD-6 (1.3%); SILVER-262 (57.5%); and BRONZE-188 (4

***leakage to outdoors not greater than 3 cfm per 100 sq.ft. AND (emphasis added) total leakage not greater than 9 cfm per 100 sq.ft. of conditioned floor area

at a pressure differential of 25 Pascal across the entire system." MEANS Qn total should not exceed .09 and Qn out should not exceed .03

Residential New Construction TECHNICAL SPECIFICATIONS OF ELIGIBILITY

BuildSmart™

***Air distribution system must meet the following criteria:

Trade Ally Program Sealing of the ducted air distribution system may have a maximum cfm

leakage of five percent (5%) of the air-conditioned square footage of the

home at the final inspection and three percent (3%) at the mid-point

inspection. State of Florida Energy Code approved closure systems must

Trade Ally Program Standards be used for all duct system connections.

Effective: June 1, 2000

Florida Power & Light Company

Residential New Construction

Trade Ally Program Standards

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET 040069-EG
NO. D4066D-EG Exhibit No. 21
Company/ Cale's Plus
Witness: Jon Klengerbo
Date: 10-10-05



Residential Energy Services Network

RESBlog | Site Map |

Setting the STANDARD for Q

- About RESNET
- Energy Ratings & Mortgages
- RESNET Standards
- RESNET Accredited Programs
- Become a Certified Rater
- Join RESNET
- Rater Resources
- Lender Resources
- Builder Resources
- Consumer Resources
- RESBlog
- RESNET Conference
- Energy Codes
- Related Sites

RESBlog

Postings on this Blog do not constitute an endorsement of any product or service or opinions by RESNET

Utility Intrusion into Energy-Efficiency Programs

Monday, June 20, 2005 - 7:10 PM

This should be a short posting and based upon logic and/or common sense regarding the infiltration of Investor-Owned Utilities into Energy-Efficiency Programs. To be straight forward and to the point:

1. Investor Owned Utilities (IOU's) exist to maximize profits for their shareholders. All the end-arounds and smoke-and-mirror PR programs about energy-conservation are used as a public relations spin to achieve their ultimate goal... to increase profits and/or appease regulators. That is what every for-profit company is naturally expected to achieve.
2. Why do IOU's want to de-market their product which derives them of profit...because they don't want to build additional power plants? Or maybe where they will either increase profits through increased usage, or, in the case of regulated IOU's, request rate hikes to ensure a level of profitability that would be acceptable to shareholders?
3. Why do you care as rater (this is a rater forum?)? Well, if you are in the rating business, it would make sense to involve yourself with issues that would affect the climate for you, as a professional, to succeed as a business and more importantly to affect the atmosphere in which you are able to market your trade.

Some Thoughts for Consideration and Input.

Jon Klongerbo

Posted In: [Posts and Views](#) :: [Email a Friend](#)

Comments

Let me list some of the large beasts out here in the home energy jungle

Submissions

- [Submit Link](#)
- [Submit Post](#)

Archive

- [September 2005 \(0\)](#)
- [August 2005 \(0\)](#)
- [July 2005 \(49\)](#)
- [June 2005 \(34\)](#)
- [May 2005 \(35\)](#)
- [April 2005 \(32\)](#)
- [March 2005 \(31\)](#)
- [February 2005 \(29\)](#)
- [January 2005 \(27\)](#)
- [December 2004 \(25\)](#)
- [November 2004 \(23\)](#)

Categories

- [Building Perfco and Business](#)
- [Hot Topics](#)
- [News from RE](#)
- [Posts and Vie](#)
- [Technical](#)
- [Upcoming Ev](#)

(Investor Owned Utilities are only one of several), and then lets look at the good points Mr. Klongerbo raises.

1. (Governmental) Federal, State and Local Governments, including legislative bodies, permitting agencies, code providers, corporation commissions, utility commissions and energy agencies.
2. (Component Manufacturing) Windows, Doors, Lumber Products, HVAC, Plumbing, Lighting, Electrical, Appliances, Insulation.
3. (Home Builders) Custom Homes, Local Production, National Production, Manufactured.
4. (Mortgage Industry) Appraisers, Underwriters, Banks, FNMA, VA, etc.
5. (Utilities) Investor Owned, Municipal, Electric, Natural Gas, Combination

So let's just say there are a lot of pretty big feet stomping around in the Rater hunting grounds. Of course they all have their own interests, and are influenced by outside forces as well.

It seems to me that of all the parties listed above, the investor owned utility may be one of the best entities for raters not to fear or attack but to converse with and partner with. A utility company, regardless of their reason for taking an interest in home energy efficiency, is faced with fairly high costs for stepping in to the arena. Utility wages are as high as or higher than those of the other groups listed above. Overheads for retirement and healthcare benefits are significant. Costs for new programs, equipment and vehicles must be approved and budgeted well in advance, and administrative costs can be staggering. Adding personnel is very complicated, downsizing even worse. For these reasons, I would recommend looking at Investor Owned Utilities as potential customers instead of competitors.

Smart, nimble entrepreneurs (an apt description of the rater persona is it not?) should certainly be able to perform ratings for less than a utility can on their own. I wouldn't necessarily go in looking for a jack pot of easy dollars as every bid would be at reduced rates for quantities of services. Also, attitudes may have to be improved toward gradual improvements in energy efficiency over larger scales, instead of cutting edge, award winning, or "off grid" results on a handful of homes. There is room for improvement at both ends of that spectrum. If you can break in and become a utility subcontractor, opportunities may blossom. An example would be to use the utilities entree to the national builders to offer additional services.

On to end-arounds, smoke-and-mirror PR programs, share holder profits and appeasing regulators. Jon, your summation comes down to concerns over your ability to market your trade. Therefore I must assume that your own motives are less pure than the wind driven snow, and that you too would like to make a dollar at what you are about. Please get down off the high horse. The very existence of a nationally certified rating trade springs out of market forces, political pressures and resulting regulatory guidelines, the same things that the utilities struggle under daily. Why are you retaking the rater test or taking the Rater QA test? To appease regulators, right? (Apologies Steve B. and RESNET, we know it's the right thing!)

You may be surprised at the attitude I find among my utility coworkers, who agree that they find satisfaction in working to supply safe reliable energy to their community at reasonable cost. I think this is on balance with what I am sure is the positive motivation you must have personally in promoting residential energy efficiency. Ultimately for us all it does come down to providing customer needs, and responding to that which is market driven and or legally required. At some point if a rater can't show that his \$300 rating will save 301 time value adjusted dollars over the lifespan of his recommendations, business may soften, and he may just end up wishing for some utility company PR programs to take part in.

In the meantime- Most production homes in the area where I work have gone from ratings of about 81 to about 87 over the last six years, and I'm quite proud of the role we at Southwest Gas Corporation have played, along with our builder partners, and with the regulatory input and approval of the Arizona Corporation Commission and its staff, in creating that improvement.

Links
None

Feeds

RSS 2.0

Posted By: [Eric Shoberg](#)

Comment On Utility Intrusion into Energy-Efficiency Programs

Name:

Email:

Web Address:

Remember Me: Yes No

Comment:

[About RESNET](#) | [Energy Ratings & Mortgages](#) | [RESNET Standards](#) | [RESNET Accredited Pro](#)
[Become a Certified Rater](#) | [Join RESNET](#) | [Rater Resources](#) | [Lender Resources](#) | [Builder Resources](#) | [Con](#)
[RESBlog](#) | [RESNET Conference](#) | [Energy Codes](#) | [Related Sites](#)

© 2005 Residential Energy Services Network
P.O. Box 4561, Oceanside, CA 92052-4561, (760) 806-3448
Send Comments, Questions or Suggestions to: info@natresnet.org

FLORIDA PUBLIC SERVICE COMMISSION

DOCKET 040069-EG+

NO. 040660-EG Exhibit No. 22

Company/ Calc's-Plus

Witness: Philip fairey Deposition

Date: 10-10-05

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

IN RE:)
)
Petition for approval of) Docket No. 040660-EG
Modifications to BuildSmart)
Program by Florida Power &)
Light Company)

-----)
IN RE:) Docket No. 040029-EG
)
Petition for approval of)
Numeric conservation goals)
By Florida Power & Light)
Company)

-----) Filed: September 8, 2005

DEPOSITION OF: PHILIP FAIREY
DATE: September 14, 2005
TIME: 1:00 p.m. - 4:10 p.m.
PLACE: Arter Reporting Services
100 Rialto Place
Suite 700
Melbourne, Florida
REPORTED BY: DEBRA M. ARTER
Registered Diplomate Reporter
Certified Realtime Reporter

COPY

**ARTER REPORTING SERVICES
POST OFFICE BOX 560368
ROCKLEDGE, FLORIDA 32956-0368
(321) 632-5806 * FAX (321) 632-0386**

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

A P P E A R A N C E S

WILLIAM J. TAIT, ESQUIRE
1061 Windwood Way
Tallahassee, Florida 32311

Appearing for Petitioner Calcs-Plus
(By telephone)

PATRICK M. BRYAN, ESQUIRE
Florida Power & Light Company
700 Universe Boulevard
Juno Beach, Florida 33408-0420

Appearing for Florida Power & Light Company

MARTHA CARTER BROWN, ESQUIRE
Office the General Counsel
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Appearing for Florida Public Service
Commission
(By telephone)

ALSO PRESENT:

JUDY HARLOW, ESQUIRE
Commission Staff Analyst
Division of Economic Regulation
(By telephone)

HOLLY DUQUETTE
Corporate Representative
Florida Power & Light Company

* * * * *

I N D E X

TESTIMONY OF PHILIP FAIREY:

Direct Examination by Mr. Bryan	4
Cross Examination by Mr. Tait	99

CERTIFICATE OF THE COURT REPORTER	113
-----------------------------------	-----

E X H I B I T S

Florida Power & Light Company's
Exhibits for Identification:

1 ASHRAE Standard 152-2004	71
----------------------------	----

2 Slide presentation materials: Weatherization 201	74
---	----

3 Slide presentation materials: Producing Airtight Ducts	78
---	----

P R O C E E D I N G S

PHILIP FAIREY

being first duly sworn, was examined and testified upon the oath as follows:

DIRECT EXAMINATION

BY MR. BRYAN:

Q. Please state your full name.

A. Philip Fairey.

Q. And what is your professional address, Mr. Fairey?

A. 1679 Clearlake Road, Cocoa, Florida.

Q. Okay, and have you given a deposition before, sir?

A. Yes.

Q. Okay, so you're familiar generally with the rules of how these work.

A. Generally.

Q. I would just invite you to let me know if you don't understand a question, I'll be happy to try to rephrase it for you. And if you need to take a break at any point, just let us know and we'll be happy to accommodate you.

Can you briefly describe your educational background.

A. Yes, I have an undergraduate degree in

1 architecture and a Master's degree in city and regional
2 planning.

3 Q. And your undergraduate degree was from which
4 institution?

5 A. Clemson, University.

6 Q. In what year?

7 A. 1969.

8 Q. And your Master's degree from which school?

9 A. Clemson University.

10 Q. And the year, please?

11 A. 1973.

12 Q. Okay. And your present position?

13 A. I'm Deputy Director of the Florida Solar Energy
14 Center.

15 Q. And can you briefly describe what the Florida
16 Solar Energy Center is?

17 A. Yeah, the Florida Solar Energy Center is the
18 State's energy research institute, it's a Type 1
19 university research institute under the state university
20 system. It is supposed to serve the state-wide needs of
21 the state in terms of energy efficiency and energy
22 research.

23 We have approximately 140 employees and an annual
24 budget between 10 and \$12 million a year. The majority
25 of that, those funds come from external contracts that

1 we win in the open marketplace.

2 Q. For research projects?

3 A. For research projects, correct.

4 Q. And how long have you been employed by the
5 Florida Solar Energy Center?

6 A. 25 years.

7 Q. And what are your duties today as Deputy
8 Director?

9 A. My duties are to represent the Director in his
10 absence and to represent the Center at various meetings,
11 functions and et cetera, and to work with the directors
12 of the different divisions of research that we have in
13 formulating research plans for the Center and attracting
14 funding to the Center.

15 Q. And do you have direct -- let me rephrase that.

16 Do you have responsibility over the BERS rating
17 system or program?

18 A. Our Center does. Our Center is, has a no-cost
19 contract with the Department of Community Affairs to
20 administer the Building and Energy Rating System in the
21 State of Florida. We train certified raters. We answer
22 technical questions that people have and we produce
23 the -- produce and maintain the software that is used by
24 the rating system.

25 Q. Okay, who at the -- I'm just going to use the

1 acronym FSEC.

2 A. Uh-huh.

3 Q. Who at FSEC is responsible for administering that
4 program? Is there one reason that is responsible for
5 that?

6 A. There is a primary coordinator, her name is Tei
7 Kerchinski.

8 Q. We're going to need to spell that.

9 A. Please don't ask me to spell that.

10 Q. What's her first name?

11 A. T E I, her first name is T E I, last name is
12 K U R C H K I, or something like that. She just changed
13 her name. She's been with us a while, but she changed
14 it from Simmons to Kerchinski.

15 Q. Just to mess with you, right?

16 A. Please excuse me.

17 Q. Okay, and who does she report to in the chain at
18 FSEC?

19 A. She reports to our Director of Buildings
20 Research.

21 Q. Okay, and ultimately do those, do they all flow
22 up to you?

23 A. Yes.

24 Q. And how long have you been employed by the
25 Florida Solar Energy Center?

1 A. 25 years.

2 Q. And you've been Deputy Director for how long?

3 A. Thirteen.

4 Q. And you had a stint in there as Interim Director,
5 I understand?

6 A. Yes.

7 Q. From what year to year?

8 A. From -- it was 26 months, and it ended January of
9 this year.

10 Q. Okay. And FSEC, you mentioned earlier that it's
11 part of the university, the state university system,
12 it's affiliated with the University of Central Florida,
13 is that correct?

14 A. That's correct.

15 Q. Now, looking at the resume' that you supplied
16 with your prefiled testimony, it mentions that from 1986
17 to 2000 you were President of Building Consultants
18 Group, Inc.

19 A. That's correct.

20 Q. Can you tell me what that firm was, the nature of
21 the business of that firm?

22 A. The nature of the business of that firm was
23 diagnosis and recommendations on remediation for
24 buildings that had problems, largely concerned with
25 moisture problems and mold and mildew problems in

1 buildings.

2 And the firm did both diagnostic tests and
3 measurements and made recommendations for remediation of
4 problems that were associated with the buildings.

5 Q. Did that firm have anything to do with energy
6 ratings?

7 A. No.

8 Q. Okay. And what happened to your interest in --
9 well, you were President. Did you have an ownership
10 interest in that firm?

11 A. I owned it completely.

12 Q. And what happened?

13 A. I dissolved it in 2000.

14 Q. Okay. You were served with a subpoena that
15 required you to bring certain documents. Did you bring
16 documents with you today?

17 A. Yes, I did.

18 Q. Can you tell me what you brought pursuant to the
19 subpoena.

20 A. Well, pursuant to the subpoena I brought the
21 testimony of Daniel Haywood and Steven Sim.

22 Q. Okay.

23 A. Which were documents that were relied on for my
24 original testimony.

25 Q. Okay, and just for the record, you've handed me

1 copies of their direct prefiled testimony. Did you
2 bring any other documents with you today?

3 A. I brought my testimony, because my memory ain't
4 so good anymore.

5 Q. Okay, well, I brought a copy just in case you
6 hadn't, so I'm glad you did.

7 A. And I also brought copies of the rebuttal
8 testimony of Mr. Sim and Mr. Haywood.

9 Q. Okay. Where did you -- who provided you with
10 this testimony? First, let's start with the direct
11 testimony.

12 A. The direct testimony came off line. It came from
13 the, I downloaded it from the Public Service Commission
14 site where the docket is located.

15 Q. Okay, and the same thing with the rebuttal
16 testimony?

17 A. No, the rebuttal testimony was forwarded to me by
18 e mail by Mr. Tait.

19 Q. Okay, did you bring any other documents with you
20 today? The directions, for what good they were.

21 A. And the deposition -- I mean the subpoena.

22 Q. And the subpoena. Am I safe in assuming that you
23 relied on no other documents in the preparation of your
24 prefiled testimony in this case other than what you've
25 brought today?

1 A. No, not directly.

2 Q. Okay, tell me what else, then.

3 A. Well, I mean, indirectly you rely on everything
4 you've learned over 25 years, so no particular
5 documents, no.

6 Q. Okay, so you didn't -- when you sat down to
7 formulate your prefiled testimony, you didn't have
8 documents in front of you that you were working from,
9 you may have --

10 A. I did not.

11 Q. -- you may have knowledge from documents over the
12 years that helped you formulate your testimony, is that
13 fair?

14 A. That's very fair.

15 Q. Okay, thank you. Have you met Mr. Tait?

16 A. Yes.

17 Q. Okay, when was the first time you met Mr. Tait?

18 A. I don't recall the year, but it was shortly after
19 he became the Director of the Florida Energy Office. It
20 would have been in the early '90s, I would say. And I
21 mean, just -- this is just a supposition, but I would
22 say it was in the '93 kind of time frame.

23 Q. And at that time you did work for FSEC still?

24 A. Yes, I did.

25 Q. And in what context was it, professional context?

1 A. Yes, it was. We do a considerable amount of
2 contract research for the Florida Energy Office, and he
3 was the new Director of the office. And when I met him,
4 I made a trip up to Tallahassee specifically to meet
5 him.

6 Q. Okay. And do you recall how long he stayed in
7 that position as Director of the Energy Office?

8 A. I believe it was for close to eight years.

9 Q. And did you have an ongoing professional
10 relationship with him --

11 A. Yes, I did.

12 Q. -- for all those years? And did FSEC perform
13 research projects for his organization?

14 A. Yes, we did.

15 Q. Does Mr. Tait represent the Florida Solar Energy
16 Center in this proceeding?

17 A. No.

18 Q. Does he represent you?

19 A. No.

20 Q. Have you been retained as an expert witness in
21 this matter?

22 A. No.

23 Q. So you don't have any sort of written agreement
24 with Mr. Tait or the Petitioners.

25 A. No.

1 Q. Okay. Are you receiving any compensation for
2 your testimony in this proceeding?

3 A. No.

4 Q. Okay. Are the opinions in your prefiled
5 testimony in this proceeding, do they represent your
6 personal opinions or do they represent the official
7 position of FCE?

8 A. They represent my personal opinions.

9 Q. Have you acted as a witness in any other
10 proceedings, whether they're legal proceedings or
11 regulatory, where Mr. Tait has been the attorney of
12 record?

13 A. No.

14 Q. Okay, have you acted as a witness in any other
15 proceedings or lawsuits, regulatory or legal, where
16 either Mr. Klongerbo or Mr. Stroer were parties?

17 A. Yes.

18 Q. Can you tell me.

19 A. I was a witness at a hearing a number of years
20 ago where Mr. Klongerbo and Mr. Stroer were present, and
21 the circumstances were that an organization called the
22 National Home Energy Raters Association was petitioning
23 the Public Service Commission to essentially not allow
24 utilities to provide ratings free of charge.

25 Q. BERS or HERS ratings?

1 A. That's correct.

2 Q. And do you know -- who was the Respondent in that
3 case? Do you recall whether it was Florida Power &
4 Light Company?

5 A. I don't recall precisely, I do not.

6 Q. And what year do you think that was?

7 A. At least five years ago, I think.

8 Q. Have you been involved in any lawsuit or
9 proceedings with Mr. Klongerbo or Mr. Stroer or their
10 firm, Calcs-Plus?

11 A. No.

12 Q. Have you met Mr. Dennis Stroer?

13 A. Yes.

14 Q. And when was the first time you met him?

15 A. I don't recall the exact date. I am reasonably
16 active in the national rating industry, and I have had
17 occasion to meet Dennis a number of times.

18 Q. Are you and he involved in any of the same
19 organizations?

20 A. Yes, he is a member of RESNET, and I am the
21 President of that organization.

22 Q. Is he on any committees at RESNET, do you know?

23 A. He may be on -- you'll have to excuse me, I'm not
24 positive on who's on every committee. But he may be on
25 one of the committees.

1 Q. And for approximately how long have you known Mr.
2 Stroer?

3 A. Approximately five years.

4 Q. And in your work for RESNET, do you have occasion
5 to talk with Mr. Stroer on RESNET duties from time to
6 time?

7 A. I usually talk with him at pretty much all of the
8 annual conferences, I see him there. I don't see him
9 very often. I probably see Dennis once a year, maybe
10 twice a year.

11 Q. Is he a personal friend of yours?

12 A. No.

13 Q. Do have any financial or business ties with Mr.
14 Stroer --

15 A. No.

16 Q. -- other than RESNET and your affiliation with
17 RESNET?

18 A. No.

19 Q. NERA, is that the National Energy Rating
20 Association?

21 A. Yes, I believe it still exists, I'm not positive.

22 Q. That's N E R A?

23 A. That's correct.

24 Q. Okay, are you a member or --

25 A. No, I am not.

1 Q. Were you at any point in time?

2 A. No, I was not.

3 Q. Okay, what about Jon Klongerbo, when did you
4 first meet him, if you've met him?

5 A. Mid '90s I would say was the first time I met
6 Jon.

7 Q. Mid '90s?

8 A. I don't know the exact date.

9 Q. And what was the -- I'm sorry.

10 A. It was probably ten years ago or more.

11 Q. And the context of your meeting him was what?

12 A. He worked for the Florida Solar Energy Center.

13 Q. Okay. And what was his position at that point?

14 A. He was what the state system calls an OPS
15 employee, other personnel services, and he was an
16 employee who was working on research projects for some
17 of the principal investigators that were involved in the
18 research projects.

19 Q. Okay, do you know the nature of the research
20 projects he was involved in?

21 A. I believe one of the research projects that he
22 was involved in -- well, in general, the nature of the
23 research projects that he was involved in had to do with
24 buildings research.

25 Q. And what does that mean, buildings research?

1 A. Research on how buildings perform in Florida's
2 climate, whether it has to do with the efficiency of the
3 building, the durability of the building, moisture
4 problems in buildings, there's a whole host of things
5 that the Center does with respect to buildings research.

6 And I believe Mr. Klongerbo was much involved in
7 the work we were doing in the early '90s with FPL on a
8 broad, large field study of homes that were built in
9 1992 and 1993 to try to characterize their performance
10 and to look at how that performance stacked up against
11 energy codes and ratings systems within Florida.

12 Q. Were those the studies that led to the BuildSmart
13 Program, to your knowledge?

14 A. They were.

15 Q. So Mr. Klongerbo worked on those studies?

16 A. Yes, he did.

17 Q. Okay.

18 A. It's my recollection; I can't be absolutely
19 positive, but that is my recollection.

20 Q. I understand, thank you. Did you work on those
21 studies, as well?

22 A. Yes, I did.

23 Q. I'll get back to that in a moment. Do you recall
24 approximately when Mr. Klongerbo left FSEC?

25 A. I can take a guess. I would guess in the

1 1998-1999 time frame.

2 Q. Do you know the circumstances of his leaving
3 FSEC?

4 A. Not precisely.

5 Q. What do you know?

6 A. He left to take work for other companies. He was
7 never a, quote, full-time employee of FSEC, to my
8 knowledge. And he left to work on projects that I
9 believe some utilities were trying to get started. But
10 I'm not positive.

11 Q. Have you had occasion since he left FSEC to have
12 discussions with Mr. Klongerbo?

13 A. I would say about like Mr. Stroer; I might see
14 Jon once a year.

15 Q. Would that be typically at RESNET or any
16 other --

17 A. More likely in my office; he drops in from time
18 to time to see Tei.

19 Q. To see Tei --

20 A. Kerchinski.

21 Q. Okay. Just friendly visits or on business?

22 A. I think there's something going on there. I
23 don't know exactly what it is, but I think there's a
24 relationship between them.

25 Q. Okay, a personal relationship.

1 A. Yes.

2 Q. Now, what about Richard Dixon, have you met Mr.
3 Dixon?

4 A. Yes.

5 Q. Mr. Dixon is with the Department of Community
6 Affairs?

7 A. That is correct.

8 Q. How long have you known him?

9 A. 25 years.

10 Q. Your paths, I'm assuming, have crossed quite a
11 bit because of the --

12 A. Many times.

13 Q. -- work that FSEC does for the DCA.

14 A. And the involvement that FSEC has as the
15 Department's technical support for codes and standards.

16 Q. Do you consider -- do you ever see Mr. Dixon
17 outside of a professional context?

18 A. No.

19 Q. And how often do you have to deal, say, in the,
20 in a year --

21 A. Two to three times a year I see or talk to Rick.

22 Q. Okay. Neil Moyer, currently he's employed by
23 FSEC, is that correct?

24 A. That is correct.

25 Q. And how long have you known him?

1 A. Since the very early 1990s, I would say 1991 time
2 frame.

3 Q. And how did you first meet him?

4 A. I first met Neil when he worked for another
5 organization that was involved in research along with us
6 on duct leakage in buildings. I think the organization
7 was something like Natural Florida Retrofit, or
8 something like that.

9 We were involved with them in both research and
10 the development of training and educational materials
11 and course work for duct leakage in residential
12 buildings.

13 Q. And do you know how it came to pass that Mr.
14 Moyer came to be employed at FSEC?

15 A. Yes, he was employed by another firm in
16 Massachusetts and wanted to get back in the Florida area
17 and came to see me, and I offered him a job.

18 Q. All right, and what position did you offer to
19 him?

20 A. He is a research scientist at the Florida Solar
21 Energy Center, and his primary area of expertise is, we
22 tend to call it uncontrolled air flow in buildings,
23 studying how pressure gradients in buildings impact the
24 performance, durability, health and safety and indoor
25 air quality in buildings.

1 Q. I'm sorry, did you say when he started at FSEC?

2 A. I did not say. I would have to guess. He's been
3 with us, I think, more than five years but less than
4 ten.

5 Q. Okay, do you know if he at any point in time
6 worked for Calcs-Plus, the Petitioner in this case?

7 A. I do not know. If I had to guess, I would guess
8 no. But I do not know.

9 MR. BRYAN: We heard a funny noise on
10 the phone. I guess I want to check and
11 see if everybody's still there.

12 MS. BROWN: We're still here.

13 MR. TAIT: I'm still here.

14 MR. BRYAN: Okay, very good.

15 MR. TAIT: But we heard the funny noise
16 here.

17 MR. BRYAN: We're still here, then.

18 BY MR. BRYAN:

19 Q. Last, but not least, Ken Fonarel (phonetic)?

20 A. Ken Fonarel, yes.

21 Q. Have you met Mr. Fonarel?

22 A. Yes, I know Mr. Fonarel.

23 Q. And when did you first meet him?

24 A. 1998 kind of time frame. No, no, wait a minute,
25 that's not right. No, that is probably right, in the

1 1998 kind of time frame, perhaps before.

2 Q. Okay, and the context of your meeting him was?

3 A. The context of my meeting Ken was that Ken was
4 very interested in, in the Building and Energy Rating
5 System in Florida.

6 Q. And did he seek you out?

7 A. Yes.

8 Q. And so do you know him also from professional
9 organizations at this point over the years?

10 A. The only professional organization I think we're
11 both members of is RESNET.

12 Q. Okay. Do you have occasion to speak with him
13 periodically throughout the year?

14 A. Periodically, no more than once a year.

15 Q. Is there any particular purpose of the
16 once-a-year conversation?

17 A. He usually has a complaint that he wants to air.

18 Q. Okay. About the ratings business?

19 A. Yes. In broad, general context, yes.

20 Q. Do you consider the, and I'm going to use this
21 term and tell me if you don't understand it, but is
22 there a small, you know, ratings, or raters' community
23 within the State of Florida? Is that a fair way to
24 characterize --

25 A. Yes, you certainly wouldn't characterize it as

1 large or big.

2 Q. And do many of the raters, or people involved in
3 the rating business, HERS rating, BERS rating, safe to
4 say many of them know each other?

5 A. I would say most of them know each other, yes.

6 Q. Prior to this deposition today, did you have any
7 discussions with Mr. Tait concerning the deposition?

8 A. Yes.

9 Q. When did you, when did those discussions take
10 place?

11 A. Last night.

12 Q. And how did that come about?

13 A. Mr. Tait called me to tell me that in depositions
14 it was best just to answer the questions.

15 Q. Okay. Good advice. Did you discuss the
16 substance of what your testimony would be today?

17 A. No.

18 Q. How long did the conversation last?

19 A. Five minutes, maybe.

20 Q. Did you discuss the case in general in any manner
21 other than he told you to answer questions in a
22 deposition?

23 A. Well, he told me not to volunteer information,
24 just to answer the questions and not try to expound on
25 the answers too much was the main substance of the

1 conversation.

2 Q. Okay, did he discuss with you the status of this
3 proceeding?

4 A. No.

5 Q. Was there anything, any other discussion with him
6 concerning this deposition?

7 A. No.

8 Q. Now, I believe you said earlier that Mr. Tait
9 forwarded to you the rebuttal testimony of Mr. Sim and
10 Mr. --

11 A. That's correct.

12 Q. -- Haywood, Dan. Okay, when did he forward those
13 to you?

14 A. Maybe a week ago, or less.

15 Q. I can tell you that were filed on Friday, I
16 believe, of last week so it would have had to have
17 been --

18 A. Less than that. He may have forwarded them to me
19 on Friday, I'm not positive.

20 Q. Did you have discussions with Mr. Tait concerning
21 the rebuttal testimony of Mr. Haywood and Mr. Sim?

22 A. Brief. Mr. Tait indicated that he thought I
23 should read that rebuttal testimony before coming to
24 this deposition.

25 Q. Did he tell you why he thought that?

1 A. He said that he thought it would give me a better
2 feel for what was likely to occur at the deposition.

3 Q. Did you have any other substantive conversation
4 with Mr. Tait concerning the rebuttal testimony?

5 A. No.

6 Q. Did you say earlier that he mailed you the
7 rebuttal testimony?

8 A. That's correct, along with a number of other
9 people.

10 Q. Did you have a specific discussion then, by
11 telephone on the rebuttal conversation, was that a
12 different telephone conversation than last night's call?

13 A. Yes, that was different than last night's call.
14 And I do not recall if that was a telephone conversation
15 or that was included in the e mail message, I don't
16 recall. But the communication did occur.

17 Q. Have you had any discussions with Mr. Stroer
18 concerning the deposition today?

19 A. No.

20 Q. Mr. Klongerbo?

21 A. No.

22 Q. Any of the other witnesses, Mr. Dixon, Mr. Moyer,
23 Mr. Fonarel?

24 A. No.

25 Q. Okay, I would like to ask some questions, then,

1 about your prefiled testimony.

2 A. May I refer to it?

3 Q. You certainly may. I'm not going to be asking
4 specific questions about the substance of it just
5 yet --

6 A. Okay.

7 Q. -- although we will get to that.

8 A. All right.

9 Q. But certainly, you may have it in front of you.
10 First, how were you contacted to provide testimony in
11 this proceeding?

12 A. I think I was probably first contacted by phone
13 by Mr. Tait, and he asked me if he could use me as a
14 witness. And I told him that I would -- if he wanted to
15 use me as a witness, he would have to, he would need to
16 subpoena me.

17 Q. Okay, did you -- in that first phone
18 conversation, did he discuss the nature of this case
19 with you?

20 A. I would say broadly, yes.

21 Q. And do you know approximately when he contacted
22 you?

23 A. Not very long before I got the subpoena. So I
24 mean -- you see my concept of time is --

25 Q. I understand.

1 A. What happened the day before yesterday feels like
2 a week to me.

3 Q. So with your subpoena came certain questions?

4 A. With the subpoena came 40 questions.

5 Q. Had you and Mr. Tait discussed what those
6 questions should be at any point in time before you got
7 the subpoena with the questions?

8 A. No, we had not.

9 Q. Okay. Had you had discussions with Mr. Stroer or
10 Mr. Klongerbo about what questions should be included in
11 your subpoena?

12 A. No, I have not.

13 Q. How did you go about -- when you received your
14 subpoena with the 40 questions, or thereabouts, how did
15 you go about preparing your testimony?

16 A. Very quickly. The timeline for the subpoena and
17 answering the questions was, I believe, less than two
18 days. And so early the next morning after receiving the
19 subpoena I sat down at my computer and started banging
20 out answers.

21 Q. And how long did that take you, about?

22 A. I probably spent a total of five hours answering
23 the questions.

24 Q. And then how did you convey those answers back to
25 Mr. Tait?

1 A. I sent them by e mail.

2 Q. Okay.

3 A. I just answered them on the form that they were
4 in and returned the document to Mr. Tait.

5 Q. While you were preparing your answers, did you
6 have conversations with Mr. Tait about any particular
7 question?

8 A. I did not.

9 Q. Any discussions with Mr. Klongerbo or Mr. Stroer?

10 A. I did not, they weren't up.

11 Q. Okay. Did the answers that you first provided to
12 Mr. Tait, were those answers ever edited or changed?

13 A. No, they were not.

14 Q. Did you have discussion with Mr. Tait once he
15 received your answers?

16 A. Yes, I think we had one discussion, and the
17 substance of the discussion was that he had to get it in
18 this numbered, double-space format and, you know, he
19 wanted to know if I knew how to do that. And I told him
20 no.

21 Q. Did you have discussions related to the substance
22 of your testimony?

23 A. No, I did not.

24 Q. So you sent off your answers and that was the end
25 of it, basically, in terms of your prefiled testimony.

1 A. That is correct.

2 Q. Since filing that testimony or submitting your
3 opinions to Mr. Tait, who then filed your testimony,
4 have you been asked to render any additional opinions in
5 this proceeding?

6 A. No, I have not.

7 Q. Are you planning to attend the final hearing in
8 this proceeding on October 10 in Tallahassee?

9 A. I was under the assumption I didn't have any real
10 choice in that matter. But yes, my plan --

11 Q. That's a yes?

12 A. Yes.

13 Q. Has Mr. Tait or have the Petitioners in any way
14 offered to compensate you for your travel expenses when
15 you go to Tallahassee for the final hearing?

16 A. No, they have not.

17 Q. Do you intend to seek reimbursement for those
18 expenses?

19 A. No, I do not.

20 Q. Can I ask why not?

21 A. Well, yes, you can. My logic on that is that
22 this is part of my job working for the State. We were
23 the developers of this rating system under the
24 Department of Community Affairs, and our job is to try
25 to assist the citizens of the state in saving energy.

1 And I consider this part of my job as a State
2 employee, to be responsive to subpoenas that pertain to
3 what our job is. And I didn't think that reimbursement
4 was even possible.

5 Q. Okay.

6 A. Under those circumstances.

7 Q. And what you just expressed to me, is that, was
8 the thought process, that this is part of your job
9 working for the State, is that because of the nature of
10 the relief that the Petitioners are seeking in this
11 case, or does that not matter to you, it's just it's
12 related to ratings, therefore, it's part of your job?

13 A. It has nothing to do with the nature of the
14 relief. It is -- my thought processes were that this
15 was part of our charge is to be able to explain what the
16 rating system does, where it came from, what the rules
17 are, et cetera, et cetera, et cetera. And it has
18 nothing to do with the nature of the relief.

19 Q. Okay, but in this particular case, as I read your
20 prefiled testimony, it seems to me that you're offering
21 opinions rather than just, you know, factual history or
22 explaining ratings. Do you agree with that assessment,
23 or no?

24 A. Well, I don't know. Basically, what I tried to
25 do was answer the questions that were asked. If you

1 have specific questions about places where you think
2 things were opinion rather than fact, you know, I'd be
3 happy to discuss those.

4 Q. Okay, well, we'll get into that in a little
5 while, then. Were you informed at any point of the
6 nature of the relief that the Petitioners are seeking in
7 this matter?

8 A. I was informed that they're seeking relief and
9 that they're seeking -- and I don't know what the
10 terminology is, but they're seeking that the Public
11 Service Commission deny the request for continuation of
12 the program.

13 Q. Of the BuildSmart Program.

14 A. Yes. And if that's the nature of the relief that
15 you're talking about, then yes, I was informed.

16 Q. Yeah, I was asking, actually, what your
17 understanding of the nature -- of the relief that they
18 sought. And is that the extent of it? Just based on
19 your understanding.

20 A. Yes, based on my understanding.

21 Q. Have you had discussions with Mr. Stroer or Mr.
22 Klongerbo or Mr. Tait about the relief that they're
23 seeking in this proceeding?

24 A. Not with Mr. Klongerbo or Mr. Stroer; but Mr.
25 Tait did inform me that they were seeking relief and

1 that that included not granting approval for the
2 program.

3 Q. Okay, fair enough. Aside from the prefiled
4 testimony of Mr. Sim and Mr. Haywood that was provided
5 to you by Mr. Tait, did Mr. Tait provide you with any
6 other documents related to this matter to assist you in
7 preparing prefiled testimony?

8 A. No, he did not.

9 Q. Did they provide you any other documents to
10 assist you in providing testimony at the final hearing?

11 A. No, they did not.

12 Q. And I asked specifically with respect to Mr.
13 Tait. Did Mr. Stroer or Mr. Klongerbo provide you any
14 documents?

15 A. No, they did not.

16 Q. Have you had any e mail correspondence or written
17 correspondence with Mr. Stroer or Mr. Klongerbo
18 concerning this proceeding since you've been involved?

19 A. No, I have not.

20 Q. Now, FSEC has had a relationship with Florida
21 Power & Light Company over the years, too, is that
22 correct?

23 A. That is correct.

24 Q. Do you know in the last ten years how many
25 projects FPL has funded through FSEC?

1 A. No, I -- you know, I don't have that figure off
2 the top of my head. I can certainly find out. And we
3 have different kinds of arrangements with FPL. Some of
4 them are project-based. And I know we have at least one
5 individual that has what amounts to a blanket contract
6 from time to time task orders get issued against.

7 So it would be -- I could get the answer to that
8 question, but I don't know it.

9 Q. But generally, FSEC has an ongoing relationship
10 and has had a relationship with Florida Power & Light
11 Company over the years?

12 A. For a large number of years.

13 Q. And do you have a ballpark estimate of the dollar
14 value of the projects FPL has funded?

15 A. No.

16 Q. Would it surprise you if the dollar value was in
17 the millions of dollars over the years?

18 A. No.

19 Q. That would not surprise you.

20 A. No, it would not surprise me in the least.

21 Q. Are you aware of current projects FSEC's
22 performing for Florida Power & Light Company?

23 A. I'm aware of maybe a couple, you know. I believe
24 we have a project that's being conducted by Jim Cummings
25 and we have, I believe, a blanket contract that Charlie

1 Crum has. I'm not aware of any of the absolute
2 specifics.

3 Q. As Deputy Director of FSEC, do you know if FSEC
4 desires to continue its relationship with Florida Power
5 & Light Company?

6 A. I would say the answer to that is definitively
7 yes.

8 Q. And the reason for that is?

9 A. Because we're a research firm for hire, and we
10 don't want to destroy our relationships with any of our
11 clients.

12 Q. Would you consider Florida Power & Light Company
13 to be one of the better clients?

14 A. It is certainly a good client.

15 Q. Now, you mentioned FSEC derives its revenues
16 primarily from performing these sort of research
17 projects.

18 A. That is correct.

19 Q. Does FSEC receive revenues in connection with the
20 ratings system in Florida? Maybe I'll break that down.

21 You mentioned earlier that FSEC has a no-cost
22 contract with DCA to administer the Florida ratings
23 system?

24 A. That's correct.

25 Q. Explain that to me, what does that mean?

1 A. Well, the law requires that the Department of
2 Community Affairs is responsible for Florida's Building
3 and Energy Rating System. And the Department of
4 Community Affairs entered into a no-cost contract with
5 us to do the administration of that system.

6 And in return for that no-cost contract, they
7 gave us the right to collect revenues from sales of
8 software and to collect modest revenues for what is
9 called the Registry of Rated Buildings.

10 The standards require that buildings which are
11 rated be maintained in a data base, and that is one of
12 the functions that we perform. And we charge \$15 to do
13 that.

14 Q. \$15 to do what, to --

15 A. To take all of the data that is relative to the
16 building and to store it and to maintain it in a
17 state-wide data base of registered buildings, we call it
18 a building registry.

19 Q. Right, okay.

20 A. And that's, that registry is actually required by
21 national and state standards. So in return for the
22 revenues that are available through those kinds of
23 services, we agreed to a no-cost contract with the
24 Department of Community Affairs to administer their
25 program for them.

1 Q. When did you enter into that no-cost contract
2 with the DCA?

3 A. I'm going to have to guess, but I'm going to say
4 in the 1996 time frame.

5 Q. Do you know if that, if there was, that contract
6 went out to bid or was --

7 A. It did not go out to bid.

8 Q. So DCA came to FSEC and you negotiated a no-cost
9 contract; there were no other bidders.

10 A. No, there were no other bidders.

11 Q. The software that you mentioned that you can
12 derive revenues from, is that Energy Gauge software?

13 A. That is Energy Gauge, that's correct.

14 Q. And that Energy Gauge software is what a rater
15 would use to derive a BERS rating?

16 A. That is correct.

17 Q. And --

18 A. Energy Gauge is a family of software, and there
19 are a number of different pieces of that software. One
20 of those pieces of that software family will allow
21 raters to derive ratings, yes.

22 Q. And FSEC is a licensor of that software?

23 A. That is correct.

24 Q. So FSEC licenses that software to a certified or
25 qualified rater?

1 A. To certified raters only.

2 Q. And that's a revenue source for FSEC.

3 A. Yes. Does it offset the cost? No.

4 Q. Okay, do you know approximately, like last year,
5 what the license, Energy Gauge license revenues were for
6 FSEC?

7 A. For ratings software? I don't know the exact
8 number, but we have approximately 60 to 70 pieces of
9 ratings software out there in the field being actively
10 used. It's not a huge number.

11 Q. When you say 60 pieces, does that mean 60
12 licenses?

13 A. Yes. And they're all single-user licenses.

14 Q. Do you know what the license fee is?

15 A. Yes, I believe it's \$119.

16 Q. Per year?

17 A. Yes.

18 Q. And to register a BERS rating or HERS score, FSEC
19 charges \$15?

20 A. That is correct.

21 Q. Who pays that fee?

22 A. The certified rater.

23 Q. Does FSEC receive or derive revenues in any other
24 way related to the BERS rating system?

25 A. Well, there is a Building and Energy Rating

1 System for commercial buildings, as well. I don't think
2 we've ever sold a piece of software, although we have to
3 make sure that we have it available.

4 And FSEC does provide software on a national
5 basis, which really can't be used in Florida, but
6 Florida software can't be used anywhere else because of
7 the nature of the various software products. But
8 nothing directly related to the Florida Building Energy
9 Efficiency Ratings Act.

10 Q. Now, you were involved in the infancy of the
11 ratings, the creation of the ratings in Florida, is that
12 correct?

13 A. That's correct.

14 Q. Explain to me your involvement?

15 A. I believe it was 19 -- late 1993 the then, I
16 believe, Director of the Florida Energy Office at that
17 time came to us and asked us if we could create a
18 ratings system for Florida, that Florida had just
19 recently passed a law and the law required a uniform
20 rating system for the State of Florida.

21 And they wanted to know if we could create one.
22 And we said yes.

23 Q. Was the Director of the Florida Energy Office at
24 that time Mr. Tait?

25 A. No, at that time it was Mr. Michael Ashworth, who

1 was Mr. Tait's successor.

2 Q. Okay, and so in response to his request that
3 FSEC -- is it FSEC or you individually went about --

4 A. It was FSEC. I was the principal investor,
5 project manager, whatever you want to call it. It was
6 a very short-fuse kind of thing, we got to get this done
7 if five months, can you do it for us and, you know,
8 here's how much money we got to spend.

9 As I recall, you know, something had to be done
10 before the end of -- I seem to recall a December kind of
11 time frame. There was quite a mad rush to get something
12 done and finished. And at that time the system was not
13 computerized.

14 Q. Uh-huh, okay. When you created this system, this
15 rating system, did you have any visions of, you know,
16 how it would take off in Florida?

17 A. I think we were very hopeful that it would be
18 widely used. Because part of our charge is to save
19 energy in Florida. And we felt like having the ability
20 to look at the relative efficiency of buildings would in
21 a marketplace environment induce more consumers to
22 choose more efficient buildings, which would save energy
23 in Florida.

24 Q. Is it fair to say you've been disappointed with
25 the number of ratings that have taken place in Florida

1 since its inception?

2 A. I think disappointed is a little too strong a
3 word. I think if the, if the right incentives were in
4 place and the right information were in place for
5 consumers, we would have seen more ratings take place
6 and we would have seen more energy savings than we have.

7 Q. Is it part of your charge as Deputy Director of
8 FSEC to try to increase the number of ratings that occur
9 in Florida?

10 A. No, not specifically. I think it's part of my
11 charge as Deputy Director of FSEC to try to increase the
12 efficiency with which the state uses energy and its
13 energy resources.

14 But I wouldn't say it's part of my specific
15 charge to increase the number of ratings, per se. I
16 mean, ratings can be used for all kinds of things. We
17 would like them to be used in a consumer marketplace as
18 a way of, for consumers to make a determination about
19 what is and is not in their best interest. That's,
20 after all, the reason they were created.

21 Q. Does FSEC -- let me go back.

22 There's a national raters' test, I believe, that
23 was --

24 A. There is now, yes.

25 Q. And was that created by RESNET?

1 A. That was.

2 Q. Of which you are the current President.

3 A. That is correct.

4 Q. If somebody wants to become a rater, a certified
5 rater in the State of Florida, does he or she go to
6 RESNET to take the test or do they go to FSEC to take
7 the test?

8 A. They could go directly to RESNET. But the way
9 the national standards are written, that National Core
10 test is not sufficient to become a rater. Quote, local
11 jurisdiction, states, are allowed to put additional
12 requirements for certification on raters.

13 And the State of Florida has its own law and rule
14 which determines what it takes to become a rater. And
15 so in addition to passing the National Core test,
16 Florida raters also have to pass Florida specific tests
17 on what the administrative procedures and policies are
18 in Florida.

19 And they additionally have to pass a small
20 hands-on performance test, which is not required by the
21 national standards or the national requirements.

22 Q. And does FSEC conduct those tests?

23 A. Yes, it does.

24 Q. Okay, and does it receive a fee for those tests?

25 A. For those trainings? Well, there's a couple ways

1 that things can occur. Those tests are part and parcel
2 of a six-day training, two to six-day, depending on what
3 portion of the things you want to do, but from two to
4 six days. Those particular Florida tests are part and
5 parcel of that training curriculum.

6 However, the standards allow for people who are
7 interested in becoming a certified rater to take a
8 challenge test where they do not take any training, they
9 just walk in the door and try to pass the test.

10 In the case where we have people who are not
11 interested in training but want to take the challenge
12 test, yes, we do charge \$25, I believe, for that
13 individual to take a proctored test.

14 Q. Okay, and if you conduct the training for those
15 individuals, what's the cost to the individual for the
16 training?

17 A. It's posted online. I'm not -- my memory is not
18 good enough to tell you exactly what they are, the
19 costs. But I can tell you in general they're in the
20 vicinity of \$140 to \$150 a day.

21 Q. And you said it was a six-day -- two six-day
22 trainings?

23 A. Well, the rating system in Florida is broken down
24 into three classes. Class 1, Class 2 and a Class 3
25 certified rater.

1 Q. Uh-huh.

2 A. And a Class 3 rater is only authorized to do the
3 calculations that come from building documents and
4 specifications. And so that's all he has in the way of
5 data to input and to do the calculation. And you can
6 become a Class 3 rater in Florida with I believe it's
7 two days of training.

8 But you have to pass a test for Class 3 raters.
9 And then you can move on to Class 2, and there's a test
10 for Class Two 2. And then you can move to Class 1, and
11 there's a test for Class 1.

12 Now, the National Core test is only given to
13 people who are trying to qualify as Class 1 raters.

14 Q. Okay, and help me out, the National Core test, is
15 that given by FSEC?

16 A. It can be given by anyone, but we do provide the
17 venue to allow that to happen.

18 Q. Do you receive the revenues if the test is --

19 A. No.

20 Q. -- taken in your venue?

21 A. No.

22 Q. Who --

23 A. RESNET does.

24 Q. RESNET?

25 A. The people who are taking the test pay directly

1 online to RESNET as they are taking the test.

2 Q. And the charge for the National Core test to
3 RESNET is?

4 A. I believe it's \$25.

5 Q. And then the training, depending on which class
6 an individual wants to go to, could go up to 12 days?

7 A. Up to six days. It's reasonably well divided
8 two, two and two: Two days for Class 3, two days for
9 Class 2 and two days for Class 1.

10 Q. Okay, thank you. And do you know how many BERS
11 ratings -- is that the correct terminology, BERS score,
12 BERS --

13 A. It's good enough for me.

14 Q. Okay. How many are registered at FSEC, a
15 ballpark?

16 A. Ballpark, I hate to guess, but I believe it is
17 in the 4 to 5000 range since 1996 or 7. An exact answer
18 can be provided for that question, I just don't have it.

19 Q. Okay, thank you. So as I understand it, FSEC
20 provides or licenses software related to ratings, it
21 registers BERS ratings, it provides training and is it
22 fair to say if the number of ratings increased in the
23 State of Florida and the number of raters increased in
24 the State of Florida, that FSEC would derive more
25 revenues than it currently derives in connection with

1 the Florida rating system?

2 A. It would derive more revenues, but it would incur
3 more costs. We don't make money, period. And so the
4 costs and the revenues balance each other.

5 Q. That's currently?

6 A. Almost.

7 Q. Okay.

8 A. Not quite but almost.

9 Q. And I asked a variation of this question before,
10 but as part of your performance review at FSEC, have you
11 been assigned the task of increasing the number of
12 ratings in the State of Florida, is it in any way tied
13 to the review of your work?

14 A. No, it is not.

15 Q. Okay, what is the purpose of RESNET? Is there an
16 organizational purpose?

17 A. RESNET -- well, there's a mission, there's an
18 organizational purpose. But basically, RESNET's purpose
19 is to provide national standards for the conduct of
20 ratings on a nationwide basis so that everybody is
21 playing on the same field and so that that, that playing
22 field is as level as possible.

23 Q. And when you say national standard, and you're
24 the President of RESNET, do you believe that national
25 standard should be the BERS rating system?

1 A. I'm not exactly sure how to answer that question
2 because of the way it's phrased. But let me take a stab
3 at it.

4 Florida's law specifies that Florida's rating
5 system should be consistent with national rating
6 standards. Part of the reason that I've been involved
7 in the development of these national rating standards
8 is, in one aspect, to keep what Florida's doing as close
9 to what is going on in the nation, as close as possible
10 so Florida does not, so we don't get caught from behind,
11 for lack of a better term, with what's going on
12 nationally. So that was one of the original intents of
13 my involvement in the national rating system.

14 On the other hand, the national rating system has
15 a provision in it which basically says that if a state
16 has a law or a regulation governing rating systems, that
17 that state law or regulation shall govern what occurs.
18 And so in a sense, because Florida does have a law, it
19 can do things that are not necessarily in strict
20 compliance with the national standards.

21 We've chosen, the State has chosen to try to be
22 as closely corresponding to the national standards as
23 possible.

24 Q. And that's with respect to HERS or BERS ratings.

25 A. Yes.

1 Q. And how long have you been President of RESNET?

2 A. This is my second and final year.

3 Q. How long has the organization been in existence?

4 A. Since 1995, ten years.

5 Q. And your general duties as President?

6 A. Herding cats.

7 Q. Sounds like fun.

8 A. I conduct the Board meetings. We have a Board
9 meeting almost every month. I'm responsible to the
10 Executive Director for making sure that, you know, the
11 organization is not fiscally in terrible shape.

12 I work on, you know, a number of committees.
13 I've spent a lot of time working with the technical
14 committees on the development of standards and methods
15 and things of that nature. It's mostly just unpaid
16 work.

17 Q. Okay, that was my next question, are you
18 compensated for your duties?

19 A. Not in any way.

20 Q. And your Board meetings are --

21 A. Telephonically, generally, with the exception of
22 the annual conference which is once a year.

23 Q. Do you accept compensation for your travel to go
24 to the annual conference of RESNET?

25 A. Do not.

1 Q. Currently, now, or have you ever held any
2 ownership interest in any firms or business interests
3 that were tied directly or indirectly to the Florida
4 rating system?

5 A. No.

6 Q. Do you currently have any business interests in
7 any firm other than -- outside of your employment for
8 FSEC?

9 A. No. You're not counting stocks and bonds, right?

10 Q. I'm not counting stocks and bonds. Do you have
11 any family member or spouse that has an interest in any
12 sort of firm that performs ratings or is connected to
13 the ratings business?

14 A. No, I do not.

15 Q. Let's turn, then, to your prefiled testimony.
16 You do have a copy?

17 A. Yes.

18 Q. Okay, and I would refer you to Question Nine on
19 Page Three in your response. And the question is how do
20 you believe any residential program purporting to
21 increase residential building energy efficiencies should
22 be measured and monitored?

23 And your response is: I believe the most
24 effective way is through trained and certified
25 third-party inspections and testing.

1 A. Yes.

2 Q. What did the word measured mean to you in the
3 question, what was your understanding of that?

4 A. I guess my understanding in that context was that
5 measured meant putting some type of estimate on the
6 energy use of the building.

7 Q. Okay. And what did monitor mean to you?

8 A. Well, I guess monitored in that particular sense,
9 the way that question is put together, to me, monitored
10 would have to do with how are you going to control the
11 quality of what goes on.

12 Q. Okay.

13 A. Now, we use monitored in a very different sense
14 where I work, because it means you instrument the hell
15 out of the thing and you measure it.

16 Q. Right, but I'm asking in the context of this
17 question what your understanding was.

18 A. I took this question a little bit differently
19 than the context that we use the terms measured and
20 monitored.

21 Q. And you used the term in your answer through
22 trained and certified third-part inspections and
23 testing.

24 A. Yes.

25 Q. What is a -- maybe I should ask who is a

1 certified third party, in your answer?

2 A. To a certain extent, you can say that every rater
3 in Florida is a certified third party. If they disclose
4 their interest correctly, one of the things that exists
5 in the Florida rating system is a disclosure capability
6 that -- and the national standards actually require a
7 disclosure of any interest that the rater may have in
8 the particular building that's being rated be disclosed
9 to the client fully.

10 Q. Okay, and --

11 A. And so I guess my context here is that -- there
12 are self certifications and there are third-party
13 certifications. And I was trying to make the
14 distinction between self certification and third-party
15 certification.

16 I know that there are many programs where, for
17 example, builders can self-certify that they have done
18 XYZ and there's nobody that's coming behind them and
19 checking and looking. I clarify that as
20 self-certification.

21 On the other hand, if there is somebody that is
22 not -- doesn't stand to gain anything financially from
23 what that builder has done who is coming behind them and
24 looking and making sure that what they claim to have
25 done has been done, I would consider that a third party.

1 Q. So you are not -- by using the term certified
2 third party, you did not intend to exclude utility
3 employees, electric utility employees or public utility
4 employees who were certified as raters under the BERS
5 system.

6 A. No, and the BERS system does not exclude them
7 from performing that function.

8 Q. And the interest in the property that you
9 referred to that's spelled out in the, I believe in the
10 Administrative Code is the rater must disclose whether
11 he or she has an interest in the property that's being
12 rated, is that correct?

13 A. Any kind of financial interest, yes.

14 Q. Okay, let me refer you, then, to the question and
15 answer for Number 11 in your prefiled testimony on Page
16 Four. And here is where you mention the no-cost
17 contract with the Department of Community Affairs.

18 A. Yes.

19 Q. And we've gone over that a little bit already.
20 I wanted to ask you as the Deputy Director of the
21 Florida Solar Energy Center who is in this contract with
22 Department of Community Affairs, are you, do you know if
23 the delegation from DCA to FSEC to administer this
24 program is authorized in the Florida statutes?

25 A. I don't believe it's specifically authorized in

1 the Florida statutes. And that's why DCA maintains all
2 the certification requirements and the other
3 requirements of the law. Raters are not certified by
4 us, they are certified by the Department of Community
5 Affairs. We do the training, we do the testing, we do
6 everything else.

7 All the results get shipped to the Department of
8 Community Affairs, and the Department of Community
9 Affairs certifies the raters.

10 Q. But even -- are you aware of where the authority
11 to delegate what's been delegated to FSEC is located in
12 the Florida law?

13 A. No, I'm not aware of where that is.

14 Q. Do you know if there is an authorization in the
15 Florida law for that?

16 A. No.

17 Q. Have you read or been informed of the proposed
18 modifications to the FPL BuildSmart Program that is at
19 issue in this docket?

20 A. Only to the extent that they exist in the
21 prefiled testimony.

22 Q. Okay, is it your understanding, then, that the
23 BuildSmart Program as modified will not provide a BERS
24 rating or HERS score?

25 A. That's not completely clear to me. My reading of

1 the prefiled testimony was that there were two cases,
2 one in which there was a set of restrictive standards
3 that the builder would have to meet in order to qualify
4 for the program; and another one which was called a
5 flexible methodology. And it was not clear to me
6 whether or not that would require a rating or not.

7 Q. So as you sit here today, it's not clear to you
8 whether the program as proposed to be modified would
9 include HERS ratings or BERS scores, it's not clear to
10 you.

11 A. I have a very limited understanding and it's
12 based only on my reading of the prefiled testimony. But
13 I would have to answer, yes, it's not completely clear
14 to me if, whether or when BERS ratings would be involved
15 in this program.

16 Q. If I were to ask you to assume that under the
17 proposed modifications to the program that those ratings
18 would not be part of the BuildSmart Program, HERS
19 rating, BERS score, would that change your testimony,
20 your prefiled testimony in any way?

21 A. Probably not.

22 Q. Okay. Explain to me why not.

23 A. Well, you know, first of all, I don't remember
24 everything that was asked or answered in the
25 pretrial -- I mean in the prefiled testimony. But that

1 being said, I still believe that the most effective way
2 to move a marketplace is to allow builders and consumers
3 to do what they think is best. And I'm not a big fan of
4 prescriptive standards. And I can tell you why.

5 Because if they're constructed in a way that
6 assures that all homes come up to some bar, then they
7 end up being more costly than flexible standards that
8 say, okay, you have to meet some energy budget but you
9 get there the best, most cost effective way you can.

10 Which is essentially what ratings do. They say
11 here's the energy budget you need to do, and how you get
12 there is up to your particular local cost constraints
13 and your particular choices with respect to how you want
14 to treat any given building.

15 And I personally think that that's a more
16 effective way to achieve savings than to prescribe
17 exactly what a builder has to put in the building.
18 Therefore, many ways to skin a cat with respect to
19 building energy efficiency, and to pick the owners a
20 priori on the front end is not the most cost effective
21 way to do business, in my opinion.

22 Q. So what you're suggesting here is that in, and
23 tell me if this is a fair characterization of what
24 you're proposing, that for any demand site management
25 program by, say, FPL or other utilities connected with

1 energy efficiency of residential homes or buildings,
2 that a BERS rating be performed?

3 A. No, that's not exactly what I'm saying. Let me
4 give you an example. I'm saying FPL has for years in
5 existing home markets had air conditioning improvement
6 kind of programs where they will offer an incentive if
7 someone will install an air conditioner that's X amount
8 better than whatever the minimum requirements are at
9 that particular point in time. That's a lot different
10 than saying, okay, we want to achieve a percent savings
11 in the entire building that is X percent better than
12 some reference standard.

13 In the case of something like a specific piece of
14 equipment that you're trying to incent the installation
15 of, some kind of performance standard doesn't make a lot
16 of sense because you know exactly where you're going
17 from and where you're going to. And it doesn't depend
18 on a huge number of other very complex relationships
19 that occur in buildings.

20 But when you want to start talking about the
21 whole building and improving the efficiency of an entire
22 building, then it does make sense that you use
23 whole-building analysis to determine how far you've
24 gotten.

25 And that is what the BERS system does is it

1 performs a whole-building analysis that tells you how
2 much better the building you are proposing to build is
3 than some reference standard.

4 And the relationships between all the different
5 components of a building are so complex that you can't
6 do that without a fairly detailed and comprehensive
7 analysis of what is actually there.

8 Q. Okay. Let me refer you to Question 17 in your
9 prefiled testimony, then. And this question relates to
10 the adoption by the Florida Public Service Commission of
11 Florida Administrative Code Rule 25-17.003 sub 4(a).
12 And the question was did you provide any recommendation
13 to the Public Service Commission when it adopted that
14 rule and, if so, what was your recommendation and the
15 reasons therefor?

16 And your answer was that we made a joint
17 recommendation to Mr. Jim Dean of the Florida PSC that
18 Class A utility audits be altered to use the Florida
19 Energy Building Ratings for such audits and that the
20 rule be changed to require the utilities -- excuse me,
21 that utilities charge their customers for such services
22 and file a tariff with the FPSC.

23 In this answer, at least characterizing what your
24 recommendation was back in 1996, were you proposing or
25 recommending at that time that for a program such as

1 BuildSmart demand site management energy conservation
2 programs by utilities, that the Florida Building Energy
3 Ratings System be mandated or mandatory?

4 A. No.

5 Q. Okay.

6 A. I would have to answer that question no.

7 Q. Explain to me, then, what you mean by this.

8 A. The Public Service Commission rules that look at
9 utility audits had for a number of years what amount to
10 multiple classes of audits. And Class A audits were the
11 highest class of audit and they were the most complex.

12 There was a -- and I haven't looked at these
13 rules for a long time, and so I could be incorrect here,
14 but I believe the other class of audit was called a
15 Class C audit, which is commonly referred to as a
16 walk-through audit.

17 And there were walk-through audits and they were
18 very, very detailed audits at that time.

19 The Department of Community Affairs, the Florida
20 Energy Office in consultation with Jim Dean of the
21 Public Service Commission, because the rule was up for
22 modification at the time that the rating system was
23 coming into effect in Florida, came to, I would say,
24 what amounted to a consensus that it would be advisable
25 to use that rule-making procedure to alter the

1 allowances or requirements or whatever for Class A
2 audits so that Class A audits would be more structured
3 and could take advantage of the fact that Florida had
4 developed a uniform Building and Energy Rating System
5 for buildings.

6 But that if utilities were going to do that, they
7 needed to be compensated by the individuals who were
8 seeking those audits, that class of audit.

9 Q. Okay. So what you're saying your recommendation
10 was was that the utilities performing that Class A audit
11 have the option to use the BERS system; if they do, they
12 need to charge the customer, is that -- I'm trying to
13 understand.

14 A. I don't think that's what the rule says.

15 Q. I'm asking -- excuse me, I'm asking what your
16 recommendation was back in '96. I'm just trying to
17 understand it.

18 A. I think our recommendation back in '96 was that
19 if you are going to perform a Class A audit, you should
20 do it in accordance with the State's rating system.

21 Q. The State's rating system, in your mind, being
22 the BERS rating system.

23 A. Yes.

24 Q. So then that gets back to my original question,
25 were you not then suggesting or proposing that the rule

1 be altered to require the BERS rating system be used for
2 that class of audits --

3 A. Yes --

4 Q. -- by utilities?

5 A. -- for that class of audits, yes.

6 Q. Thank you. And was that recommendation adopted
7 back in 1996?

8 A. Yes, it was.

9 Q. It was.

10 A. I believe. My reading of 25-17.003(a) indicates
11 that it was.

12 Q. And a Class A audit, though -- what is the
13 BuildSmart audit, do you know what --

14 A. You know, there I'm lost. I can't tell -- I
15 don't have the legal expertise to tell you whether
16 that's a Class A or a Class C or some other animal
17 entirely.

18 Q. You don't know.

19 A. No, I don't. I think that's probably a legal
20 question that I'm not qualified to answer.

21 Q. Okay. So then you do not have an opinion as we
22 sit here today whether under the BuildSmart Program FPL
23 is required to utilize a BERS rating in conducting
24 audits under that program.

25 A. Well, I do have a bit of an understanding. I

1 don't think -- you know, when FPL originate that program
2 in 1993-194, there was no BERS rating. And what FPL
3 chose to use in lieu of some kind of BERS rating was a
4 reduction in what at that time was called the Energy
5 Point Index in the code system.

6 And at that time in Florida's code system they
7 had an Energy Point Index that ranged from -- well, the
8 minimum standard was 100, and anything greater than that
9 would not qualify for code and anything less than that
10 indicated that the building was more efficient than the
11 minimum code.

12 And at that point in time, FPL -- there was no
13 standardized rating, and FPL said that what they would
14 do, they would put together a program so that if the EPI
15 was 90, 80, 70, they would give awards for gold, silver,
16 bronze, whatever levels they established, and that would
17 be indicative that the homes were 10, 20 or 30 percent
18 more efficient than the minimum code. That was pre any
19 kind of rating system in the state.

20 Q. Okay, but my question to you was since you do not
21 know whether the audit that's conducted under FPL's
22 BuildSmart Program is a Class A audit, you do not have
23 an opinion, then, as to whether the Administrative Code,
24 the rules under the Administrative Code require FPL to
25 utilize a BERS or HERS rating in the BuildSmart Program.

1 A. No, I do not have an opinion on that, that's a
2 legal matter.

3 Q. I want to refer you, then, to Question 18 in your
4 prefiled testimony.

5 A. Uh-huh.

6 Q. And in the answer to Question 18 you use the term
7 again State certified independent third parties, at the
8 very end. Do you see that, sir?

9 A. Yes.

10 Q. I just want to ask you again utilizing that
11 terminology, you do not mean to exclude public utility
12 employees who are certified under the Florida rating
13 system.

14 A. No, by law they're not excluded, in my opinion.

15 Q. Thank you. Now, I would like to refer you to
16 Question 20 and your answer to that question in your
17 prefiled testimony.

18 A. Okay.

19 Q. And the question, so that the record reads clear,
20 is recognizing that you are not an economist but,
21 rather, an educated layman, how would you measure the
22 cost effectiveness of any entity's program to enhance
23 the energy efficiency of a residential unit?

24 And your answer is, quote, I would say that the
25 simplest means of determining the cost effectiveness of

1 a entity's efforts to enhance energy efficiency would be
2 the cost of achieving the increased energy efficiency
3 divided by the amount of energy saved, in other words,
4 dollars expended per kilowatt hour avoided.

5 Now, I would like to ask you are you familiar
6 with the PSC-approved criteria for cost effectiveness
7 for demand side management programs as is set out in
8 Florida Administrative Rule 25-17.008?

9 A. I am not.

10 Q. In rendering the opinion that you have rendered
11 in response to Question 20, the simplest means of
12 determining cost effectiveness, did you perform a rem
13 test?

14 A. No, I did not.

15 Q. Did you perform a participation test?

16 A. I would consider that a participation test.

17 Q. And how did you go about performing a test to
18 determine cost effectiveness?

19 A. Well, you can't go about performing a test to
20 determine cost effectiveness unless you're given some
21 specifics about what it is you're trying to determine
22 the cost effectiveness of. I mean, this is a very
23 general question with a very general answer.

24 Now, if you had said that you're going to improve
25 House B by doing X, Y and Z and these things are going

1 to cost you Q, R and S and the savings are going to be,
2 you know, A, B and C, and the lifetime of those are
3 going to be, you know, some other numbers, then you can
4 start to perform some kind of analysis as to whether or
5 not it's cost effective to the person who's going to
6 invest the money in it.

7 But the question wasn't phrased anything like
8 that. It was a very general question, and, you know, I
9 came up with the simplest answer that I could come up
10 with as like kind of the bar.

11 Q. But are you not really suggesting a new criteria
12 for cost effectiveness for demand side management
13 programs, in answer --

14 A. No, this question doesn't ask if that should be
15 the criteria for demand side management programs or what
16 the criteria for demand side management programs should
17 be. It simply asks, you know, from a layman's
18 perspective how would you determine if something is cost
19 effective or not. And I mean, if I'm a consumer that's
20 the way I would determine whether or not it's cost
21 effective.

22 Q. Okay, fair enough. So I take it, then -- well,
23 let me ask do you have an opinion as to whether the
24 BuildSmart Program in place with, by Florida Power &
25 Light is cost effective under the criteria set out by

1 the Public Service Commission?

2 A. It's my understanding from the testimony
3 presented by Mr. Sim that it is. However, I am not
4 familiar with the software and I am not familiar with
5 all of the input that went into that software to make
6 that determination. But the testimony of Mr. Sim is
7 that it is cost effective based on the rem test.

8 Q. Okay. Let me refer you to Question 22. The
9 question is if the program's direct costs are to be paid
10 by someone other than the program operator, how would
11 you assure a program designed to be effective yet
12 minimize the cost burden on those that pay it?

13 And your answer, quote, I think I would require
14 that the cost of providing the energy efficiency be less
15 than the amortized cost of the avoided energy use. Can
16 you explain to me what you mean there?

17 A. Well, you know, basically, you know, if it's
18 going to cost me Ten Cents a kilowatt hour to plug into
19 that socket over there, then it shouldn't cost me more
20 than Ten Cents a kilowatt hour for a conservation
21 program that's run by a utility.

22 Q. Okay. And again, are you familiar with the
23 Public Service Commission's criteria for evaluating
24 demand side management programs such as BuildSmart?

25 A. Yeah, I understand exactly what you're saying,

1 and that the demand side management programs of
2 utilities are evaluated based on the rem test. I'm not
3 intimately familiar with all the classes that go into
4 the rem test, and I'm certainly not familiar with the
5 software that is used by the utilities to make that
6 determination.

7 Q. What about the general criteria for evaluating
8 demand side management programs, not just the criteria
9 for cost effectiveness, are you familiar with that
10 criteria approved by the Public Service Commission?

11 A. Only in a very limited way, that these things
12 need to have a cost benefit analysis that's greater than
13 1, as tested by the rem test, and they need to have
14 a -- they need to pass a participant test, as well, so
15 the participant is not supposedly paying more than he
16 would otherwise be paying for electricity.

17 Q. And again, the latter part of that answer seems
18 to be geared toward cost effectiveness. But there is
19 general criteria that the Public Service Commission uses
20 to evaluate a program in its entirety. Do you have an
21 opinion as to whether FPL's BuildSmart Program service
22 the public service commission's criteria for demand side
23 management programs such as BuildSmart?

24 A. No, I don't have an opinion on that. I think
25 that's beyond my level of expertise.

1 Q. In response to Question 22, do you consider that
2 response to be a suggestion that the criteria for cost
3 effectiveness be changed or modified by the Public
4 Service Commission? Was that your intent in answering
5 Number 22?

6 A. No, I didn't have an intent in answering these
7 questions to get the Public Service Commission to do
8 anything. As I said earlier, I was simply trying to
9 answer the questions with my, I guess in this case my
10 opinion on what would maximize quality control.

11 Q. Okay, thank you. Let me refer you, then, to
12 Question 23.

13 A. I thought that was the question --

14 Q. I'm sorry.

15 A. Okay. I thought that was the subject of the last
16 question.

17 Q. Actually, the last question was 22. Were you
18 responding in connection with 23?

19 A. Yes, I was.

20 Q. I apologize, maybe I misspoke.

21 A. Oh, no, we did discuss 22 and then you asked a
22 question about 23 was my understanding.

23 Q. Why don't we go off the record for a second.

24 (A recess was taken in the proceedings.)

25 MR. BRYAN: Jim and Martha, are you there?

1 MR. TAIT: I'm here.

2 MS. BROWN: Yes, we're here, we're all
3 set.

4 MR. BRYAN: We're going to go back on,
5 thank you.

6 MS. BROWN: All right.

7 BY MR. BRYAN:

8 Q. Okay, Mr. Fairey, let me direct your attention to
9 Question Number 23 in your direct prefiled testimony.
10 And I understand during the break that there may have
11 been a little confusion, you may have thought you were
12 responding to questions dealing with Question 23,
13 whereas, I believed I was asking questions with respect
14 to Question 22.

15 But let me ask you to explain your answer in 23,
16 and if you feel you need to modify your prior answer,
17 please feel free to correct that.

18 In response to Question 23, your prefiled
19 testimony states, quote, I believe the most cost
20 effective means of maximizing quality control and
21 verifying energy savings is Florida's Building and
22 Energy Rating System.

23 Are you proposing -- well, let me ask you what
24 did you mean by that, generally?

25 A. Generally, I meant that Florida's Building and

1 Energy Rating System is put together in a way that
2 provides a, you know, the best technical estimate of
3 what the performance of the building is going to be and
4 also provides a set of quality assurance measures that
5 works to maximize the quality assurance of the way the
6 information is collected and the independence of the
7 people who are providing the service.

8 And so, in my mind, it is the easiest uniform way
9 to maximize quality control and verify savings that is
10 widely available within Florida.

11 Q. And were you intending to suggest that the Public
12 Service Commission change its rules to require the
13 BuildSmart Program to utilize a BERS system in its
14 BuildSmart energy audits?

15 A. As I said before, that wasn't my intent in
16 answering these questions; but I think it would be a
17 good idea.

18 Q. Then I'll ask the same question I did before,
19 have you done a cost effectiveness analysis under the
20 Public Service Commission rules for confident
21 effectiveness of demand side management programs?

22 A. No.

23 Q. Okay. Do you intend to conduct that analysis
24 before the final hearing in this case on October 10?

25 A. No, I do not.

1 Q. In responding to Question 23, did you perform any
2 calculation to come to this conclusion, or was it just
3 something that you wrote down as you were answering the
4 question?

5 A. I didn't perform any calculation. But again, I
6 took the question as something which was more general
7 than specific. And the answer in that regard is general
8 rather than specific. I mean, if you had said, you
9 know, what's the best way to maximize to verify for
10 energy-starved refrigerators, then you'd get a more
11 specific answer.

12 But this was a much more general question framed
13 in a general way, and the answer is -- I personally
14 think the answer is not a bad answer and that of all the
15 systems that I know of that are in place for doing this
16 kind of thing, Florida's Building and Energy Rating
17 System, is what it was intended to be by law, a uniform
18 system of having a very level playing field that does a
19 very good job of estimating how much energy a building
20 is likely to use and has a group of provisions in it
21 that require some minimum level of quality control of
22 the people who are performing the work and of the
23 results of the work.

24 Q. Okay, fair enough. Let me refer you, then, to
25 Question Number 24 and your response thereto in your

1 prefiled testimony. In 24, you indicate that the
2 accepted duct testing methods recognized by Florida,
3 other state and international standards are specified by
4 the ASHRAE ANSI Standard 102-2004, do you see that?

5 A. That's correct.

6 Q. And then in Question Number 25, in response
7 thereto you indicate, or you state at present, there is
8 only one nationally accepted protocol as specified in
9 the answer to Question 24, again, which is referring to
10 the ASHRAE ANSI Standard 152-2004.

11 A. Correct.

12 Q. And then in Question Number 26, the question in
13 respect to the pressure pan testing method, and the
14 question was was pressure pan testing ever accepted by
15 the State? If yes, then is it still accepted as a valid
16 testing protocol? If no, then why not?

17 And your answer in part is at the beginning:
18 Yes, in the past pressure pan testing was accepted by
19 the State as a threshold test for determination of
20 acceptable duct leakage. As of the most recent change
21 to Rule 9B-60, international standards, it is no longer
22 an accepted test protocol for duct leakage. Do you see
23 that, sir?

24 A. Yes, I do.

25 Q. In your response that I just read, the portion of

1 your response to Question 26, isn't it true that the
2 pressure pan test is no longer an accepted test protocol
3 for quantifying duct leakage, but it is still accepted
4 and a valid diagnostic tool for identifying duct leaks?

5 A. I think that's a fair clarification of the
6 answer. It is still a valid diagnostic tool for
7 identifying the likely location of a duct leak.

8 Q. Now, isn't it true, also, that the ASHRAE
9 Standard itself that you referred to still includes as
10 part of the, as part of that protocol the pressure pan
11 test?

12 A. I would have to look at it specifically.

13 Q. Okay.

14 A. Not that I'm doubting your word.

15 Q. Well, I want you to be sure.

16 A. That's it right there.

17 Q. That's my copy.

18 MR. BRYAN: Let me ask the court reporter
19 to mark this.

20 (Florida Power & Light's Exhibit Number One was
21 marked for identification.)

22 BY MR. BRYAN:

23 Q. I'm handing to you what has been marked as FPL
24 Exhibit Number One to the Philip Fairey deposition. Can
25 you identify that document for me which I believe

1 consists of 48 pages, I believe.

2 A. It's ANSI/ASHRAE Standard 152-2004, Method of
3 Test for Determining the Design and Seasonal
4 Efficiencies of Residential Thermal Distribution
5 Systems.

6 Q. And that is the same standard that you referred
7 to in your answer to Question Number 24 in your prefiled
8 testimony?

9 A. That is correct.

10 Q. Would you please turn to Page 32 of the standard,
11 which should be Annex B.

12 A. Yes.

13 Q. Okay, and then the first column under B1, test
14 procedure, paragraph marked as number three, can you
15 tell me if they refer to the pressure pan test as part
16 of this protocol under Annex B of the ASHRAE Standard?

17 A. Yes, they do.

18 Q. And if you would please turn to Page 39 of the
19 standard.

20 A. Okay.

21 Q. How would you characterize Page 39, is that a
22 pressure pan data collection sheet, is that a fair
23 characterization?

24 A. You need to give me just a minute to look at
25 this.

1 Q. Sure, take as much time as you need.

2 A. Yes, it looks like a pressure pan data sheet..

3 Q. Thank you. Isn't it also true, Mr. Fairey, that
4 the pressure pan test is used in numerous programs
5 related to building energy efficiency throughout the
6 country for purposes of identifying duct leaks?

7 A. Yes, it is.

8 Q. So you would not disagree with me, for example,
9 the Wisconsin Energy Conservation Corporation, are you
10 familiar with that entity?

11 A. Yes, but I'm not specifically -- I'm not familiar
12 with their specific protocols for what they do.

13 Q. If I were to ask you -- would it surprise you,
14 then, if Wisconsin and this program utilizes the
15 pressure pan test still for identifying duct leaks?

16 A. No, it would not.

17 Q. Are you familiar with the Residential Energy
18 Analyst Program under the Oregon Housing and Community
19 Services?

20 A. No, I'm not.

21 Q. Are you aware that the pressure pan test is used
22 in, for identification of duct leaks in conservation
23 programs in Oregon?

24 A. No.

25 Q. All right.

1 A. I'm not specifically aware of it.

2 Q. Are you aware of the Weatherization Assistance
3 Program?

4 A. Yes.

5 Q. Okay, what is that?

6 A. That's a national program that is run by the
7 Department of Energy to weatherize homes that are owned
8 by low-income residents.

9 MR. BRYAN: Let me ask if you would
10 mark this for identification purposes as
11 Exhibit Number Two.

12 (Florida Power & Light's Exhibit Number Two was
13 marked for identification.)

14 BY MR. BRYAN:

15 Q. I hand to you what has been marked as Exhibit
16 Number Two. Can you read the cover page for the record,
17 please?

18 A. Says Weatherization 201, Weatherization That
19 Works, updated February 15, 2005.

20 Q. And if you flip through it, can you agree with me
21 that it is a, looks like it may have been a slide
22 presentation or some presentation materials concerning
23 the Weatherization Assistance Program?

24 A. It appears that way, yes.

25 Q. And if you flip to Page 13 in the materials,

1 there's a page labeled Diagnostic Tools. And can you
2 identify or read the diagnostic tool under the second
3 bullet.

4 A. The second bullet says Pressure Pan and
5 Manometer - Leaky Ducts Can Increase Costs by 10 to 30
6 Percent.

7 Q. Thank you. Are you familiar with Penn College?

8 A. Penn College or Penn State?

9 Q. Well, it's a -- Pennsylvania College of
10 Technology affiliated with the Pennsylvania State
11 University.

12 A. Okay. No, I'm not.

13 Q. Would it surprise you to learn that in the
14 courses that college offers under Advanced Diagnostics
15 that it still teaches the pressure pan test?

16 A. No, it wouldn't.

17 Q. Isn't it also true that the duct pressurization
18 test which -- is that the correct term for the test that
19 would be the proper protocol for a HERS or BERS rating?

20 A. Yes, that's the correct terminology for tests
21 that the ASHRAE Standard recommends be used to determine
22 how much leakage occurs.

23 Q. Okay, that duct pressurization test is typically
24 more time consuming than a pressure pan test?

25 A. Yes. It doesn't necessarily have to be more time

1 consuming; but it is more resource consuming because it
2 is usually done with two pieces of equipment, one to
3 pressurize the duct system and another one to pressurize
4 the house.

5 Q. And typically, if you know, would the duct
6 pressurization test be more expensive than the pressure
7 pan test?

8 A. I don't have a good way to estimate that. I
9 would say that is largely dependent on the experience
10 and expertise of the operator.

11 Q. But the duct pressurization test is more labor
12 intensive than the pressure pan test?

13 A. Not necessarily.

14 Q. More equipment consuming, is that the word you
15 would use?

16 A. More equipment intensive. It requires two pieces
17 of equipment rather than one piece of equipment.

18 Q. Isn't it true that if a pressure pan test is
19 performed and the pressure pan average is zero or close
20 to zero, it's very likely there are no significant duct
21 leaks in the system?

22 A. If it is zero, zero is zero. And to the extent
23 that we can measure a pascal or two, it is likely that
24 the duct system is leak-free unless there are extremely
25 long duct systems and the leakages occur at some

1 distance from the supply registers and return registers.

2 Q. Do you know how in the typical Florida home, you
3 know, how far the duct systems, the ducts go from the
4 grills?

5 A. The distance I can't tell you. I can tell you
6 kind of on a national average basis what the area of
7 supply ducts is as a function of the square footage of
8 the home. It's about 27 percent of the conditioned
9 floor, area square footage.

10 Now, the length is a different matter and it's
11 going to depend on the home and it's going to depend on
12 a lot of variables. I don't know what --

13 Q. Okay, that's --

14 A. -- typical is.

15 Q. -- that's fair.

16 A. You've got to define --

17 Q. Sure.

18 A. In the event a pressure pan average is zero or
19 close to zero, in that event, assuming that there are no
20 abnormally long ducts in the home.

21 Q. Isn't it true there would be little need to
22 perform the more equipment-intensive duct pressurization
23 test?

24 A. I will go back to my previous statement, at zero
25 all methods are reasonably accurate.

1 Q. So, I'm sorry, does that answer my question?

2 A. I'm not sure. But I mean, here's what happens.
3 The further you go away from zero, the more variation
4 you have in the results. And so if you are getting zero
5 as a result for the amount of duct leakage that is in a
6 house, almost any method that you use is reasonably
7 accurate.

8 But if you get very far away from zero, some
9 methods get much more inaccurate than other methods.

10 Q. Okay.

11 MR. BRYAN: Let me ask the court reporter
12 to mark this as Exhibit Number Three.

13 (Florida Power & Light's Exhibit Number Three was
14 marked for identification.)

15 BY MR. BRYAN:

16 Q. You've just been handed what has been marked for
17 identification purposes as Exhibit Number Three, and the
18 cover page indicates, it says Producing Air Tight Ducts
19 and let me ask you if you've ever seen this document.
20 It appears to be presentation materials. Have you ever
21 seen this before?

22 A. No, I have not seen this document.

23 Q. Do you know what the Energy and Environmental
24 Building Association is that's referenced in the left
25 hand corner?

1 A. I do.

2 Q. And do you know who Neil Moyer is?

3 A. I do.

4 Q. And does the front page indicate that this
5 document at least would appear, or imply that it was
6 prepared by Mr. Moyer?

7 A. It would.

8 Q. And what's the date of the -- there's a
9 conference that's referenced on the top of the first
10 page. What's that date?

11 A. The date is October the 20th through the 23rd,
12 2004.

13 Q. And let me refer you to Page Nine, I've marked
14 the page numbers at the bottom right hand corner, if you
15 could read the very short text on that page.

16 A. "The only way to know your ducts are tight, test
17 them."

18 Q. Okay. And then on Page Ten, there's just three
19 words, if you'd read that.

20 A. "Diagnostics, Some Tools."

21 Q. And then Page 11.

22 A. You want me to read that?

23 Q. Would you please read that, yes.

24 A. "The Pressure Pan."

25 Q. So Mr. Moyer believes, if you can accept that

1 this is accurate, Mr. Moyer at least as of October of
2 2004 was still advocating the pressure pan test as a
3 diagnostic tool for duct testing.

4 A. That's correct, and I think he probably still
5 would as a diagnostic tool as opposed to a measurement.

6 Q. Okay, and then the last page of this document,
7 I'm sorry, it's Page 23, on the right side of the page
8 there is a reference to a DOE document, Better Duct
9 Systems for Home Heating and Cooling, do you see that,
10 sir?

11 A. Yes, I do.

12 Q. And that's under the heading on Page 22 of A Few
13 Reference Materials.

14 A. On Page 22 it says A Few Reference Materials,
15 yes.

16 Q. And that DOE document, would it surprise you to
17 learn that they still refer to and advocate the use of
18 the pressure pan test as a diagnostic tool?

19 A. No, it would not.

20 Q. Okay, thank you. Okay, turning, then, to
21 Question 28 of your prefiled testimony, I'm sorry, let's
22 go to 27, were you involved in the original residential
23 new construction study conducted by FPL in 1993 and '94
24 that led to the BuildSmart Program? If so, what was
25 your involvement?

1 And you've provided an answer that you were
2 Project Manager and co-principal investigator for FSEC
3 for a portion of the study. Can you elaborate a little
4 bit on that, can you tell me more about what your
5 involvement was back in 1993 and '94.

6 A. Well, I along with, you know, one of my
7 colleagues was responsible for the management of the
8 program and getting the work done in the field. And our
9 part of that program was to go to a total of, I think,
10 437 homes that were built in the 1992-1993 time frame,
11 that were completed in that time frame, and to
12 independently conduct detailed site audits of the homes
13 and take that audit information and incorporate it into
14 Florida's code system and at that time its emerging
15 rating system, and determine how those homes differed
16 from what was submitted to the building office, the code
17 permitting offices.

18 And so we had to also go to various code
19 permitting offices and get the data which were submitted
20 to the code office for permitting those homes and to
21 look at the differences between those.

22 And also to do field studies on how good, for
23 lack of a better term, the duct systems were in those
24 homes using a number of different methodologies. I
25 don't recall exactly how many of the homes were actually

1 tested, but I believe most of them were tested by duct
2 pressurization methods and by at least two different
3 pressure pan methods, and using what is called a
4 subtraction technique where you test the home with the
5 ducts included in the test and you test the homes with
6 the ducts excluded from the house.

7 And it was an effort to look at how those various
8 methods stacked up against each other, as well as look
9 at how those homes, how well the energy use of those
10 homes would be predicted by the proposed rating system
11 at that time.

12 Q. Okay. And you said there was duct testing
13 protocol, you said pressure pan test and --

14 A. Two different types of pressure pan -- well, two
15 different ways of looking at the results from pressure
16 pan testing were calculated in that study, from pressure
17 pan measurements that were taken from within, I believe
18 the largest majority of the 439 homes, or however many
19 were in the study, it was a pretty major study.

20 In addition to that, a couple of different ways
21 of dealing with results from what are called the board
22 or subtraction test also were looked at all with respect
23 to what duct pressurization tests predicted for the duct
24 systems in the homes.

25 Q. And as a result of the studies conducted back

1 then, did the results of those studies recommend a duct
2 testing protocol?

3 A. I don't recall. I do have our final report and
4 I could go look. But I don't recall whether we did or
5 not. We were responsible for only one piece of this,
6 and FPL had another consultant called Quantum Consulting
7 who was responsible for putting together the program
8 recommendations to FPL as far as what the BuildSmart
9 Program was going to actually look like.

10 And our data and information essentially -- it
11 went to FPL but it also went to Quantum for their use in
12 developing the program specifications for the BuildSmart
13 Program. And I don't recall whether we made a specific
14 recommendation on what testing methodology should be
15 used.

16 And as I've said before, for a lot of years the
17 pressure pan results were allowable as what we call a
18 threshold test to indicate that, that ducts are likely
19 the meet some minimum level of performance if the
20 pressure pan tests are less than or equal to some value.

21 And it's only been very recently that this ASHRAE
22 Standard 152 has become a national standard. And --

23 Q. Since November of last year?

24 A. That's correct, since November of last year.
25 and so certainly, up until that time there were many --

1 there were no nationally-recognized protocols, and there
2 were a number of protocols that were used in the field.

3 Q. So until November of last year, the pressure pan
4 test was still accepted protocol for a HERS or BERS
5 rating; but after November of last year the -- you're
6 not suggesting the pressure pan test -- I'm sorry, let
7 me -- you're cutting me off -- go ahead.

8 A. The answer to your question is yes, but. It was
9 accepted as a threshold test which triggered a leakage
10 value to go into the software to calculate what the
11 likely result would be. It was never accepted as a
12 measurement of duct leakage. It was only accepted as a
13 threshold test that would allow you to use a certain
14 value as equivalent to a measurement.

15 Q. Okay, and I understand that. And then after
16 November of '04, it was no longer accepted protocol for
17 that purpose, as a threshold for a HERS or BERS rating.

18 A. I don't believe that has happened until January
19 or February of this year when 9B-60 was changed.

20 Q. Okay, that's fair, as well. But you're not
21 suggesting that the pressure pan test has no value now
22 as a diagnostic tool.

23 A. I am absolutely not suggesting that. It is an
24 excellent diagnostic tool, it does a very good job of
25 locating major duct leakage when it is within a

1 reasonable proximity of supply registers and returns.

2 Q. Thank you. Now, you mentioned you still have the
3 results, you still have the results of your studies from
4 1993 and '94?

5 A. Yes, we have the report that we submitted.

6 Q. Okay, if I were to ask you to send that to us,
7 could you do that before you take off for Europe, or
8 have somebody do that?

9 A. That report is proprietary and it would probably
10 require that you get your client to allow us to send it
11 to you.

12 MR. BRYAN: Who was our client?

13 MS. DUQUETTE: That's us.

14 MR. BRYAN: Oh, it's FPL.

15 THE WITNESS: The report was done for FPL
16 and it is marked proprietary and --

17 MR. BRYAN: Right, but I am FPL, so --

18 THE WITNESS: Then I guess you have the
19 authority to request that I give you the
20 report. Or you could just get it from your
21 corporate office.

22 MR. BRYAN: Maybe we'll talk after the
23 deposition.

24 THE WITNESS: No, I -- you know, I don't
25 know the legalities of that, but --

1 MR. BRYAN: Certainly. And I wouldn't
2 ask you to -- I'm very happy to hear that
3 you take seriously your confidentiality
4 obligations. But I thought we were the
5 client in that. And I am FPL. But we'll
6 talk after.

7 THE WITNESS: Or a subpoena could
8 probably get it, either way.

9 BY MR. BRYAN:

10 Q. Let me refer you, then, to Question Number 30 in
11 your prefiled testimony. And the question is have you
12 or your staff at FSEC done any audits, open paren,
13 second ratings, close paren, on homes rated by either
14 the Petitioner, which is Calcs-Plus, or Respondent,
15 which is Florida Power & Light Company. If so, please
16 describe circumstances and results.

17 And in your response, you seem to indicate that
18 there was one auditor second rating done on a home
19 originally rated by a rater employed by Florida Power &
20 Light Company. The question to you is has FSEC done any
21 of these audits or second ratings on homes rated by
22 Calcs-Plus?

23 A. No, I don't believe we've done any second audits
24 on Calcs-Plus. The second rating on the home that was
25 mentioned here was triggered by the builder and a

1 request to us to come out and do an independent rating
2 of that home. Because he was having complaints from the
3 homeowner and he wanted to locate any problems that
4 might be causing that to occur.

5 Q. Okay, so is that when you, when FSEC would
6 typically do a second rating, is at the request of
7 somebody? Or does FSEC do these audits as part of its
8 administering the --

9 A. Yes, it does do a limited number of these audits
10 as part of administering things. One of the things that
11 we do is we look at every -- we do what a lot of people
12 call a desk audit of every single rating that is done.
13 And when we find that there are raters that are
14 consistently entering information that doesn't make
15 sense, we will occasionally go out in the field and
16 backcheck those ratings.

17 The largest part of our quality control is that
18 desk audit procedure. And we very, very often send
19 ratings back to raters and say, no, this can't be, you
20 can't have X, Y, Z. And a great example is what happens
21 with, you know, pressure pan testing, we very often
22 have -- or it used to be more often than it is now, but
23 we had a number of ratings that came in and said, you
24 know, the air handler is located, you know, in the
25 garage but the ducts are located in the house and they'd

1 do pressure pan ratings on ducts that are located
2 internally, and the pressure pan doesn't work for
3 internal duct systems.

4 So there are a number of things like that that we
5 catch on a routine basis in ratings that are sent to us
6 for registration.

7 And we simply send them back and tell them that
8 they've done things wrong and that they're going to have
9 to correct them before the rating can be registered.

10 Q. Now, for even those, you call them desk audits?

11 A. Yes.

12 Q. In answering -- which question were we on?

13 That's why you're confused because I can't keep track.

14 A. You're on 30.

15 Q. Thank you. In responding to Question 30, did you
16 check to see whether there were desk audits on any
17 Calcs-Plus ratings?

18 A. Desk audits were done on all Calcs-Plus ratings.

19 Q. Okay, on all?

20 A. Desk audits are done on every rating.

21 Q. Okay, I'm sorry. Do you know, then, whether you
22 had any findings as a result of those desk audits on
23 Calcs-Plus ratings?

24 A. I don't know offhand, but I could find out.

25 Q. Records are kept of those?

1 A. I don't think details records are kept. But the
2 person who does those desk audits has a good feel for
3 where the problems are and where the problems aren't.

4 Q. Who's the person that, that would do that at
5 FSEC?

6 A. Tei.

7 Q. Tei. Okay, I'd like to refer you to Question 31
8 of your prefiled testimony. And the question is are you
9 aware of any studies of the differences between initial
10 code calculations done on homes and their subsequent
11 as-built energy efficiency compared to the Florida code
12 or a BERS rating?

13 And your answer was, yes, such studies were
14 accomplished as part of the FPL BuildSmart Project.

15 Can you elaborate on that, can you tell me what
16 the studies showed.

17 A. Yeah, they basically showed two things. Number
18 one, that on average Florida's code is -- new homes on
19 average are right at the code minimum requirement. And
20 there are basically two groups that vary from that.

21 There is a small group of people that are much
22 more efficient than the minimum and that are also more
23 efficient than their code submissions.

24 And then there is a small group of people that
25 are less efficient than code minimum, based on these

1 field audits.

2 And we classified those as the quitters and the
3 cheaters. There are a group of people that once they
4 got to that 100-point code thing just quit worrying
5 about how efficient their homes were and just submitted
6 their homes, and their homes were actually more
7 efficient than they claimed.

8 And then there was a small group of people that
9 were less efficient than they claimed. We called them
10 the cheaters.

11 But by and large, you know, the vast majority of
12 people were very near the minimum code standard.

13 And the other thing the study showed was that the
14 rating system which was proposed at that time, with a
15 few exceptions, did a very adequate job of predicting
16 the energy use in these homes on a portfolio basis. In
17 other words, if you looked at the whole group of almost
18 400 homes from which that, I think there were 378 homes
19 for which that particular -- sufficient data was
20 available to do an analysis, then the mean prediction
21 of the rating system was very close to the mean energy
22 use for those 378 homes.

23 There, was of course, variation from that line on
24 both sides. But the means were very reasonably
25 represented by the rating system.

1 Q. Okay. Were those results used in any way by
2 FSEC?

3 A. They became the subject of a, of at least one
4 presentation that I'm aware of. I made a presentation
5 in 1997 at a conference in New Orleans that included
6 some of those results as -- at a conference that was
7 about rating systems.

8 Q. You said in your prefiled testimony that these
9 studies were accomplished as part of the FPL BuildSmart
10 Project.

11 A. That's correct.

12 Q. What does that mean? Help me out, is that when
13 the, is that part of the studies you did in '93 and
14 '94 --

15 A. That's correct.

16 Q. -- that led to the BuildSmart Program?

17 A. Yes.

18 Q. And you were doing that work under a research
19 contract with Florida Power & Light Company?

20 A. That is correct.

21 Q. And did those results lead to any opinion or
22 conclusion by you that a program such as BuildSmart, you
23 know, is needed or could help?

24 A. I don't recall whether we made any specific
25 recommendations along those specific lines or not. It

1 was clear from the results that the great majority of
2 homes were being built right at minimum code standards.

3 Q. Uh-huh.

4 A. And so if you have some program that moves those
5 homes 10, 20 percent better than that, then it's going
6 to help, from our perspective. Because our objective is
7 to reduce -- increase efficiency networks, you know, in
8 every way we can.

9 So if you can take that result which showed that
10 out of an EPI score of 100, which was minimum code, the
11 average from a sample of 400 homes came in at 99.6 and
12 move that from 99.6 to 80 or 70, it's going to help.

13 Q. Okay, fair enough. Question Number 32 in your
14 prefiled testimony. It asks you to comment on any
15 concerns you had after reviewing the Prefiled Direct
16 Testimony of the FPL witnesses. And in your response,
17 you make reference to the \$50 incentive that is proposed
18 as part of the BuildSmart modifications.

19 And I'll read a portion of your answer, down
20 toward the bottom of Page 11, quote, considering the
21 administrative costs per home are estimated at 400 for
22 even the 10 percent savings level, the \$50 incentive for
23 doubling that energy savings seems quite small, and it
24 seems doubtful to me that this incentive would induce
25 many builders to participate at the higher level of

1 performance.

2 And my question to you is, number one, is that an
3 opinion of Phil Fairey, individual, or is that the
4 official position of FSEC?

5 A. That's an opinion of Philip Fairey. FSEC can't
6 take an official position on this.

7 Q. Okay. Do you believe that cash incentives are
8 the only means to motivate builders to incorporate
9 energy efficient measures in their homes?

10 A. No.

11 Q. Have you done any market studies or market
12 research studies on whether the \$50 incentive would
13 induce builders to participate at higher levels?

14 A. No.

15 Q. Do you intend to do any market research or have
16 that performed?

17 A. No.

18 Q. In Question Number 34, you were asked to explain
19 the processes that FSEC uses to assure quality control
20 and to assure that Florida's citizens receive the best
21 unbiased, accurate and verifiable information about the
22 energy efficiency of their home and as compared to other
23 like homes.

24 And your response deals with the quality control
25 measures for raters under the BERS system, is that fair?

1 A. That's fair.

2 Q. Okay. Any FPL employee who is certified as a
3 rater under BERS would be subject to this same quality
4 control, is that correct?

5 A. That is correct.

6 Q. I'd like to refer you, then, to Question 36. Do
7 you have any recommendations based on your experience as
8 Administrative Agent for the State's rating program as
9 to how FPL and the Commission may improve its monitoring
10 and performance-measuring capabilities? And I'd like to
11 make sure I understand your response there.

12 Because it appears to me, and I may be wrong,
13 that what you're suggesting here, again -- I shouldn't
14 say again. What you're suggesting here is that the
15 BuildSmart Program utilized a BERS rating. Is that a
16 fair characterization of what you're saying there? Or
17 did I misunderstand your response?

18 A. I'm not sure it's completely fair. I mean, I
19 answered, you know, the question based on what I thought
20 is the most uniform system of looking at building energy
21 efficiency in Florida. And I know the Commission
22 doesn't, but the Commission could require that all
23 programs that are done by any utility, not just FPL,
24 verify the savings that they're claiming through Class 1
25 or 2 BERS ratings and that gives reasonable amount of

1 assurance that those homes are actually achieving those
2 savings.

3 I think the operative word here is the Commission
4 could.

5 Q. So this, again, is a suggestion on what the
6 Commission could do; you're not --

7 A. The question had the word improve in it --

8 Q. Okay.

9 A. -- and so if you want to improve the monitoring
10 and performance measurement of these homes, this is a
11 way that you could improve it. I'm not saying that it
12 is deficient to the point that it must be improved.

13 Q. Okay, very good. And again, I'm assuming you
14 haven't done any cost benefit analysis in connection
15 with the answer to Question 36 about specifically under
16 the PSC criteria for cost effectiveness of demand side
17 management programs.

18 A. No, I have not.

19 Q. And understanding that this is a recommendation
20 to improve, as you've expressed, would you acknowledge
21 that perhaps a better forum or more appropriate forum to
22 make that recommendation, then, would be a more general
23 docket of dealing with demand side management programs
24 by utilities in general versus this BuildSmart docket,
25 which is a limited scope docket dealing with one demand

1 side management program offered by one utility?

2 A. You're asking me a question that's beyond my
3 level of expertise. However, if we were asked by the
4 Public Service Commission to make recommendations, we
5 would certainly make recommendations.

6 Q. But you would want this recommendation --

7 A. But --

8 Q. I'm sorry, I didn't mean to interrupt you, go
9 ahead.

10 A. But clearly, this is not a question the Public
11 Service Commission asked me, this is a question posed
12 by opposing counsel.

13 Q. Right. But you're making a suggestion as to how
14 the Public Service Commission could improve things, and
15 I assume that your response here, you would want it to
16 apply to all utilities in the State of Florida.

17 A. It's my opinion, again, I'm opining, that rules
18 that apply to one utility should apply to all utilities.

19 Q. Okay. I think I'll leave it at that, I think I
20 got my answer.

21 Okay, Question 37, asking you about the trend for
22 the number of certified raters for the years 1995 to
23 2005, and there's more to the question, but your
24 response was the data required to answer this question
25 will take much more time to develop than has been

1 provided by this subpoena.

2 My question to you is since your prefiled
3 testimony has been filed, have you gone back to
4 undertake that analysis?

5 A. No.

6 Q. Do you intend to do so before the final hearing
7 on October 10? Have you been asked to do so?

8 A. No.

9 Q. If asked to do so by Mr. Tait, is that something
10 you would undertake?

11 A. Well, it's not something I personally would
12 undertake. You know, as I said, we are required by the
13 different standards and regulations to keep a data base
14 of what has been done and what has been registered. And
15 the only way that we could do this is to query the data
16 set and -- and the other thing, we keep records of who
17 has been certified, when they've been certified, what
18 happens to their certification and et cetera.

19 And we would have to basically query these two
20 data bases and look at what the trends have been with
21 respect to employment of certified raters within the
22 state.

23 Q. Okay, thank you. I am almost finished. I'm
24 looking at the resume' or CV that was provided with your
25 prefiled testimony. And specifically Page Five of the

1 resume' toward the bottom of the page and continuing on
2 to Page Six, you list your consulting experience. Do
3 you see that, sir?

4 A. Yes, I do.

5 Q. Okay, can you tell me in any of these matters,
6 and there are, you know, quite a few, probably at least
7 30 matters listed, were you acting in any of those
8 matters as an expert witness?

9 A. Yes.

10 Q. Did any of the matters listed deal with a BERS
11 rating or --

12 A. No.

13 Q. -- did they deal with energy efficiency in
14 buildings?

15 A. I don't believe so. I don't believe any of them
16 dealt with that.

17 Q. Okay.

18 MR. BRYAN: If you'd just give me one
19 minute, I think I'm done. But let me just
20 double check.

21 I believe I'm finished. Jim or Martha,
22 do you have any questions?

23 MS. BROWN: I have no questions.

24 MR. TAIT: I have just a couple of them
25 that I'd like to just ask for clarification.

CROSS EXAMINATION

1
2 **BY MR. TAIT:**

3 Q. Philip, you were asked a question as to the cash
4 incentives that would motivate, and you answered that,
5 no, you didn't think that cash incentives were a strong
6 motivating factor. What do you believe motivates?

7 A. I don't believe I said I didn't think they were a
8 strong motivating factor. I said I don't think they're
9 the only motivating factor.

10 I do think that cash incentives are a reasonably
11 strong motivator.

12 However, I philosophically believe that they're a
13 stronger motivator when they go to the consumer than
14 when they go to the builder. But that's a whole
15 different matter all together.

16 There are a number of things that can motivate
17 the building community to move towards more efficient
18 buildings, things like very strong national marketing
19 programs like the Energy Star Program have proven to be
20 extremely strong motivators in certain markets, and it
21 resulted in last year greater than 10 percent of the new
22 homes that are built in the country qualifying as Energy
23 Star homes. And there is no cash incentive there.

24 And so clearly there are other than cash
25 incentive motivators for high-efficiency homes that are

1 out there. EPA has done a, you know, I would have to
2 say that they've done an extremely good job of marketing
3 their Energy Star products. I've seen some reports that
4 over 70 percent of the general population of the country
5 knows what the Energy Star brand is. And so that's a
6 pretty dad-gum high percentage from a marketing
7 perspective. And I've seen those results portrayed by
8 EPA.

9 And so with no cash incentives, the Environmental
10 Protection Agency, at least, is getting, you know, very
11 large return on their Energy Star homes line. So there
12 certainly are other strong incentives that, that can be
13 attributed to changes in practice.

14 Q. Okay. I have just maybe three or four quick
15 questions. One is, you were talking about the code, the
16 Florida Building Code is basically a performance-based
17 code, it's a flexible code and not a prescriptive code,
18 is that correct?

19 A. By and large, that's correct. There are two
20 methods to comply with Florida's code: Method A which
21 is totally performance-based, and Method B, which is a
22 group of packages of measures that are prescriptive in
23 nature that can be selected instead of the performance
24 methodology.

25 Those packages of measures are put together in

1 such a way that what amounts to absolute worst case
2 analysis is done on some typical homes to determine what
3 would have to be done from a prescriptive perspective in
4 order for virtually all of those homes to meet the
5 prescriptive guidelines. And that's the way the
6 packages themselves are actually created.

7 And so for, you know, the strong majority of
8 cases you actually have to do less using the performance
9 methodology than you would using the prescriptive
10 methodology because that prescriptive methodology is
11 created for the absolute worst case.

12 As a result of that, we basically see that more
13 than 90 percent of the people who are trying to comply
14 with code use that performance methodology as a
15 compliance pathway.

16 Q. In one of the questions in response to quality
17 control, you basically stated that you do desk audits
18 and other kind of quality control mechanisms to assure
19 quality in the ratings both from a performance and from
20 a measurement and an information device. Can you kind
21 of relate to us very quickly kind of the quality control
22 that goes behind a Florida rating?

23 A. I'm not completely sure that I understand the
24 answer to the question. We do both -- we do what I had
25 called earlier desktop audits where we look at the

1 complete rating in terms of the numbers that are entered
2 into the software. We actually have the building input
3 file that is sent to us by the raters when they try to
4 register their rating. And so we know exactly what all
5 the components of the building are.

6 And, you know, there are certain kinds of
7 geometric limits to what you can do with a building, and
8 so we can actually look at those submission and tell
9 whether or not the, the input values for the simulations
10 are reasonable or not. And in certain cases they're not
11 reasonable and we go back to the raters and we tell
12 them, okay, you've done X, Y or Z incorrectly and you
13 need to go back and redo it before you resubmit this
14 rating.

15 And those are the things that we call desktop
16 audits and they look at the building in its entirety.
17 And they look for capability between systems and between
18 numbers and geometries and a whole host of other things.

19 And when we find internal inconsistencies and
20 incapacibilities within a submitted rating file, it goes
21 back to the rater for correction and resubmission.

22 And then, in addition to that, we do a limited
23 number of field audits where we actually go into the
24 field and do a complete rating on a home that has been
25 rated by a certified rater and look at how the results

1 of our field ratings stack up against the results that
2 were submitted by the rater. And we try to use that as
3 an educational tool as much as possible and go back to
4 the rater in question and try to encourage them to, to
5 improve or to understand, you know, why the results are
6 different from what they are seeing and what we are
7 saying.

8 We haven't yet had a case where there was any
9 kind of legal or procedural ramification such as trying
10 to revoke a rater's certification or anything of that
11 nature. But we have occasionally done those.

12 We anticipate that because of changes to the
13 national guidelines which are going to go into effect in
14 January that the number of those field audits where we
15 actually go out behind raters and do stuff is going to
16 increase, because there's a new national requirement
17 that we do something on the order of one percent. The
18 national requirements only require 10 percent desk
19 audits, where we do 100 percent DOH but they do require
20 one percent field backup audits. And so we anticipate
21 that that's going to increase.

22 Q. And then I guess basically just my final
23 question, if I can see in my notes where it is, oh, when
24 you were talking about your system, Item 21 and 22, the
25 question portfolio was what is a BuildSmart audit. And

1 they were talking about whether it's a Class A or not a
2 Class A.

3 But based on your role in the initial study
4 leading to the BuildSmart Program and just your general
5 knowledge of these programs and everything, what
6 services should be performed to do a BuildSmart audit
7 properly?

8 A. Well, I think, you know, a couple of things the
9 initial study found was that, number one, it was very,
10 very important that you have as good as information that
11 you can get as possible, that was one of the most
12 critical mistakes that was -- critical differences that
13 was found between what was submitted and what was
14 actually found through separate audits in the field in
15 terms of difference in these buildings. And it cut both
16 ways, sometimes it was helpful to the builder and
17 sometimes it wasn't.

18 And the other piece, I think, that came out of
19 the BuildSmart study was that you're not going to know
20 how you're doing to duct systems unless you measure
21 them. Because, I mean, when we did the BuildSmart study
22 and reduced the data to what we now call normalized
23 leakage, we saw it was all over the map from a low of on
24 the order of .03, which is what we now consider
25 leak-free duct systems, or substantially leak-free duct

1 systems, up to a high on the order of .22. And there
2 are substantial energy savings that are available there.

3 And so I think that the ultimate recommendations
4 that went into the BuildSmart Program was that it was
5 very important to ensure that you have in the field
6 what's in the specifications and on the drawings,
7 because you can't necessarily count on the building
8 inspector to do that.

9 And you also have some assurance that the duct
10 systems which are, can be major contributors to energy
11 waste are -- have good integrity.

12 MR. TAIT: That's fine, that's all
13 the questions I had.

14 MR. BRYAN: Okay, I guess we're done.

15 Oh, just one question on the record.

16 Now, you are leaving to go overseas --

17 THE WITNESS: Friday.

18 MR. BRYAN: And you return --

19 THE WITNESS: October the 6th, late,
20 late, late in the evening. For all practical
21 purposes, October the 7th.

22 MR. BRYAN: I had to ask in case we need
23 to subpoena you to come back in the interim.
24 I'll get you specifics.

25 THE WITNESS: The guy does not want to

1 live long.

2 MR. TAIT: My understanding is he
3 probably is going to leave us no
4 forwarding address.

5 I do have one that may -- a request
6 that may or may not be on the record,
7 Patrick, it's up to you, is that I would
8 like to request Mr. Fairey to make
9 provision for answering Question Number
10 37.

11 MR. BRYAN: Question Number 37?

12 MR. TAIT: That was the one that he
13 was not able to answer because of the
14 statistics. If he could perform the kind
15 of analysis he discussed or have somebody
16 at FSEC perform that analysis and provide
17 it to all the parties, I'd appreciate it.

18 MR. BRYAN: That's entirely up to Mr.
19 Fairey, I believe.

20 MR. TAIT: Our deadline is September
21 the 26th, I guess, for all discovery to
22 be complete. Mr. Fairey, I know you'll be
23 out of the country, but is there somebody
24 you can designate or delegate that
25 responsibility to?

1 THE WITNESS: I guess there is. Would
2 someone send me an e mail message reminding
3 me to do that tomorrow, and I will see if I
4 can get it done on my last day in the office,
5 that delegation.

6 MR. TAIT: I'll be more than happy to.

7 MR. BRYAN: The only thing I ask is that
8 if that is done that FPL be copied.

9 MR. TAIT: Oh, I'll copy you on the
10 e mail message. And to be clear --

11 THE WITNESS: I'll copy you on the results.

12 MR. TAIT: That FPL and all of us get the
13 results.

14 MR. BRYAN: To be clear FPL, is not asking
15 you to do this, it's Mr. Tait.

16 MR. TAIT: I would like to ask one more
17 thing, Patrick. As you -- I would urge Mr.
18 Fairey to give you the Executive Summary and
19 that study, and I would sure like to have a
20 copy of that, as well.

21 MR. BRYAN: If we get a copy through Mr.
22 Fairey, you will certainly get a copy.

23 MR. TAIT: Well, I would like a copy if
24 you get it through other sources, as well,
25 if that's possible.

1 MR. BRYAN: Well --

2 MS. BROWN: Excuse me, can I ask a
3 question about these late-filed exhibits
4 that Mr. Tait is asking for? Jim, are
5 these late-filed exhibits to the deposition
6 testimony? I assume they're not late-filed
7 exhibits to the Prefiled Direct. It better
8 not be.

9 MR. TAIT: I would make it to the
10 deposition testimony, yes, ma'am.

11 MR. BRYAN: Well, then -- well, I have
12 a problem with that.

13 MS. BROWN: Right.

14 MR. BRYAN: I guess I would make a formal
15 objection. I didn't know that that was your
16 intention.

17 MR. TAIT: Well, with the permission of
18 the Public Service Commission --

19 MS. BROWN: No, no, no, don't put me in
20 that spot.

21 MR. TAIT: We can make them to our prefiled
22 testimony, as well.

23 MS. BROWN: I think you'll have to petition
24 the Prehearing Officer to do that.

25 MR. TAIT: I'd be more than happy to do

1 that, if Patrick has an objection to me
2 putting it as part of the deposition
3 testimony, although it was part of the
4 deposition discussion.

5 MR. BRYAN: Well, the questions were
6 asked but there was no exhibit. A late-filed
7 exhibit is usually just that, an exhibit.

8 MR. TAIT: Well, I would hope that
9 Florida Power & Light would not object to
10 my request.

11 MS. BROWN: Well, Jim, wouldn't it be
12 subject to further discovery?

13 MR. TAIT: Yes.

14 MS. BROWN: And the discovery cut-off
15 is when?

16 MR. TAIT: It's a week from Friday.

17 MR. BRYAN: September 26th.

18 MS. BROWN: And Mr. Fairey's going to
19 be out of the country.

20 MR. TAIT: I'm asking if there is some
21 other person that could, you know, provide
22 that information, if he could designate
23 them, and we would then -- I don't know.
24 you caught me in a round-robin on this one.

25 MS. BROWN: Well, this is Mr. Bryan's

1 deposition, so --

2 MR. TAIT: It certainly is, so I'll defer
3 to Patrick.

4 MR. BRYAN: Well, I do object to the,
5 whatever work is done between now and then
6 coming in as a late-filed exhibit to this
7 deposition, and for the reasons that were
8 stated. It would be subject to further
9 discovery, the witness won't be here.

10 MR. TAIT: Okay.

11 MR. BRYAN: Okay.

12 MR. TAIT: I'll have to think -- okay.

13 MR. BRYAN: We can talk offline. I
14 don't know if you want to stay on the record,
15 Jim, but I don't think anything's going to
16 get resolved here.

17 MR. TAIT: I agree, we'll talk about it
18 tomorrow.

19 MR. BRYAN: And Mr. Fairey, do you know
20 about reading the transcript or waiving the
21 reading and signing of a deposition transcript?
22 You have the right to read and fill out an
23 errata sheet. If you think that the
24 transcription is wrong, you can't change your
25 answers in any way except to make corrections.

1 Or you can waive the reading and signing.

2 THE WITNESS: When could I read?

3 MR. BRYAN: Probably you'd have to read
4 it in Europe. I don't know. That's up to
5 the court reporter. I don't know when she
6 could get it for you.

7 THE WITNESS: I don't know how you could
8 get it to me in Europe --

9 MR. BRYAN: A number of witnesses waive.

10 THE WITNESS: -- in any reliable fashion.

11 MR. BRYAN: Right.

12 THE WITNESS: I don't have any problem
13 waiving. I guess I trust you.

14 COURT REPORTER: Thank you.

15 MR. BRYAN: A number of witnesses do.
16 So okay.

17 THE WITNESS: Because it's really untenable
18 to read. I usually read, but it's pretty
19 untenable in this case.

20 MR. BRYAN: All right, very good.

21 MR. TAIT: Thank you everybody.

22 (The deposition was concluded at 4:10 p.m.)

23

24

* * * * *

25

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

CERTIFICATE OF OATH

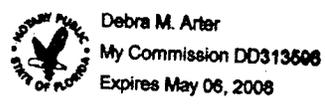
STATE OF FLORIDA)
) SS:
COUNTY OF BREVARD)

I, DEBRA M. ARTER, do hereby certify that PHILIP FAIREY personally appeared before me and was duly sworn.

WITNESS my hand and official seal this 23rd day of September, 2005.



DEBRA M. ARTER
Notary Public
State of Florida



1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

CERTIFICATE OF REPORTER

STATE OF FLORIDA)
) SS:
COUNTY OF BREVARD)

I, DEBRA M. ARTER, Registered Diplomate Reporter and Certified Realtime Reporter, certify that I was authorized to and did stenographically report the deposition of PHILIP FAIREY; and that the transcript was requested; and that the transcript, pages 1 - 111, is a true and complete record of my stenographic notes.

I FURTHER CERTIFY that I am not a relative, employee, attorney or counsel of any of the parties, nor am I a relative or employee of any of the parties' attorney or counsel connected with the action, nor am I financially interested in the event of this cause.

DATED this 23rd day of September, 2005.



DEBRA M. ARTER
REGISTERED DIPLOMATE REPORTER
CERTIFIED REALTIME REPORTER

Q.

On page 3 of PETITION OF FLORIDA POWER & LIGHT COMPANY FOR APPROVAL OF MODIFICATIONS TO ITS BUILDSMART™ PROGRAM, Dated 30-June 2004, you stated:

FPL charges fees to homebuilders for plan inspection and certification. FPL charges different levels of fees per home, depending upon the level of efficiency achieved. Lower fees are charged to homes with higher energy efficiency, and homes that are at least 30% more efficient than the baseline have no fee.

Please provide detailed information on the homes certified that are at least 30% more efficient than the baseline with respect to:

- A. Number of Homes under this category certified for the last 5 years.
- B. Number of Homes under this category that received a BERS Rating for the last 5 years.

Total amount of revenue collected for the last 5 years for all Homes under this category that received a BERS Rating.

- A.
 - a. 2489 homes certified in this category in the last five years.
 - b. 389 homes under this category have received BERS Ratings in the last 5 years.
 - c. During the period of 2000-2004, builders could obtain a HERS rating for no fee under the BuildSmart program if the home achieved an EPI rating of 70 or below and the builder requested the basic service. The energy analysis software used by in the BuildSmart Program during this time was capable of calculating a HERS rating at the same time the EPI rating was calculated. Since November of 2004, the duct testing protocol for a HERS rating has changed. FPL BuildSmart Program applies the guidelines outlined in the BERS tariff and has collected \$289.56 in revenue under this category.

FLORIDA PUBLIC SERVICE COMMISSION
DOCKET 040029-EG +
NO. 040660-EG Exhibit No. 23
Company/ FPL
Witness: Daniel J. Haywood
Date: 10-10-05

#23