

**BEFORE THE FLORIDA
PUBLIC SERVICE COMMISSION**

**DOCKET NOS. 040029-EG, 040660-EG
FLORIDA POWER & LIGHT COMPANY**

SEPTEMBER 9, 2005

REBUTTAL

TESTIMONY & EXHIBITS OF:

STEVEN R. SIM

DOCUMENT NUMBER-DATE

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FPSC-COMMISSION CLERK

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6
7 **Q. Please state your name and business address.**

8 A. My name is Steven R. Sim and my business address is 9250 West
9 Flagler Street, Miami, Florida 33174.

10 **Q. Have you previously filed direct testimony in this proceeding?**

11 A. Yes.

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

13 A. The purpose of my rebuttal testimony is to address the statement of
14 Mr. Philip Fairey regarding his proposed approach for determining the
15 cost-effectiveness of an energy efficiency program.

16 **Q. Mr. Fairey's states on page 7, lines 12-14 of his testimony that the**
17 **“simplest means of determining the cost effectiveness of an entity's**
18 **efforts to enhance energy efficiency would be the cost of achieving**
19 **the increased energy efficiency divided by the amount of energy**
20 **saved. In other words, dollars expended per kwh avoided.” Do you**
21 **see problems with that statement?**

22 A. Yes. There are at least three aspects of Mr. Fairey's statement that are
23 problematic. One aspect has to do with the forum Mr. Fairey has

1 chosen to suggest a new DSM cost-effectiveness test. The other two
2 problematic aspects tie to fundamental problems in the approach he
3 proposes.

4 **Q. What is the concern you see in regard to Mr. Fairey proposing a**
5 **new approach to determining DSM cost-effectiveness in this**
6 **docket?**

7 A. Mr. Fairey is proposing a new approach as to how to judge the cost-
8 effectiveness of demand side management (DSM) programs in
9 general, but he is making that suggestion in a limited scope docket
10 regarding the cost effectiveness of a single DSM program being
11 offered by a single utility.

12
13 The topic of how best to determine the cost-effectiveness of DSM
14 programs was exhaustively examined in the mid-1990s in the first
15 DSM Goals docket (Docket Nos. 930548-EG, 930549-EG, 930550-
16 EG, 930551-EG). In that docket several dozen witnesses, representing
17 all of Florida's larger electric utilities as well as numerous other
18 interested parties, were heard. After weighing all of this testimony, the
19 Commission decided that a combination of the Rate Impact Measure
20 (RIM) test and the Participant test was the most meaningful approach
21 to evaluating the cost-effectiveness of DSM programs. Florida's
22 utilities have since based their extensive DSM program development
23 and implementation efforts on this decision.

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The subject of how to judge the cost-effectiveness of DSM programs is a far reaching one. It simply is not an appropriate issue for a docket such as this one that deals with a protest of a single DSM program of a single utility. If Mr. Fairey wishes to raise this important issue again, then a more appropriate forum, such as a future DSM Goals docket, should be sought.

Q. You mentioned that there were two fundamental problems with the approach to judging DSM cost-effectiveness that Mr. Fairey is proposing. What are those problems?

A. These two fundamental problems are related and can be summarized as follows:

- i. the proposed approach ignores fully one-half of the impacts of DSM, including the DSM impact that results in the avoidance of new generation, transmission, and distribution facilities; and,
- ii. the proposed approach would result in no DSM programs being found cost-effective.

Q. Please discuss the fact that Mr. Fairey’s approach ignores one-half of DSM’s impacts.

A. Let’s return to Mr. Fairey’s summary comment regarding his proposed cost-effectiveness test: “..In other words, dollars expended per kwh avoided”. This approach is a DSM program cost only approach; there

1 is no reference to, or calculation of, the benefits of DSM. In other
2 words, the proposed approach addresses only half of the DSM picture.

3
4 Most importantly, the proposed approach completely ignores the
5 potential benefits driven by the kw reduction attribute of DSM
6 programs. The kw reduction attribute of DSM programs results in
7 DSM's biggest potential benefit - the avoidance or deferral of new
8 generation, transmission, and distribution facilities that would
9 otherwise be needed.

10
11 Mr. Fairey's proposed approach would give no weight at all to a DSM
12 program's capability to reduce a utility's demand during Summer and
13 Winter peak hours. Assume for a moment that there are two
14 hypothetical DSM programs, Program A and Program B, both of
15 which achieve 100 kwh of annual energy reduction and have identical
16 program-related costs. Now let's assume that Program A achieves 1
17 kw of peak load reduction and Program B achieves zero kw of peak
18 load reduction. According to his proposed cost-effectiveness approach,
19 these two programs would be judged to be identical in terms of "cost-
20 effectiveness". That clearly is not the case and illustrates a
21 fundamental flaw in his proposed approach.

22 **Q. You mention that Mr. Fairey's approach would result in no DSM**
23 **programs being found cost-effective. Please explain.**

1 A. Recall that the primary objective of any DSM cost-effectiveness test is
2 to determine if it is cost-effective for the utility to offer the DSM
3 program. This means that a cost-effectiveness test is designed to reach
4 a “go”/“no go”, or “pass”/“fail”, decision. In the RIM and Participant
5 tests, this decision is reached after it is known if the DSM-related
6 benefits exceed or match the DSM-related costs to achieve a cost-
7 effectiveness (or benefits-to-costs) ratio of 1.0 or greater. Therefore, a
8 benefits-to-cost ratio of 1.0 is the “pass”/“fail” criterion for these tests.
9 Mr. Fairey does not propose a similar criterion for his approach, but by
10 following the logic of his proposed approach this criterion is obvious.

11
12 Mr. Fairey’s proposed approach, as explained above, is a DSM
13 program “cost only” approach: the test examines DSM program-
14 related costs in the sense of “..dollars expended per kwh avoided”, or
15 \$/kwh. It would seem logical then that the higher this ratio was; i.e.,
16 the more dollars it cost to save a kwh, the less attractive a DSM
17 program would be under the proposed approach. One can envision a
18 hierarchy of DSM programs, some with a relatively high \$/kwh value
19 and some of with a relatively low \$/kwh value.

20
21 However, since all utility-sponsored DSM programs have costs, there
22 is a greater-than-zero cost per kwh for all DSM programs. Since the
23 utility would incur no DSM-related costs if it chose not to offer the

1 program, the logical conclusion of the proposed approach is that all
2 DSM programs are more expensive than not doing the DSM program
3 since not doing the program has program-related costs of zero while
4 all DSM programs will have a greater-than-zero \$/kwh value. In other
5 words, a cost of zero is the logical “pass”/“fail” criterion for the
6 proposed approach. Consequently, no utility-sponsored DSM program
7 would pass this criterion for the proposed approach.

8
9 Any DSM cost-effectiveness test, such as the proposed approach, in
10 which all DSM programs fail is a flawed test. (Conversely, any
11 proposed cost-effectiveness test in which virtually all DSM programs
12 pass would also be a flawed test.)

13 **Q. On page 8, lines 4 and 5, Mr. Fairey states that “I think I would**
14 **require that the cost of providing the energy efficiency be less than**
15 **the amortized cost of the avoided energy use”. Would you**
16 **comment about this statement?**

17 A. There is simply not enough information regarding the terms he uses to
18 ensure that one knows what types of costs of “providing the energy
19 efficiency” would be included and what types of costs would be
20 included in the “amortized cost of the avoided energy use”. However,
21 as discussed above, since the program-related costs of not offering the
22 DSM program will always be less than the cost of offering the DSM
23 program in the proposed approach – thus resulting in the DSM

1 program failing the proposed approach – knowing this information is
2 really not important.

3 **Q. Would you summarize your testimony, please?**

4 A. Yes. This individual DSM program docket is not an appropriate forum
5 to raise generic questions regarding how to judge DSM program cost-
6 effectiveness. Furthermore, the approach Mr. Fairey proposes by
7 which the cost-effectiveness of DSM programs would be judged is
8 fundamentally flawed.

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

10 A. Yes.