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July 30, 2009

VIA HAND DELIVERY

Ms. Ann Cole, Director
Office of Commission Clerk
Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

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Re: Orlando Utilities Commission's Rebuttal Testimony
Docket No. 080412-EG

Dear Ms. Cole:

Enclosed for filing in the above-referenced docket on behalf of the Orlando Utilities Commission (OUC) is an original and fifteen copies of the Pre-filed Rebuttal Testimony of Randall E. Halley, Frederick F. Haddad, Jr. and Bradley E. Kushner.

Please acknowledge receipt of said filing of the above.

Thank you for your assistance in connection with this matter.

Sincerely yours,

W. Christopher Browder
Vice President & General Counsel

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BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Commission review of Numeric
Conservation Goals (Orlando Utilities
Commission).

DOCKET NO. 080412-EG

FILED: July 30, 2009

ORLANDO UTILITIES COMMISSION'S NOTICE OF SERVICE OF REBUTTAL
TESTIMONY OF RANDALL E. HALLEY, FREDERICK F. HADDAD, JR. AND
BRADLEY E. KUSHNER

Orlando Utilities Commission has this 30th day of July, 2009 furnished the
Rebuttal Testimony of Randall E. Halley, Frederick F. Haddad, Jr. and Bradley E.
Kushner by hand delivery to Ann Cole, Director, Office of Commission Clerk, Public
Service Commission, 2540 Shumard Oak Blvd., Tallahassee, Florida 32399.

Respectfully submitted,



W. CHRISTOPHER BROWDER
Office of General Counsel
Orlando Utilities Commission
100 W. Anderson Street
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(407) 236-9698

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been provided by U.S. Mail and E-mail, this 30th day of July, 2009 to the following persons:

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By:



W. CHRISTOPHER BROWDER

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **REBUTTAL TESTIMONY OF BRADLEY E. KUSHNER**

3 **ON BEHALF OF**

4 **ORLANDO UTILITIES COMMISSION**

5 **DOCKET NO. 080412**

6 **JULY 30, 2009**

7

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

9 A. My name is Bradley E. Kushner. My business address is 11401 Lamar Avenue,
10 Overland Park, Kansas 66211.

11

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

13 A. I am employed by Black & Veatch Corporation as a Manager.

14

15 **Q. Have you previously provided testimony in this proceeding?**

16 A. Yes. I provided pre-filed direct testimony on behalf of the Orlando Utilities
17 Commission (OUC) and my credentials are provided in that testimony.

18

19 **Q. On whose behalf are you testifying?**

20 A. I am providing this rebuttal testimony on behalf of OUC.

21

22 **Q. What is the purpose of your testimony in this proceeding?**

23 A. The purpose of my testimony is to rebut certain evidence offered in the direct
24 testimony of NRDC, SACE and Commission Staff witnesses. More

1 specifically, my testimony will rebut certain statements made by such witnesses,
2 regarding the use of CO₂ emissions allowance price projections in the analysis
3 of DSM measures and goals for OUC.
4

5 **Q. Did OUC consider CO₂ emissions allowance prices in its DSM analyses?**

6 A. Yes.
7

8 **Q. What was the basis for the CO₂ emissions allowance prices considered in
9 your analyses?**

10 A. The CO₂ emissions allowance price projections considered in my analyses for
11 OUC were based on those presented in the US Energy Information
12 Administration's (EIA) April 2008 *Energy Market and Economic Impacts of*
13 *S.2191, the Lieberman-Warner Climate Security Act of 2007* report.
14

15 **Q. Why was this report chosen as the basis for your CO₂ emissions allowance
16 price projections?**

17 A. The *Energy Market and Economic Impacts of S.2191, the Lieberman-Warner*
18 *Climate Security Act of 2007* report represented the most recent detailed
19 analyses of proposed legislation to regulate emissions of CO₂ with
20 corresponding annual emissions allowance price projections beyond 2019
21 developed by a US governmental entity at the time we began developing
22 avoided costs for use in this Docket. Furthermore, these same CO₂ emissions
23 allowance price projections were considered in the JEA Greenland Energy

1 Center Combined Cycle Need for Power Application, which was approved by
2 the Commission February 25, 2009 (Order No. PSC-09-0111-FOF-EM).

3

4 **Q. Did witness Steinhurst present any alternative CO₂ emissions allowance
5 price projections?**

6 A. Witness Steinhurst only suggests a low-case CO₂ emissions allowance price of
7 \$15 per ton, a mid-case allowance price of \$30 per ton, and a high-case
8 allowance price of \$78 per ton, all levelized over the period of 2013-2030, in
9 2007 dollars.

10

11 **Q. How do the CO₂ emissions allowance price projections used in OUC's
12 analyses compare to those suggested by witness Steinhurst?**

13 A. The three CO₂ emissions allowance price projections considered in OUC's
14 analyses range from approximately \$16 per ton in the low-case to approximately
15 \$37/ton in the mid-case to approximately \$96/ton in the high case, all levelized
16 over the period of 2012-2027, in 2007 dollars. As shown in the table below,
17 these align well with those suggested by witness Steinhurst.

Comparisons of CO ₂ Emissions Allowance Price Projections (Levelized \$/ton)			
Source	Low	Mid	High
Witness Steinhurst	15	30	78
Witness Kushner	16	37	96

18

19 **Q. How do the CO₂ emissions allowance price projections used in your
20 analyses compare to any more recent price projections developed by US
21 governmental entities?**

1 A. I have reviewed the projections developed by the US Environmental Protection
2 Agency (EPA) in their report titled *EPA Analysis of the American Clean Energy*
3 *and Security Act of 2009 H.R. 2454 in the 111th Congress* (dated 6/23/09) and
4 the Congressional Budget Office (CBO) cost estimate of H.R. 2454 (dated
5 6/5/09). It is difficult to do a direct comparison between the CO₂ emissions
6 allowance prices considered in my analyses for OUC to those projected by either
7 EPA or CBO, since the basis of the projections in the EPA and CBO reports (i.e.
8 real or nominal dollars in either the EPA or CBO analysis, metric or short tons
9 in the EPA analysis, etc.) is not clear. However, in general, the range of CO₂
10 emissions allowance prices considered in my analyses encompass those
11 presented in both the EPA and CBO reports.

12
13 **Q. Witness Steinhurst suggests that the potential for state rather than federal**
14 **regulation of greenhouse gases in Florida was not considered in OUC's**
15 **analyses. Is this a distinction of any significance?**

16 A. No. It is irrelevant whether or not the CO₂ emissions allowance price
17 projections were based on potential Federal- or State-level regulations of
18 greenhouse gases. What is relevant is that an appropriate range of possible costs
19 were considered. Based on the range of emissions allowance prices
20 recommended by witness Steinhurst, and in light of my previous discussion of
21 comparison of CO₂ emissions allowance price projections, it would appear that
22 he would agree the price projections considered in my analyses were reasonable
23 and appropriate, a conclusion that appears to be substantiated by the testimony
24 of witness Spellman (Page 50, Lines 6-7).

1 Q. Does this conclude your testimony?

2 A. Yes.

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **REBUTTAL TESTIMONY OF RANDALL E. HALLEY**

3 **ON BEHALF OF**

4 **ORLANDO UTILITIES COMMISSION**

5 **DOCKET NO. 080412**

6 **JULY 30, 2009**

7

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

9 A. My name is Randall E. Halley. My business address is Reliable Plaza at 100
10 West Anderson Street, P.O. Box 3193, Orlando, Florida 32802.

11

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

13 A. I am employed by Orlando Utilities Commission (OUC) as Manager of Strategic
14 Planning.

15

16 **Q. Have you previously provided testimony in this proceeding?**

17 A. Yes. I provided direct testimony on behalf of OUC and my credentials are
18 provided in my pre-filed direct testimony.

19

20 **Q. On whose behalf are you testifying?**

21 A. I am providing this rebuttal testimony on behalf of the Orlando Utilities
22 Commission (OUC).

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1 **Q. What is the purpose of your testimony in this proceeding?**

2 A. The purpose of my testimony is to rebut certain evidence offered in the direct
3 testimony of NRDC, SACE and Commission Staff witnesses. More
4 specifically, my testimony will address the appropriate tests for evaluating the
5 cost-effectiveness of DSM measures; the DSM goals that witness Spellman and
6 Steinhurst have recommended for OUC; the scope of Itron's Technical Potential
7 Study; utilization of the two-year payback period in OUC's analyses;
8 consideration of potential greenhouse gas (GHG) regulation; Itron's cost-
9 effectiveness evaluation; and proposed funding set-asides for research regarding
10 demand-side renewable energy.

11

12 **Q. Do you agree with the interpretations of witnesses Wilson and Steinhurst**
13 **regarding use of the RIM test relative to the intent of Section 366.82, F.S.?**

14 A. No. Section 366.82, F.S., requires the PSC to consider the costs and benefits to
15 the participating ratepayers as well as the general body of ratepayers as a whole.
16 However, Section 366.82 does not dictate which cost-effectiveness test must be
17 used to establish DSM goals. The Commission should use both the RIM and
18 Participants test to set goals. When used in conjunction with each other, these
19 tests fulfill the Commission's obligation to consider the costs and benefits to the
20 general body of ratepayers as a whole, including utility incentives and
21 participant contributions. The Commission's use of the RIM test to ensure no
22 impact to customers' rates is particularly appropriate for municipal utilities, such
23 as OUC, over which the Commission does not have ratemaking authority.

1 **Q. Do you agree with witness Cavanagh's allegation that the RIM test**
2 **discourages the adoption of most energy efficiency measures?**

3 A. No. The RIM test is a determinant of cost-effectiveness that identifies DSM
4 measures that do not increase rates. The intent of the RIM test is to identify
5 DSM measures that would increase rates more than supply-side alternatives.
6 Such measures should not be considered cost-effective. The RIM test is
7 therefore the appropriate test to use as the basis for establishing DSM goals
8 because such a screening process allows OUC to provide its customers with the
9 least cost option.

10
11 **Q. Witness Spellman testified that the RIM test tends to limit investment by**
12 **FEECA utilities in energy efficiency programs, and is therefore not**
13 **consistent with the current FEECA statutes. Is this an accurate**
14 **characterization of the RIM test?**

15 A. No. The RIM test screens out DSM measures that will increase customer rates,
16 and in doing so, accounts for costs and benefits to the ratepayers as a whole (as
17 required by the FEECA statutes). The RIM test eliminates DSM measures that
18 would result in utility rate increases for all ratepayers. Customers such as
19 renters and low income customers who do not or cannot implement a DSM
20 measure and therefore have no corresponding benefit of reduced consumption to
21 offset the rate increase will be subject to increased utility bills. If the RIM test is
22 not applied, the net result for any non-participating customer would be an
23 increase in their electricity bills above what such bills would have been if RIM
24 testing had eliminated the measure.

1 **Q. Witness Spellman testifies that use of the TRC test rather than the RIM**
2 **and Participant tests will not likely have significant long-term impacts on**
3 **FEECA utility customers' rates. Do you agree with this conclusion?**

4 A. No. Witness Spellman's conclusions do not differentiate between DSM
5 measures that pass RIM and those that fail RIM, nor are they supported by any
6 sort of comprehensive analysis. As I have testified previously, the RIM test
7 should be used to evaluate the cost-effectiveness of a DSM measure. As shown
8 in Exhibit No. __ [RH-3] of my pre-filed testimony, customer rates are
9 estimated to increase by approximately 12.7 percent by 2019 based on the DSM
10 measures that fail RIM but pass the TRC and Participants test in Itron's
11 analyses. Such increases amount to annual customer bill increases of
12 approximately \$112 per year by 2014 and \$281 dollars per year by 2019 for the
13 residential customer based on 1,200 kWh of monthly consumption. While
14 witness Spellman may view this as an insignificant increase, the definition of
15 significant is not universal and those customers who struggle to pay their utility
16 bills would likely argue against witness Spellman's conclusions that bill
17 increases of this magnitude are in fact not significant.

18
19 **Q. Witness Spellman recommends that the Commission mandate that FEECA**
20 **utilities have DSM goals consistent with those developed as discussed in**
21 **GDS' testimony. Do you agree with this suggestion?**

22 A. No. As I have stated previously throughout my pre-filed testimony, the RIM
23 and Participant tests are the proper tests to use for evaluating the cost-
24 effectiveness of DSM measures and should be used as the basis for establishing

1 DSM goals. I am not intimately familiar with the methodology used by witness
2 Spellman in estimating achievable potential, but it seems his recommended
3 goals are arbitrary in nature and not supported by conclusive supporting
4 evidence. However, witness Spellman's suggestion of basing goals upon full
5 achievable potential as GDS quantifies it does not account for the impact to our
6 customers' rates that will result from mandating DSM measures that do not pass
7 the RIM test.

8 As discussed in my pre-filed testimony, Itron's cost-effectiveness analyses
9 indicated that none of the DSM measures analyzed passed the RIM test. Exhibit
10 No. __[RH-3] of my pre-filed direct testimony presents projected rate impacts
11 associated with the DSM measures that passed both the TRC and Participants
12 tests in Itron's cost-effectiveness analyses. The table presented below shows
13 projected annual bill impacts to a residential customer consuming 1,200 kWh
14 per month based on adopting GDS' recommended cumulative energy goals
15 (including the transition period) as presented in Exhibit RFS-21 (page 6 of 7) of
16 the testimony of witness Spellman. The impacts shown in the table below were
17 calculated by determining the annual ratios of the recommended savings per
18 witness Spellman's testimony to those projected by Itron for measures passing
19 both the TRC and Participants tests, and applying these ratios to the estimated
20 bill impacts shown in Exhibit No. __ [RH-3] of my pre-filed testimony. As
21 shown in the table below, annual bill increases to our residential customers
22 range from approximately \$63 per year in 2010 to approximately \$1,202 per
23 year in 2019. These increases represent the upward rate pressure solely from

1 the implementation of DSM measures that do not pass RIM as suggested by
2 witness Spellman.

3

Projected Customer Bill (Nominal \$/Year) for 1,200 kWh Residential - Without Customer Charge										
Scenario	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
OUC Proposed Goals	\$1,846	\$1,883	\$1,921	\$1,959	\$1,998	\$2,038	\$2,079	\$2,121	\$2,163	\$2,206
GDS Recommended Goals	\$1,909	\$2,027	\$2,157	\$2,295	\$2,440	\$2,607	\$2,790	\$2,986	\$3,192	\$3,408
Increase Due to GDS Recommended Goals	\$63	\$144	\$236	\$336	\$441	\$568	\$711	\$865	\$1,029	\$1,202

4

5 **Q. Witness Steinhurst recommends specific numeric goals that should be**
6 **adopted by the Commission (Exhibit WS-1, Page 8 of 9). Do you agree with**
7 **these recommended goals?**

8 A. No. As I have stated previously throughout my pre-filed and rebuttal testimony,
9 the RIM and Participant tests are the proper tests to use for evaluating the cost-
10 effectiveness of DSM measures and should be used as the basis for establishing
11 DSM goals. Witness Steinhurst's recommended goals are arbitrary in nature
12 and do not account for the impact to our customers' rates that will result from
13 mandating DSM goals based on measures that do not pass the RIM test.

14 As discussed in my pre-filed testimony, Itron's cost-effectiveness analyses
15 indicated that none of the DSM measures analyzed passed the RIM test. Exhibit
16 No. __[RH-3] of my pre-filed testimony presents projected rate impacts
17 associated with the DSM reductions associated with the measures that passed
18 both the TRC and Participants tests in Itron's cost-effectiveness analyses. The
19 table presented below shows projected annual bill impacts to an OUC residential

1 customer consuming 1,200 kWh per month based on adopting the energy goals
 2 suggested by witness Steinhurst. The impacts shown in the table below were
 3 calculated by determining the annual ratios of the recommended savings per
 4 witness Steinhurst's testimony to those projected by Itron for measures passing
 5 both the TRC and Participants tests, and applying these ratios to the estimated
 6 bill impacts shown in Exhibit No. __ [RH-3] of my pre-filed testimony. As
 7 shown in the table below, annual bill of OUC residential customers would
 8 increase from approximately \$44 per year in 2010 to approximately \$1,487 per
 9 year in 2019 based on witness Steinhurst's recommendations

10

Projected Customer Bill (Nominal \$/Year) for 1,200 kWh Residential - Without Customer Charge										
Scenario	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
OUC Proposed Goals	\$1,846	\$1,883	\$1,921	\$1,959	\$1,998	\$2,038	\$2,079	\$2,121	\$2,163	\$2,206
Witness Steinhurst Recommended Goals	\$1,890	\$1,982	\$2,082	\$2,219	\$2,416	\$2,640	\$2,884	\$3,143	\$3,411	\$3,693
Increase Due to Witness Steinhurst Recommended Goals	\$44	\$99	\$161	\$260	\$418	\$602	\$805	\$1,022	\$1,248	\$1,487

11

12 **Q. Witness Steinhurst's recommended numeric goals appear to be based on**
 13 **annual savings of 1 percent of forecasted energy requirements. How have**
 14 **recent OUC energy sales compared to previous years?**

15

16 **A.** For the 12-month period ending June 2009 compared to the 12 month period
 17 ending June 2008, OUC's energy sales are down approximately 2.9 percent.
 18 The magnitude of the decline in energy sales represents nearly 3 years of the
 19 energy reductions proposed by witness Steinhurst.

1 When compared to the 12 month period ending June 2007, OUC's energy sales
2 for the 12 months ending June 2009 are down approximately 0.6 percent.
3 Therefore, potential energy savings projected using 2007 as the baseline, as was
4 done in this Docket, are overstated.

5

6 **Q. Taking into consideration the recent rate increases bourn by many FEECA**
7 **utility customers, including those of OUC, do you think it is important to**
8 **focus on customer rates when evaluating the cost-effectiveness of possible**
9 **new DSM measures?**

10 **A. Yes. Determining cost-effectiveness of new DSM measures using the impact to**
11 **customers' rates as the primary determinant is extremely important. In light of**
12 **recent rate increases, we should not implement new DSM measures that have**
13 **been shown to increase rates even further. While the near-term bill impacts**
14 **shown in my previous responses as a result of either witness Spellman's or**
15 **witness Steinhurst's recommended DSM goals may not seem substantial, when**
16 **coupled with the recent increase in customers' rates OUC will be**
17 **disproportionately burdening its lower income and rental customers who cannot**
18 **take advantage of these DSM measures.**

19

20 **Q. On Page 8, Lines 5-7 of his testimony, witness Cavanagh states "It makes**
21 **far more sense from a policy perspective to focus not on *rates* but on total**
22 **utility *bills*. After all, are customers really worse off if, for a constant level**
23 **of service, their rates go up but their bills go down?" Is witness Cavanagh's**
24 **assertion regarding the relationship between rates and bills correct?**

1 A. No. If rates increase, as a result of implementing DSM measures that do not
2 pass the RIM test, and a nonparticipating customer's usage does not decrease
3 (i.e., the customer maintains a constant level of service), the customer's bill will
4 increase. An increase in rates correlates to an increase in bills in such a
5 scenario. Total bills will only go down if there is sufficient reduction in
6 consumption to offset the increase in rates. In this regard, customers who are
7 unable to implement DSM measures that do not pass the RIM test due to their
8 housing situation, income level, or combinations thereof, would therefore have
9 no corresponding benefit of reduced consumption and would experience an
10 increase to their utility bills.

11

12 **Q. How would you respond to allegations by witnesses Spellman and Wilson**
13 **that the scope of the Technical Potential Study was insufficient and did not**
14 **adequately assess the full technical potential of demand-side and supply-**
15 **side conservation and energy efficiency systems, including demand-side**
16 **renewable energy systems?**

17 A. I disagree with the allegations of witnesses Wilson and Spellman. The technical
18 potential study performed by Itron, as described in the testimony of Mike Rufo,
19 considered 267 unique measures known to the FEECA utilities and provided an
20 adequate assessment of the full technical potential of available demand-side and
21 supply-side conservation and efficiency measures, including demand-side
22 renewable energy systems. The scope of the study, the measures to be analyzed,
23 and the assessment techniques were fully vetted through the Collaborative
24 process which included input from all of the FEECA-regulated utilities and

1 other interested parties including SACE and NRDC. I think it is worth noting
2 that, while raising these allegations, witness Wilson simultaneously praises the
3 study, stating “Overall, the technical potential study was conducted in a
4 professional and thorough manner. The collaboration between utilities and our
5 organizations was generally productive and communications were effective for
6 the most part.” (Wilson testimony, Page 26, Lines 7-9).

7 As members of the Collaborative, SACE and NRDC agreed to the scope of the
8 Technical Potential Study and agreed that there was insufficient data to analyze
9 four sectors. SACE and NRDC did not protest any sort of “omission” of the
10 four measures, as they argue in the testimony of witness Wilson (Page 26, Line
11 12).

12

13 **Q. Witness Spellman’s testimony indicates that the 2-year minimum payback**
14 **criterion should not be used for all customer segments, specifically**
15 **residential and small commercial. Is this consistent with the DSM goal**
16 **setting process in Florida?**

17 A. No. Use of different payback criterion for different customer classes is not
18 consistent with the requirements of the DSM goals setting process. The DSM
19 goal setting process does not and should not differentiate between customer
20 segments while requiring that free-ridership be recognized.

21

22 **Q. Why was a 2-year payback period selected for the purposes of screening out**
23 **DSM measures from further consideration?**

1 A. The 2-year payback period provides for a reasonable method for minimizing
2 free ridership when evaluating the cost-effectiveness of DSM measures. The
3 types of measures that were screened out using the 2-year payback criterion are
4 the focus of existing educational programs and other efforts. . Furthermore, it is
5 OUC's position that there are a variety of reasons not to incentivize measures
6 that have a 2-year payback period or less, including:

7 (a) Not all conservation measures need utility incentives to have customers
8 implement them.

9 (b) Utility incentives should be utilized to "change the market" to incent
10 customers to do something they would ordinarily not consider doing, rather
11 than provide a reward for something they would do anyway.

12 (c) There is sufficient empirical evidence that indicates most customers consider
13 a 2 year payback period to be attractive enough to implement conservation
14 measures without further utility incentives. Residential customers'
15 expectation of a 2 to 3 year payback period for household investments is an
16 often-cited barrier to energy efficiency. This expectation of rapid payback
17 limits potential, but still provides considerable opportunities across all
18 sectors.¹ The average payback period expected by commercial customers is
19 3.6 years.² Empirical research suggests that "U.S. consumers typically

¹ *Unlocking Energy Efficiency in the U.S. Economy*, McKinsey Global Energy and Materials Group, July 2009, (pg 28)

² *Unlocking Energy Efficiency in the U.S. Economy*, McKinsey Global Energy and Materials Group, July 2009, (pg 77)

1 expect payback within 2.5 years. This expectation affects 60 percent of the
2 potential (of non-low income home owners)"³

3 (d) Customers should also share in the responsibility for implementing DSM
4 measures. It is OUC's position that the economics of a 2-year payback
5 period, equal to almost a 50% return on investment, provides sufficient
6 incentive in the marketplace for customers to install these measures without
7 additional utility incentives.

8

9 **Q. Witness Steinhurst alleges that the cost-effectiveness analyses did not**
10 **appropriately account for costs associated with regulation of greenhouse**
11 **gases (i.e. CO₂) emissions? How were such costs considered in OUC's**
12 **analyses?**

13 **A. Greenhouse gases are not currently regulated at either the State or Federal level,**
14 **and there currently are no costs imposed on the emissions of greenhouse gases.**
15 **While there is much speculation on the potential for greenhouse gas emissions**
16 **regulation, OUC does not believe it is appropriate to establish DSM goals that**
17 **would increase customer rates based on speculation related to yet-to-be defined**
18 **potential regulations of emissions of greenhouse gases. However, for**
19 **informational purposes, Itron performed additional analyses related to several**
20 **different combinations of fuel and carbon dioxide (CO₂) emissions allowance**
21 **prices.**

22

³ *Energy Savings Potential of Solid State Lighting in General Illumination Applications: Final Report*,
Office of Energy Efficiency and Renewable Energy, Department of Energy, December 2006

1 **Q. Were incentives properly considered by Itron in their cost-effectiveness**
2 **evaluations for OUC?**

3 A. Yes. Itron properly considered incentives provided from the utility to the
4 participating customer in the RIM and Participants tests.

5

6 **Q. Did Itron's cost-effectiveness evaluations for OUC reflect the inclusion of**
7 **administrative costs at the DSM measure level, as alleged in the testimony**
8 **of witness Mosenthal?**

9 A. No. Itron did not consider the inclusion of administrative costs at the DSM
10 measure level.

11

12 **Q. Witness Spellman suggests that DSM goals be based upon the maximum**
13 **achievable cost-effective potential under the E-TRC and Participant tests**
14 **with GHG cost estimates based upon most recent CBO costs estimates. Do**
15 **you agree with this approach?**

16 A. No. As I have stated previously throughout my pre-filed testimony, the RIM
17 and Participant tests are the proper tests to use for evaluating the cost-
18 effectiveness of DSM measures and should be used as the basis for establishing
19 DSM goals.

20

21 Greenhouse gases are not currently regulated at either the State or Federal level,
22 and there currently are no costs imposed on the emissions of greenhouse gases.

23 While there is much speculation on the potential for greenhouse gas emissions
24 regulation, OUC does not believe it is appropriate to establish DSM goals that

1 would increase customer rates based on speculation related to yet-to-be defined
2 potential regulations of emissions of greenhouse gases. However, for
3 informational purposes, Itron performed additional analyses related to several
4 different combinations of fuel and carbon dioxide (CO₂) emissions allowance
5 prices. The rebuttal testimony of witness Kushner discusses the CO₂ emissions
6 allowance price projections used in these analyses and how they compare to
7 recent CBO estimates.

8

9 **Q. Do you agree with witness Spellman's suggestion that utilities should be**
10 **required to set aside a specific amount of funds to encourage demand-side**
11 **renewable energy?**

12 A. No. I do not believe there should be Commission-mandated requirements as to
13 the amount of funds set aside to encourage technologies that are not shown to be
14 cost-effective. All goals should be established to promote cost-effective DSM
15 without bias to any particular technology. If demand-side renewable energy
16 systems are cost-effective, utilities should have the flexibility to include such
17 systems either as part of their renewable portfolios or as part of their DSM
18 programs. Witness Spellman cites no basis whatsoever to require a municipal
19 utility to invest unspecified research and development into measures that he
20 admits have been shown to not be cost-effective.

21 It should be noted that even in the absence of Commission mandated
22 requirements, municipal utilities may, at their own discretion, choose to
23 implement non-RIM based measures in response to input from our communities.
24 As examples, OUC offers limited demand-side renewable energy programs such

1 as our Solar Photovoltaic (PV) and Solar Thermal programs, as well as our
2 partnership with the Orlando Federal Credit Union to offer no cost and low cost
3 loans to customers installing solar systems.

4

5 **Q. Does this conclude your testimony?**

6 A. Yes.

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **DIRECT TESTIMONY OF FREDERICK F. HADDAD JR.**

3 **ON BEHALF OF**

4 **ORLANDO UTILITIES COMMISSION**

5 **DOCKET NO. 080412 -EG**

6 **JULY 30, 2009**

7

8 **Q. Please state your name and address.**

9 A. My name is Frederick F. Haddad, Jr. My business address is 1310 Winter
10 Springs Boulevard, Winter Springs, Florida 32708.

11

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

13 A. I am the President of Haddad Resources Management LLC.

14

15 **Q. Please describe your responsibilities in that position.**

16 A. Haddad Resources Management, LLC is a consulting firm that provides
17 assistance to public and private utilities and municipal entities on various
18 matters related to the planning and operation of the utility systems owned by
19 such entities. As President of Haddad Resource Management, I am primarily
20 responsible for performing analysis and making recommendations to clients in
21 the areas of rate design, power resource management and operation, need
22 certification and integrated resource management planning that incorporates
23 both traditional and renewable strategies

24

1 **Q. Please state your educational background and professional experience.**

2 A. I have a Bachelor's degree in Engineering from the University of Central
3 Florida, as well as an MBA from Rollins College. I am a licensed professional
4 engineer in the State of Florida. Prior to establishing Haddad Resources
5 Management LLC, I was employed by Orlando Utilities Commission (OUC) as
6 Vice President of the Power Resources Business Unit. In that capacity, I was
7 responsible for all of OUC's power resources including the planning,
8 construction, and operation of OUC's generation portfolio. I also managed the
9 fuel procurement and related financial hedging programs of OUC, and
10 wholesale power marketing. I worked for OUC from 1977 until 2007 and my
11 responsibilities included serving as a Results Engineer, Assistant Superintendent
12 of Operations, Superintendent of Indian River Power Plant in Titusville,
13 Director of Stanton Energy Center near Orlando, Managing Director of
14 Generation, and finally as Vice President of the Power Resources Business
15 Unit. I retired from that position in 2007.

16
17 **Q. On whose behalf are you testifying?**

18 A. I am providing testimony on behalf of the Orlando Utilities Commission (OUC).
19

20 **Q. What is the purpose of your testimony in this proceeding?**

21 A. The purpose of my testimony is to rebut certain evidence offered in the direct
22 testimony of NRDC, SACE and GDS Associates witnesses. More specifically,
23 my testimony will rebut certain erroneous assumptions and statements made by
24 such witnesses which overstate the potential effectiveness of recommended

1 DSM reduction measures as they would apply to OUC and OUC's ability to
2 comply with prudent resource planning to reliably serve its load in the most
3 cost-effective manner. My testimony will also rebut certain statements made by
4 such witnesses which understate the risk of DSM measures relative to supply
5 side alternatives that may be available to OUC.

6

7 **Q. Are you sponsoring any exhibits to your testimony?**

8 A. Yes. Exhibit No. __ [FFH-1] is a copy of my résumé.

9

10 **Q. Witnesses Steinhurst and Spellman claim that DSM related reductions have**
11 **value in the wholesale market because power can be resold. Witness**
12 **Steinhurst references an informal bilateral market for wholesale energy**
13 **transactions whereby energy imported from outside Florida is projected to**
14 **be substantial. Do you agree with this wholesale market description?**

15 A. No. Peninsular Florida is essentially an isolated electric grid with the exception
16 of a small amount of import capability as referenced in witness Steinhurst's
17 testimony. The unique characteristics of peninsular Florida are further
18 exemplified by the fact that the FRCC is a separate reliability region from
19 SERC. In recent years, the PSC recognized this exposure by raising the reserve
20 margin requirements for IOU utilities from 15 to 20%.

21

22 **Q. Assuming that DSM measures were imposed and resulted in reduction in**
23 **consumption of energy, would such a reduction have value to OUC in the**
24 **wholesale market?**

1 A. Only limited value. For reduction in consumption resulting from a DSM
2 measure to benefit OUC in the wholesale market, it would first have to be
3 mandated for OUC customers as opposed to being voluntary so that the potential
4 savings to be realized by the measure could be more accurately quantified. If
5 that condition were to be met, the value of the DSM measure would at most be
6 equivalent to non-firm supply resource since consumption levels vary depending
7 upon weather conditions and many other factors. Finally, the value of the DSM
8 measure in the wholesale market would not be based on each and every kWh
9 reduction in consumption, but rather, would have value only in “blocks” of
10 energy equivalent to standard trading blocks utilized for wholesale transactions.
11 Wholesale trading is generally based on 50MW blocks of energy.

12

13 **Q. What significance does the relatively isolated characteristics of Florida’s**
14 **electric grid play in the development and operation of the wholesale**
15 **market?**

16 A. Given the relatively restricted ability to import energy into Florida, in order to
17 maintain the reliability of energy supply in peninsular Florida utility providers
18 must either develop supply side resources located in peninsular Florida or
19 control customer consumption over time or both. For a utility to responsibly rely
20 solely on the wholesale market for firm energy supply resources, the transaction
21 must involve a physical asset located in the state and an approved transmission
22 path from the resource to the utilities service area.

23

1 **Q: Are you aware of any plans by transmission owners in the State of Florida**
2 **to increase the capacity of their systems to enhance the import capability**
3 **within the State for wholesale energy?**

4 A. No.

5

6 **Q. In your experience as utility executive and consultant, must a retail utility**
7 **be concerned with reliability in planning its generation portfolio?**

8 A. Yes. Reliability of service is not only a high priority for OUC, like other
9 utilities, but is a hallmark of prudent utility planning.

10

11 **Q. In the testimony of both witness Steinhurst and witness Spellman, it is**
12 **stated that mandating energy efficiency measures is a less risky strategy for**
13 **a utility than relying on supply side alternatives. Do you agree with this**
14 **position?**

15

16 A. No. In a state such as Florida, where import capability and access to wholesale
17 providers outside the region is severely restricted, access to physical supply is
18 critical to reliability of supply. The risks related to supply side alternatives can
19 be responsibly managed and mitigated through good management practices and
20 qualification of suppliers and contractors. Once the supply side resource is in
21 place, it can physically produce the power needed, or act as a financial ceiling
22 for prices paid in the wholesale market for power that may be available at a
23 lower price.

24

1 In the case of energy efficiency, a utility must rely on the voluntary reduction of
2 consumption by the customer. Market penetration predictions for customer
3 participation carry a significant level of uncertainty from both cost and actual
4 level of achievable reduction. Customer behavior changes and/or switching
5 options can change or eliminate the level of savings achieved through the DSM
6 program. If a utility relies on DSM for reduction in capacity requirements and
7 the prediction is flawed, the utility has two options once its reserve capabilities
8 have been exhausted A utility must either buy what it can in the wholesale
9 market at whatever price the market dictates, or interrupt service to its customers
10 to protect the integrity of the system.

11

12 **Q. Do you feel that relying on energy efficiency at the expense of supply side**
13 **alternatives is prudent utility resource management?**

14 A. No. It exposes a utility to both reliability and cost risk.

15

16 **Q. Are there any other considerations relating to the application of avoided**
17 **cost to the evaluation of DSM programs?**

18 A. Yes. Prudent planning for reliability of supply should consider that unless the
19 aggregate benefit of the DSM programs of a utility are equal or greater than the
20 practical size (or level of participation in the avoided cost unit), capacity cost
21 reductions are not avoided. Considering the forecasted load growth for the
22 State, aggregated DSM benefits will only delay, not eliminate the need for
23 additional units from a planning perspective. Until such time that aggregated

1 DSM measures completely offset new load growth, capital costs for new
2 generation will continue to be incurred.

3

4 **Q. Does this conclude your testimony?**

5 A. Yes

Frederick F. Haddad Jr.
Haddad Resource Management LLC
P.O. Box 195215 Winter Springs, Florida 32719
haddadrm@cfl.rr.com 407.719.0333

Profile

Senior executive with over 30 years of management experience, primarily focused in the electric and water utility industry with demonstrated expertise in the areas of power generation development, operations, retail and wholesale power marketing, asset optimization, commodity fuel procurement, and the negotiation of complex physical and financial infrastructure related transactions

Knowledge and experience in the planning, permitting, construction, and operation of state-of-the-art traditional and renewable electric generation assets using best available environmental control technologies

Proven ability to develop and negotiate large scale purchase power agreements, commodity fuel portfolio procurements, and transportation contracts for both rail and natural gas pipelines

Created and executed complex asset restructuring programs for the optimization of individual utility, joint action and power pool portfolios

Developed financial hedging programs for energy price stabilization

Utilized significant electric market experience to develop new approaches for management of regional water resources and business plans to meet compliance requirements for water consumptive use permits

Negotiated multiple utility reuse water agreements with local governmental agencies

Experience

HADDAD RESOURCE MANAGEMENT LLC, Winter Springs, FL 2007-Present

Haddad Resource Management LLC is a corporation that specializes in the development of creative approaches to complex business situations and optimization of electric and water asset-based portfolios. Examples of work performed to date include

- Strategic and operational guidance for long term electric integrated resource planning incorporating both traditional and renewable portfolio strategies
- Development and negotiation of municipal long term wholesale power, renewable energy and reclaimed water agreements
- Negotiation of new power plant construction and ownership agreements
- Strategic and operational guidance to municipal power, water, and strategic planning business units
- Development and implementation of contractor selection criteria and contract negotiation for design build commercial construction projects

ORLANDO UTILITIES COMMISSION, Orlando, FL 1977-2007

The 16th largest fully-integrated, AA rated municipal electric and water utility in the United States and second largest in Florida servicing approximately 196,000 customers in Orlando, unincorporated Orange County and St. Cloud, FL

Vice President Power Resources Business Unit

1996-2007

- Responsible for planning, development, regulatory permitting, construction and operation of physical generation asset portfolio valued greater than \$1 billion, with annual operating budgets exceeding \$300 million, and a workforce of more than 200 professional and craft employees.
- Responsible for the development, negotiation, and management of large scale asset sale and purchase power agreements valued at greater than \$2 billion.
- Responsible for the development, negotiation, and management of fuel portfolios including commodity fuel procurement, rail and gas transportation agreements, and financial energy price hedging programs resulting in over \$200 million in savings
- Responsible for the establishment of wholesale marketing business to compliment retail sales including the development of wholesale products portfolio, negotiation and contract management of short, intermediate, and long term sales transactions, and optimization and monetization of individual utility, joint action, and power pool physical generation assets to the wholesale market.
- Interact with regulatory, political, environmental agencies and the financial community on a national, state, and local level to complete large scale energy asset transactions.
- Interact directly with the largest financial rating agencies to maintain "AA" credit rating and achieve recognition for implementation of a sound strategic plan to develop and maintain a diverse and competitive power resource asset base.

Managing Director, Director, Manager, Results Engineer

1977-1996

- Management, operations, maintenance and construction responsibilities for multiple power facilities

Education and Professional Certification

Bachelor of Science in Engineering,
University of Central Florida, Orlando, FL. 1975

Master of Business Administration,
Rollins College Crummer Graduate School of Business, Winter Park, FL. 1987

Licensed Professional Engineer, State of Florida (Active Status)