



Via E-Filing

June 10, 2014

Carlotta S. Stauffer, Director
Office of Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, Florida 32399

RE: Docket No. 130199-EI (Florida Power & Light Company)
Docket No. 130200-EI (Duke Energy Florida, Inc.)
Docket No. 130201-EI (Tampa Electric Company)
Docket No. 130202-EI (Gulf Power Company)
Docket No. 130203-EM (JEA)
Docket No. 130204-EM (Orlando Utilities Commission)
Docket No. 130205-EI (Florida Public Utilities Company)

Dear Ms. Stauffer:

Please find enclosed for filing in the above-referenced consolidated proceeding the Rebuttal Testimony of Nathanael Miksis on Behalf of The Alliance for Solar Choice. The Alliance for Solar Choice is concurrently filing a Petition to Intervene in this consolidated proceeding. Please do not hesitate to contact me if you have any questions regarding this filing.

Sincerely,

/s/ Thadeus B. Culley

Thadeus B. Culley
Keyes, Fox & Wiedman LLP
401 Harrison Oaks Blvd., Suite 100
Cary, NC 27513
(510) 314-8205
tculley@kfwlaw.com

Enclosures

CERTIFICATE OF SERVICE

I hereby certify that on June 10, 2014, I sent a true and correct copy of this Rebuttal Testimony of Nathanael Miksis on Behalf of The Alliance for Solar Choice to the following:

Wal-Mart Stores East, LP and Sam's East, Inc.

Kenneth E. Baker
Energy Department
2001 SE 10th St.
Bentonville, AR 72716-0550
Phone: 479-204-0404
FAX: 479-273-6851

Sierra Club

Diana Csank
50 F St. NW, 8th Floor
Washington, DC 20001
Phone: (202) 548-4595
FAX: (202) 547-6009
Email: Diana.Csank@sierraclub.org

Office of Public Counsel (14g)

J.R. Kelly/E. Saylor
c/o The Florida Legislature
111 W. Madison Street, Rm. 812
Tallahassee, FL 32393-1400
Phone: (850) 488-9330
Email: Saylor.Erik@leg.state.fl.us

Florida Power & Light Company

Mr. Ken Hoffman
215 South Monroe Street, Suite 810
Tallahassee, FL 32301-1858
Phone: (850) 521-3900
FAX: (850) 521-3939
Email: ken.hoffman@fpl.com

Florida Department of Agriculture and Consumer Services

Steven L. Hall, Senior Attorney
Office of General Counsel
407 South Calhoun Street, Suite 520
Tallahassee, FL 32399
Phone: 850-245-1000
FAX: 850-245-1001
Email: Steven.Hall@FreshFromFlorida.com

Southern Alliance for Clean Energy

George Cavros
120 E. Oakland Park Blvd., Suite 105
Fort Lauderdale, FL 33334
Phone: 954-295-5714
FAX: 866-924-2824

PCS Phosphate - White Springs (14)

James W. Brew / F. Alvin Taylor
c/o Brickfield Law Firm
1025 Thomas Jefferson St., NW, Eighth
Washington, DC 20007-5201
Phone: (202) 342-0800
FAX: (202) 342-0807
Email: jbrew@bbrslaw.com

Gardner Law Firm

Robert Scheffel Wright/John T. La Via,
1300 Thomaswood Drive
Tallahassee, FL 32308
Phone: 850-385-0070
FAX: 850-385-5416
Email: schef@gbwlegal.com

Florida Industrial Power Users Group (13 Moyle)

Jon C. Moyle, Jr./Karen Putnal
c/o Moyle Law Firm
118 North Gadsden Street
Tallahassee, FL 32301
Phone: (850) 681-3828
FAX: 681-8788
Email: jmoyle@moylelaw.com

Environmental Defense Fund (Finnigan QR-14)

John Finnigan
128 Winding Brook Lane
Terrace Park, OH 45174
Phone: 513-226-9558
Email: jfinnigan@edf.org

Earthjustice

Alisa Coe/David G. Guest
111 S. Martin Luther King Jr. Blvd.
Tallahassee, FL 32301
Phone: 850-681-0031
FAX: 681-0020
Email: acoe@earthjustice.org

Tampa Electric Company

Ms. Paula K. Brown
Regulatory Affairs
P. O. Box 111
Tampa, FL 33601-0111
Phone: (813) 228-1444
FAX: (813) 228-1770
Email: Regdept@tecoenergy.com

Gulf Power Company

Mr. Robert L. McGee, Jr.
One Energy Place
Pensacola, FL 32520-0780
Phone: (850) 444-6530
FAX: (850) 444-6026
Email: rlmcgee@southernco.com

Hopping Law Firm

Gary V. Perko
P.O. Box 6526
Tallahassee, FL 32314
Email: Gperko@hgslaw.com

Florida Power & Light Company (Juno 13i)

John Butler/Jessica Cano
700 Universe Blvd
Juno Beach, FL 33408
Phone: (561) 304-5639
FAX: (561) 691-7135
Email: John.Butler@FPL.com

Orlando Utilities Commission

Mr. W. Christopher Browder
P. O. Box 3193
Orlando, FL 32802-3193
Phone: (407) 423-9100 ext 4
FAX: (407) 434-2220
Email: cbrowder@ouc.com

Duke Energy

Mr. Paul Lewis, Jr.
106 East College Avenue, Suite 800
Tallahassee, FL 32301-7740
Phone: (727) 820-5184
FAX: (727) 820-5041
Email: paul.lewisjr@duke-energy.com

Beggs & Lane (13)

J. Stone/R. Badders/S. Griffin
P.O. Box 12950
Pensacola, FL 32591-2950
Phone: 850-432-2451
FAX: 850-469-3331
Email: srg@beggslane.com

Gardner Law Firm

Robert Scheffel Wright/John T. La Via,
1300 Thomaswood Drive
Tallahassee, FL 32308
Phone: 850-385-0070
FAX: 850-385-5416
Email: schef@gbwlegal.com

JEA

Mr. P. G. Para
21 West Church Street, Tower 16
Jacksonville, FL 32202-3158
Phone: (904) 665-6208
FAX: (904) 665-4238
Email: parapg@jea.com

Florida Power & Light Company (Miami)

Kevin Donaldson
4200 West Flagler Street
Miami, FL 33134
Phone: (305) 442-5071
FAX: (305) 442-5435
Email: kevin.donaldson@fpl.com

Florida Public Utilities Company

Ms. Cheryl M. Martin
1641 Worthington Road, Suite 220
West Palm Beach, FL 33409-6703
Phone: (561) 838-1735
FAX: (561) 833-0151
Email: cyoung@fpuc.com

Ausley Law Firm (13d)

J. Beasley/J. Wahlen/A. Daniels
Post Office Box 391
Tallahassee, FL 32302
Phone: 850-224-9115
FAX: (850) 222-7560
Email: jbeasley@ausley.com

Gunster Law Firm (13 Keating)

Beth Keating
215 South Monroe Street, Suite 601
Tallahassee, FL 32301-1839
Phone: 850-521-1706
FAX: 561-671-2597
Email: bkeating@gunster.com

Mike Rogers

P.O. Box 12552
Tallahassee, FL 32317
Phone: (850) 566-2560
Email: mrogers@comcast.net

Southeast Energy Efficiency Alliance

Abby Schwimmer
FL
Phone: 404-602-9665
Email: aschwimmer@seealliance.org

Florida Solar Energy Industries Association

Colleen McCann Kettles, JD
FL
Phone: (321) 638-1004
Email: ckettles@fsec.ucf.edu

Keyes, Fox and Wiedman LLP

Kevin Fox/Justin Barnes/Rusty Haynes
436 14th St., Ste. 1305
Oakland, CA 94612
Phone: (510) 314-8201
Email: kfox@kfwlaw.com

OPOWER

Alex Lopez
FL
Phone: (571) 483 3042
Email: alex.lopez@opower.com

The Alliance for Solar Choice

Anne Smart
595 Market St. 29th Floor
San Francisco, CA 94105
Phone: (408) 728-7166
Email: anne@allianceforsolarchoice.com

Dated: June 10, 2014

BY /s/ Thadeus B. Culley
Thadeus B. Culley
NC Bar No. 47001
CA Bar No. 271602
Keyes, Fox & Wiedman LLP
401 Harrison Oaks Blvd., Suite 100
Cary, NC 27513
(510) 314-8205
tculley@kfwlaw.com

Qualified Representative of The Alliance for Solar
Choice

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Commission review of numeric conservation goals (Florida Power & Light Company).	DOCKET NO. 130199-EI
In re: Commission review of numeric conservation goals (Duke Energy Florida, Inc.).	DOCKET NO. 130200-EI
In re: Commission review of numeric conservation goals (Tampa Electric Company).	DOCKET NO. 130201-EI
In re: Commission review of numeric conservation goals (Gulf Power Company).	DOCKET NO. 130202-EI
In re: Commission review of numeric conservation goals (JEA)	DOCKET NO. 130203-EM
In re: Commission review of numeric conservation goals (Orlando Utilities Commission)	DOCKET NO. 130204-EM
In re: Commission review of numeric conservation goals (Florida Public Utilities Company)	DOCKET NO. 130205-EI
	FILED: JUNE 10, 2014

**REBUTTAL TESTIMONY OF NATHANAEL MIKSIS
ON BEHALF OF THE ALLIANCE FOR SOLAR CHOICE**

1 **I. INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. My name is Nathanael Miksis and my business address is 436 14th Street, Suite
4 1305, Oakland, California, 94612.

5

6 **Q. PLEASE STATE YOUR CURRENT TITLE AND NAME YOUR**
7 **EMPLOYER.**

1 A. I am a Power System Expert and consultant with EQ Research, a division of the
2 Oakland, California based law firm Keyes, Fox & Wiedman LLP. EQ Research
3 offers research and consulting services on a variety of energy-related issues, with
4 a particular focus on analyzing policies and regulation affecting renewable energy
5 and energy efficiency.

6

7 **Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATION AND EXPERIENCE.**

8 A. I have both a Bachelor of Arts in Economics and a Master of Science in Industrial
9 Engineering and Operations Research from the University of Massachusetts. A
10 list of my previous work experience and publications is included in my
11 curriculum vitae, attached as Exhibit NM-1.

12

13 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING?**

14 A. I am testifying on behalf of The Alliance for Solar Choice (“TASC”). TASC is an
15 organization founded by companies that comprise the majority of the nation’s
16 rooftop solar market, including SolarCity, Sunrun, Sungevity, Verengo Solar,
17 Demeter Power Group, and Solar Universe.

18

19 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY IN THIS**
20 **PROCEEDING?**

21 A. The purpose of my rebuttal testimony is to respond to one aspect of the direct
22 testimony of James Fine for the Environmental Defense Fund (“EDF”). Witness
23 Fine recommends:

1 “... that the Commission develop a pilot program for utility-owned
2 distributed solar PV programs. These programs could compete with the
3 incentive-based programs currently in effect. Allowing the utilities to own
4 the distributed solar PV systems on customer property would permit them
5 to rate base these investments and earn a return. This may provide a
6 greater incentive for utilities to promote these systems.”¹

7 TASC opposes EDF’s recommendation. Many of the reasons cited in Witness
8 Fine’s direct testimony in support of a utility-owned program apply equally well
9 or better to existing non-utility-owned programs. Additionally, allowing utilities
10 to rate base their investments involves risks that EDF does not mention, and
11 therefore it cannot uncritically be assumed to be a benefit.

12
13 **Q. PLEASE SUMMARIZE EDF’S REASONS FOR SUPPORTING A**
14 **UTILITY-OWNED DISTRIBUTED SOLAR PV PROGRAM.**

15
16 **A.** Witness Fine provides several reasons for supporting this type of program,
17 including the interest of allowing utilities to include the cost of project
18 investments in their rate base, in order to incentivize their support for distributed
19 solar PV. He also cites Witness Owen Smith in a Duke Energy proceeding before
20 the North Carolina Utility Commission (Docket No. E-7, Sub 856). In that
21 proceeding, Duke’s testimony touted the benefits of a utility-owned distributed

¹ Direct Testimony of EDF witness James Fine, pages 27-28.

1 generation (DG) program² to justify its proposal to own and operate supply-side
2 PV systems on the rooftops of residential and commercial customers. In summary,
3 Duke's witness claimed that the benefits of its proposal would be to:

- 4 1. Help meet Duke's renewable energy Renewable Energy and Energy
5 Efficiency Portfolio Standard (REPS).
 - 6 2. Help the utility to gain experience on concerns and opportunities with
7 distributed resources.
 - 8 3. Help the utility gain competency as owners and operators of renewable
9 DG.
 - 10 4. Provide distributed emission-free energy (which is therefore more reliable
11 due to geographic diversity).
 - 12 5. Promote local economic development.
 - 13 6. Allow Duke's customers to participate in renewable resource development.
- 14 Witness Fine acknowledges that Florida doesn't have a renewable
15 portfolio standard, but he suggests that the other reasons in Duke's North
16 Carolina testimony justify a utility-owned distributed renewable energy
17 program in Florida.

18

19 **Q. DO YOU AGREE WITH EDF WITNESS FINE'S CONCLUSION THAT**
20 **THESE BENEFITS JUSTIFY ESTABLISHMENT OF A UTILITY-**
21 **OWNED PROGRAM?**

² Direct Testimony of EDF witness James Fine, page 26.

1 A. No. I acknowledge that these are the potential benefits of a general, distributed
2 solar program, but I disagree that these reasons would generally justify a *utility-*
3 *owned* distributed renewable energy program. I disagree with Witness Fine’s
4 ultimate conclusion for the following reasons:

- 5 1. Distributed solar developers already have extensive experience with
6 renewable DG. While providing utilities with appropriate experience in
7 this area may be a laudable goal, using a utility-owned program (with its
8 attendant ratepayer costs and risks, both absolutely and relative to existing
9 programs) may not be cost-effective policy.
- 10 2. The increased reliability from geographically dispersed solar PV projects
11 can be achieved regardless of the ownership model.
- 12 3. While the promotion of local economic development is a valid and proven
13 reason to support distributed renewable energy development, the private
14 solar industry already has an extensive and successful track record of
15 accomplishing this throughout the country.
- 16 4. While utility-owned renewable DG has the potential to allow customers to
17 participate in renewable resource development, it is important to note, as
18 Witness Rábago (for the Southern Alliance for Clean Energy, or “SACE”)
19 does in the present proceeding, that utility-owned DG (such as FPL’s
20 proposal under Docket No. 140070-EG) is “not a community solar
21 program or a suitable alternative to customer-owned distributed solar
22 generation.”³. Without considering the many trade-offs between program

³ Direct Testimony of SACE witness Karl Rábago, page 34.

1 models, it is far from clear that a utility-owned model is any better at
2 encouraging increased customer participation in solar energy than others.
3 Additionally, there is no guarantee that participating customers would
4 receive the tangible benefits of the renewable resources (reduced energy
5 cost volatility, avoided energy delivery costs, valuable green energy
6 attributes).

7

8 **Q. YOU MENTIONED RISKS THAT COULD BE ASSOCIATED WITH**
9 **UTILITY OWNERSHIP. PLEASE EXPLAIN.**

10 A. The risks involved with utility-ownership are two-fold. First, while rate basing
11 any investment provides incentive for utilities to make these investments, the
12 inevitable result is that risks become socialized among all ratepayers (subscribers
13 and non-subscribers). Allowing a utility to rate base these assets does not
14 necessarily incentivize *prudent* investment from the utilities, because the greater
15 the investment, the greater the increase in utility rate-base and financial benefit to
16 the utility.

17

18 Second, because the utility is the agent in control of interconnecting new
19 customers and new projects, it may have both the motive and the opportunity to
20 favor its own projects over non-utility projects. This outcome would be
21 antithetical to the general principle of open access to electric grids that has been
22 central to energy policy-making for decades. A long-term risk of having utility-
23 owned programs compete with non-utility-owned ones is that the advantages

1 enjoyed by the incumbent utility (in terms of favorable finance, discretion in
2 program implementation, control over project interconnection, and perhaps
3 others) would make the competition an unfair one, with the result that customer
4 choices would be restricted rather than enhanced over time.

5
6 **Q. WHY DO YOU RECOMMEND THAT THE COMMISSION DECLINE TO**
7 **ADOPT THE PROPOSAL BY EDF FOR A PROGRAM BASED ON**
8 **UTILITY-OWNERSHIP OF DISTRIBUTED SOLAR?**

9 A. EDF is recommending that the Commission create a new program of questionable
10 comparative value to existing programs that are already in place to achieve
11 FEECA directives. Many of the reasons provided to support their
12 recommendation are reasons that apply equally well or better to non-utility-owned
13 program models. Additionally, utility ownership carries its own risks in terms of
14 inflated revenue requirements (and consequent higher energy rates) from
15 imprudent investment costs added to rate base, and potential for anticompetitive
16 behavior to crowd out private market players. Finally, while EDF suggests that a
17 utility-owned program can encourage more customers to participate in renewable
18 resource development, it is far from clear that the tangible benefits of investing in
19 these resources (lower energy cost volatility, valuable/monetizeable green
20 attributes, reduced costs to deliver energy to end users) would accrue to customers
21 rather than the utility and its shareholders.

22

23

1 Q. **DOES THIS COMPLETE YOUR REBUTTAL TESTIMONY?**

2 A. Yes, it does.

TASC

EXHIBIT NM-1

Nathanael Miksis

Mr. Miksis is a power system specialist with experience in Regional Transmission Organization stakeholder processes, electric utility regulatory proceedings, Federal Energy Regulatory Commission (FERC) proceedings, electricity market design, and power system operations and electric power economics.

WORK HISTORY

Power System Expert, Keyes, Fox and Wiedman LLP (Apr. 2014 - Present)
Principal, NextGrid Strategies (Jan. 2013 to Present)
Expert Market Analyst, Pacific Gas & Electric Co. (PG&E) (May 2011 to Jan. 2013)
Market Analyst, PG&E (Jan. 2010 to May 2011)
Associate Market Analyst, ISO New England, Inc. (ISO-NE) (Jun. 2007 to Dec. 2009)
Research Assistant, University of Mass. Amherst (UMass) (Jan. 2006 to May 2007)
Visiting Researcher, Electricite de France (Jul. 2006 to Aug. 2006)
Markets Development Intern, ISO-NE (Jun. 2004 to Dec. 2005)

SELECTED EXPERIENCE

- Drafted Motion to Intervene and Opposition on behalf of The Alliance for Solar Choice in Colorado PUC Dockets 14A-0301E and 14A-0302E.
- Submitted cost recovery testimony before the California Public Utility Commission on behalf of PG&E for expenses incurred to monitor new Market Redesign and Technology Upgrade (MRTU) rules at the California Independent System Operator (CAISO).
- Led internal analysis for PG&E officers on renewable PPA portfolio impact on residential volumetric electric rates, 2012-2020.
- Wrote PG&E's Motion to Intervene before the Federal Energy Regulatory Commission on CAISO Bid-Cost Recovery (Docket No. ER11-3856).
- Wrote PG&E's Stakeholder Comments to the CAISO on Intertie Pricing and Settlement for virtual and physical electricity imports and exports.
- Drafted briefing and discussion paper on PG&E system frequency response capabilities, including discussion of future North American Electric Reliability Corporation reliability standards on inertial response requirements in the Western Interconnection.
- Led detailed analysis and wrote PG&E's comments to the CAISO on \$300 million per year market flaw associated with Real-Time Energy Imbalance Offset charges.
- Wrote tariff language on CAISO's Flexible Ramping Constraint that was recommended

by PG&E and adopted by the CAISO.

- Led internal Quarterly Market Reporting function for PG&E leadership on the state of the California wholesale electricity market, involving monitoring for, anticipating and escalating market issues for resolution internally or through stakeholder processes.
- Gave internal PG&E Market Knowledge talks on “Energy and Ancillary Services Co-optimization,” “Optimal Dispatch with a Flexible Ramping Requirement Constraint,” “Optimal Dispatch and Locational Marginal Pricing with Transmission Congestion.”
- Wrote ISO-NE’s Semi-Annual Ancillary Services Phase 2 Compliance Filing for FERC.
- Conducted extensive internal ISO New England, Inc. review of power grid resource adequacy, covering wholesale-retail integration, demand-side management, electricity storage, dynamic pricing, rate design, and locational capacity markets.

SELECTED PUBLICATIONS

Miksis, N., S. Wadalawala., “Impact of Convergence Bidding on CAISO Real-Time Imbalance Energy Offset Charges,” Internal PG&E Whitepaper. Jan. 2011.

Miksis, Nathanael K., “Electric Power Market Modeling with Multi-Agent Reinforcement Learning,”. Masters Theses 1896 - 2014.
(<http://scholarworks.umass.edu/theses/494>). Sep. 2010.

Miksis, N., R. Entriken, M. Trotignon, “Program on Technology Innovation: Optimal Bidding in Power Markets: Q-Learning for Adaptive Agents,” Electric Power Research Institute Technical Report, Co-Sponsored by Electricite de France. Dec. 2007.

Miksis, N., “Spot Pricing and Investment Decisions in an Electricity Market Simulator with Adaptive Agents.” Presentation at Annual Meeting of the Institute for Operations Research and the Management Sciences (INFORMS), Pittsburgh, Nov. 2006.

EDUCATION

Master of Science, Industrial Engineering/Operations Research (UMass), Sep. 2010.

Bachelor of Arts, Economics (UMass), May 2006.