State of Florida

Public Service Commission

CAPITAL CIRCLE OFFICE CENTER • 2540 SHUMARD OAK BOULEVARD
TALLAHASSEE, FLORIDA 32399-0850

-M-E-M-O-R-A-N-D-U-M-

DATE: July 20, 2009

TO: Ann Cole, Commission Clerk - PSC, Office of Commission Clerk

FROM: Erik L. Sayler, Senior Attorney, Office of the General Counsel

RE: Docket Nos. 080407-080413-EG, Replacing non-color exhibits with color exhibits filed with Staff's testimony in on July 17, 2009.

Please note that the attached color exhibits RFS-1 through RFS-23 should replace the non-color exhibits RFS-1 through RFS-23 filed with Staff's testimony in Docket Nos. 080407-080413-EG on July 17, 2009. Non-color exhibits RFS-1 through RFS-23 were inadvertently filed with Staff's testimony in these dockets.

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EDUCATION: Management II Program, University of Michigan, Graduate School of Business, 1987
M.B.A., Thomas College, 1980
Amos Tuck Graduate School of Business, 1974-75
B.A., Math/Economics, Dartmouth College, 1974 (graduated with distinction)

PROFESSIONAL MEMBERSHIP: Association of Energy Service Professionals,
Board of Directors of AESP – 2005 to Present
Chair of AESP Policy Committee – 1997 & 1998,
Vice Chair AESP Policy Committee – 1995 & 1996

EXPERIENCE:

Mr. Spellman is the President of GDS Associates and the Chair of the GDS Board of Directors. He has over 30 years of energy industry experience. He has managed natural gas and electric energy efficiency, demand response and renewable energy consulting projects in such states as California, Connecticut, Georgia, Florida, Hawaii, Indiana, Louisiana, Maine, Massachusetts, Nebraska, New Hampshire, New Mexico, New York, North Carolina, North Dakota, Oregon, Pennsylvania, Rhode Island, South Carolina, Texas, Utah, Vermont, Virginia, and Wisconsin for GDS clients.

Mr. Spellman has also completed over three dozen electric and natural gas energy efficiency technical potential studies for clients across North America. He has also served in project management positions for energy efficiency and demand response implementation projects for electric utility clients, Wisconsin Focus on Energy and Efficiency Maine. From 1999 to December 2002, Mr. Spellman served as the Program Manager for the Wisconsin Focus on Energy Commercial and Industrial pilot energy efficiency programs (Systems Benefit Charge funded) implemented in a 23-county area in Northeast Wisconsin, and he served as the Deputy Project Director for the $60 million Wisconsin Focus on Energy Business Program from March of 2001 until June of 2003. He also served as the Deputy Program Manager for the Efficiency Maine Small Business Program from 2003 through 2007.

He has designed and implemented **DSM bidding programs** for such clients as Central Maine Power Company, the Business Program of Wisconsin Focus on Energy, and the East Texas Electric Cooperative. Mr. Spellman has also chaired several committees to review energy efficiency and demand response proposals received in response to DSM RFPs (for Central Maine Power Company, Wisconsin Focus on Energy, East Texas Electric Cooperative, etc.).

In addition to program implementation projects, Mr. Spellman has completed renewable energy and conservation program market assessments, technical potential studies, market research, program designs, and Integrated Resource Plans for a number of the firm's clients. He has served as the Chair of the Policy Topic Committee of the Association of Energy Services Professionals (AESP) and he is currently a member of the Board of Directors of AESP.

Before joining GDS in Atlanta, Mr. Spellman was the Manager of Marketing and Product Development at Central Maine Power Company, where he was employed from 1977 to 1993. He has extensive experience working with collaboratives and community organizations on conservation and renewable energy issues. While at CMP he managed CMP's $26 million portfolio of energy efficiency programs. He also worked on CMP's market transformation program efforts with appliance and building standards, energy efficient lighting and motors, new construction and renewable energy programs. He worked on national market transformation programs such as the Super Efficient Refrigerator Program, and the EPA's Green Lights and Energy Star Programs. Finally, he has a solid track record testifying for clients before Commissions and legislative

committees on energy issues. He was also the chairperson of the New England Power Pool DSM Planning Committee for several years, and worked on a wide range of regional DSM and renewable energy projects in New England during his sixteen years at CMP.

His education includes a BA degree with distinction in Math/Economics from Dartmouth College (graduated cum laude) and a Masters in Business from Thomas College Graduate School of Business. He is a graduate of the University of Michigan Graduate School of Business Administration Management II Program (1987), and the Electric Council of New England Skills of Utility Management Program (1986). In 1974 Mr. Spellman was awarded a research grant by the Richard King Mellon Foundation to study how colleges and universities in the Northeast were responding to the 1973-1974 U.S. energy crisis.

Specific Experience Includes:

1993-Present GDS Associates, Inc.

At GDS Associates, Mr. Spellman has directed and completed numerous management consulting, IRP, renewable energy, DSM planning and implementation, market research, load research and market planning assignments for the firm's clients, which include electric and natural gas utilities, municipal utilities, electric cooperatives, government agencies, and large commercial and industrial organizations.

Listed below are examples of consulting projects completed by Mr. Spellman relating to energy efficiency technical, economic and achievable potential studies:

1. **Consolidated Edison of New York** – Consolidated Edison Company of New York retained GDS to prepare an assessment of the natural gas energy efficiency potential in its service area and to develop a portfolio of natural gas energy efficiency programs. GDS developed this Gas Efficiency Plan for Con Ed, and the Plan was filed with the New York Public Service Commission in March 2009. The program plans included detailed benefit/cost calculations using the Total Resource Cost test. The plan also included a detailed plan for evaluation of each individual program, including details on the scope and method of measurement and verification activities pursuant to the Commission's rules and regulations.
2. **District of Columbia Energy Office** - In September 2007, GDS Associates and Ed Meyers Consulting completed a detailed assessment of energy use in the District of Columbia, and developed findings and recommendations for cost effective electric and natural gas energy efficiency programs for the District. The report included detailed information on residential energy measures recommend for consideration in the upcoming Comprehensive Energy Plan IV for DC (CEP-IV) as well as energy efficiency programs and measures for DC Government facilities. The report found that the effectiveness of the District's programs can be increased working with the Metropolitan Washington Council of Governments (MWCOG) to leverage resources with federal agencies and coordinate policies and programs throughout the region to produce mutually targeted results. Such regional cooperation also reduces administrative costs per program unit delivered, as costs are amortized over more clients served. One particularly promising opportunity may involve regional government purchasing of energy efficiency products, where each governmental unit would gain from regional quantity discounts. The report determined the successful energy conservation programs can yield about 6,000 new jobs in the District of Columbia over a fifteen year period. DC's job creation totals in energy efficiency can be boosted for DC residents through First Source Employment Agreements and LSDBE requirements, when businesses receive tangible benefits from the DC government (for example, low-interest loans or down payment assistance).

3. **New Hampshire Public Utilities Commission** - In 2008, GDS in partnership with RLW Analytics, Research Into Action and RKM Research and Communications was retained by the New Hampshire Public Utilities Commission to conduct a thorough assessment of the potential for electric and natural gas energy efficiency in the state of New Hampshire. To support the energy efficient potential analysis, the GDS Team conducted residential and small commercial telephone surveys and large C&I site visits. The data collected will help determine key study inputs such as equipment saturations and baseline efficiency levels. The GDS Team has identified hundreds of electric and natural gas energy efficiency measures which are being analyzed to identify cost-effective measures. Estimates of the technical, economic and achievable electric and natural gas savings potential over the next ten years and the cost necessary to achieve these savings will then be developed.
4. **Hoosier Energy** - GDS was retained by Hoosier Energy to conduct a thorough assessment of the cost effective achievable potential for electric energy efficiency and demand response measures in service area of Hoosier Energy in southern Indiana. GDS collected and analyzed extensive information on over 200 energy efficiency measures and 25 demand response measures, developed supply curves to show the achievable potential and completed a report by December 2008.
5. **Brazos Electric Cooperative** - GDS was retained by Brazos Electric Cooperative to conduct a thorough assessment of the cost effective achievable potential for electric energy efficiency and demand response measures in the service area of this large electric cooperative in Eastern Texas. GDS collected and analyzed extensive information on over 200 energy efficiency measures and 25 demand response measures, developed supply curves to show the achievable potential and completed a draft report by September 2008.
6. **Arkansas Electric Cooperative Corporation** - GDS was retained by Arkansas Electric Cooperative Corporation to conduct a thorough assessment of the cost effective achievable potential for electric energy efficiency and demand response measures in the service area of this large electric cooperative in Arkansas. GDS collected and analyzed extensive information on over 200 energy efficiency measures and 25 demand response measures, developed supply curves to show the achievable potential and completed a draft report by September 2008.
7. **Central Maine Power Company (CMP)** - As a subcontractor to La Capra Associates, GDS was retained by CMP to conduct an assessment of the potential for cost-effective electric energy efficiency and demand response as an alternative to transmission system expansion in 5 sub-areas of the CMP service area. GDS collected and analyzed extensive information on over 100 energy efficiency and conservation measures, developed supply curves to show the achievable potential and is in the process of developing a draft findings report.
8. **Bonneville Power Administration (BPA)** - GDS was retained by BPA to conduct an assessment of their Non-Wires Solutions initiative development process and the current state of the initiative. The BPA Non Wires Solutions Program assesses the feasibility of energy efficiency and demand response programs as an alternative to building new electric transmission lines in the BPA service area. GDS reviewed program materials and reports, designed an interview guide and conducted in-depth, interviews with key BPA staff. Our analysis identified program strengths, weaknesses and potential improvements in key program areas including design, implementation, planning, cost impact & allocation and resources. A final report was delivered on June 8, 2007.
9. **Reading Municipal Light Department (Reading, Massachusetts)** - GDS was retained by the RMLD to assess the technical, economic, and market potential for reducing (avoiding) electricity use and peak demand, and reducing fossil-fueled electricity use and peak demand, in RMLD's service territory by implementing a wide range of end-use efficiency

measures and renewable energy resource technologies. GDS collected and analyzed extensive information on over 100 energy efficiency, conservation and demand-response measures and renewable energy technologies, developed supply curves to show the achievable potential and is in the process of developing a draft report.

10. **Concord Municipal Light Department, Concord, Massachusetts** – GDS completed a detailed study for the potential for energy efficiency and renewable energy technologies for the Concord Municipal Light Department (CMLD). GDS's specific responsibilities for this project include identification and analysis of demand-side alternatives, including distributed generation and other demand response technologies (i.e., direct load control).
11. **North Carolina Electric Membership Corporation (NCEMC)** - GDS was retained by the NCEMC to conduct a thorough assessment of the cost effective achievable potential for electric energy efficiency and conservation resources in service area of the North Carolina Electric Membership Corporation (NCEMC). GDS collected and analyzed extensive information on over 200 energy efficiency and conservation measures, developed supply curves to show the achievable potential and completed a final report in 2007.
12. **Central Electric Power Cooperative Inc. (CEPCI)** - GDS was retained by the CEPCI to conduct a thorough assessment of the cost effective achievable potential for electric energy efficiency, conservation and demand response resources in the service area of CEPCI. GDS collected and analyzed extensive information on over 200 energy efficiency and conservation measures, developed supply curves to show the achievable potential and completed a final report in August 2007.
13. **Maine** – GDS recently completed a technical potential study for high efficiency residential lighting equipment for the Efficiency Maine Residential Lighting Program. GDS conducted this study for the Maine Public Utilities Commission.
14. **North Carolina Public Utilities Commission** -GDS was retained by the North Carolina PUC to conduct an assessment of the cost effective achievable potential for electric energy efficiency and conservation resources in the State of North Carolina. GDS collected and analyzed extensive information on over 100 energy efficiency and conservation measures, developed supply curves to show the achievable potential and completed a final report in December 2006.
15. **Vermont Department of Public Service** - GDS was retained by the Vermont Department of Public Service to conduct a thorough assessment of the cost effective achievable potential for electric energy efficiency and conservation resources in the State of Vermont. GDS collected and analyzed extensive information on over 100 energy efficiency and conservation measures, developed supply curves to show the achievable potential and completed a final report in January 2007. GDS also conducted market research with energy services providers in Vermont to collect information on baseline levels of energy efficiency in the State.
16. **Big Rivers Electric Corporation – 2005 Energy Efficiency Technical Potential Study - Kentucky** - During 2005, GDS completed a study of the technical and maximum achievable cost effective economic potential of energy efficiency measures and programs for the service area of the Big Rivers Electric Corporation, a large Generation and Transmission electric utility in Ohio. This technical and economic potential study was completed as part of the comprehensive analysis of supply-side and demand-side options for the latest BREC Integrated Resource Plan filing with the Kentucky Public Service Commission.
17. **Public Service of New Mexico** – GDS completed this natural gas DSM technical and achievable potential study in May 2005. This study presents estimates of the maximum achievable cost-effective potential for natural gas Demand-Side Management (DSM)

opportunities in the service area of Public Service of New Mexico. The main output of this study is a concise, fully documented report on the opportunities for achievable, cost effective natural gas energy efficiency programs in New Mexico.

18. **Utah Energy Office and Questar Gas Company** – GDS completed this natural gas DSM technical and achievable potential study in June 2004. This study presents estimates of the maximum achievable cost-effective potential for natural gas Demand-Side Management (DSM) opportunities in the State of Utah. The main output of this study is a concise, fully documented report on the opportunities for achievable, cost effective natural gas energy efficiency programs in Utah. This study assessed the impacts that gas DSM measures and programs can have on natural gas use, assesses the economic costs and benefits of DSM programs, and assesses the revenue impacts to Questar Gas Company. The final report also includes an assessment of the environmental impacts of the achievable DSM options identified in this study.
19. **Energy Efficiency Potential in Georgia – Study for the Alliance to Save Energy** – GDS completed this study for the Alliance to Save Energy in July 2004. This study provides estimates of the maximum achievable cost effective potential in the State of Georgia for several "top-ranked" energy efficiency programs. In addition, GDS presented expert witness testimony on behalf of the ASE before the Georgia Public Service Commission that covered the following issues:
    - the potential net present value dollar savings to ratepayers in Georgia due to the implementation of cost effective energy efficiency programs.
    - the cost effectiveness of these energy efficiency programs
    - energy efficiency tariffs that could be implemented in Georgia to save energy
    - up-to-date information on energy efficiency and DSM success stories and energy savings in other regions of North America and the technical potential for DSM in Georgia
    - improvements that could be made in the DSM measure screening process in Georgia.
    - recommendations for DSM cost recovery and shareholder incentive mechanisms.
20. **Energy Efficiency Potential in Florida – Study for the Alliance to Save Energy and the Southern Alliance for Clean Energy** – GDS completed this study for the Alliance to Save Energy in July 2004. This study provides estimates of the maximum achievable cost effective potential in the State of Florida for several "top-ranked" energy efficiency programs
21. **Connecticut Energy Conservation Management Board** – In March 2003, GDS was retained by the Connecticut Energy Conservation Management Board to conduct a thorough assessment of the cost effective maximum achievable technical potential for energy efficiency and conservation resources in the State of Connecticut and two sub-regions of the State. GDS collected and analyzed extensive information on over 250 energy efficiency and conservation, and developed supply curves to show the maximum achievable potential. GDS completed the final report in June 2004.
22. **Alliant Energy Corporate Services** - As an update to an assessment of potential customer-sited/distributed generation technology applications in all categories (residential, small/large commercial, industrial, and agricultural) conducted by GDS in 2001, Alliant requested that modeling assumptions be reviewed and revised, as necessary. In addition, the Distributed/Onsite Generation Screening (DOGS) tool was reviewed by MN Department of Commerce as part of a filing in 2001 and they requested expansion of applicable technologies and fuels, including: bio-diesel and methane from landfills and digesters to fuel reciprocating engines; methanol, ethanol, gasoline, and methane for electricity production from fuel cells. The revised model results will be used to estimate the market potential for

distributed/onsite generation within Alliant's Minnesota service territories.

23. **Massachusetts GasNetworks** – In January of 2004, GDS was hired by GasNetworks (a network of several natural gas utilities in Massachusetts) to develop benefit/cost analyses and energy savings potential estimates for GasNetworks' regional market transformation and demand-side management programs. Benefit/cost ratios and energy savings potential estimates were developed for several regional gas energy efficiency programs using a spreadsheet model, and similar data were developed for each program for each service area for each natural gas utility participating in this study.
24. **Northern Utilities (Gas Company)** – In 2002 GDS was hired by Northern Utilities to prepare benefit/cost analyses and energy savings potential estimates of a portfolio of energy efficiency programs proposed for implementation in their New Hampshire service area. This project was completed during September 2002 and a final report was filed with the New Hampshire PUC. A workshop was conducted at the NH Public Utilities Commission early in 2003 to review cost-effectiveness methodologies and key model input/output requirements.
25. **KeySpan Energy Delivery (Gas Company)** – In 2002 GDS was hired by KeySpan Energy Delivery – New Hampshire to prepare benefit/cost analyses and energy savings potential estimates of ten energy natural gas energy efficiency programs proposed for implementation in the KeySpan New Hampshire service area. This project was completed during September 2002 and a final report was filed with the New Hampshire PUC that month.
26. **Big Rivers Electric Corporation – 2002 Energy Efficiency Technical Potential Study - Kentucky** - During 2002, GDS completed a study of the technical and economic potential of energy efficiency and load management measures and programs for the service area of the Big Rivers Electric Corporation, a large Generation and Transmission electric utility in Ohio. This technical and economic potential study was completed as part of the comprehensive analysis of supply-side and demand-side options for the latest BREC Integrated Resource Plan filing with the Kentucky Public Service Commission.
27. **City of Grand Island, Nebraska – Municipal Utility – Energy Efficiency Technical Potential Study** - GDS completed a study of the technical and economic potential for energy efficiency and load management measures and programs for the service area of this large municipal electric utility in Nebraska. This technical and economic potential study was completed as part of the comprehensive analysis of supply-side and demand-side options for an Integrated Resource Plan for this utility.
28. **City of Lafayette, Louisiana – Municipal Utility – Energy Efficiency Technical Potential Study** - GDS completed a study of the technical and economic potential for energy efficiency and load management measures and programs for the service area of this large municipal electric utility in Louisiana. This technical and economic potential study was completed as part of the comprehensive analysis of supply-side and demand-side options for an Integrated Resource Plan for this utility.
29. **New York State Energy Research and Development Authority (NYSERDA) - Energy $mart℠ Program Evaluation Services:** In the fall of 1999, GDS was retained by NYSERDA to be the prime evaluation contractor for the New York Energy $mart℠ program. During the years 2000, 2001, 2002, and 2003, GDS has been responsible for providing energy efficiency program and measure data collection, analysis, and report writing services to NYSERDA in support of their overall evaluation and market assessment efforts, and to determine actual savings of the programs. To date, GDS team evaluation activities have included development of a Gap Analysis for the purpose of setting priorities and allocating evaluation resources to the various New York Energy $mart℠ project areas; and numerous

evaluation activities leading to development of a draft and final Program Evaluation Status report which provided the New York Public Service Commission with sufficient information to determine the future of SBC-funded public benefits programs beyond its initial three-year transition period which ended July, 2001.

30. **Distributed Generation Technical Potential Assessment for Minnesota and Iowa:** During the fall of 2001, GDS assessed the technical potential of customer-sited distributed generation technology applications for Alliant, a major investor owned utility located in the MidWest. The analysis covered the residential, small/large commercial, industrial, and agricultural sectors. GDS developed a Distributed/Onsite Generation Screening spreadsheet model to determine the cost-effectiveness of various distributed generation options; used the model to assess the potential for various customer groups and then scaled results using customer profiles. Model results were also used to estimate the technical potential for distributed/onsite generation within Alliant's Minnesota and Iowa service territories.
31. **Renewable Electric Energy and Peak Demand Savings Methodology Reviews - Wind Power and Photovoltaics Programs:** GDS performed detailed reviews of NYSERDA's methodologies for estimating electric energy savings and peak demand reduction benefits associated with NYSERDA's Wind Power Research & Development Program and two Photovoltaic (PV) programs. These Savings Methodology reviews entailed three-components: 1) a review of the current method used by NYSERDA for estimating savings (including algorithms and inherent assumptions), 2) a review of the methods and assumptions used by other utilities and program administrators for estimating savings from similar programs being implemented elsewhere in the country, and 3) a presentation of key findings and recommendations.
32. **Evaluation Services for Commercial/Industrial Program Areas and Technical Assistance Reviewing Engineering Analyses- Efficiency Vermont:** GDS Associates is the lead contractor in a team that has been hired to assist the VT DPS in evaluating a statewide portfolio of energy efficiency programs targeted to the Commercial and Industrial market sectors. The GDS team is also providing technical engineering and review assistance, on an "on-call" basis, to the administrator of Vermont's energy efficiency programs.
33. **Development and Implementation of Five-Year Energy Efficiency Plan – Boston Edison:** GDS Associates was retained by Boston Edison to assist BECo staff with the development of program designs, evaluation plans, technical potential estimates and budgets for the Company's Five Year Energy Efficiency Plan. For this project GDS performed energy efficiency technology screenings to identify potentially viable measures for utility funding/support, and developed the program designs for a number of new initiatives, including over a dozen new market transformation programs. GDS also conducted cost effectiveness screening for all of the new DSM initiatives included in the plan.
34. **Energy Efficiency Technical and Market Potential Analysis:** This report presented the results of a technical and market potential study for energy efficiency options for the East Texas Electric Cooperative, Inc. (ETEC). The purpose of this report was to review energy efficiency options that comply with the Public Utility Commission of Texas (PUCT) orders issued in Northeast Texas Electric Cooperative (NTEC), Sam Rayburn Electric Cooperative (SRG&T) and Tex-La Electric Cooperative of Texas (Tex-La) rate cases. This study presented cost effectiveness findings and recommendations on energy efficiency options and programs for ETEC and its member generation and transmission electric cooperatives (NTEC, SRG&T, and Tex-La). In this study, GDS evaluated the cost effectiveness of over

90 energy efficiency options and found many of them to be cost effective according to the Total Resource Cost Test.

35. **Technical and Market Potential Analysis for Load Management and Energy Efficiency Options:** GDS was retained to update energy efficiency and load management technical and market potential analyses completed in the mid 1990's time period, and to develop recommendations relating to cost effective DSM programs for electric cooperatives in East Texas. This study identified energy efficiency and load management (DSM) options that were viable based on economic tests presented in the California Standard Practice Manual for Economic Analysis of Demand-Side Management Programs. DSM options that had a Total Resource Cost test benefit/cost ratio greater than 1.3 and a positive net present value for the participant were ones that were recommended by GDS for further program development.

8/90-5/93 Central Maine Power Company - Manager of Marketing Services/Marketing and Product Development

From 8/90 to 8/92 - Responsible for managing the design and implementation of CMP's residential, commercial, and industrial demand-side management programs. Also responsible for corporate market research, five-year DSM implementation plans, testifying on DSM topics before regulatory agencies, and for participating in integrated resource planning activities. Accountable for managing a $26 million DSM budget and a staff of 50 persons. Served on three person lead team from 1989 to 1992 to develop CMP's first integrated resource plan. During 1991 traveled to Czechoslovakia and Poland to provide consulting to foreign utilities on DSM issues.

From 8/92 to 5/93, responsible for identifying and developing marketing strategies for products and services which would improve the competitiveness of CMP's customers, increase the efficiency of energy use, increase CMP's profitability, and which would reduce the rate of growth of electricity prices for all customers. Directly responsible for the design of renewable energy and demand-side management programs, integrated resource planning, research on new technologies, and managing marketing and product development staff. Also provided consulting services to utilities in New Zealand, Australia, and Bulgaria relating to DSM program design and implementation.

6/86-8/90 Central Maine Power Company - Director of Market Research and Forecasting

Responsible for managing twenty-five professional employees. Duties included supervising DSM program evaluation activities, short and long range load forecast development, local area energy and peak load forecasts, market and load research, economic forecasting, and developing and updating DSM assumptions for use in the Company's long range planning models. Also participated in the development of the first Power Partners RFP, and in the evaluation and selection of proposals submitted in response to this RFP.

5/85-5/86 Central Maine Power Company - Corporate Economist

Responsible for monitoring and forecasting energy and economic trends in the CMP service area and in the New England Region. Duties included development of corporate short-term kWh sales and revenue forecasts, market research studies, and CMP's energy management strategy. Instrumental in promoting the use of state-of-the art PC-based computer models for integrated resource planning (UPLAN). Authored a second report on CMP's DSM strategy in April 1986. Also responsible for supervising several analysts.

5/77-5/85 Central Maine Power Company - Staff Economist

(5/77 to 5/78) Joined CMP in May 1977 and worked in the Customer Services Department. Responsibilities included short-term forecasting, annual appliance saturation surveys, and preparation of the 1977 and 1978 long-range energy and peak load forecasts.

(5/78 to 12/80) In May of 1978, selected to join a new group, the Corporate Financial Model Staff, to develop a new corporate financial model for CMP. Had major responsibility for development of a revenue forecasting model, and assisted with development of models to produce income statement, balance sheet, and sources and uses of funds forecasts. In addition to corporate model development, responsibilities included short-term forecasting and market research.

(12/80 to 5/85) In December of 1980, moved to CMP's Research Department and worked for Phil Hastings for five years. Responsible for all corporate market research, short-term kWh sales and revenue forecasts, economic analyses and forecasts, and forecasts of key corporate planning assumptions. Prepared and published CMP's first DSM strategy study in March 1985.

Other Professional Activities:

- Board of Directors, Association of Energy Services Professionals (AESP), 2005 to 2010
- Member of the Association of Energy Service Professionals (1993 to Present), Vice Chairman of the Policy Committee (1995-1996), Chair of Policy Committee (1997 and 1998)
- Panel Leader, 1992 American Council for an Energy Efficient Economy (ACEEE) Summer Study on Building Energy Efficiency.
- Chairman of the NEPOOL Demand-Side Management Planning Committee, September 1989 to September 1990, August 1991-July 1992.
- Vice Chairman of the NEPOOL Demand-Side Management Committee - January to August 1989, July 1990 - July 1991.
- Member of the NEPOOL Demand-Side Management Task Force (1986-1988).
- Member of the Load Research Committee of the Association of Edison Illuminating Companies (1988-1991).
- Alternate to the NEPOOL Governor's Liaison Committee (1986-1988).
- State Forecast Analyst for the NEPOOL Load Forecasting Model (1979-1986).
- Maine Model Manager of the New England Economic Project economic forecasting model, 1983-1986.
- Member of the Statistical Research Committee of the Electric Council of New England (Chairperson 1982-1983, member 1977-1986).
- Member of the Edison Electric Institute Economics Committee (1986-1991)
- Past member of the International Association of Energy Economists.

Publications:

1. Spellman, Richard F., *Modeling of Energy Management Strategies with the Utility Systems Analysis Model*, paper presented at the International Load Management Conference, November 1984, Chicago, Illinois.

2. Spellman, Richard F., *Use of Computer Models and Load Research Data for Developing Energy Management Strategies*, paper presented at the Fifth Annual Northeast Load Research Conference, September 10-12, 1986, Farmington, Connecticut
3. Spellman, Richard F., *Potential Market Penetration of DSM Programs at Central Maine Power*, paper presented at Third National Conference on Utility DSM Programs, June 16-18, 1987, Houston, Texas
4. Spellman, Richard F., *Demand-Side Management Market Penetration: Modeling and Resource Planning Perspectives from Central Maine Power Company*, paper presented at the Fourth National Conference on Utility DSM Programs, May 2-4, 1989, Cincinnati, Ohio
5. Spellman, Richard F., *Using Program Evaluation Data for Long-Range Resource Planning at Central Maine Power Company*, paper presented at the Canadian Electrical Association's Conference on Enhancing Electricity's Value to Society, October 22-24, 1990, Toronto, Canada
6. Spellman, Richard F., *Demand-Side Management from a North American Perspective*, Keynote Address to the International Energy Agency Conference on Advanced Technologies for Electric Demand-Side Management, written for Joe C. Collier, Jr., President and Chief Executive Officer of Central Maine Power Company, paper presented in Sorrento, Italy on April 3, 1991
7. Leamon, Ann K., and Spellman, Richard F., *From the Bottom Up: T&D and DSM*, paper presented at the 5th National Demand-Side Management conference, July 30 - August 1, 1991, Boston, Massachusetts
8. Haeri, M. Hossein, and Spellman, Richard F., *Integration of Evaluation Results into the Resource Planning Process*, paper presented at the 5th National Demand-Side Management Conference, July 30 - August 1, 1991, Boston, Massachusetts
9. Spellman, Richard F., *Does Fuel Switching Make Sense for an Electric Utility?*, paper presented at the 1992 International Energy Efficiency and DSM Conference, October 22, 1992, Toronto, Ontario
10. Spellman, Richard F., and Brunette, Marguerite, *Market Research for the Design, Implementation, and Evaluation of a Compact Fluorescent Lighting Program*, paper presented at the EPRI/EUMRC Market Research Symposium, November 17-20, 1992, Dallas, Texas
11. Spellman, Richard F., Forum For Applied Research and Public Policy/Fall 1992, *Energy Management: A View from Maine* (Journal Article)
12. Spellman, Richard F., *DSM Incentives Plus Electric Rate Adjustment Mechanisms Equal Bottom Line Impact*, paper presented at the 6th National Demand-Side Management Conference, March 24-26, 1993, Miami Beach, Florida
13. Spellman, Richard F., Van Wie, David A., Peaco, Daniel E., Lawrence, and Dennis R., *Optimizing Demand-Side and Supply Resources Using Linear Programming*
14. Spellman, Richard F., Utility Experience With Load Management in Texas, EPRI/Houston Lighting and Power Co. Load Management Conference, May 3, 1994, Houston, Texas.
15. Spellman, Richard, F., The Role of DSM in the Privatized Electricity Sector in England and Wales, and New Zealand, Paper Presented at the Association of Demand-Side Management Professionals Annual Meeting, Orlando, Florida, December 1994.
16. Spellman, Richard, F., Energy Services in A Global Environment, Paper Presented at the Association of Energy Services Professionals Annual Meeting, Phoenix, Arizona, December 1995.

17. Spellman, Richard, F., Value Added Services as Profit Centers in Texas, Paper Presented at the Association of Energy Services Professionals Annual Meeting, Beverly Hills, California, December 1996.
18. Spellman, Richard, F., "Preparing for Competition by Updating Corporate Marketing Strategies", Paper Presented at the Association of Energy Services Professionals Annual Meeting, Boca Raton, Florida, December 1997.
19. Megdal, Lori, Spellman, Richard, F., Johnson, Bruce "Methods and Measurement Issues for a DSM Evaluation versus a Market Transformation Market Assessment and Baseline Study", Paper Presented at the 1999 Energy Program Evaluation Conference, Denver, Colorado, August 1999.
20. Spellman, Richard F., Shel Feldman, Bruce Johnson, Lori Megdal, "Measuring Market Transformation Progress & the Binomial Test: Recent Experience at Boston Gas Company", Paper presented at the ACEEE Summer Study on Building Energy Efficiency, August 2000.
21. Spellman, Richard F., Giffin, Thomas M., Sheil, Jolene A., Nicol, John, "Experience and Lessons from the Wisconsin Industrial Focus on Energy Program: Transformation in Industrial Energy Efficiency Markets", presented at American Council for and Energy Efficient Economy Summer Study on Energy Efficiency in Buildings, Tarrytown, New York. July 25-27, 2001
22. Spellman, Richard F., Shel Feldman, Bruce Johnson, Lori Megdal, "Transition Strategies for Market Transformation Programs: Recent Experience at KeySpan Energy Delivery", Paper presented at the December 2001 12th National Energy Services Conference.
23. Rooney, Thomas; Spellman, Richard; Rufo, Michael; Schlegel, Jeff, "Estimating the Potential for Cost Effective Electric Energy and Peak Demand Savings in Connecticut", Paper presented at the 2004 American Council for an Energy Efficient Economy Summer Study in Pacific Grove, California, August 2004.
24. Spellman, Richard F., Goldfarb, Lynn K., Barnes, Harley, "Using Market Research to Improve Program Design and Delivery of Residential Lighting Programs in the US Northeast Region", Paper presented at the 15th National Energy Services Conference, December 7, 2004, Clearwater Beach, Florida.
25. Spellman, Richard F.; Goldfarb, Lynn K.; Huber, Jeffrey, "IS THERE A POTENTIAL NATIONAL MARKET FOR TRADING ENVIRONMENTAL CREDITS BASED ON THE ENVIRONMENTAL SAVINGS ACHIEVED THROUGH ENERGY EFFICIENCY SAVINGS?", Paper presented at the 16th National Energy Services Conference, December 2005.
26. Spellman, Richard F.; Rooney, Thomas; Burks, Jeffrey; Bean, Stephen; "Potential for Natural Gas Savings in the Southwest", Paper presented at the 2006 ACEEE Summer Study on Building Energy Efficiency, held at Pacific Grove, California.

Direct Testimony of Richard F. Spellman:

1. On Behalf of Central Maine Power Company, Before the State of Maine Public Utilities Commission, Docket Nos. 85-48, 85-82, 85-83, filed July 7, 1986. Subject Matter: Economics of Commercial and Industrial Conservation Programs in the CMP Service Area
2. On Behalf of Central Maine Power Company, Before the State of Maine Public Utilities Commission, Docket Nos. 88-111 and 87-261, filed November 6, 1987. Subject Matter: DSM Assumptions for Central Maine Power Company in Long Term Avoided Cost Filing.
3. On Behalf of Central Maine Power Company, Before the State of Maine Public Utilities Commission, Docket Nos. 88-111 and 87-261, filed June 22, 1988. Subject Matter: DSM Potential and Cost Effectiveness in the CMP Service Area.
4. On Behalf of Central Maine Power Company, Before the State of Maine Public Utilities

Commission, Docket No. 89-68, filed May 19, 1989. Subject Matter: Review and explain the basis for the updated short-term kWh sales forecast on which CMP's revised Attrition Study is based.

5. On Behalf of Central Maine Power Company, Before the State of Maine Public Utilities Commission, Docket No. 89-68, filed October 24, 1989. Subject Matter: Review and explain the basis for the short-term kWh sales forecast on which CMP's Attrition Study is based.
6. On Behalf of Central Maine Power Company, Before the State of Maine Public Utilities Commission, Docket No. 91-213, filed November 15, 1991. Subject Matter: Present CMP's conclusions regarding the advisability of inaugurating a residential space heat conversion program in the Company's service territory.
7. On Behalf of Central Maine Power Company, Before the State of Maine Public Utilities Commission, Docket No. 91-213, filed July 31, 1992. Subject Matter: Present updated information regarding the advisability of inaugurating a residential space heat conversion program in the Company's service territory.
8. On Behalf of Tex-La Electric Cooperative of Texas, Inc. Before the Public Utilities Commission of Texas, Docket No. 12289, filed July 1993. Subject Matter: Tex-La's DSM activities and updating of TEX-LA Energy Efficiency Plan.
9. On Behalf of Tex-La Electric Cooperative of Texas, Inc. Before the Public Utilities Commission of Texas, Docket No. 12289, filed July 1993. Subject Matter: Rebuttal testimony relating to TEX-LA's DSM activities.
10. On Behalf of H.E. Butt Grocery Company, Before the Public Utilities Commission of Texas, Docket No. 12820, Filed October 17, 1994. Subject Matter: Proposed modifications to Central Power and Light DSM Programs.
11. On Behalf of The Coalition of Cities and The City of Houston, Before the Public Utilities Commission of Texas, Docket No. 12065, filed November 15, 1994. Subject Matter: Proposed changes to Houston Lighting and Power Company's DSM programs.
12. On Behalf of the Georgia Public Service Commission Staff IRP Adversary Team, Before the Georgia Public Service Commission, Docket NO. 5602-U, filed May 8, 1995. Subject Matter: Proposed modifications to DSM programs proposed by Georgia Power Company in Integrated Resource Plan filed by the Company in January 1995.
13. On Behalf of the Georgia Public Service Commission Staff IRP Adversary Team, Before the Georgia Public Service Commission, Docket NO. 5601-U, filed May 8, 1995. Subject Matter: Proposed modifications to DSM programs proposed by Savannah Electric and Power Company in Integrated Resource Plan filed by the Company in January 1995.
14. On Behalf of the Sam Rayburn G&T Electric Cooperative, Inc., Before the Public Utilities Commission of Texas, Docket No. 14893, filed September 1995. Subject Matter: Description of SRG&T Compliance with prior Commission orders relating to SRG&Ts DSM activities.
15. On Behalf of the Sam Rayburn G&T Electric Cooperative, Inc., Before the Public Utilities Commission of Texas, Docket No. 14893, filed January 1996. Subject Matter: Rebuttal testimony relating to SRG&Ts DSM activities.
16. On Behalf of the Sam Rayburn G&T Electric Cooperative, Inc., Before the Public Utilities Commission of Texas, Docket No. 14893, filed March 1996. Subject Matter: Surrebuttal testimony relating to SRG&Ts DSM activities.
17. On Behalf of the Georgia Public Service Commission Staff IRP Adversary Team, Before the Georgia Public Service Commission, Docket Nos. 6315-U and 6325-U, filed April 5, 1996. Subject Matter: Evaluation of Benefits and Costs of Residential Load Management Program

Proposed by Georgia Power Company.

18. On Behalf of Green Mountain Power Company, Before the Vermont Public Service Board, Docket No. 5983, filed December 8, 1997. Subject Matter: Rebuttal Testimony relating to the effectiveness of the Company's historical DSM activities.

19. On Behalf of the Georgia Public Service Commission Staff IRP Adversary Team, Before the Georgia Public Service Commission, Docket NO. 8708-U, filed May 29, 1998. Subject Matter: DSM programs proposed by Georgia Power Company in Integrated Resource Plan filed by the Company in 1998.

20. On Behalf of the Georgia Public Service Commission Staff IRP Adversary Team, Before the Georgia Public Service Commission, Docket NO. 8709-U, filed May 29, 1998. Subject Matter: Proposed modifications to DSM programs proposed by Savannah Electric and Power Company in Integrated Resource Plan filed by the Company in January 1995.

21 On Behalf of the Georgia Public Service Commission Staff IRP Adversary Team, Before the Georgia Public Service Commission, Docket No. 8709-U, filed May 29, 1998. Subject Matter: Proposed modifications to DSM programs proposed by Savannah Electric and Power Company in Integrated Resource Plan filed by the Company in January 1998.

22. On Behalf of the Georgia Public Service Commission Staff IRP Adversary Team, Before the Georgia Public Service Commission, Docket No. 13305-U, filed May 11, 2001. Subject Matter: DSM programs proposed by Georgia Power Company in Integrated Resource Plan filed by the Company in January 2001.

23. On Behalf of the Georgia Public Service Commission Staff IRP Adversary Team, Before the Georgia Public Service Commission, Docket No. 13306-U, filed May 11, 2001. Subject Matter: Proposed modifications to DSM programs proposed by Savannah Electric and Power Company in Integrated Resource Plan filed by the Company in January 2001.

24. On Behalf of the Alliance to Save Energy, Before the Georgia Public Service Commission, Docket Nos. 17687 & 17688-U, filed May 14, 2004. Subject Matter: Proposal for new energy efficiency programs to be paid for and implemented by Savannah Electric and Power Company and Georgia Power Company (this was intervener testimony filed in the Integrated Resource Plan dockets heard before the Georgia Commission during 2004).

25. On Behalf of the Southern Alliance for Clean Energy, Before the Georgia Public Service Commission, Docket Nos. 4822-U & 19279-U, filed November 12, 2004. Subject Matter: Provided comments on the rules of the Georgia Commission relating to the methodology for the calculation of electric energy and capacity avoided costs that would apply to renewable energy producers in the State of Georgia.

26. On behalf of the Public Staff of the North Carolina Utilities Commission, Before the North Carolina Public Service Commission, Docket No. E-7, Sub 831, June 26, 2008, Subject Matter: The purposes of this testimony were the following: (1) to determine whether the SAVE-A-WATT (SAW) approach was in the public interest of the ratepayers of Duke Energy Carolinas, LLC (Duke or the Company); (2) to determine whether the SAW program administrator costs per lifetime kWh saved were reasonable and whether projected utility margins for energy efficiency and demand response resources under the proposed SAVE-A-WATT approach were reasonably based; (3) to determine whether the SAW approach would achieve the maximum achievable cost-effective potential for kilowatt-hour (kWh) and kilowatt (kW) savings in the Company's service area in North Carolina.; (4) to determine whether any additional cost-effective energy efficiency and demand response programs should be included in the Company's Energy Efficiency Plan; (5) to determine whether an alternative to SAW exists that provides superior electricity and dollar savings to the Company's ratepayers at a

much lower cost to them.

27. On behalf of Communities Against Regional Interconnect, Before the State of New York Public Service Commission, Case No. 06-T-0650, Filed January 9, 2009, Subject Matter: The purpose of this testimony were the following: to present the achievable, cost effective non-route alternatives to construction of the New York Regional Interconnect (NYRI) project and to demonstrate that with the implementation of the proposed non-route alternatives there is no real need for the NYRI project.

28. On behalf of Connecticut Natural Gas Corporation, Before the State of Connecticut Department of Public Utility Control, Docket No. 08-12-06, Filed January 16, 2009, Subject Matter: The purposes of this testimony were the following: (1) describe how the new Connecticut Natural Gas (CNG) energy efficiency programs will strengthen the partnership with customers through expanded communication and outreach, consistent with the state's policy encouraging energy efficiency; (2) present an overview of existing CNG energy efficiency programs; (3) present information on best practice natural gas energy efficiency programs in other States; (4) describe CNG's proposal to expand energy efficiency program offerings; (5) provide a summary of proposed budgets, energy savings and cost effectiveness of proposed program offerings; (6) describe staffing needs to support the proposed programs; (7) present information on the impact of proposed programs on natural gas use per customer; (8) describe the regulatory mechanism for recovery of program costs.

29. On behalf of the Southern Connecticut Gas Company, Before the State of Connecticut Department of Public Utility Control, Docket No. 08-08-17, Filed January 20, 2009, Subject Matter: The purposes of this testimony were the following: (1) describe how the new Southern Connecticut Gas Company (SCG) energy efficiency programs will strengthen the partnership with customers through expanded communication and outreach, consistent with the state's policy encouraging energy efficiency; (2) present an overview of existing SCG energy efficiency programs; (3) present information on best practice natural gas energy efficiency programs in other States; (4) describe SCG's proposal to expand energy efficiency program offerings; (5) provide a summary of proposed budgets, energy savings and cost effectiveness of proposed program offerings; (6) describe staffing needs to support the proposed programs; (7) present information on the impact of proposed programs on natural gas use per customer; (8) describe the regulatory mechanism for recovery of program costs

Caroline L. Guidry
GDS Associates, Inc.
Engineer - *Energy Efficiency & Demand-Side Management*

Education

Georgia Institute of Technology, Woodruff School of Mechanical Engineering		Atlanta, GA
M.S. Mechanical Engineering	GPA – 3.71/4.0	August 2008
Master's Thesis:	*Modified Comparative Life Cycle Assessment of End-of-Life Options for Post-Consumer Carpet in Urban Regions*	
Relevant Coursework:	Engineering Design, Designing Open Engineering Systems, Optimization in Engineering Design, Design and Analysis of Experiments, Simulation, Business and the Environment, Rapid Prototyping	
Columbia University, Fu Foundation School of Engineering and Applied Science		New York, NY
B.S. Mechanical Engineering	Overall GPA – 3.57/4.00 Major GPA – 3.63/4.00	May 2006
Relevant Coursework:	Computer Graphics and Design, Computer Aided Design, Manufacturing Processes, Industrial Economics, Industrial Forecasting, Probability and Statistics, Math Programming	

Certifications

Engineer in Training:	Certified by the New York State Education Department	December 2006

Technical Skills

Applications:	REM/Rate, Home Energy Rating Tool, MatLab, IDEAS, INVENTOR, ProEngineer, Excel, MS Word, PowerPoint

Work Experience

GDS Associates, Inc. September 2008 - present

- **Florida Public Service Commission**
  - **Technical Consulting Assistance**
    - **Concept Paper**: Compiled a paper for the Florida Public Service Commission on topics related to energy efficiency potential and setting targets for demand-side management energy efficiency programs. Subjects included: strengths and weaknesses of benefit-cost tests, techniques for the development of energy efficiency goals, methodological best practices for conducting energy efficiency potential studies, revenue- and cost-recovery and performance incentives, potential supply-side efficiency improvements and regulations effecting energy efficiency not under control of the utilities of the public service commission. Regarding all of these issues, connections where made where appropriate to tailor discussions in terms of current the current Florida Energy Efficiency and Conservation Act (FEECA), which sets the regulations and parameters for energy efficiency and conservation in Florida. Based on this context, recommendations were made to the FPSC regarding appropriate benefits-costs test used to determine measure program cost-effectiveness, methodologies for conducting potential studies, performance incentives (rewards and repercussions), and methods for translating studies into goals. This work also required the creation and implementation of a survey designed

to ascertain methods for setting savings targets used by organization overseeing best-practice energy efficiency programs.

- **Technical Potential Study – Review**: This work in progress involves an assessment of the Statewide Technical Potential Study and the seven FEECA utilities' individual technical potential reports conducted by Itron. The recommendations and conclusions drawn from this assessment where incorporated into a report to be submitted to the FPSC. The review covers all methodologies, assumptions, sources, and models used to determine the technical potential available within the seven FEECA utility service areas. The project includes an assessment of the residential, commercial, and industrial sector energy efficiency, demand response, and customer-PV potential.

- **Georgia Public Service Commission**
  – Consulting Assistance with the DSM Working Group
  - For this ongoing project, Ms. Guidry has attended all of the 2008/2009 Georgia Power Company Demand-Side Management Working Group meetings as an advisor to the commission staff. Contributions to the group have included (1) a review of the proposed technical manual for energy efficient measure completeness; (2) a set straw-man proposals for residential energy efficiency programs, based on best-practice program plans, that included descriptions of measure bundles, implementation strategies, marketing strategies, potential trader allies, and verification and evaluations plans; and (3) a summary of current CFL incentives rebates offered throughout the country as a percent of incremental measure costs in order to determine a best-practice incentive level for achieving high market penetration rates at rebate levels under 100% of the full incremental costs.

- **Communities Against Regional Interconnect**
  - Energy Efficiency and Demand Response Technical Consulting Assistance
  - This work included a Residential Technical Potential Study for the downstate region of New York, which involved research, compilation and documentation of all measure data and assumptions. Ms. Guidry incorporated the data into the GDS residential technical potential model to determine the savings potential. Ms. Guidry also assisted in the assessment of typical residential energy efficiency program packages in order to determine savings potential and economic and impacts. Additionally, she drafted the residential sector technical potential section of technical witness Spellman's exhibit. The results of the residential technical potential study and program potentials developed supported Mr. Spellman's claim that the construction of the NYRI proposed Transmission Line could be avoided if aggressive energy efficiency were implemented instead.

- **Hoosier Energy Rural Electric Cooperative**
  – Energy Efficiency and Demand Response Technical Potential Study
  - Ms. Guidry assisted in the development and review of the technical, economic and achievable potential energy efficiency estimates for the commercial and industrial sectors of Hoosier Energy's service territory.

- **Buckeye Power, Inc.**
  – "Lite" Technical Potential Study
  - Ms. Guidry assisted in the "Lite" Technical Potential Study for Buckeye Power, Inc. This study involved "lite" assessments of both residential energy efficiency and demand response programs. Work included research, compilation, and documentation of all measure data assumptions; the data input and model update of the GDS residential technical potential model; and the data input and updating of the GDS cost-effectiveness model.

- **Consolidated Edison Company**

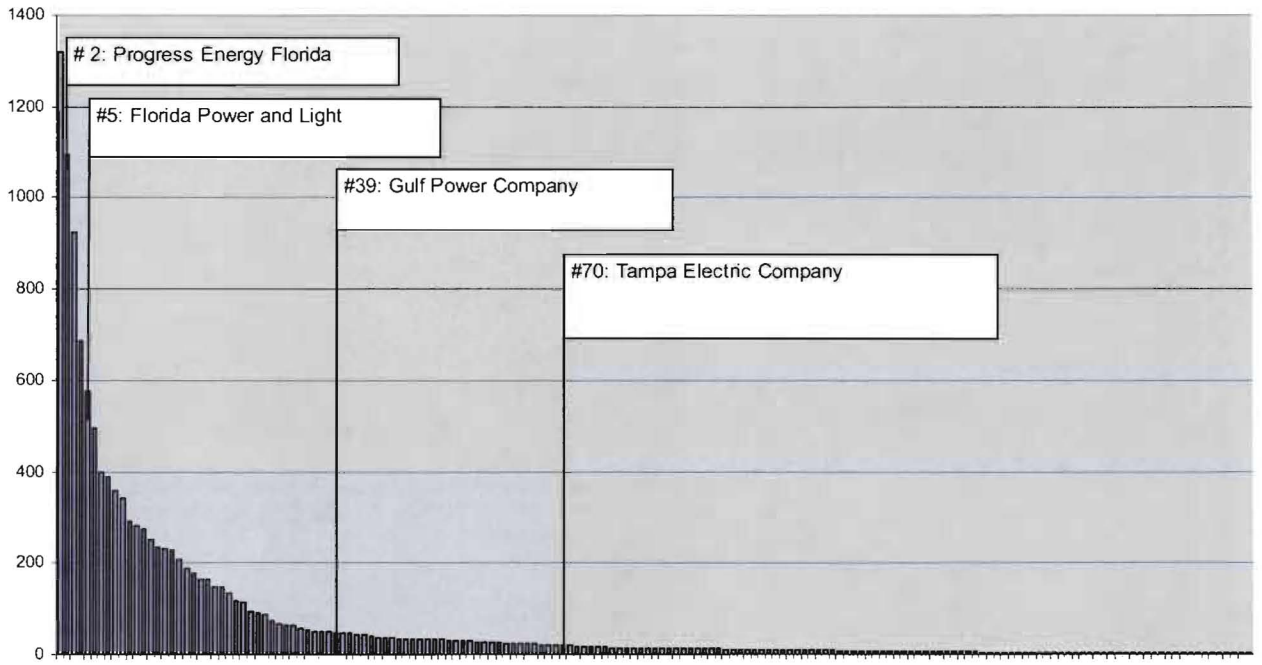
– **Technical Consulting Assistance**
  - This work included a review of the Technical Reference Manual for gas appliances, specifically those related to winter sensitive temperatures. The investigation included filtering through national standards for calculating heating load hours and equivalent full load heating hours for residential heating equipment (boilers and furnaces) as well as determining the national standard for calculating regionally specific heating degree days. The culmination of the work included a memo sent out to involved parties addressing the discrepancies between the method used in the Technical Reference Manual and the national standards for calculating heating load hours and well as the proposed alternative estimates for the New York City region.

Graduate Research Assistant Fall 2006 – August 2008

- **Project:** *Modeling Material Flows for Sustainable Industrial Systems for Urban Regions*
  - Material Use, Science, Engineering and Society (MUSES) project - National Science Foundation Award No. 0628190
  - collaborative project focused on the sustainability of recycling post-consumer products in urban regions based on social, economic and environmental viability with contributions from City and Regional Planning, Chemical Engineering and Mechanical Engineering at Georgia Institute of Technology; Mechanical Engineering at University of Washington; and the Regional Research Institute at West Virginia University
- **Thesis:** *Modified Comparative Life Cycle Assessment of End-of-Life Options for Post-Consumer Carpet in Urban Regions*
  - modular process and facility modeling
  - study of material reclamation, secondary material reclamation, and waste disposal end-of-life options for post-consumer carpet
  - modified LCA concentrating on social (employment opportunities), economic (investments and savings) and environmental (global warming potential, criteria pollutants, solid wastes) impacts
  - sensitivity of model explored to determine tipping points, enablers and inhibitors
- **Conference Presentation** - The Institute for Operations Research and the Management Sciences
  - INFORMS Annual Meeting, November 4-7, 2007; Seattle, Washington
  - Presentation, *A Triple Bottom Line Comparison of Carpet Reclamation Strategies for Urban Regions* - By Caroline Guidry and Dr. Bert Bras; Presented by: Dr. Bert Bras

Exhibit RFS - 3: Ranking of FEECA Utilities by Absolute Cumulative kW Savings from Load Management Programs

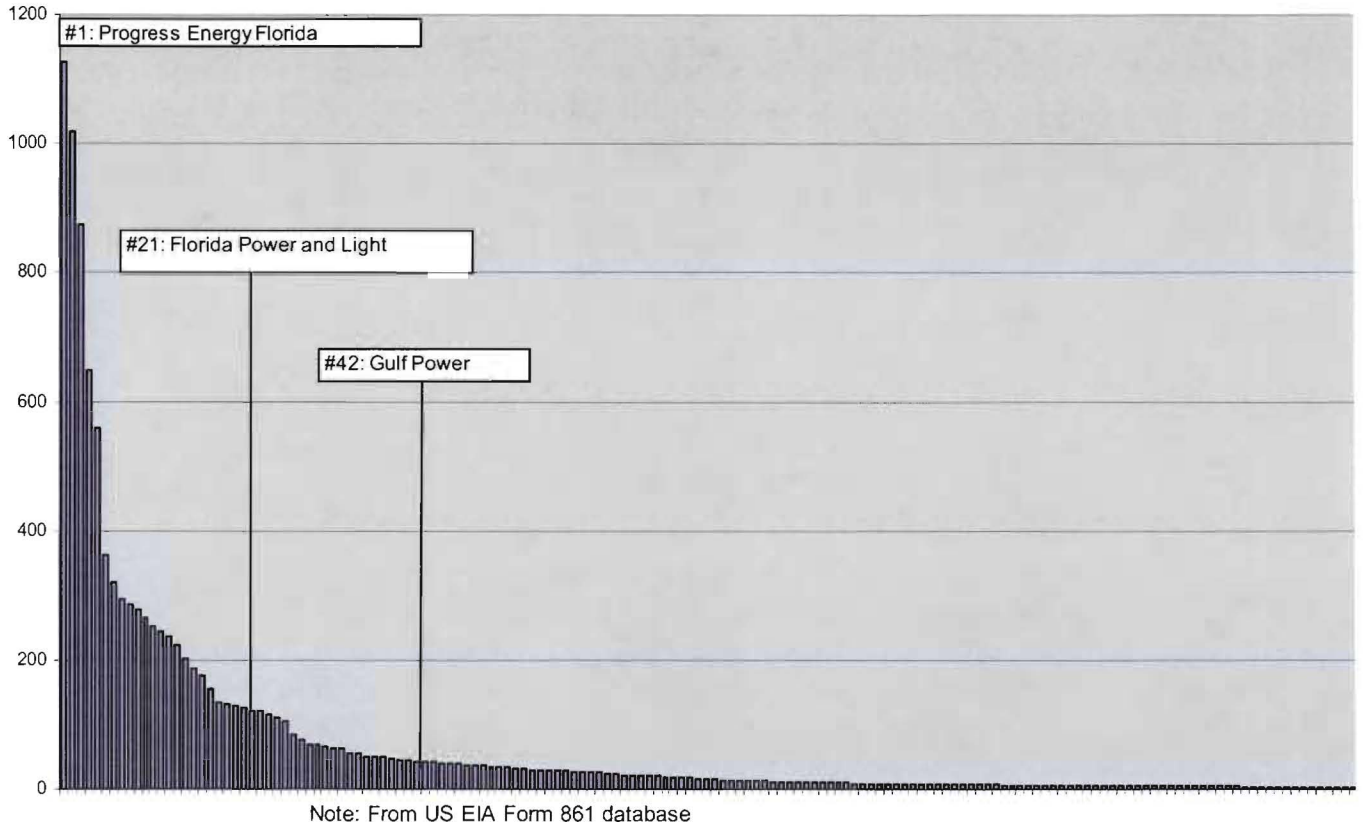
Figure 1: Rankings of US Electric Utilities by their total amount of kW saved by Load Management Programs in 2007



Note: From US EIA Form 861 database

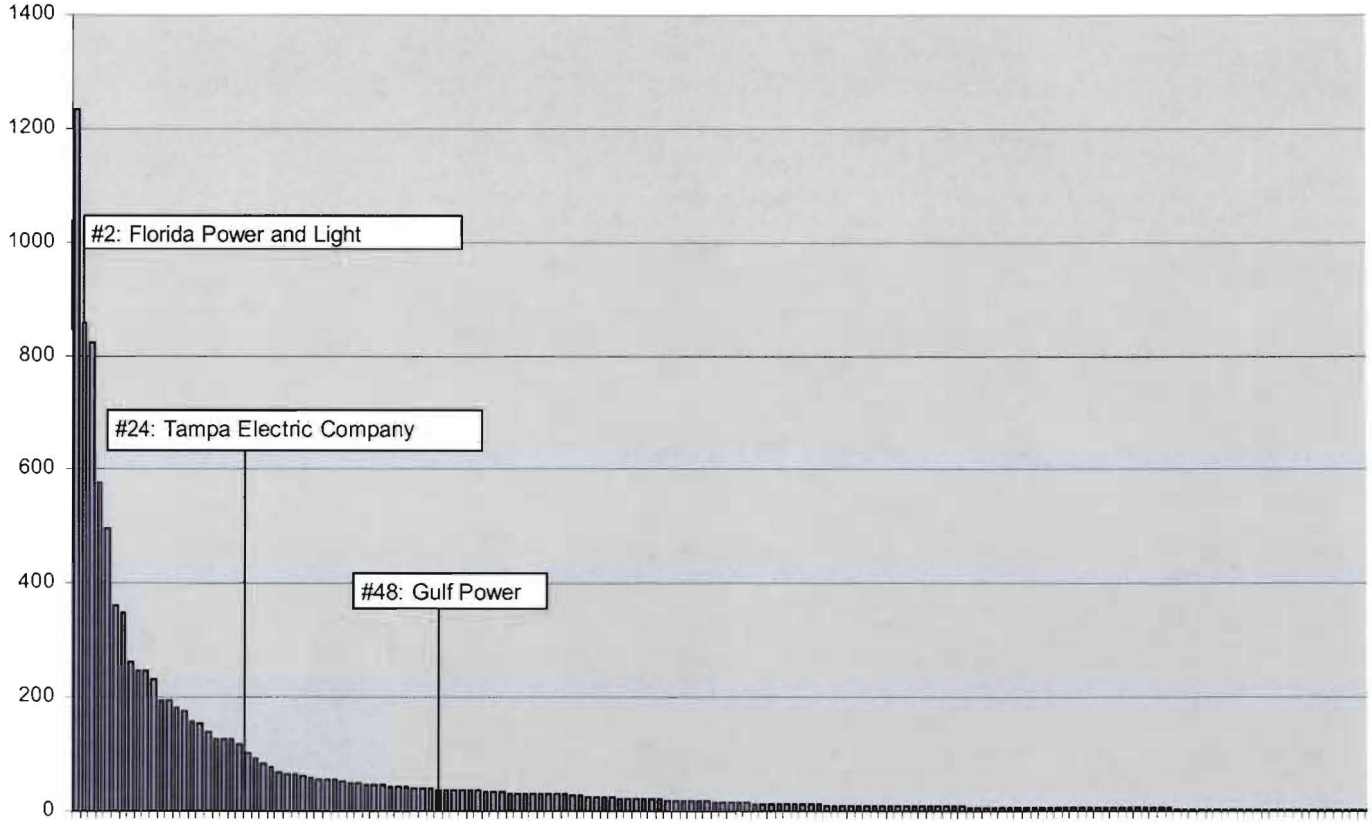
Note: Orlando Utility Company, Florida Public Utilities Company and JEA did not report savings for 2007.

Figure 2: Rankings of US Electric Utilities by their total amount of kW saved by Load Management Programs in 2006



Note: Tampa Electric Company, Orlando Utility Company, Florida Public Utilities Company and JEA, did not report savings for 2006.

Figure 3: Rankings of US Electric Utilities by their total amount of kW saved by Load Management Programs in 2005



Note: From US EIA Form 861 database

Note: Orlando Utility Company, Florida Public Utilities Company, Progress Energy Florida and JEA did not report savings for 2005.

Figure 4: Top Twenty Utilities Ranked by Total Load Management Savings in 2007

Utility Code	Rank	Utility Name	State	2007 Total Peak Reduction (KW)
17609	1	Southern California Edison Co	CA	1,321,000
6455	2	Florida Power Corp	FL	1,096,000
13781	3	Northern States Power Co	MN	923,000
14328	4	Pacific Gas & Electric Co	CA	686,000
6452	5	Florida Power & Light Company	FL	575,000
13337	6	Nebraska Public Power District	NE	497,000
13374	7	Constellation NewEnergy, Inc	MD	398,000
12658	8	Minnkota Power Coop, Inc	ND	387,000
7570	9	Great River Energy	MN	360,000
7140	10	Georgia Power Co	GA	341,000
13687	11	North Carolina Eastern M P A	NC	292,000
15466	12	Public Service Co of Colorado	CO	283,000
9417	13	Interstate Power and Light Co	IA	274,000
15470	14	PSI Energy Inc	IN	251,000
1167	15	Baltimore Gas & Electric Co	MD	234,000
9324	16	Indiana Michigan Power Co	OH	232,000
12341	17	MidAmerican Energy Co	IA	229,000
13780	18	Northern States Power Co	WI	207,000
16572	19	Salt River Project	AZ	188,000
14940	20	PECO Energy Co	PA	179,000

Figure 5: Top Twenty Utilities Ranked by Total Load Management Savings in 2006

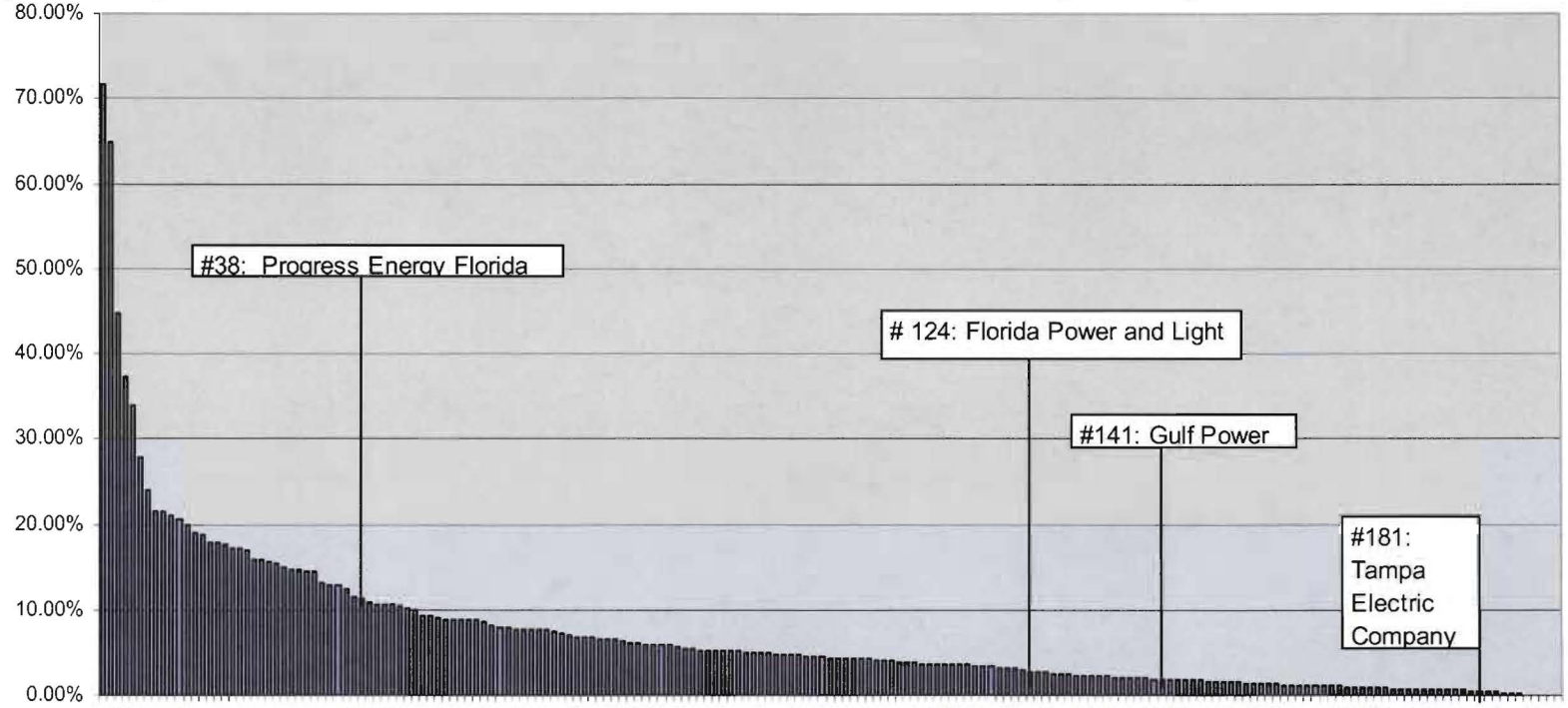
Utility Code	Rank	Utility Name	State	2006 Total Peak Reduction (KW)
6455	1	Progress Energy Florida Inc	FL	1,126,000
17609	2	Southern California Edison Co	CA	1,018,000
13781	3	Northern States Power Co	MN	874,000
14328	4	Pacific Gas & Electric Co	CA	648,000
13337	5	Nebraska Public Power District	NE	560,000
7140	6	Georgia Power Co	GA	362,000
12658	7	Minnkota Power Coop, Inc	ND	320,000
195	8	Alabama Power Co	AL	294,000
13687	9	North Carolina Eastern M P A	NC	285,000
9417	10	Interstate Power and Light Co	IA	279,000
15466	11	Public Service Co of Colorado	CO	266,000
20847	12	Wisconsin Electric Power Co	WI	252,000
16572	13	Salt River Project	AZ	244,000
14006	14	Ohio Power Co	OH	237,000
12341	15	MidAmerican Energy Co	IA	222,000
13780	16	Northern States Power Co	WI	202,000
9324	17	Indiana Michigan Power Co	OH	187,000
14940	18	PECO Energy Co	PA	175,000
14063	19	Oklahoma Gas & Electric Co	OK	156,000
16534	20	Sacramento Municipal Util Dist	CA	135,000

Figure 6: Top Twenty Utilities Ranked by Total Load Management Savings in 2005

Utility Code	Rank	Utility Name	State	2005 Total Peak Reduction (KW)
17609	1	Southern California Edison Co	CA	1,234,000
6452	2	Florida Power & Light Company	FL	858,000
13781	3	Northern States Power Co	MN	822,000
14328	4	Pacific Gas & Electric Co	CA	577,000
13337	5	Nebraska Public Power District	NE	495,000
7140	6	Georgia Power Co	GA	360,000
9417	7	Interstate Power and Light Co	IA	350,000
13687	8	North Carolina Eastern M P A	NC	261,000
15466	9	Public Service Co of Colorado	CO	248,000
15470	10	PSI Energy Inc	IN	247,000
12341	11	MidAmerican Energy Co	IA	232,000
807	12	Arkansas Electric Coop Corp	AR	195,000
20847	13	Wisconsin Electric Power Co	WI	193,000
13780	14	Northern States Power Co	WI	183,000
14940	15	PECO Energy Co	PA	175,000
16534	16	Sacramento Municipal Util Dist	CA	156,000
9324	17	Indiana Michigan Power Co	OH	155,000
20856	18	Wisconsin Power & Light Co	WI	138,000
7004	19	Buckeye Power, Inc	OH	127,000
14006	20	Ohio Power Co	OH	126,000

Exhibit RFS - 4: Ranking of FEECA Utilities by Cumulative kW Savings as Percent of Summer Peak Load

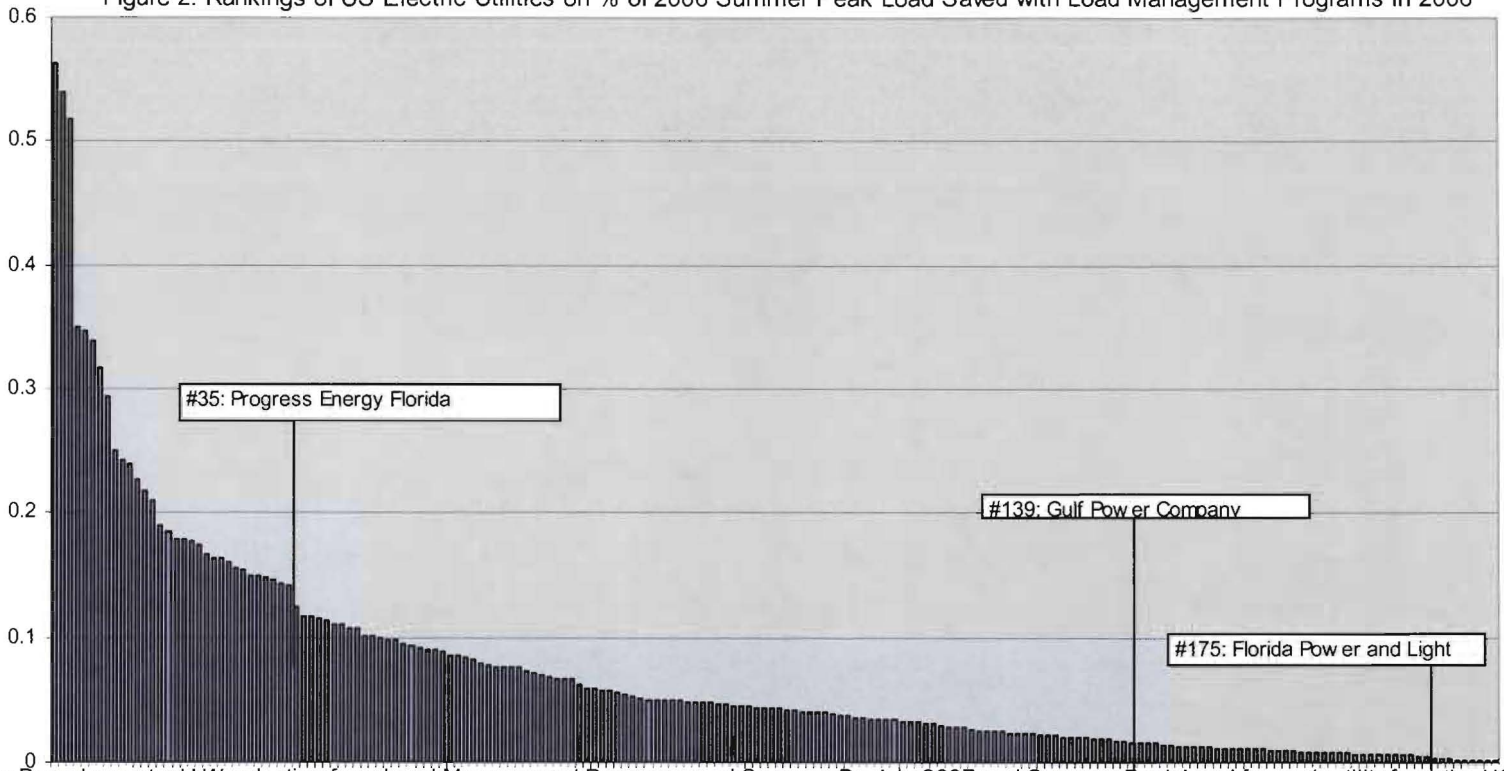
Figure 1:Rankings of US Electric Utilities on % of 2007 Summer Peak Load Saved with Load Management Programs in 2007



Note: Based on actual kW reduction from Load Management Programs and Summer Peak in 2007 and Summer Peak Load for each utility from the US EIA Form 861 Database

Note: Orlando Utility Company, Florida Public Utilities Company and JEA did not report savings for 2007.

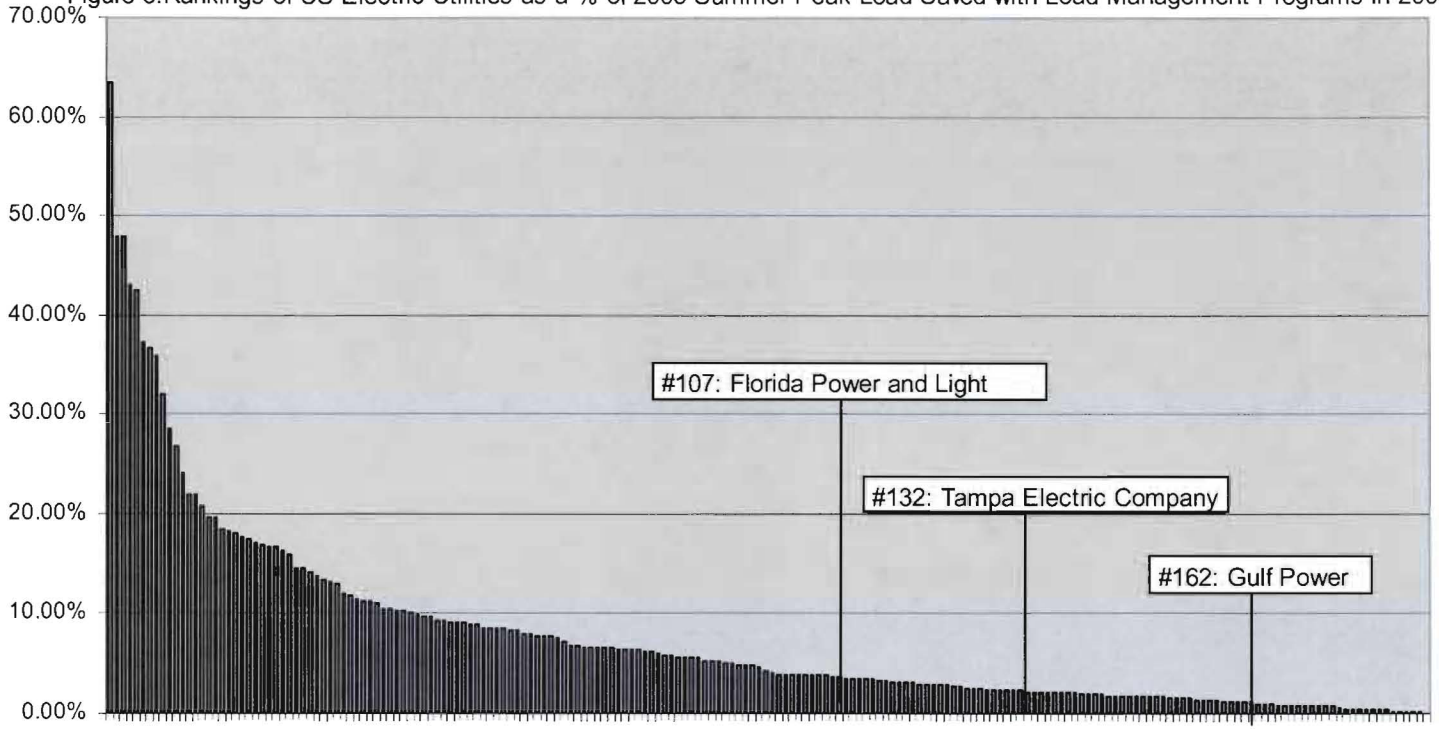
Figure 2: Rankings of US Electric Utilities on % of 2006 Summer Peak Load Saved with Load Management Programs in 2006



Note: Based on actual kW reduction from Load Management Programs and Summer Peak in 2007 and Summer Peak Load for each utility from the US EIA

Note: Tampa Electric Company, Orlando Utility Company, Florida Public Utilities Company and JEA did not report savings for 2006.

Figure 3:Rankings of US Electric Utilities as a % of 2005 Summer Peak Load Saved with Load Management Programs in 2005



Note: Based on actual kW reduction from Load Management Programs in 2007 and Summer Peak Load for each utility from the US EIA Form 861

Note: Orlando Utility Company, Progress Energy Florida, Florida Public Utilities Company and JEA did not report savings for 2005.

Figure 4: Top Twenty Utilities Ranked as a % of 2007 Summer Peak Load Saved with Load Management Programs in 2007

Utility Code	Rank	Utility Name	State	2007 Total Peak Reduction (KW)	2007 Summer Peak (KW)	Annual 2007 Peak Reduction as Percentage of 2007 Summer Peak
12658	1	Minnkota Power Coop, Inc	ND	387,000	540,000	71.67%
12301	2	Nodak Electric Coop Inc	ND	94,000	145,000	64.83%
5780	3	Elkhorn Rural Public Pwr Dist	NE	38,000	85,000	44.71%
13050	4	Mountain Parks Electric, Inc	CO	19,000	51,000	37.25%
213	5	Alaska Electric Light&Power Co	AK	21,000	62,000	33.87%
2890	6	City of Camden	SC	15,000	54,000	27.78%
17040	7	Shelby Electric Coop, Inc	IL	12,000	50,000	24.00%
5552	8	East River Elec Pwr Coop, Inc	SD	88,000	408,000	21.57%
13523	9	City of Newberry	FL	9,000	42,000	21.43%
108	10	Adams-Columbia Electric Coop	WI	26,000	124,000	20.97%
21111	11	Perennial Public Power Dist	NE	14,000	68,000	20.59%
13337	12	Nebraska Public Power District	NE	497,000	2,510,000	19.80%
17868	13	St Croix Electric Coop	WI	7,000	37,000	18.92%
19790	14	Verendrye Electric Coop Inc	ND	13,000	69,000	18.84%
20472	15	Wharton County Elec Coop, Inc	TX	7,000	39,000	17.95%
1251	16	Barron Electric Coop	WI	10,000	56,000	17.86%
5417	17	Wharton County Elec Coop, Inc	WI	6,000	34,000	17.65%
13687	18	North Carolina Eastern M P A	NC	292,000	1,692,000	17.26%
8319	19	Heartland Power Coop	IA	6,000	35,000	17.14%
20997	20	Yellowstone Valley Elec Co-op	MT	10,000	59,000	16.95%
Weighted Average Annual Peak Reduction as a Percent of Annual Summer Peak				1,571,000	6,160,000	25.50%

Figure 5: Top Twenty Utilities Ranked as a % of 2006 Summer Peak Load Saved with Load Management Programs in 2006

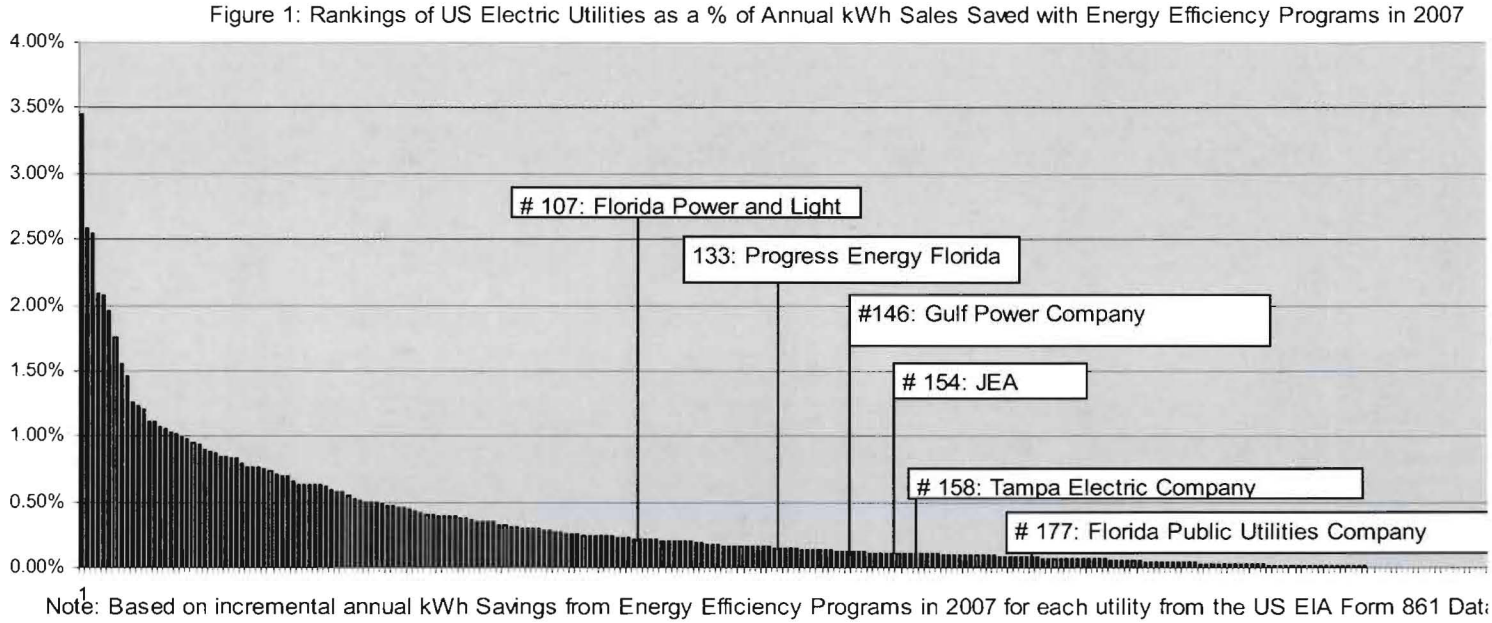
Utility Code	Rank	Utility Name	State	2006 Total Peak Reduction (KW)	2006 Summer Peak (KW)	Annual 2006 Peak Reduction as Percentage of 2006 Summer Peak
12301	1	Nodak Electric Coop Inc	ND	76,000	135,000	56.296%
12658	2	Minnkota Power Coop, Inc	ND	320,000	594,000	53.872%
5780	3	Elkhorn Rural Public Pwr Dist	NE	44,000	85,000	51.765%
407	4	Altamaha Electric Member Corp	GA	55,000	157,000	35.032%
13050	5	Mountain Parks Electric, Inc	CO	18,000	52,000	34.615%
20963	6	Woodruff Electric Coop Corp	AR	42,000	124,000	33.871%
12395	7	Menard Electric Coop	IL	19,000	60,000	31.667%
2890	8	City of Camden	SC	15,000	51,000	29.412%
1233	9	City of Barnesville	MN	1,000	4,000	25.000%
8319	10	Heartland Power Coop	IA	8,000	33,000	24.242%
17040	11	Shelby Electric Coop, Inc	IL	12,000	50,000	24.000%
5552	12	East River Elec Pwr Coop, Inc	SD	84,000	369,000	22.764%
108	13	Adams-Columbia Electric Coop	WI	27,000	124,000	21.774%
13337	14	Nebraska Public Power District	NE	560,000	2,671,000	20.966%
10539	15	La Plata Electric Assn, Inc	CO	25,000	132,000	18.939%
19157	16	Tri-County Electric Coop	MN	12,000	65,000	18.462%
20472	17	Wharton County Elec Coop, Inc	TX	7,000	39,000	17.949%
20997	18	Yellowstone Valley Elec Co-op	MT	10,000	56,000	17.857%
14216	19	City of Osceola	AR	6,000	34,000	17.647%
13687	20	North Carolina Eastern M P A	NC	285,000	1,633,000	17.453%
Weighted Average Annual Peak Reduction as a Percent of Annual Summer Peak				1,626,000	6,468,000	25.14%

Figure 6: Top Twenty Utilities Ranked as a % of 2005 Summer Peak Load Saved with Load Management Programs in 2005

Utility Code	Rank		State	2005 Total Peak Reduction (KW)	2005 Summer Peak (KW)	Annual 2005 Peak Reduction as Percentage of 2005 Summer Peak
12301	1	Nodak Electric Coop Inc	ND	76,000	120,000	63.33%
16971	2	Shakopee Public Utilities Comm	MN	34,000	71,000	47.89%
24949	3	Cass County Electric Coop Inc	ND	66,000	138,000	47.83%
2890	4	City of Camden	SC	22,000	51,000	43.14%
5780	5	Elkhorn Rural Public Pwr Dist	NE	34,000	80,000	42.50%
20963	6	Woodruff Electric Coop Corp	AR	42,000	113,000	37.17%
19157	7	Tri-County Electric Coop	MN	22,000	60,000	36.67%
407	8	Altamaha Electric Member Corp	GA	55,000	153,000	35.95%
108	9	Adams-Columbia Electric Coop	WI	30,000	94,000	31.91%
13050	10	Mountain Parks Electric, Inc	CO	18,000	63,000	28.57%
12395	11	Menard Electric Coop	IL	16,000	60,000	26.67%
17040	12	Shelby Electric Coop, Inc	IL	12,000	50,000	24.00%
5552	13	East River Elec Pwr Coop, Inc	SD	82,000	373,000	21.98%
10539	14	La Plata Electric Assn, Inc	CO	30,000	137,000	21.90%
12894	15	City of Moorhead	MN	15,000	72,000	20.83%
13739	16	Northeast Nebraska P P D	NE	8,000	41,000	19.51%
13337	17	Nebraska Public Power District	NE	495,000	2,539,000	19.50%
20472	18	Wharton County Elec Coop, Inc	TX	7,000	38,000	18.42%
19790	19	Verendrye Electric Coop Inc	ND	10,000	55,000	18.18%
3279	20	Central Power Elec Coop, Inc	ND	32,000	177,000	18.08%
				1,106,000	4,485,000	24.66%

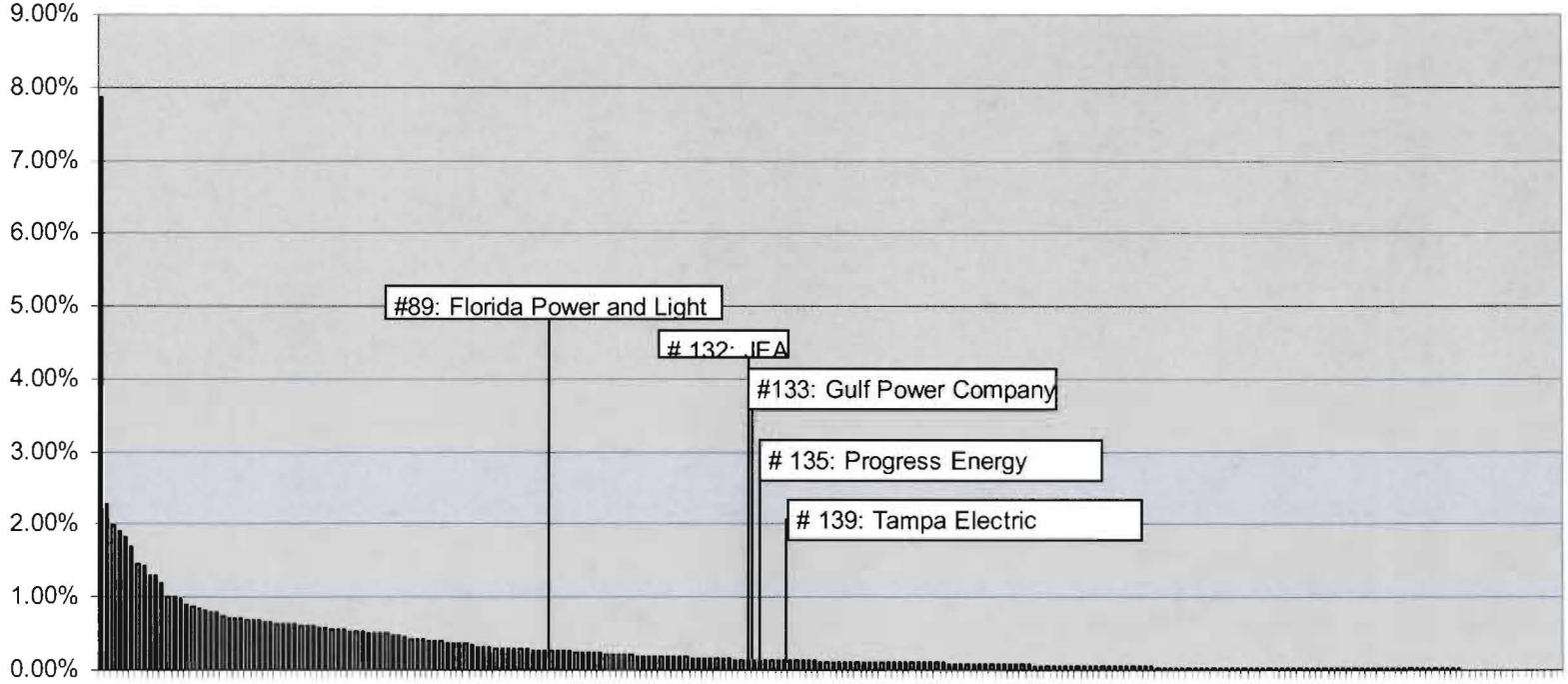
Ranking of FEECA Utilities by Cumulative kW Savings as Percent of Summer Peak Load

Exhibit RFS - 5: Ranking of FEECA Utilities by Incremental Annual kWh Savings as Percent of Sales



Note: Orlando Utility Company did not report savings for 2007.

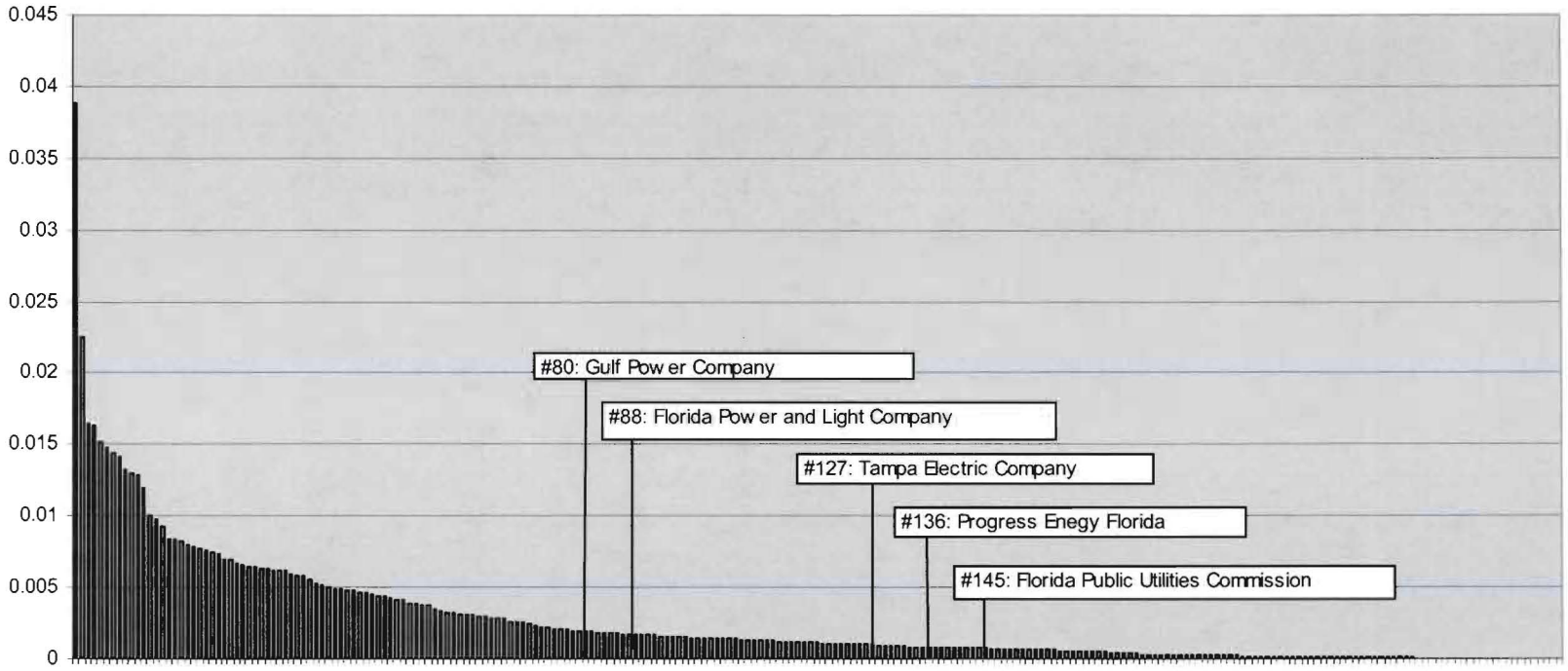
Figure 2: Rankings of US Electric Utilities as a % of Annual kWh Sales Saved with Energy Efficiency Programs in 2006



1 Note: Based on incremental annual kWh Savings from Energy Efficiency Programs in 2006 for each utility from the US EIA Form 861 Database

Note: Orlando Utility Company and Florida Public Utilities Company did not report savings for 2006.

Figure 3: Rankings of US Electric Utilities as a % of Annual kWh Sales Saved with Energy Efficiency Programs in 2005



Note: Based on incremental annual kWh Savings from Energy Efficiency Programs in 2005 for each utility from the US EIA Form 861

Note: Orlando Utility Company and JEA did not report savings for 2005.

Figure 4: Top Twenty Utilities Ranked by Annual 2007 Energy Savings as a Percentage of Annual kWh Sales

Utility Code	Rank	Utility Name	State	2007 Energy Efficiency Savings (kWh) Incremental	2007 Annual Retail kWh Sales	Annual 2007 Energy Efficiency Savings as a % of Annual kWh Sales
2182	1	City of Breckenridge	CO	1,462,000	42,336,000	3.45%
7303	2	Glidden Rural Electric Coop	IA	2,606,000	101,177,000	2.58%
2548	3	Burlington City of	VT	9,276,000	364,586,000	2.54%
14328	4	Pacific Gas & Electric Co	CA	1,662,875,000	79,450,903,000	2.09%
20806	5	City of Windom	MN	1,480,000	71,208,000	2.08%
17609	6	Southern California Edison Co	CA	1,551,503,000	79,505,231,000	1.95%
4176	7	Connecticut Light & Power Co	CT	281,367,000	16,054,317,000	1.75%
11804	8	Massachusetts Electric Co	MA	195,357,000	12,543,637,000	1.56%
19497	9	United Illuminating Co	CT	86,011,000	5,917,448,000	1.45%
10768	10	Laurens Electric Coop, Inc	SC	12,519,000	996,410,000	1.26%
20455	11	Western Massachusetts Elec Co	MA	25,873,000	2,098,952,000	1.23%
16181	12	Rochester Public Utilities	NY	15,815,000	1,307,897,000	1.21%
12312	13	Merced Irrigation District	CA	4,709,000	422,674,000	1.11%
6374	14	Fitchburg Gas & Elec Light Co	NH	3,049,000	276,004,000	1.10%
405	15	City of Alta	IA	166,000	15,587,000	1.06%
24590	16	Unitil Energy Systems	CT	9,983,000	941,779,000	1.06%
15500	17	Puget Sound Energy Inc	WA	222,310,000	21,626,537,000	1.03%
1015	18	Austin Energy	TX	117,649,000	11,546,977,000	1.02%
6022	19	Eugene City of	OR	26,914,000	2,728,684,000	0.99%
15776	20	Reedy Creek Improvement Dist	FL	11,607,000	1,183,620,000	0.98%
Weighted Average Annual kWh Savings as a Percent of Annual Retail kWh Sales				4,230,924,000	236,012,344,000	1.79%

Figure 5: Top Twenty Utilities Ranked by Annual 2006 Energy Savings as a Percentage of Annual kWh Sales

Utility Code	Rank	Utility Name	State	2006 Energy Effciency Savings (kWh) Incremental	2006 Annual Retail kWh Sales	Annual 2006 Energy Efficiency Savings as a % of Annual kWh Sales
14534	1	City of Pasadena	CA	96,632,000	1,229,963,000	7.86%
7303	2	Glidden Rural Electric Coop	IA	2,243,000	98,493,000	2.28%
11804	3	Massachusetts Electric Co	MA	256,956,000	12,990,328,000	1.98%
20455	4	Western Massachusetts Elec Co	MA	43,298,000	2,276,376,000	1.90%
2548	5	Burlington City of	VT	6,604,000	359,268,000	1.84%
2182	6	City of Breckenridge	CO	682,000	40,123,000	1.70%
12312	7	Merced Irrigation District	CA	5,451,000	375,279,000	1.45%
13214	8	Narragansett Electric Co	RI	96,048,000	6,707,930,000	1.43%
10768	9	Laurens Electric Coop, Inc	SC	12,433,000	951,468,000	1.31%
19497	10	United Illuminating Co	CT	76,242,000	5,919,000,000	1.29%
4176	11	Connecticut Light & Power Co	CT	264,916,000	22,109,070,000	1.20%
14328	12	Pacific Gas & Electric Co	CA	779,603,000	76,817,131,000	1.01%
17609	13	Southern California Edison Co	CA	787,563,000	78,863,143,000	1.00%
3477	14	Chicopee City of	MA	4,438,000	458,566,000	0.97%
6374	15	Fitchburg Gas & Elec Light Co	NH	2,548,000	283,887,000	0.90%
24590	16	Unitil Energy Systems	NH	9,210,000	1,048,943,000	0.88%
9417	17	Interstate Power and Light Co	IA	134,177,000	16,026,131,000	0.84%
16181	18	Rochester Public Utilities	MN	10,417,000	1,266,716,000	0.82%
17166	19	Sierra Pacific Power Co	NV	69,404,000	8,726,238,000	0.80%
15500	20	Puget Sound Energy Inc	WA	166,254,000	21,091,533,000	0.79%
Weighted Average Annual kWh Savings as a Percent of Annual Retail kWh Sales				2,562,817,000	236,548,053,000	1.08%

Figure 6: Top Twenty Utilities Ranked by Annual 2005 Energy Savings as a Percentage of Annual kWh Sales

Utility Code	Rank	Utility Name	State	2005 Energy Efficiency Savings (kWh) Incremental	2005 Annual retail kWh Sales	Annual 2005 Energy Efficiency Savings as a % of Annual kWh Sales
10768	1	Laurens Electric Coop, Inc	SC	35,951,000	924,781,000	3.89%
7303	2	Glidden Rural Electric Coop	IA	2,008,000	89,156,000	2.25%
17609	3	Southern California Edison Co	CA	1,239,175,000	75,301,581,000	1.65%
14328	4	Pacific Gas & Electric Co	CA	1,191,221,000	72,727,705,000	1.64%
12647	5	Minnesota Power Inc	MN	137,033,000	9,051,942,000	1.51%
1998	6	Boston Edison Co	MA	160,406,000	10,888,695,000	1.47%
4089	7	Commonwealth Electric Co	MA	31,760,000	2,210,570,000	1.44%
21013	8	City of Worthington	MN	2,634,000	186,896,000	1.41%
19497	9	United Illuminating Co	CT	80,931,000	6,106,000,000	1.33%
20455	10	Western Massachusetts Elec Co	MA	40,238,000	3,113,996,000	1.29%
11804	11	Massachusetts Electric Co	MA	199,421,000	15,491,461,000	1.29%
6374	12	Fitchburg Gas & Elec Light Co	NH	3,986,000	332,612,000	1.20%
1015	13	Austin Energy	TX	111,000,000	10,997,914,000	1.01%
4176	14	Connecticut Light & Power Co	CT	236,818,000	24,125,638,000	0.98%
13214	15	Narragansett Electric Co	RI	66,093,000	7,115,094,000	0.93%
12312	16	Merced Irrigation District	CA	2,905,000	345,224,000	0.84%
15500	17	Puget Sound Energy Inc	WA	171,390,000	20,465,557,000	0.84%
6022	18	Eugene City of	OR	22,030,000	2,663,174,000	0.83%
2886	19	Cambridge Electric Light Co	MA	8,845,000	1,117,811,000	0.79%
13441	20	New Hampshire Elec Coop Inc	NH	5,878,000	747,260,000	0.79%
Weighted Average Annual kWh Savings as a Percent of Annual Retail kWh Sales				3,749,723,000	264,003,067,000	1.42%

Exhibit RFS - 6: Ranking of Florida Utilities by Incremental Annual and Cumulative kWh Savings as a Percentage of Total Sales

Table 1: 2007 Incremental Annual kWh Energy Savings by Florida Utilities as Reported in the EIA Form 861 Database

Rank:	Utility Name	Incremental Savings	Total Retail Sales	%
1	Reedy Creek Improvement Dist	11,607	1,183,620	0.9806%
2	Gainesville Regional Utilities	14,327	1,876,933	0.7633%
3	City of Tallahassee	9,465	2,755,874	0.3434%
4	Florida Power & Light Company	208,608	105,274,631	0.1982%
5	Lee County Electric Coop, Inc	5,769	3,621,892	0.1593%
6	Florida Power Corp	51,413	39,281,638	0.1309%
7	Gulf Power Co	12,353	11,520,888	0.1072%
8	JEA	13,000	12,844,424	0.1012%
9	Tampa Electric Co	18,581	19,532,753	0.0951%
10	Sumter Electric Coop, Inc	1,918	2,677,554	0.0716%
11	Florida Public Utilities Co	574	812,897	0.0706%
12	Clay Electric Cooperative, Inc	584	3,195,230	0.0183%
13	City of Lakeland	9	2,928,568	0.0003%

Note: Orlando Utility Company did not report savings in EIA Form 861 for 2007.

Table 2: 2006 Incremental Annual kWh Energy Savings by Florida Utilities as Reported in the EIA Form 861 Database

Rank:	Utility Name	Incremental Savings	Total Retail Sales	%
1	Reedy Creek Improvement Dist	11,607	1,172,862	0.990%
2	Gainesville Regional Utilities	14,327	1,849,368	0.775%
3	City of Tallahassee	9,465	2,713,901	0.349%
4	Florida Power & Light Co	208,608	103,652,914	0.201%
5	Lee County Electric Coop, Inc	5,769	3,505,338	0.165%
6	Progress Energy Florida Inc	51,413	39,431,837	0.130%
7	Gulf Power Co	12,353	11,428,880	0.108%
8	JEA	13,000	12,799,959	0.102%
9	Tampa Electric Co	18,581	19,025,064	0.098%
10	Sumter Electric Coop, Inc	1,918	2,570,910	0.075%
11	Florida Public Utilities Co	574	848,718	0.068%
12	Clay Electric Cooperative, Inc	584	3,154,987	0.019%

Note: Orlando Utility Company did not report savings in EIA Form 861 for 2006.

Table 3: 2005 Incremental Annual kWh Energy Savings by Florida Utilities as Reported in the EIA Form 861 Database

Rank:	Utility Name	Incremental Savings	Total Retail Sales	%
1	City of Tallahassee	11,160	2,723,848	0.410%
2	Gulf Power Co	22,657	11,238,896	0.202%
3	Gainesville Regional Utilities	3,566	1,853,587	0.192%
4	Florida Power & Light Company	183,925	101,979,583	0.180%
5	Sumter Electric Coop, Inc	3,436	2,425,467	0.142%
6	Lee County Electric Coop, Inc	3,771	3,339,388	0.113%
7	Tampa Electric Co	18,550	18,911,837	0.098%
8	Progress Energy Florida Inc	32,583	39,176,586	0.083%
9	Florida Public Utilities Co	610	824,645	0.074%
10	Reedy Creek Improvement Dist	749	1,219,849	0.061%
11	City of Lakeland	9	2,808,851	0.000%

Note: Orlando Utility Company and JEA did not report savings in EIA Form 861 for 2005.

Exhibit RFS - 7: Recommended Measures to be Added to the Potential Studies

1.0: Residential Measures

The list of residential measures assessed in the Florida Technical Potential Study was compared to measure lists of comparable studies. The following measures, found in other technical potential studies, were not included in the Florida study.

The six items in Table 1 could contribute to a rather large percentage of the technical potential. For example, these listed measures account for 19.6% of the residential maximum achievable cost-effective potential according to a New Hampshire study (2009). These measures are common, commercially available measures that are minimally affected by climate and could be applicable to the Florida residential energy market.

Table 1: Recommended List of Residential Measures to be Added to Technical Potential Studies

Measure	Percent of Maximum Achievable Cost-Effective potential in NH Study
Smart Strips/Phantom Load Switch	9.2%
Second refrigerator turn-in	7.8%
Light Emitting Diode (LED) lighting	0.9%
Programmable thermostats	0.8%
Second freezer turn-in	0.7%
Tree shading	0.2%
TOTAL	**19.6%**

The following measures listed below are not featured in the list of potential energy savings measures in Itron's Florida study and, based on their inclusion in other state or utility potential studies, may also be worthy of consideration.

- Zero-energy homes
- T-5 lighting
- Daylighting/Solar tubes
- Dimmable CFLs
- LED Holiday Lighting

2.0: Commercial Measures

The list of commercial measures assessed in the Florida technical potential study was compared to measure lists of comparable studies. The following measures, found in other technical potential studies, were not included in the Florida study:

Appliances

- Energy Star Compliant Single-Door Refrigerator
- Computers/Office Equipment
- TVs – Energy Star over Standard
- Energy Efficiency "Smart" Power Strip for PC/Monitor/Printer

Water Heating

- Commercial Dishwashers
- Commercial Clothes Washers
- Booster Water Heater
- Point of Use Water Heater
- Low Flow Faucet/Shower Adaptors

Pools

- Energy Efficient Pool Pumps
- High Efficiency Spas/Hot Tubs
- Solar Pool Heater
- Heat Pump Pool Heater
- Temperature Control
- Pool Cover
- Liquid Pool Cover

Building Envelop

- Integrated Building Design
- Energy Efficient Windows

Ventilation

- Dual Enthalpy Economizer (from Fixed Damper and Dry Bulb)

Space Cooling

- Variable Refrigerant Volume/Flow
- Dedicated Outdoor Air System
- Radiant Ceiling Cooling
- HVAC Controls
- Programmable Thermostat
- LEED Enhanced Commissioning

Cooking

- High Efficiency Steamer
- High Efficiency Holding Cabinet
- Demand Ventilation Control
- Induction Cook-tops

Lighting

- Specialty Fixture – Halogen Infra Red Bulb
- Specialty Fixture – Integrated Ballast 25W MH
- Specialty Fixture – Induction Fluorescent 23W
- Specialty Fixture – Metal Halide Track
- Cold Cathode Screw-in
- LED Screw-in
- LED Christmas type – decorative lighting
- Efficient Lighting Design

Refrigeration

- Vending Miser for Non-Refrigerated Machines
- Refrigeration Economizer
- Commercial Reach-In Cooler
- Commercial Reach-In Freezer
- Commercial Ice-Maker
- Zero-Energy Doors – Coolers
- Zero-Energy Doors – Freezers
- Door Heater Controls
- Discuss Compressor
- Scroll Compressor
- Floating Heat Pressure Control

Compressed Air

- Compressed Air – Non-Controls
- Compressed Air – Controls
- Transformers
- Energy Efficiency Transformers

Space Heating

- Water Source Heat Pump

Non-HVAC Motors

- Efficient Motors
- Variable Frequency Drives (VFD)

Exhibit RFS - 8: Free Ridership Estimates – GDS Study

A free rider is a "program participant who would have implemented the program measure or practice in the absence of the program."[1] Free-ridership rates are difficult to determine, greatly due to the tendency of consumers to falsely agree that they would have selected energy efficient products regardless of the current program in place. This misinformation is intensified when more than one lighting program is active in one area. Consumers who consider themselves free-riders in one program might have learned about measures, such as compact fluorescent light bulbs, through a different program. Thus they would not be free-riders after all.

Although difficult to determine, free-ridership rates give insight into the overall effectiveness of an energy efficiency program. Low rates show that the population is not familiar with the promoted product, suggesting that high sales of that product are a result of the program rather than pure consumer preference. Higher rates can be indicative of a biased free-ridership survey, or they can suggest that the program is paying out unneeded incentives.

Of the nine organizations surveyed in addition to Efficiency Maine, six reported current free-ridership rates. The average rate of these six is just under 6%. Instead of a direct free-ridership rate, Pacific Gas and Electric reported a net-to-gross ratio of 0.8. Below, Table 1 summarizes these results.

Table 1: Free Ridership Rates

Programs	Free-Ridership Rates
Connecticut Light and Power	6% for bulbs, 3% for fixtures and portables
Efficiency Maine	Will be available in Feburary, 2007
Efficiency Vermont	10%
National Grid/Mass. Electric*	10%
Northwest Energy Efficiency Alliance	N/A
NSTAR*	5%
NYSERDA	6.50%
Pacific Gas and Electric	Net-to-gross ratio: 0.8
Public Service Company of New Hampshire	N/A
Wisconsin Focus on Energy	0.60%

[1] The California Evaluation Framework, Prepared for the California Public Utilities Commission and the Project Advisory Group, Tech Market Works, June 2004.

Exhibit RFS - 8:

Exhibit RFS - 9: Potential Study Results Comparison

		Technical Potential				Max Acheivable Potential				Achievable Cost Effective Potential			
	Year for which results are reported	Res	Comm	Ind	Total	Res	Comm	Ind	Total	Res	Comm	Ind	Total
FL	**2019** [19]	**33.60%**	**11.25%**		**19.22%**	**2.19%**	**1.11%**		**1.49%**	**0.89%**	**0.47%**		**0.62%**
U.S.	2020 [20]								**10.14%**	4.09%	5.67%	4.42%	**4.78%**
U.S.	2030 [20]								**11.20%**	7.81%	8.84%	7.59%	**8.54%**
Downstate NY (Load Zones H, I, J, K)	2018 [16]									16%	19%	19%	**19%**
CT (2004)	2012 [1]	21%	25%	20%	**24%**	17%	17%	17%	**17%**	13%	14%	13%	**13%**
CA (2006)	2016 [2]	39%	27%	18%	**30%**					13%	6%	10%	**10%**
FL	2017 [3]					22%	30%	24%	**26%**				
GA	2015 [4]	33%	33%	17%	**29%**	21%	22%	15%	**20%**	9%	10%	7%	**9%**
Big Rivers (KY)	2015 [5]	26%		11%		18%		9%		16%	10%	9%	**12%**
Mass.	2007 [6]									31%	21%	21%	**24%**
North Carolina (2006)	2016 [7]	40%	32%	24%	**33%**	20%	22%	18%	**20%**	17%	12%	12%	**14%**
North Carolina (2007)	2026 [17]				**31%**								**19%**
State of New York	2012 [8]	37%	41%	22%	**37%**	26%	38%	16%	**30%**				
NY/NJ/ PA	2011 [9]					35%		41%					
RI	2018 [18]	34%	32%	14%	**28%**	28%	28%	14%	**24%**	9%	10%	11%	**9%**
OR	2013 [10]	28%	32%	35%	**31%**								
Puget Sound (WA)	2023 [11]					17%	7%	0%	**12%**	7%	6%	0%	**6%**
Southwest	2020 [12]	26%	37%	33%	**33%**								
TX	2017 [13]					32%	39%	26%	**33%**				
VT	2015 [14]	40%	40%	21%	**35%**	26%	24%	15%	**22%**	21%	21%	15%	**19%**
WI	2015 [15]									4.9%	4.8%		**9.2%**
		Technical Potential				**Max Acheivable Potential**				**Proposed Goals**			
FPL	2019	36.6%	18.3%		**26.8%**	1.43%	2.2%		**1.8%**	0.59%	0.87%		**0.74%**
TECO	2019	23.8%	2.9%		**5.4%**	1.06%	0.2%		**0.3%**	0.47%	0.15%		**0.19%**
OUC	2019	29.8%	18.9%		**23.0%**	0.98%	1.0%		**1.0%**	0.00%	0.00%		**0.00%**
FPU	2019	39.5%	26.1%		**31.8%**	1.54%	1.7%		**1.6%**	0.00%	0.00%		**0.00%**
Progress	2019	35.2%	23.4%		**30.1%**	5.16%	2.2%		**3.9%**	2.08%	0.72%		**1.50%**
GULF	2019	25.8%	18.6%		**22.3%**	2.02%	1.3%		**1.7%**	1.14%	0.98%		**1.06%**
JEA	2019	32.3%	14.1%		**21.9%**	1.03%	0.9%		**1.0%**	0.00%	0.00%		**0.00%**

Notes:

1 GDS Associates, "Independent Assessment of Conservation and Energy Efficiency Potential for Connecticut and the Southwest Connecticut Region, Appendix B," June 2004.

2. Itron et al., "California Energy Efficiency Potential Study," vol. 1, May 2006. Achievable cost effective potential is defined as a market potential scenario where incentives are the average between 2004 incentive levels and full measure cost.

3. R. Neal Elliott et al., "Potential for Energy Efficiency and Renewable Energy to Meet Florida's Growing Electricity Needs," ACEEE report E072, February 2007.

4. Georgia Environmental Facilities Authority, "Assessment of Energy Efficiency Potential in Georgia - Final Report," prepared by ICF Consulting, May 5, 2005.

5. "The Maximum Achievable Cost Effective Potential for Electric Energy Efficiency In the Service Territory of the Big Rivers Electric Corporation," prepared for Big Rivers Electric Cooperative by GDS Associates, November 2005.

6. "Remaining Electric Energy Efficiency Opportunities in Massachusetts: Final Report," prepared for program administrators and Massachusetts Division of Energy Resources by RLW Analytics, Inc. and Shel Feldman Management Consulting, June 7, 2001.

7. GDS Associates, "A Study of the Feasibility of Energy Efficiency as an Eligible Resource as Part of a Renewable Portfolio Standard for the State of North Carolina," December 2006.

8. New York State Energy Research and Development Authority, "Energy Efficiency and Renewable Energy Resource Development Potential in New York State - Final Report," prepared by Optimal Energy, Inc., August, 2003.

9. ACEEE, "Energy Efficiency and Economic Development in New York, New Jersey, and Pennsylvania," 1997.

10. "Energy Efficiency and Conservation Measure Resource Assessment for the Residential, Commercial, Industrial, and Agricultural Sectors," prepared for the Energy Trust of Oregon by Ecotope, Inc., ACEEE, and the Tellus Institute, January 2003.

11. "Assessment of Long-Term Electricity and Natural Gas Conservation Potential in Puget Sound Energy Service Area 2003–2024," prepared for Puget Sound Energy by KEMA-XENERGY/Quantec, August 2003.

12. "The New Mother Lode: The Potential for More Efficient Electricity Use in the Southwest," prepared for Hewlett Foundation Energy Series by Southwest Energy Efficiency Project, November 2002.

13. ACEEE, "Potential for Energy Efficiency, Demand Response, and Onsite Renewable Energy to Meet Texas' Growing Electricity Needs," ACEEE report E073, March 2007.

14. Vermont Department of Public Service, "Vermont Electric Energy Efficiency Potential Study, Final Report," prepared and submitted by GDS Associates, Inc., January 2007. This study includes fuel shifting programs to shift residential customers away fr

15. Energy Center of Wisconsin, "Energy Efficiency & Customer-Sited Renewable Energy: Achievable Potential in Wisconsin: 2006–2015," November 2005. Wisconsin reported combined results for commercial and industrial sectors as C&I.

16. GDS Associates, "Energy Efficiency Potential in the Downstate Region of New York", prepared for New York Communities Againts Regional Interconnect", January 2008, filed in New York Public Service Commission Case No. 06-T-0650.

17. Forefront Economics, "Duke Energy Carolinas, DSM Action Plan: North Carolina Report", August 31, 2007.

18. KEMA, Inc., "Rhode Island Energy Efficiency and Resource Management Council: Opportunity Report - Phase 1"; submitted to the Rhode Island Public Utilities Commission, July 15, 2008.

19. Itron, "Technical Potential for Electric Energy and Peak Demand Savings in Florida." - DRAFT FINAL REPORT: March 4, 2009. NOTE: Represents savings as percent of 2019 forecasted baseline sales.

20. EPRI, "Assessment of Achievable Potential from Energy Efficiency and Demand Response Programs in the U.S. (2010-2030)." January, 2009. - Reporting Realistic Achievable Potential & Maximum Achievable Potential.

Exhibit RFS - 10: National Action Plan for Energy Efficiency – *Understanding Cost-Effectiveness of Energy Efficiency Programs* – Use of Cost-Effectiveness Tests by States

State	Requires All	Primary Test	TRC	SCT	PCT	PACT	RIM	Other	Non-Specific
AK									•
AL									•
AR			•		•	•	•		
AZ*		SCT		•					
CA		TRC	•			•			
CO			•	•					
CT		PACT	•			•			
DC							•	•	
DE*			•						
FL		RIM	•		•		•		
GA			•	•	•		•		
HI	•		•	•	•	•	•		
IA				•	•	•	•		
ID†			•	•	•	•			
IL			•						
IN	•		•	•	•	•	•		
KS*			•				•		
KY									•
LA									•
MA		TRC	•						
MD*									•
ME		SCT		•					
MI									•
MN	•	SCT	•	•	•	•	•		
MO		TRC	•			•			
MS									•
MT			•	•					
NC									•
ND									•
NE									•
NH		TRC	•				•		
NJ								•	
NM		TRC	•						
NV				•		•		•	
NY		TRC	•						
OH									•
OK									•
OR*				•		•			
PA									•
RI								•	
SC									•
SD									•
UT		PACT	•			•			
VA	•		•	•	•	•	•		
VT		SCT		•					
TN									•
TX		PACT				•			
WA								•	
WI		SCT		•					
WV									•
WY									•

* Proposed or not yet codified in statute/Commission Order.
† Allows any or all tests, though the RIM may not be used as primary or limiting cost-effectiveness test.

Source: Regulatory Assistance Project (RAP) analysis.

Exhibit RFS - 11: Summary of Benefits and Costs Included in Each Cost-Effectiveness Test

Table 1: National Action Plan for Energy Efficiency – *Understanding Cost-Effectiveness of Energy Efficiency Programs* - Summary of Benefits and Costs Included in Each Cost-Effectiveness Test

Test	Benefits	Costs
PCT	*Benefits and costs from the perspective of the customer installing the measure*	
	▪ Incentive payments ▪ Bill savings ▪ Applicable tax credits or incentives	▪ Incremental equipment costs ▪ Incremental installation costs
PACT	*Perspective of utility, government agency, or third party implementing the program*	
	▪ Energy-related costs avoided by the utility ▪ Capacity-related costs avoided by the utility, including generation, transmission, and distribution	▪ Program overhead costs ▪ Utility/program administrator incentive costs ▪ Utility/program administrator installation costs
RIM	*Impact of efficiency measure on non-participating ratepayers overall*	
	▪ Energy-related costs avoided by the utility ▪ Capacity-related costs avoided by the utility, including generation, transmission, and distribution	▪ Program overhead costs ▪ Utility/program administrator incentive costs ▪ Utility/program administrator installation costs ▪ Lost revenue due to reduced energy bills
TRC	*Benefits and costs from the perspective of all utility customers (participants and non-participants) in the utility service territory*	
	▪ Energy-related costs avoided by the utility ▪ Capacity-related costs avoided by the utility, including generation, transmission, and distribution ▪ Additional resource savings (i.e., gas and water if utility is electric) ▪ Monetized environmental and non-energy benefits (see Section 4.9) ▪ Applicable tax credits (see Section 6.4)	▪ Program overhead costs ▪ Program installation costs ▪ Incremental measure costs (whether paid by the customer or utility)
SCT	*Benefits and costs to all in the utility service territory, state, or nation as a whole*	
	▪ Energy-related costs avoided by the utility ▪ Capacity-related costs avoided by the utility, including generation, transmission, and distribution ▪ Additional resource savings (i.e., gas and water if utility is electric) ▪ Non-monetized benefits (and costs) such as cleaner air or health impacts	▪ Program overhead costs ▪ Program installation costs ▪ Incremental measure costs (whether paid by the customer or utility)

Source: Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects.

Table 2: Components of DSM Benefit/Cost Tests

	PARTICIPANT TEST	RATE IMPACT MEASURE TEST	TOTAL RESOURCE COST TEST	UTILITY COST TEST	SOCIETAL TEST
BENEFITS:					
Reduction in Customer's Utility Bill	X				
Incentive Paid By Utility	X				
Any Tax Credit Received	X		X		
Avoided Supply Costs		X	X	X	X
Avoided Participant Costs	X		X		X
Participant Payment to Utility (if any)		X		X	
External Benefits					X
COSTS:					
Utility Costs (Including utility incentives)		X	X	X	X
Participant Costs	X		X		X
External Costs					X
Lost Revenues		X			

Exhibit RFS - 12:

Exhibit RFS - 12: GDS Survey - Summary of the Primary Benefit-Cost Tests Used in Each State

Table 1: Cost-Effectiveness Test Required[2] (by law or regulation)

State	TRC	SCT	PCT	PAC	RIM	OTHER	ALL	N/A
Alabama								x
Alaska								x
Arizona		x						
Arkansas							x	
California	x							
Colorado	x							
Connecticut				x				
DC					x			
Delaware								x
Florida			x		x			
Georgia							x	
Hawaii							x	
Idaho								x
Illinois	X							
Indiana							x	
Iowa		x						
Kansas							x	
Kentucky								x
Louisiana								x
Maine		x						
Maryland								x
Massachusetts	x							
Michigan								x
Minnesota		x						
Mississippi								x
Missouri	X							
Montana		x						
Nebraska								x
Nevada							x	
New Hampshire	x							
New Jersey								x
New Mexico	x							
New York	x							

[2] The study determined a test to be a 'required' if there is a statute, law, regulation, rule or commission order indicating a particular test that must be met before DSM measures or programs would be considered a resource, either explicit or implied through a list of cost-effectiveness test elements or commission precedent.

State	TRC	SCT	PCT	PACT	RIM	OTHER	ALL	N/A
North Carolina								x
North Dakota								x
Ohio								x
Oklahoma								x
Oregon		x		x				
Pennsylvania								x
Rhode Island						x		
South Carolina								x
South Dakota								x
Tennessee								x
Texas				x				
Utah				x				
Vermont		x						
Virginia							x	
Washington								x
West Virginia								x
Wisconsin		x						
Wyoming								x

Table 2: Cost-Effectiveness Tests Reported (in practice)

State	TRC	SCT	PCT	PAC	RIM	OTHER	NONE	Primary
Alabama							x	N/A
Alaska							x	N/A
Arizona		x						SCT
Arkansas	x		x	x	x			NONE
California	x	x	x	x	x			TRC
Colorado	x							TRC
Connecticut	x			x				PACT
DC					x			RIM
Delaware	x							TRC
Florida	x		x		x			NONE
Georgia	x	x	x	x	x			NONE
Hawaii	x	x	x	x	x			NONE
Idaho	x		x	x				NONE
Illinois	x							TRC
Indiana	x	x	x	x	x			NONE
Iowa		x	x	x	x			SCT
Kansas	x	x	x	x	x			NONE
Kentucky	x	x	x	x	x			NONE

State	TRC	SCT	PCT	PACT	RIM	OTHER	NONE	Primary
Louisiana							x	N/A
Maine		x						SCT
Maryland		x	x		x			NONE
Massachusetts	x							TRC
Michigan			x	x				NONE
Minnesota	x	x	x	x	x			SCT
Mississippi							x	N/A
Missouri	x			x				TRC
Montana	x	x		x				SCT
Nebraska							x	N/A
Nevada		x		x		x		NONE
New Hampshire	x				x			TRC
New Jersey	x	x	x	x	x	x		SCT
New Mexico	x							TRC
New York	x			x				TRC
North Carolina	x	x	x	x	x			NONE
North Dakota					x			RIM
Ohio							x	N/A
Oklahoma					x			RIM
Oregon		x		x				NONE
Pennsylvania	x							TRC
Rhode Island						x		RICET*
South Carolina							x	N/A
South Dakota					x			RIM
Tennessee							x	N/A
Texas					x			PACT
Utah	x	x	x	x	x			PACT
Vermont		x						SCT
Virginia	x	x	x	x	x			NONE
Washington	x	x	x	x	x			TRC
West Virginia							x	N/A
Wisconsin		x						SCT
Wyoming					x			RIM

Note:

*RICET: Rhode Island Cost Effectiveness Test, similar to the TRC test as described in the California Standard Practice Manual, except that it only includes electric resource savings.

NONE: Refers to situations (de jure and de facto) where the state uses multiple tests with no one primary test.

N/A: Refers to situations where there are no legal guidelines for testing and there is no primary test in practice.

Exhibit RFS - 13: Environmental Externalities Considered in Cost-Effectiveness Calculations of Various States

State	
Arizona	Environmental costs or the value of environmental improvements shall be quantified when possible, reasonable, and cost-efficient. At a minimum, utilities shall make a good faith effort to quantify water consumption savings and air emission reductions. Other environmental impacts may be considered qualitatively.
Arkansas	
California	In the Societal Test variant of the TRC test, the effects of certain externalities are included, such as the benefit of avoided environmental damages, and a societal discount rate is used to calculate net present value of costs and benefits. The TRC-Societal Test attempts to quantify the change in the total resource costs to society as a whole, rather than only to the service territory (the utility and its ratepayers). ....We also clarify that both the TRC and PAC tests should utilize the non-price components of avoided costs (e.g., environmental adders) being developed for the evaluation of energy efficiency programs in our avoided cost rulemaking, R 04-04-025
Colorado	Modified Total Resource Cost test" or "modified TRC test" means an economic cost-effectiveness test used to compare the net present value of the benefits of a DSM program or measure over its useful life, to the net present value of costs of a DSM measure or program for the participant and the utility, consistent with § 40-1-102(5), C.R.S. In performing the modified TRC test, **the benefits shall include, but are not limited to**, as applicable: the utility's avoided production, distribution and energy costs; the participant's avoided operating and maintenance costs; **the valuation of avoided emissions**; and non-energy benefits as set forth in rule 4753. Costs shall include utility and participant costs. The utility costs shall include the net present value of costs incurred in accordance with the budget set forth in rule 4753. **If the commission considers environmental effects when comparing the costs and benefits of potential utility resources, it shall also make findings and give due consideration to the effect that acquiring such resources will have on the state's economy and employment, including, but not limited to, the effect on the mining, electric, natural gas, energy efficiency, and renewable resource industries.**
Connecticut	cited on page 3 of GDS's Connecticut Energy Conservation Programs Study, February, 2008.
DC	
Delaware	
Florida	no information on environmental effects in rule
Georgia	
Hawaii	no information on environmental effects in rule
Idaho	no information on environmental effects in rule
Illinois	In calculating avoided costs of power and energy that an electric utility would otherwise have had to acquire, reasonable estimates shall be included of **financial costs likely to be imposed by future regulations and legislation on emissions of greenhouse gases.**
Indiana	no information on environmental effects in rule
Iowa	no information on environmental effects in rule
Kansas	
Kentucky	
Louisiana	
Maine	no information on environmental effects in rule
Maryland	
Massachusetts	Consistent with the use of the Total Resource Test, the **Proposed Guidelines allow for the inclusion of those environmental benefits that are related to environmental compliance costs that are reasonably projected to be incurred in the future** because of rules and/or regulatory requirements that are not currently in effect, but which are projected to take effect in the foreseeable future.
Michigan	In determining whether the substitution of advanced cleaner energy credits is cost-effective, the commission shall include as part of the costs of the system **the environmental costs attributed to the advanced cleaner energy system, including the costs of environmental control equipment or greenhouse gas constraints or taxes**. The commission's determinations shall be made after a contested case hearing that includes consultation with the department of environmental quality on the issue of carbon dioxide emissions benefits, if relevant, and environmental costs.
Minnesota	
Mississippi	
Missouri	The probable environmental costs of each supply-side resource option shall be quantified by estimating the cost to the utility to comply with additional environmental laws or regulations that may be imposed at some point within the planning horizon.

Montana	no information on environmental effects in rule
Nebraska	no information on environmental effects in rule
Nevada	**The environmental costs to the State associated with operating and maintaining a supply plan or demand side plan must be quantified for air emissions, water and land use.** Environmental costs are those costs, wherever they may occur, that result from harm or risks of harm to the environment after the application of all mitigation measures required by existing environmental regulation or otherwise included in the resource plan. **(THE PUCN DOES NOT CURRENTLY PLACE ANY MONETARY VALUE ON CARBON OR OTHER GREENHOUSE GASES REDUCTION.)**
New Hampshire	Yes there is an analysis done and includes greenhouse gases. Separate analysis than TRC test as the TRC doesn't include the greenhouse gas component. Estimate of the potential Cap and Trade value is used. Eventually, will estimate a statewide average value to use. The Statewide Potential study also has some assumptions on the value...Oscar thinks that they used $30 per ton for CO2. See PSCW website for study or someone in Marietta asked me for a link a while ago. (Rich Hackner)
New Jersey	no information on environmental effects in rule
New Mexico	no information on environmental effects in rule
New York	**Consensus was not reached on whether the following elements should be included in the total resource cost test**: energy market price effects, avoided transmission and distribution costs, distributed generation costs and benefits, load curtailment program impacts, **environmental externalities**, and the value of reductions in avoided variability and risk. **NYSERDA further recommends that unquantifiable environmental externalities and avoided variability and risk**, as well as difficult to measure and monetize customer benefits associated with distributed generation projects such as improved power quality and reliability to the host customer, and the additional distributed generation costs associated with enhanced customer benefits, **not be included.**
North Carolina	
North Dakota	Environmental externalities are not explicitly considered. North Dakota has a statute that forbids the use of environmental cost adders. Externalities affecting the environment, jobs, or other situations might become a factor if two plans were similar in cost, but one plan offered clear advantages or disadvantages, either environmentally or in terms of job creation.
Ohio	
Oklahoma	For Asset Purchase Proposals, the Company **prefers Proposals that address the ability to meet potential future emission compliance requirements for CO2.** Recognizing the increasing role that coa l will play in meeting future electricity supply needs, advanced technologies that utilize coal for power generation in a clean and efficient manner comprise a key element of a portfolio of technology options . International, national an d state policy activities all indicate the high likelihood of future legal requirement s to reduce greenhouse gas emissions, including CO2 . While the prospects for enactment of greenhouse gas control legislation in the United States are not imminent in the near term, there is growing evidence that emission control requirements will be mandated within the next several years .
Oregon	The societal perspective includes a credit for carbon dioxide reduction.
Pennsylvania	no information on environmental effects in rule
Rhode Island	Are externalities considered? If so, which ones and how are they considered? This topic has been brought up by different public groups, and the **Commission has directed the Company to include a consideration of the financial risks associated with environmental externalities** (see above); i.e., the financial risks associated with potential future environmental regulation compliance.
South Carolina	no information on environmental effects in rule
South Dakota	no information on environmental effects in rule
Tennessee	no information on environmental effects in rule
Texas	no information on environmental effects in rule
Utah	no information on environmental effects in rule
Vermont	For purposes of the analysis, a value of 0.7 cents per kWh (2000 dollars) was used to account for the externality benefits. These externality benefits are always the subject of controversy. The 0.7 cents per kWh value (2000 dollars) used here is the product of a settlement in a Vermont Public Service Board investigation in Docket 5980. For purposes of the analysis, the 0.7 cents per kWh is broad and encompasses the benefits for all externality values, especially those associated with categories of pollutants that remain uncapped..
Virginia	no information on environmental effects in rule
Washington	no information on environmental effects in rule
West Virginia	no information on environmental effects in rule
Wisconsin	no information on environmental effects in rule
Wyoming	no information on environmental effects in rule

Exhibit RFS - 14: LBNL Study – Base Case and Utility Build Moratorium

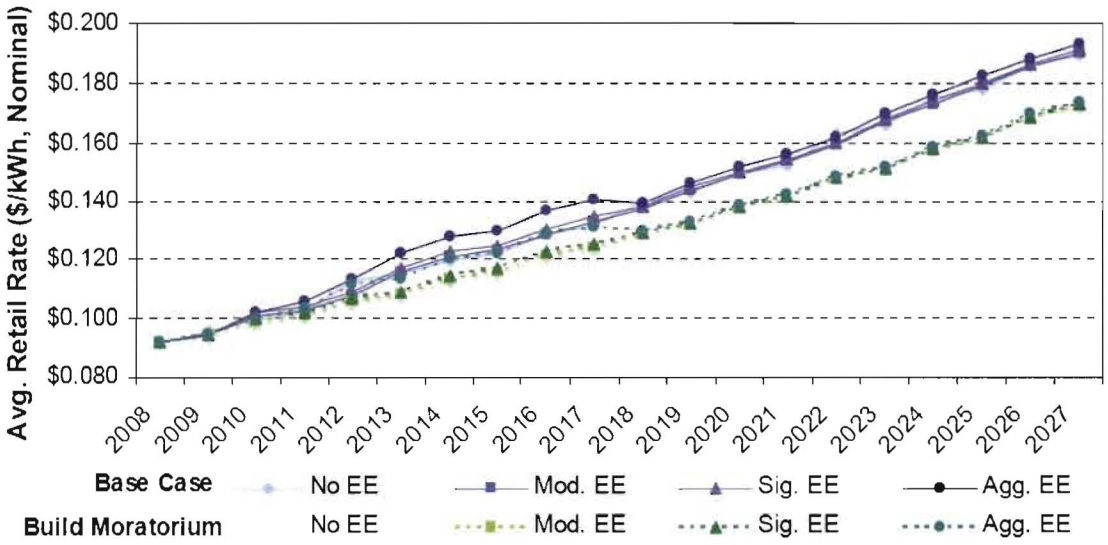


Figure E- 11. Base Case and Utility Build Moratorium annual average retail rates

Exhibit RFS - 15: Top 20 Electric Utilities Based on Annual kWh Savings as Reported in EIA Form 861 Database

Table 1: Data on the Top Twenty Energy Efficiency Utilities in the United States as Reported by the EIA for 2007

Utility Code	Rank	Utility Name	State	kWh Saved per $ Spent in 2007	2007 Energy Effciency Savings (kWh) Incremental	2007 Energy Efficiency Savings (kWh) Cumulative Annual Base	2007 Annual Retail kWh Sales	2007 Energy Efficiency Spending	2007 Retail Revenue	Annual 2007 Energy Efficiency Savings as a % of Annual kWh Sales	Cumulative Annual Energy Effciency Savings as a % of Annual kWh Sales
2182	1	City of Breckenridge	CO	50.4138	1,462,000	not reported	42,336,000	29,000	$2,649,000	3.45%	not reported
7303	2	Glidden Rural Electric Coop	IA	not reported	2,606,000	not reported	101,177,000	not reported	$7,149,000	2.58%	not reported
2548	3	Burlington City of	VT	9.2024	9,276,000	not reported	364,586,000	1,008,000	$46,118,000	2.54%	not reported
14328	4	Pacific Gas & Electric Co	CA	5.6465	1,662,875,000	8,523,069,000	79,450,903,000	294,496,000	$10,902,816,000	2.09%	10.73%
20806	5	City of Windom	MN	not reported	1,480,000	not reported	71,208,000	not reported	$5,408,000	2.08%	0.00%
17609	6	Southern California Edison Co	CA	5.1838	1,551,503,000	9,613,063,000	79,505,231,000	299,301,000	$11,217,201,000	1.95%	12.09%
4176	7	Connecticut Light & Power Co	CT	4.1500	281,367,000	2,424,378,000	16,054,317,000	67,800,000	$2,955,597,000	1.75%	15.10%
11804	8	Massachusetts Electric Co	MA	3.6985	195,357,000	2,246,977,000	12,543,637,000	52,820,000	$1,950,608,000	1.56%	17.91%
19497	9	United Illuminating Co	CT	4.0121	86,011,000	492,743,000	5,917,448,000	21,438,000	$900,448,000	1.45%	8.33%
10768	10	Laurens Electric Coop, Inc	SC	521.6250	12,519,000	not reported	996,410,000	24,000	$81,671,000	1.26%	not reported
20455	11	Western Massachusetts Elec Co	MA	3.8582	25,873,000	487,041,000	2,098,952,000	6,706,000	$348,993,000	1.23%	23.20%
16181	12	Rochester Public Utilities	NY	23.6398	15,815,000	69,466,000	1,307,897,000	669,000	$116,320,000	1.21%	5.31%
12312	13	Merced Irrigation District	CA	11.1324	4,709,000	29,458,000	422,674,000	423,000	$44,966,000	1.11%	6.97%
6374	14	Fitchburg Gas & Elec Light Co	NH	2.6375	3,049,000	38,833,000	276,004,000	1,156,000	$50,307,000	1.10%	14.07%
405	15	City of Alta	IA	not reported	166,000	not reported	15,587,000	not reported	$1,168,000	1.06%	not reported
24590	16	Unitil Energy Systems	CT	4.1133	9,983,000	47,098,000	941,779,000	2,427,000	$89,923,000	1.06%	5.00%
15500	17	Puget Sound Energy Inc	WA	13.8563	222,310,000	1,943,716,000	21,626,537,000	16,044,000	$1,836,471,000	1.03%	8.99%
1015	18	Austin Energy	TX	10.0580	117,649,000	1,024,162,000	11,546,977,000	11,697,000	$933,640,000	1.02%	8.87%
6022	19	Eugene City of	OR	4.6929	26,914,000	471,387,000	2,728,684,000	5,735,000	$173,907,000	0.99%	17.28%
15776	20	Reedy Creek Improvement Dist	FL	48.1618	11,607,000	23,214,000	1,183,620,000	241,000	$119,060,000	0.98%	1.96%
Weighted Average Annual kWh Savings as a Percent of Annual Retail kWh Sales					4,230,924,000	27,434,605,000	236,012,344,000	782,014,000		1.79%	11.62%

Exhibit RFS - 16: Savings Targets Set by the Organizations Surveyed by GDS

Table 1: Summary Types of Goals Set by Organizations Surveyed

	Goal Policy:	**Organizations:**
1.	Annual Goals	PUCT, PUCO
2.	Program Lifetime Goals	CPUC, VT-PSB, Efficiency VT, NGRID
3.	Renewable Energy Goals	NCUC
4.	Goals Based on Annual Load Growth	PUCT
5.	Goals Based on Forecasted Sales (kWh)	PUCO
6.	Goals Based on Forecasted Demand (kW)	PUCO
7.	Goals Based on Per Capita Usage	CPUC
8.	Goals Based on Historical Sales/Demand	PUCO
9.	Goals Based on Forecasted Sales/Demand	CPUC
10.	Goals Set by Program	PUCN (NV)
11.	Savings Goals as Percentage	CPUC, PUCT, PUCO, NCUC
12.	Absolute Savings Goals	VT-PSB, Efficiency VT, PUCN (NV), NGRID
13.	Monetary Expenditure Requirements	VT-PSB
14.	Participation No. Requirements	VT-PSB
15.	Alliance/Partnership Requirements	VT-PSB

California Public Utility Commission: minimum 0.3% reduction to per capita usage relative to base year (2003) data

PG&E: 0.6% reduction to per capita usage relative to forecasted data
SCE: 0.8% reduction to per capita usage relative to forecasted data
SDG&E: 0.93% reduction to per capita usage relative to forecasted data

Public Utility Commission of Texas:

2007 Goals: 10% reduction in annual growth
2008 Goals: 15% reduction in annual growth
2009 Goals: 30% reduction in annual growth
2009+ Goals: 50% reduction in annual growth

Public Utility Commission of Ohio:

2009 Goals:

(1) 1% reduction in forecasted peak demand based on average of 3 years of historical peak demand data
(2) 0.3% reduction in forecasted energy demand based on normalized and average 3 years of historical sales data

2010 Goals:

(1) 1.75% reduction in forecasted peak demand based on average of 3 years of historical peak demand data
(2) 0.5% reduction in forecasted energy demand based on normalized and average 3 years of historical sales data

2011 Goals:

(1) 2.5% reduction in forecasted peak demand based on average of 3 years of historical peak demand data

(2) 0.7% reduction in forecasted energy demand based on normalized and average 3 years of historical sales data

2012 Goals:

(1) 3.25% reduction in forecasted peak demand based on average of 3 years of historical peak demand data

(2) 0.8% reduction in forecasted energy demand based on normalized and average 3 years of historical sales data

2012-2018 Goals:

(1) 4% (additional 0.75% added annually) reduction in forecasted peak demand based on average of 3 years of historical peak demand data

(2) 2% annual reduction in forecasted energy demand based on normalized and average 3 years of historical sales data

Vermont Public Service Board: [targets applicable for 2006-2008]

Note: (*) 3-year timeframe; (**) < 3-year time frame

Electricity*: 261,700 MWh

Peak Demand*:

Summer: 37,570 kW

Winter: 41,480 kW

Geographic Peak Demand**:

Summer: 7,200 kW

Winter: 7,740 kW

Total Resource Benefit*: $198 million

CFL Stocking*:

Partnerships with 40 stores

1 partnership with each of 3 grocery store chains

Community Awareness: 2 communities with 35% participation, at least one of which demonstrates a 3% reduction in community-side electrical energy use

Vermont – Efficiency Vermont: [targets set for 2007-2008 program years]

Residential Sector:

Annual Savings: 99,452 MWh

Winter Peak Demand Savings: 14.36 MW

Summer Peak Demand Savings: 13.89 MW

Business Sector:

Annual Savings: 114,168 MWh

Winter Peak Demand Savings: 16.49 MW

Summer Peak Demand Savings: 15.95 MW

Totals:

Annual Savings: 213,620 MWh

Winter Peak Demand Savings: 30.85 MW
Summer Peak Demand Savings: 29.84 MW

North Carolina Utilities Commission: [applicable to all major utilities] – Goals Set for 2020

Energy Sales: 12.5% of 2012 retail sales met with Renewable Energy and/or DSM Programs; maximum of 25% to be met with DSM Programs

By 2012: Intermediate goal of 3% of sales met with Renewable Energy and/or DSM Programs

New York Sate Energy Research and Development Authority [general public policy goals]
[Refer to latest annual report on the New York $mart Program, March 2008, for concrete program targets based on the following general public policy goals.
<http://www.nyserda.org/pdf/Combined%20Report.pdf>]

(1) Improve New York's energy system reliability and security by reducing energy demand and increasing energy efficiency, supporting innovative transmission and distribution technologies that have broad application, and enabling fuel diversity.

(2) Reduce the energy cost burden of New Yorkers by offering energy users, particularly the State's lowest income households, services that moderate the effects of energy price increases and volatility and provide access to cost-effective energy saving measures.

(3) Mitigate the environmental and health impacts of energy use by increasing energy efficiency, encouraging the development of support services for renewable energy resources, and optimizing the energy performance of buildings and products.

(4) Create economic opportunity and promote economic well-being by supporting emerging energy technologies, fostering competition, improving productivity, stimulating the growth of New York energy businesses, and helping to meet future energy needs through efficiency and innovation.

Public Utility Commission of Nevada:
[Nevada Renewable Energy & Energy Conservation Task Force. "Energy Efficiency." Accessed February 2, 2009. <http://www.nevadarenewables.org/?section=energy>]

A/C Load Management Programs: 100 MW (2007-2009)
Cool Controls Plus: 4,900 MWh (2007); 5,900 MWh (2008)
EnergyStar Lighting and Appliances: 73,000 MWh (2007); 76,000 MWh (2008); 80,000 MWh (2009)
EnergyStar Manufactured Homes: 700 MWh (2007); 900 MWh (2008); 1,150 MWh (2009)
High Efficiency A/C Incentive: 14,000 MWh Annually
Commercial Incentives: 62,000 MWh (2007 & 2008); 52,000 MWh (2009)
School Programs: 3,600 MWh Annually
New Construction Programs: 9,000 MWh Annually
Pool Pump Programs: 3,600 MWh (2007); 4,500 MWh (2008); 5,400 MWh (2009)
Low-Income Programs:

Homes: 500 (2007); 1,000 (2008); 1,000 (2009)
Savings: 1,500 MWh (2007); 3,000 MWh (2008); 3,000 MWh (2009)

National Grid:

Program Lifetime MWh: 2,626,172 MWh
Program Lifetime kW: 417,991 kW

Oregon Public Utility Commission:

Suggested Minimum for 2008-2009 Energy Trust of Oregon Contrac: 31 MW saved based on three year rolling average

Exhibit RFS - 17: EIA For 861 Database – Top 20 Energy Efficiency Utilities in the US

Table 1: Data on the Top 20 Energy Efficiency Utilities in the United States as Reported by the EIA for 2007

Utility Code	Rank	Utility Name	State	kWh Saved per $ Spent in 2007	2007 Energy Effciency Savings (kWh) Incremental	2007 Energy Efficiency Savings (kWh) Cumulative Annual Base	2007 Annual Retail kWh Sales	2007 Energy Efficiency Spending	2007 Retail Revenue	Annual 2007 Energy Efficiency Savings as a % of Annual kWh Sales	Cumulative Annual Energy Effciency Savings as a % of Annual kWh Sales
2182	1	City of Breckenridge	CO	50.4138	1,462,000	not reported	42,336,000	29,000	$2,649,000	3.45%	not reported
7303	2	Glidden Rural Electric Coop	IA	not reported	2,606,000	not reported	101,177,000	not reported	$7,149,000	2.58%	not reported
2548	3	Burlington City of	VT	9.2024	9,276,000	not reported	364,586,000	1,008,000	$46,118,000	2.54%	not reported
14328	4	Pacific Gas & Electric Co	CA	5.6465	1,662,875,000	8,523,069,000	79,450,903,000	294,496,000	$10,902,816,000	2.09%	10.73%
20806	5	City of Windom	MN	not reported	1,480,000	not reported	71,208,000	not reported	$5,408,000	2.08%	0.00%
17609	6	Southern California Edison Co	CA	5.1838	1,551,503,000	9,613,063,000	79,505,231,000	299,301,000	$11,217,201,000	1.95%	12.09%
4176	7	Connecticut Light & Power Co	CT	4.1500	281,367,000	2,424,378,000	16,054,317,000	67,800,000	$2,955,597,000	1.75%	15.10%
11804	8	Massachusetts Electric Co	MA	3.6985	195,357,000	2,246,977,000	12,543,637,000	52,820,000	$1,950,608,000	1.56%	17.91%
19497	9	United Illuminating Co	CT	4.0121	86,011,000	492,743,000	5,917,448,000	21,438,000	$900,448,000	1.45%	8.33%
10768	10	Laurens Electric Coop, Inc	SC	521.6250	12,519,000	not reported	996,410,000	24,000	$81,671,000	1.26%	not reported
20455	11	Western Massachusetts Elec Co	MA	3.8582	25,873,000	487,041,000	2,098,952,000	6,706,000	$348,993,000	1.23%	23.20%
16181	12	Rochester Public Utilities	NY	23.6398	15,815,000	69,466,000	1,307,897,000	669,000	$116,320,000	1.21%	5.31%
12312	13	Merced Irrigation District	CA	11.1324	4,709,000	29,458,000	422,674,000	423,000	$44,966,000	1.11%	6.97%
6374	14	Fitchburg Gas & Elec Light Co	NH	2.6375	3,049,000	38,833,000	276,004,000	1,156,000	$50,307,000	1.10%	14.07%
405	15	City of Alta	IA	not reported	166,000	not reported	15,587,000	not reported	$1,168,000	1.06%	not reported
24590	16	Unitil Energy Systems	CT	4.1133	9,983,000	47,098,000	941,779,000	2,427,000	$89,923,000	1.06%	5.00%
15500	17	Puget Sound Energy Inc	WA	13.8563	222,310,000	1,943,716,000	21,626,537,000	16,044,000	$1,836,471,000	1.03%	8.99%
1015	18	Austin Energy	TX	10.0580	117,649,000	1,024,162,000	11,546,977,000	11,697,000	$933,640,000	1.02%	8.87%
6022	19	Eugene City of	OR	4.6929	26,914,000	471,387,000	2,728,684,000	5,735,000	$173,907,000	0.99%	17.28%
15776	20	Reedy Creek Improvement Dist	FL	48.1618	11,607,000	23,214,000	1,183,620,000	241,000	$119,060,000	0.98%	1.96%
Weighted Average Annual kWh Savings as a Percent of Annual Retail kWh Sales					4,230,924,000	27,434,605,000	236,012,344,000	782,014,000		1.79%	11.62%

Table 2: Data on the Top 20 Energy Efficiency Utilities in the United States as Reported by the EIA for 2006

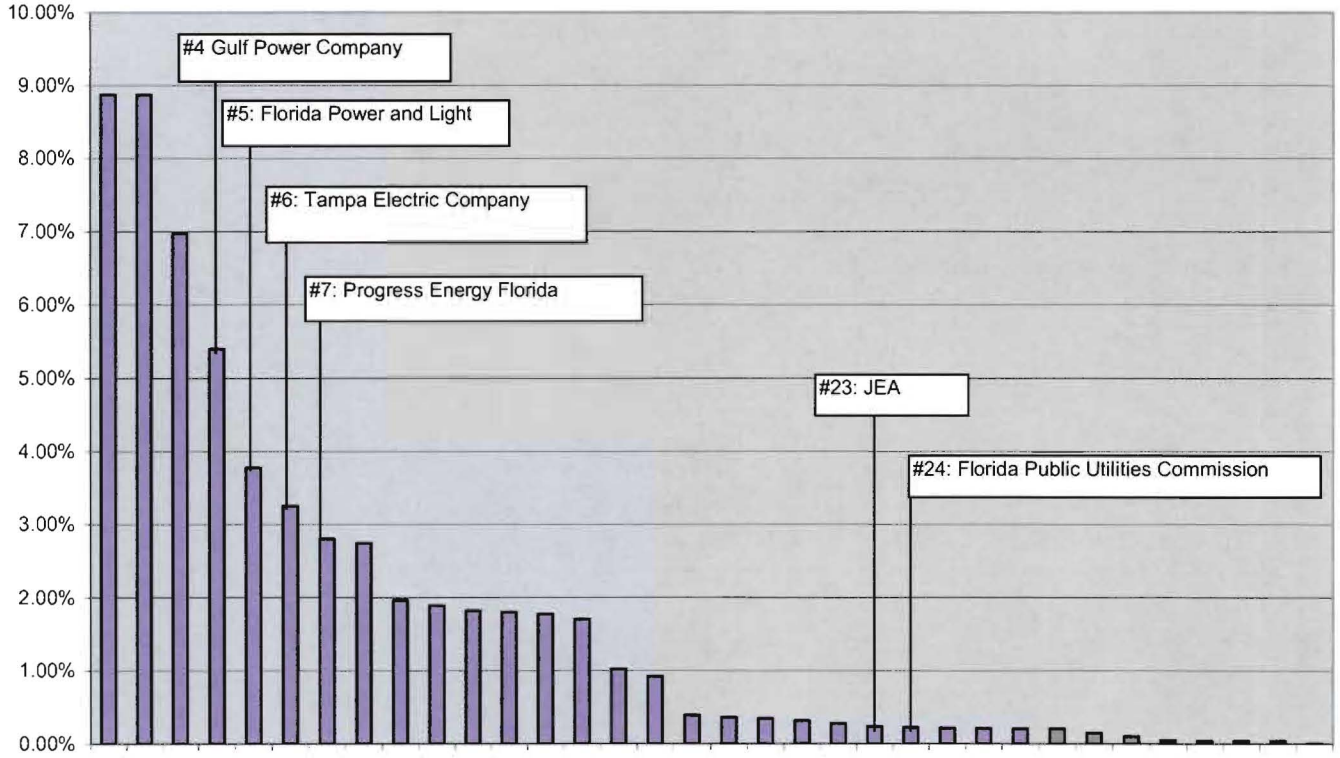
Utility Code	Rank on Cumulative % Savings	Utility Name	State	kWh saved per $ spent in 2006	2006 Energy Efficiency Savings (kWh) Incremental	2006 Energy Efficiency Savings (kWh) Cumulative Annual Basis	2006 Annual Retail kWh Sales	2006 Energy Efficiency Spending	2006 Retail Revenue	Annual 2006 Energy Efficiency Savings as a % of Annual kWh Sales	Cumulative Annual Energy Efficiency Savings as % of Annual kWh Sales
20455	1	Western Massachusetts Elec Co	MA	4.3975	43,298,000	488,152,000	2,276,376,000	$9,846,000	$355,419,000	1.90%	21.49%
2548	2	Burlington City of	VT	6.9079	6,604,000	85,503,000	359,268,000	$956,000	$42,828,000	1.84%	18.23%
15783	3	City of Redding	CA	2.7179	3,900,000	133,300,000	799,214,000	$1,435,000	$75,360,000	0.49%	16.68%
11804	4	Massachusetts Electric Co	MA	5.1061	256,956,000	2,163,812,000	12,990,328,000	$50,304,000	$2,032,981,000	1.98%	16.66%
8022	5	Eugene City of	OR	2.3955	18,956,000	444,500,000	2,689,923,000	$7,914,000	$173,277,000	0.70%	16.52%
6374	6	Fitchburg Gas & Elec Light Co	NH	2.2351	2,548,000	37,509,000	283,887,000	$1,140,000	$53,523,000	0.90%	13.21%
19497	7	United Illuminating Co	CT	4.2622	76,242,000	769,397,000	5,919,000,000	$17,888,000	$771,000,000	1.29%	13.00%
15270	8	Potomac Electric Power Co	DC		0	1,789,808,000	15,482,295,000	$0	$1,803,263,000	0.00%	11.57%
17609	9	Southern California Edison Co	CA	6.4707	787,563,000	9,031,178,000	78,863,143,000	$121,713,000	$11,577,730,000	1.00%	11.45%
13781	10	Northern States Power Co	MN	8.1160	263,664,000	4,040,946,000	35,923,013,000	$31,247,000	$2,591,785,000	0.71%	11.25%
16534	11	Sacramento Municipal Util Dist	CA	4.7173	79,283,000	1,197,783,000	10,799,230,000	$16,807,000	$1,083,877,000	0.73%	11.09%
20169	12	Avista Corp	WA	5.6394	48,316,000	935,096,000	8,787,002,000	$8,213,000	$554,996,000	0.53%	10.64%
16885	13	Seattle City of	WA	2.8642	52,271,000	974,022,000	9,454,505,000	$18,250,000	$583,114,000	0.55%	10.30%
12647	14	Minnesota Power Inc	MN	4.0240	15,271,000	930,418,000	9,077,994,000	$3,795,000	$432,793,000	0.17%	10.25%
4176	15	Connecticut Light & Power Co	CT	5.7558	264,916,000	2,226,304,000	22,109,070,000	$46,026,000	$3,460,557,000	1.20%	10.07%
26510	16	Granite State Electric Co	NH	3.2679	5,111,000	72,234,000	749,207,000	$1,564,000	$85,081,000	0.68%	9.64%
15500	17	Puget Sound Energy Inc	WA	5.7492	166,254,000	2,032,752,000	21,091,533,000	$28,918,000	$1,629,072,000	0.79%	9.64%
17470	18	Snohomish County PUD No 1	WA	4.3720	42,846,000	622,689,000	6,483,467,000	$9,800,000	$475,139,000	0.66%	9.60%
2008	19	City of Boulder	NV	4.5399	967,000	15,081,000	156,868,000	$213,000	$9,459,000	0.61%	9.48%
13214	20	Narragansett Electric Co	RI	5.5913	98,048,000	836,000,000	6,707,930,000	$17,175,000	$952,601,000	1.43%	9.48%
Average % Savings										0.91%	12.51%

Table 3: Data on the Top 20 Energy Efficiency Utilities in the United States as Reported by the EIA for 2005

Utility Code	Rank on % Savings	Utility Name	State	kWh saved per $ spent in 2005	2005 Energy Efficiency Savings (kWh) Incremental	2005 Energy Efficiency Savings (kWh) Cumulative Annual Basis	2005 Annual Retail kWh Sales	2005 Energy Efficiency Spending	2005 Retail Revenue	Annual 2005 Energy Efficiency Savings as % of Annual kWh Sales	Cumulative Annual Energy Efficiency Savings as % of Annual kWh Sales
2548	1	Burlington City of	VT	NA	Not available	65,016,000	368,279,000	$897,000	$37,718,000	Not available	17.7%
15783	2	City of Redding	CA	3.6523	5,000,000	129,400,000	769,947,000	$1,369,000	$72,552,000	0.6%	16.8%
6022	3	Eugene City of	OR	4.4923	22,030,000	424,451,000	2,663,174,000	$4,904,000	$169,452,000	0.8%	15.9%
20455	4	Western Massachusetts Elec Co	MA	3.9051	40,238,000	464,208,000	3,113,996,000	$10,304,000	$353,749,000	1.3%	14.9%
11804	5	Massachusetts Electric Co	MA	4.4066	199,421,000	1,990,984,000	15,491,461,000	$45,255,000	$1,932,300,000	1.3%	12.9%
1998	6	Boston Edison Co	MA	4.8827	160,406,000	1,346,101,000	10,888,695,000	$32,852,000	$1,539,977,000	1.5%	12.4%
15270	7	Potomac Electric Power Co	DC	NA	0	1,789,608,000	14,670,325,000	$0	$1,374,057,000	0.0%	12.2%
17609	8	Southern California Edison Co	CA	7.8740	1,239,175,000	8,901,686,000	75,301,581,000	$157,375,000	$9,445,101,000	1.6%	11.8%
19497	9	United Illuminating Co	CT	3.9787	80,931,000	693,154,000	6,106,000,000	$20,341,000	$767,000,000	1.3%	11.4%
4089	10	Commonwealth Electric Co	MA	5.8902	31,760,000	241,539,000	2,210,570,000	$5,392,000	$321,085,000	1.4%	10.9%
6374	11	Fitchburg Gas & Elec Light Co	NF	2.1430	3,986,000	36,150,000	332,612,000	$1,860,000	$50,385,000	1.2%	10.9%
16534	12	Sacramento Municipal Util Dist	CA	5.8219	81,163,000	1,118,500,000	10,483,042,000	$13,941,000	$1,027,440,000	0.8%	10.7%
13781	13	Northern States Power Co	MN	8.1285	259,422,000	3,787,182,000	35,646,728,000	$31,915,000	$2,423,494,000	0.7%	10.6%
16868	14	Seattle City of	WA	2.9775	52,555,000	970,249,000	9,161,466,000	$17,651,000	$562,548,000	0.6%	10.6%
20169	15	Avista Corp	WA	12.5713	56,571,000	888,770,000	8,542,674,000	$4,500,000	$512,689,000	0.7%	10.4%
15500	16	Puget Sound Energy Inc	WA	6.7883	171,390,000	2,086,208,000	20,465,557,000	$25,248,000	$1,436,075,000	0.8%	10.2%
2886	17	Cambridge Electric Light Co	MA	4.3983	8,845,000	113,565,000	1,117,811,000	$2,011,000	$127,749,000	0.8%	10.2%
12647	18	Minnesota Power Inc	MN	38.0014	137,033,000	892,802,000	9,051,942,000	$3,606,000	$414,810,000	1.5%	9.9%
13214	19	Narragansett Electric Co	RI	4.1844	66,093,000	679,204,000	7,115,094,000	$15,795,000	$859,772,000	0.9%	9.5%
20856	20	Wisconsin Power & Light Co	WI	6.6651	60,526,000	964,714,000	10,539,095,000	$9,081,000	$849,733,000	0.6%	9.2%
Average % Savings				6.0790	2,676,545,000		244,040,049,000			1.0%	11.9%

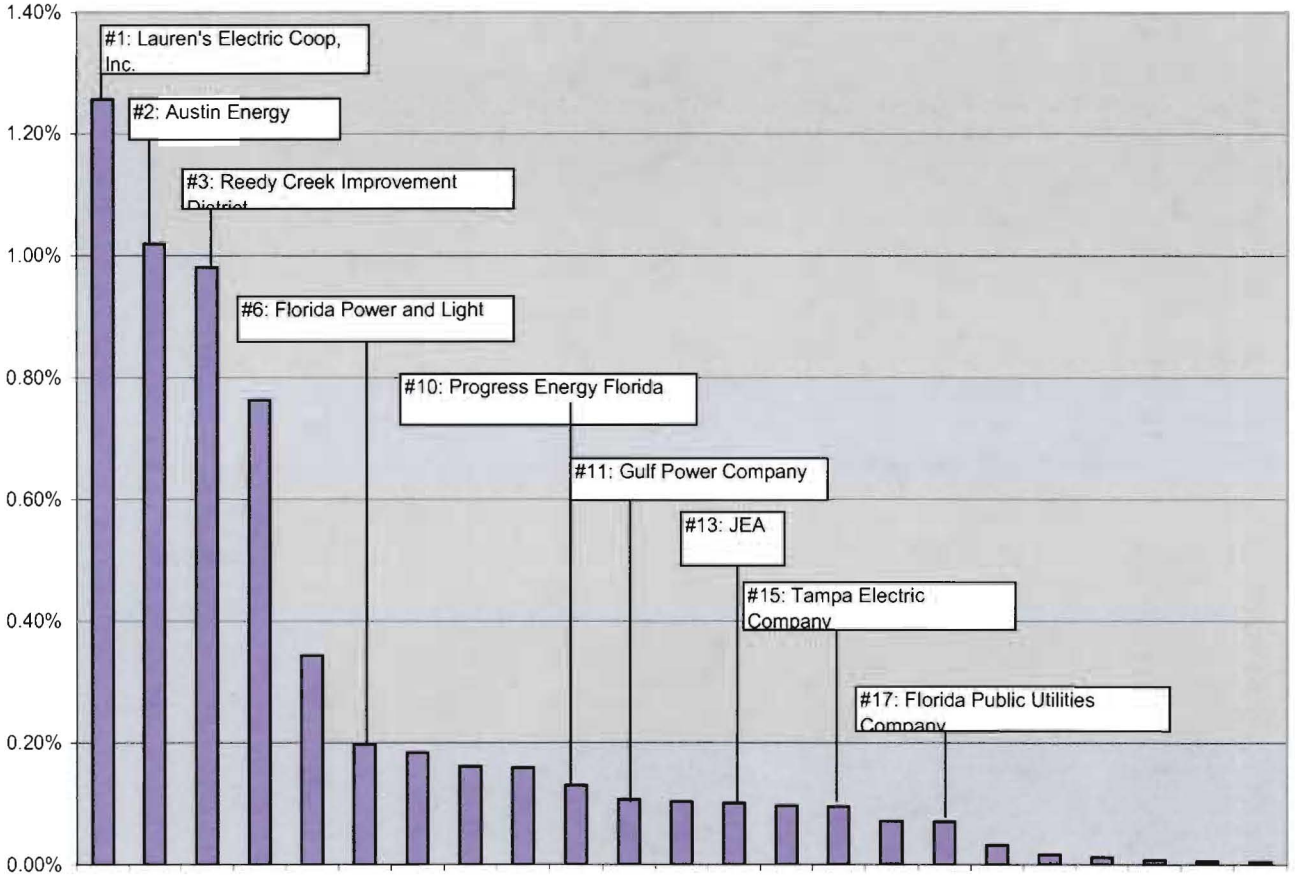
Exhibit RFS - 18: Southeastern Electric Utilities Energy Efficiency kWh Savings

Figure 1: All Utilities from Alabama, Georgia, Florida, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee and Texas that reported Cumulative kWh Savings in 2007. Graph shows utilites ranked by Cumulative kWh Savings as a percentage of total retail sales for 2007



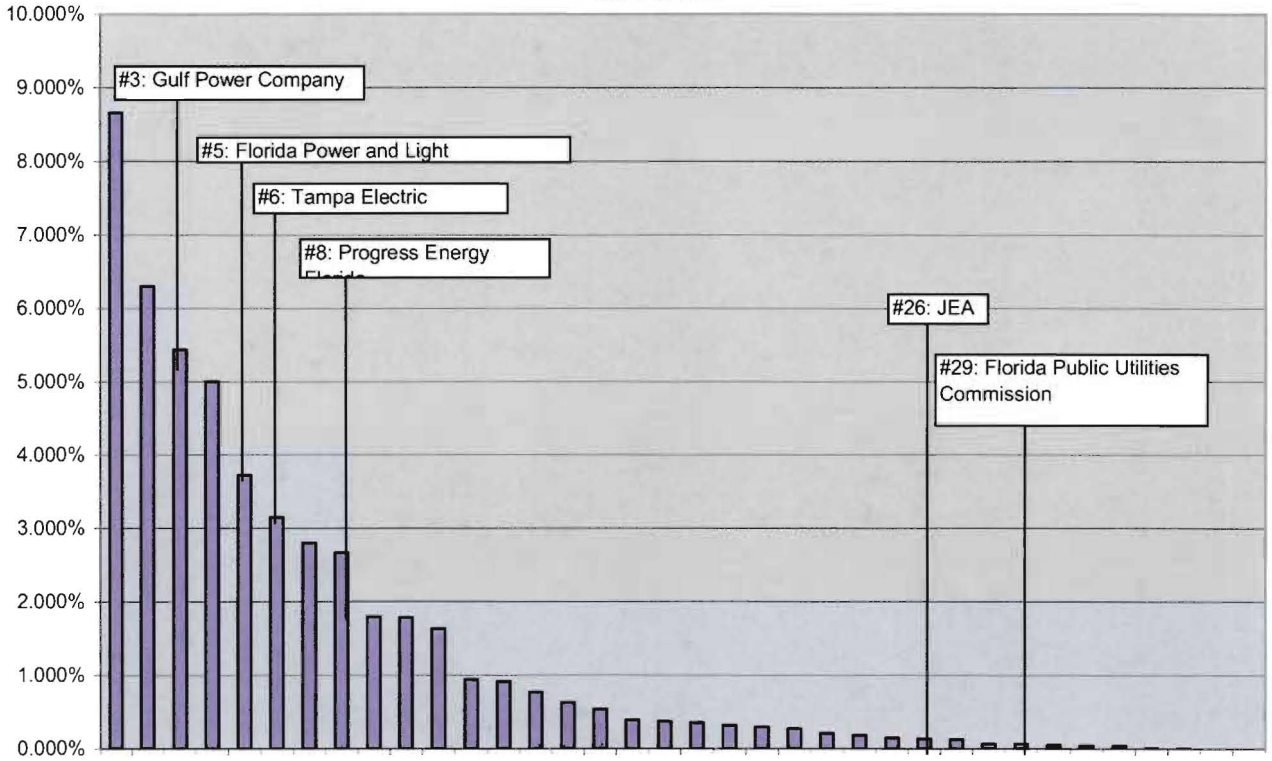
Note: Orlando Utility Company did not report savings for 2007.

Figure 2: All Utilities from Alabama, Georgia, Florida, Louisiana, Mississisippi, North Carolina, South Carolina, Tennessee and Texas that reported Incremental kWh Savings in 2007. Graph shows utilites ranked by Incremental kWh Savings as a percentage of total retail sales for



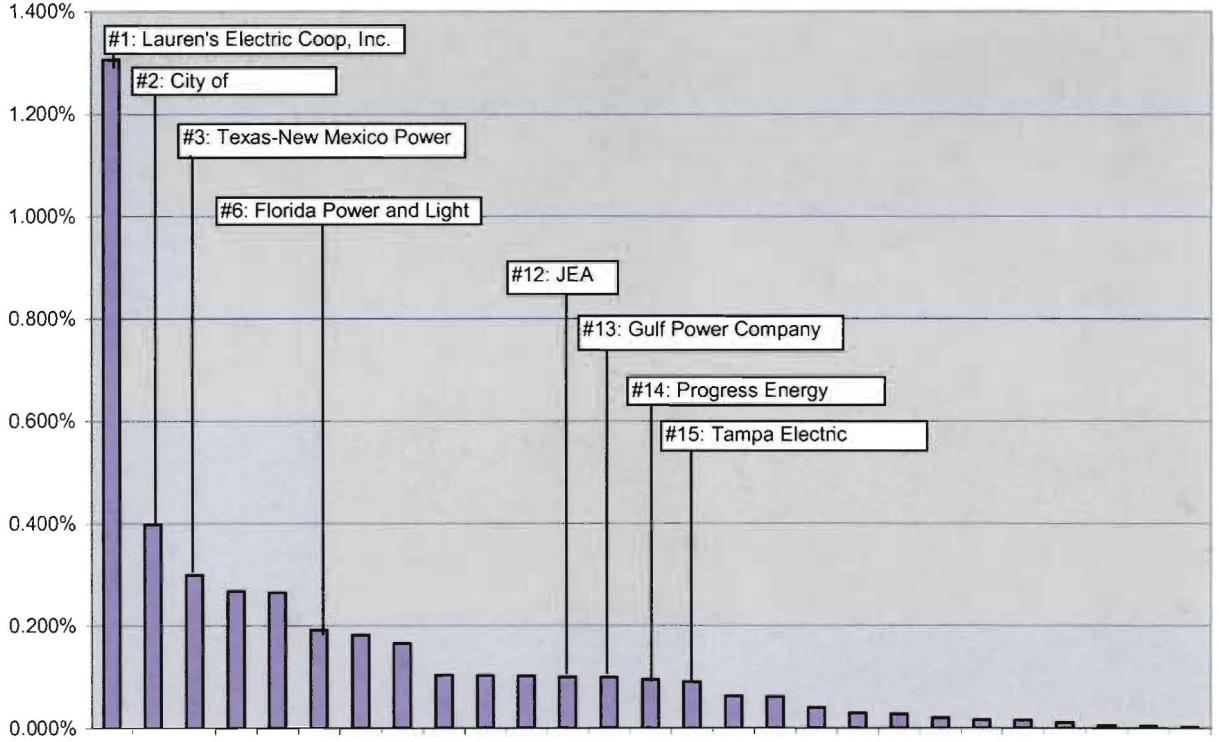
Note: Orlando Utility Company did not report savings for 2007.

Figure 3: All Utilities from Alabama, Georgia, Florida, Louisiana, Mississisippi, North Carolina, South Carolina, Tennessee and Texas that reported Cumulative kWh Savings in 2006. Graph shows utilites ranked by Cumulative kWh Savings as a percentage of total retail sales for 2006



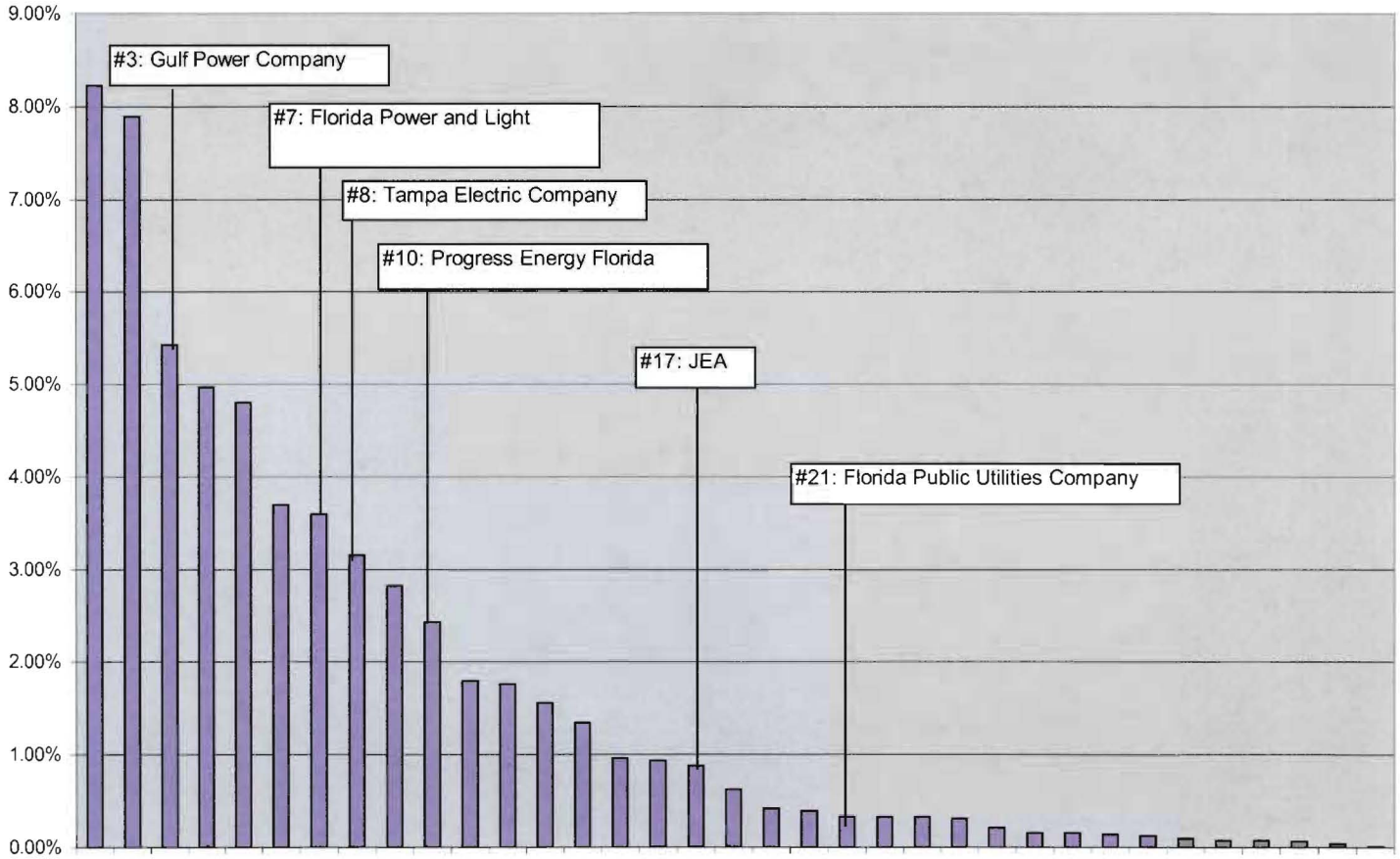
Note: Orlando Utility Company did not report savings for 2007.

Figure 4: All Utilities from Alabama, Georgia, Florida, Louisiana, Mississisippi, North Carolina, South Carolina, Tennessee and Texas that reported Incremental kWh Savings in 2006. Graph shows utilites ranked by Incremental kWh Savings as a percentage of total retail sales for 2006



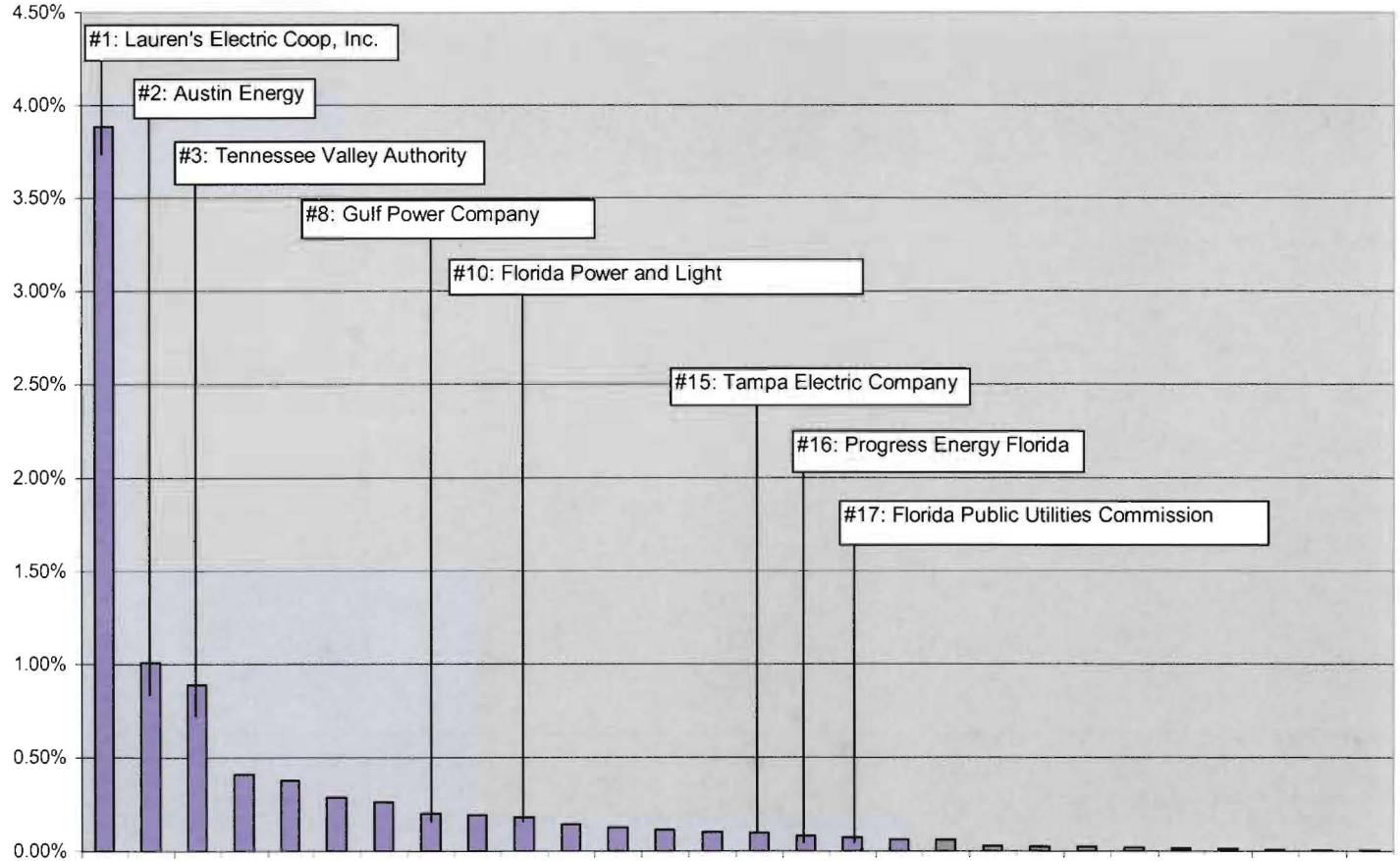
Note: Orlando Utility Company and Florida Public Utilities Company did not report savings for 2006.

Figure 5: All Utilities from Alabama, Georgia, Florida, Louisiana, Mississisippi, North Carolina, South Carolina, Tennessee and Texas that reported Cumulative kWh Savings in 2005. Graph shows utilites ranked by Cumulative kWh Savings as a percentage of total retail sales for 2005



Note: Orlando Utility Company did not report savings for 2005.

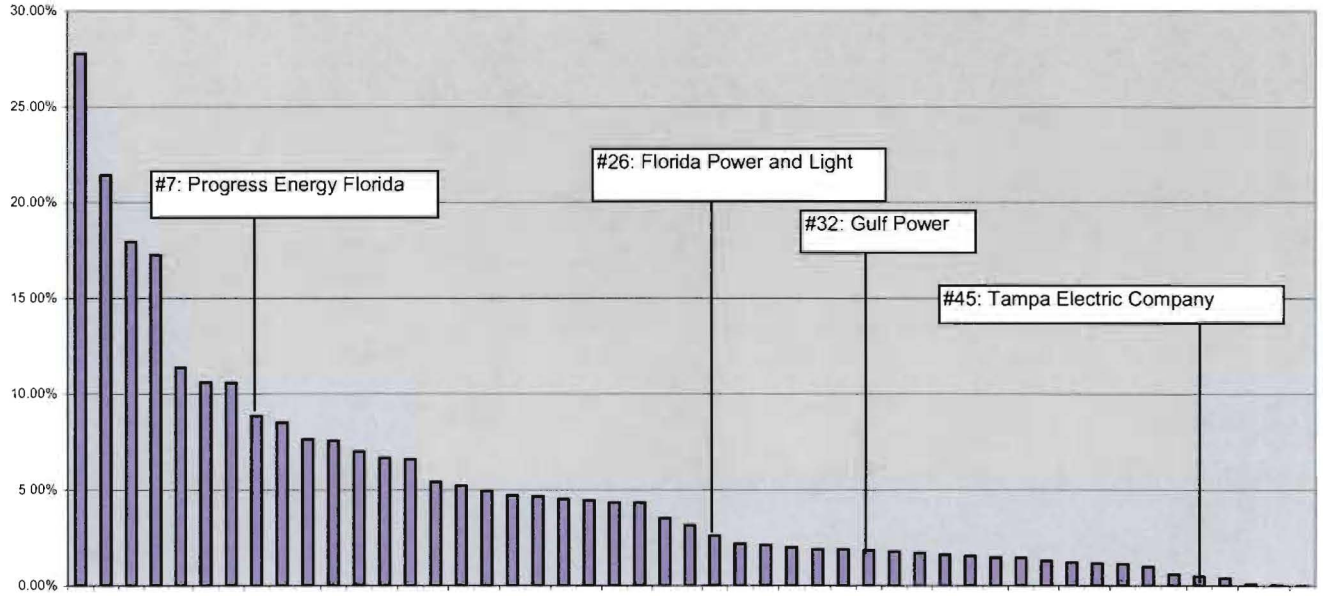
Figure 6: All Utilities from Alabama, Georgia, Florida, Louisiana, Mississisippi, North Carolina, South Carolina, Tennessee and Texas that reported Incremental kWh Savings in 2005. Graph shows utilites ranked by Incremental kWh Savings as a percentage of total retail sales for 2005



Note: Orlando Utility Company and JEA did not report savings for 2005.

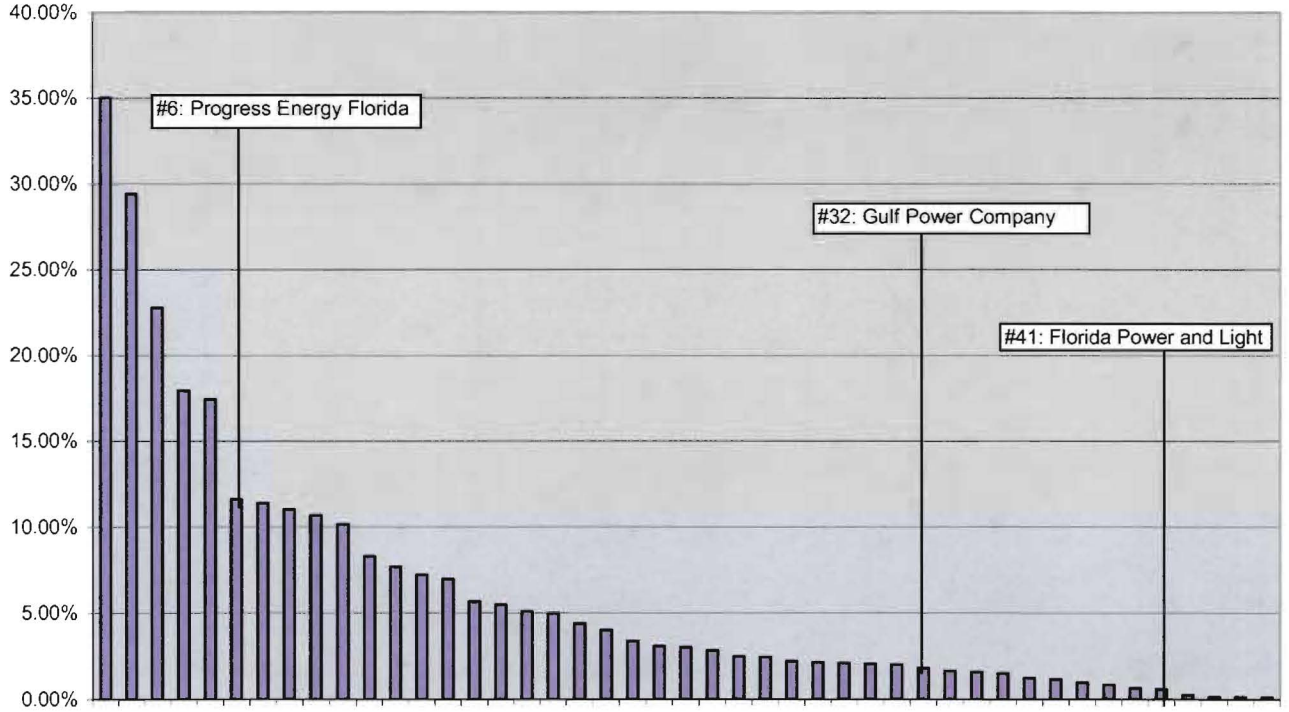
Exhibit RFS - 19: Southeastern Electric Utilities Energy Efficiency kW Savings

Figure 1: All Utilities from Alabama, Georgia, Florida, Louisiana, Mississisippi, North Carolina, South Carolina, Tennessee and Texas that reported kW in 2007. Graph shows utilites ranked by kW Load Reduction as a percentage of the Summer Peak for 2007



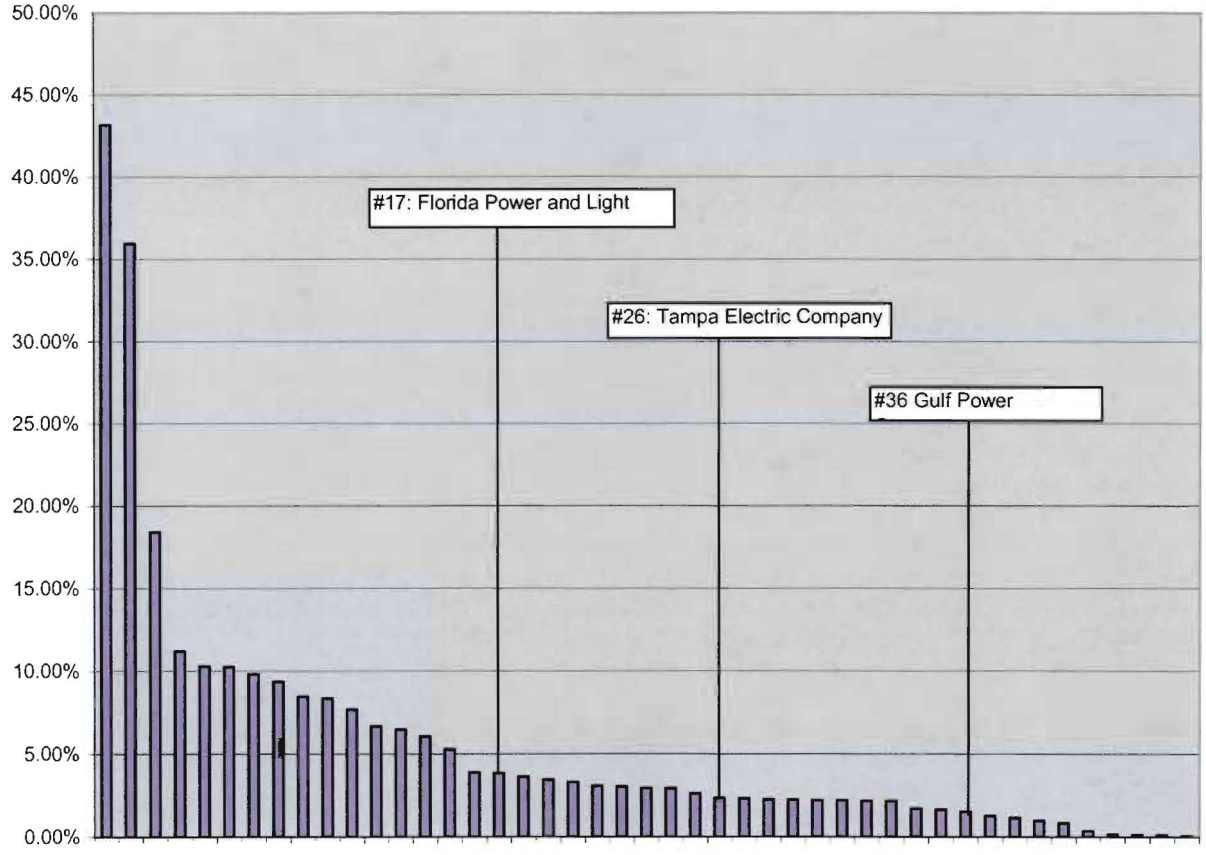
Note: Orlando Utility Company, Florida Public Utilities Company and JEA did not report savings for 2007.

Figure 2: All Utilities from Alabama, Georgia, Florida, Louisiana, Mississisippi, North Carolina, South Carolina, Tennessee and Texas that reported kW in 2006. Graph shows utilites ranked by kW Load Reduction as a percentage of the Summer Peak for 2006



Note: Orlando Utility Company, Florida Public Utilities Company, Tampa Electric Company and JEA did not report savings for 2006.

Figure 3: All Utilities from Alabama, Georgia, Florida, Louisiana, Mississisippi, North Carolina, South Carolina, Tennessee and Texas that reported kW in 2005. Graph shows utilites ranked by kW Load Reduction as a percentage of the Summer Peak for 2005



Note: Orlando Utility Company, Florida Public Utilities Company, Progress Energy Florida and JEA did not report savings for 2005.

Florida Power and Light - Cumulative Revised Goals (without Transition Period Adjustment)

	TOTAL			RESIDENTIAL			COMMERCIAL/INDUSTRIAL		
Year	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh
2010	258.5	468.6	1,188.3	238.5	341.4	764.0	20.0	127.2	424.4
2011	518.5	939.7	2,383.1	478.3	684.7	1532.0	40.2	255.0	851.0
2012	786.8	1,426.0	3,616.3	725.8	1039.1	2324.9	60.9	387.0	1291.4
2013	1,058.9	1,919.3	4,867.2	976.9	1398.5	3129.0	82.0	520.8	1738.1
2014	1,361.1	2,466.9	6,256.0	1255.7	1797.5	4021.9	105.4	669.5	2234.1
2015	1,665.7	3,019.0	7,656.0	1536.7	2199.8	4921.9	129.0	819.3	2734.1
2016	1,988.4	3,604.0	9,139.4	1834.4	2626.0	5875.6	154.0	978.0	3263.8
2017	2,323.4	4,211.1	10,678.9	2143.4	3068.3	6865.3	180.0	1142.8	3813.6
2018	2,685.9	4,868.1	12,345.1	2477.8	3547.1	7936.5	208.0	1321.1	4408.6
2019	3,064.1	5,553.6	14,083.5	2826.7	4046.6	9054.1	237.3	1507.1	5029.4

Florida Power & Light

				Steps:	(1)	(2)	(3)	(4)		
	2007 GWh Sales	2019 GWh Forecast	Proposed GWh Goals by FPL	Max. Achievable - E-RIM (GWh)	Max. Achievable - E-TRC (GWh)	Max. Achievable - E-TRC + 2-yr. Screened Measures (GWh)	Market Penetration Corrections - +10% (GWh)	Measures Originally Omitted (GWh)	GDS Revised GWh Goals Before Transition Period Adjustment	GDS Revised GWh Goals After Transition Period Adjustment
GWh - Totals	105,414	118,628	878.2	1,700.3	2,999.1	12,889.0	13,018.9	14,083.5	14,083.5	10,955.6
GWh Added - Residential			328.3	26.3	462.0	8,033.2	46.2	158.1	9,054.1	7043.173
GWh Added - Commercial/Industrial			549.9	795.7	836.8	1,856.7	83.7	906.6	5,029.4	3,912.4
Residential Cumulative as % of 2007 Sales				0.34%	0.77%	8.40%	8.44%	8.59%	8.59%	6.68%
Commercial/Industrial Cumulative as % of 2007 Sales				1.28%	2.07%	3.83%	3.91%	4.77%	4.77%	3.71%
All Sectors Cumulative Savings as % of 2007 Sales			0.83%	1.61%	2.85%	12.23%	12.35%	13.36%	13.36%	10.39%
All Sectors Cumulative as % of 2019 Forecast			0.74%	1.43%	2.53%	10.87%	10.97%	11.87%	11.87%	9.24%

Progress Energy Florida - Cumulative Revised Goals (without Transition Period Adjustment)

	TOTAL			RESIDENTIAL			COMMERCIAL/INDUSTRIAL		
Year	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh
2010	144.1	132.1	436.0	140.1	102.9	315.3	4.1	29.2	120.8
2011	289.0	264.9	874.5	280.9	206.4	632.2	8.2	58.5	242.2
2012	438.6	402.0	1,327.0	426.2	313.3	959.4	12.4	88.8	367.6
2013	590.3	541.1	1,786.0	573.7	421.6	1291.2	16.6	119.5	494.7
2014	758.8	695.5	2,295.6	737.4	541.9	1659.7	21.4	153.6	635.9
2015	928.6	851.1	2,809.3	902.4	663.2	2031.1	26.2	188.0	778.2
2016	1,108.5	1,016.1	3,353.6	1077.2	791.7	2424.6	31.3	224.4	929.0
2017	1,295.2	1,187.2	3,918.6	1258.7	925.0	2833.1	36.5	262.2	1085.5
2018	1,497.3	1,372.4	4,530.0	1455.1	1069.4	3275.1	42.2	303.1	1254.9
2019	1,708.2	1,565.7	5,167.9	1660.0	1220.0	3736.3	48.2	345.8	1431.6

Progress Energy Florida:

				Steps:	(1)	(2)	(3)	(4)		
	2007 Sales	2019 Forecast	Proposed GWh Goals by PEF	Max. Achievable - E-RIM	Max. Achievable - E-TRC	Max. Achievable - E-TRC + 2-yr. Screened Measures	Market Penetration Corrections - +10%	Measures Originally Omitted	GDS Revised Goals	GDS Revised GWh Goals After Transition Period Adjustment
GWh - Totals	39,282	40,997	613.8	613.8	1,584.5	4,689.8	4,786.8	5,167.9	5,167.9	4020.0728
GWh Added - Residential			487.5	0.0	719.6	2,241.2	72.0	216.1	3,736.3	2906.454
GWh Added - Commercial/Industrial			126.3	0.0	251.1	864.1	25.1	165.0	1,431.6	1113.6188
Residential Cumulative as % of 2007 Sales				1.24%	3.07%	8.78%	8.96%	9.51%	9.51%	7.40%
Commercial/Industrial Cumulative as % of 2007 Sales				0.32%	0.96%	3.16%	3.22%	3.64%	3.64%	2.83%
All Sectors Cumulative Savings as % of 2007 Sales			0.58%	0.58%	1.50%	4.45%	4.54%	4.90%	13.16%	10.23%
All Sectors Cumulative as % of 2019 Forecast			0.52%	0.52%	1.34%	3.95%	4.04%	4.36%	12.61%	9.81%

Tampa Electric Company - Cumulative Revised Goals (without Transition Period Adjustment)

	TOTAL			RESIDENTIAL			COMMERCIAL/INDUSTRIAL		
Year	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh
2010	48.3	67.8	177.3	45.6	53.6	113.9	2.7	14.3	63.4
2011	96.9	136.0	355.5	91.5	107.4	228.4	5.4	28.6	127.1
2012	147.1	206.4	539.5	138.9	163.0	346.6	8.2	43.4	192.9
2013	198.0	277.9	726.1	186.9	219.4	466.5	11.0	58.4	259.6
2014	254.5	357.1	933.3	240.3	282.0	599.6	14.2	75.1	333.7
2015	311.4	437.1	1,142.2	294.0	345.2	733.8	17.4	91.9	408.4
2016	371.8	521.7	1,363.5	351.0	412.0	876.0	20.7	109.7	487.5
2017	434.4	609.6	1,593.2	410.2	481.5	1023.6	24.2	128.2	569.6
2018	502.2	704.8	1,841.8	474.1	556.6	1183.3	28.0	148.2	658.5
2019	572.9	804.0	2,101.1	540.9	634.9	1349.9	32.0	169.0	751.2

Tampa Electric Company:

				Steps:	(1)	(2)	(3)	(4)		
	2007 Sales	2019 Forecast	Proposed GWh Goals by TECO	Max. Achievable - E-RIM	Max. Achievable - E-TRC	Max. Achievable - E-TRC + 2-yr. Screened Measures	Market Penetration Corrections - +10%	Measures Originally Omitted	GDS Revised Goals	GDS Revised GWh Goals After Transition Period Adjustment
GWh - Totals	19,533	22,532	201.7	201.8	310.3	1,939.9	1,950.7	2,101.1	2,101.1	1634.4703
GWh Added - Residential			59.0	0.0	74.9	1,161.6	7.5	46.9	1,349.9	1050.1025
GWh Added - Commercial/Industrial			142.7	0.0	33.6	468.0	3.4	103.5	751.2	584.36777
Residential Cumulative as % of 2007 Sales				0.30%	0.69%	6.63%	6.67%	6.91%	6.91%	5.38%
Commercial/Industrial Cumulative as % of 2007 Sales				0.73%	0.90%	3.30%	3.32%	3.85%	3.85%	2.99%
All Sectors Cumulative Savings as % of 2007 Sales			0.19%	0.19%	0.29%	1.84%	1.85%	1.99%	10.76%	8.37%
All Sectors Cumulative as % of 2019 Forecast			0.17%	0.17%	0.26%	1.64%	1.64%	1.77%	9.33%	7.25%

Gulf Power Company - Cumulative Revised Goals (without Transition Period Adjustment)

	TOTAL			RESIDENTIAL			COMMERCIAL/INDUSTRIAL		
Year	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh
2010	23.3	31.8	114.7	20.1	22.0	65.2	3.2	9.8	49.5
2011	46.8	63.7	230.0	40.4	44.1	130.8	6.4	19.6	99.2
2012	71.0	96.7	349.1	61.3	67.0	198.5	9.7	29.7	150.6
2013	95.6	130.2	469.8	82.4	90.1	267.1	13.1	40.0	202.7
2014	122.8	167.3	603.8	106.0	115.9	343.4	16.9	51.4	260.5
2015	150.3	204.8	739.0	129.7	141.8	420.2	20.6	62.9	318.8
2016	179.4	244.4	882.2	154.8	169.3	501.6	24.6	75.1	380.5
2017	209.7	285.6	1,030.8	180.9	197.8	586.1	28.8	87.8	444.6
2018	242.4	330.2	1,191.6	209.1	228.7	677.6	33.3	101.5	514.0
2019	271.8	362.4	1,359.4	238.6	260.9	773.0	33.3	101.5	586.4

Gulf Power

				Steps:	(1)	(2)	(3)	(4)		
	2007 Sales	2019 Forecast	Proposed GWh Goals by Gulf	Max. Achievable - E-RIM	Max. Achievable - E-TRC	Max. Achievable - E-TRC + 2-yr. Screened Measures	Market Penetration Corrections - +10%	Measures Originally Omitted	GDS Revised Goals	GDS Revised GWh Goals After Transition Period Adjustment
GWh - Totals	11,521	15,008	159.0	159.0	251.4	1,279.9	1,289.1	1,359.4	1,359.4	1057.4544
GWh Added - Residential			86.8	0.0	67.1	579.0	6.7	33.4	773.0	601.29327
GWh Added - Commercial/Industrial			72.2	0.0	25.3	449.6	2.5	36.9	586.4	456.16108
Residential Cumulative as % of 2007 Sales				0.75%	1.34%	6.36%	6.42%	6.71%	6.71%	5.22%
Commercial/Industrial Cumulative as % of 2007 Sales				0.63%	0.85%	4.75%	4.77%	5.09%	5.09%	3.96%
All Sectors Cumulative Savings as % of 2007 Sales			0.15%	0.15%	0.24%	1.21%	1.22%	1.29%	11.80%	9.18%
All Sectors Cumulative as % of 2019 Forecast			0.13%	0.13%	0.21%	1.08%	1.09%	1.15%	9.06%	7.05%

JEA - Cumulative Revised Goals (without Transition Period Adjustment)

	TOTAL			RESIDENTIAL			COMMERCIAL/INDUSTRIAL		
Year	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh
2010	3.4	29.3	100.7	1.5	18.9	52.1	1.9	10.3	48.6
2011	6.8	58.7	201.8	3.0	37.9	104.5	3.8	20.8	97.4
2012	10.3	89.0	306.3	4.6	57.5	158.5	5.7	31.5	147.8
2013	13.9	119.8	412.3	6.2	77.4	213.4	7.7	42.4	198.9
2014	17.8	154.0	529.9	7.9	99.5	274.3	9.9	54.5	255.6
2015	21.8	188.5	648.5	9.7	121.8	335.7	12.1	66.7	312.8
2016	26.0	225.0	774.1	11.6	145.4	400.7	14.5	79.6	373.4
2017	30.4	262.9	904.5	13.5	169.9	468.2	16.9	93.0	436.3
2018	35.2	303.9	1,045.7	15.7	196.4	541.2	19.5	107.5	504.4
2019	40.1	346.7	1,192.9	17.9	224.0	617.5	22.3	122.6	575.4

JEA:

				Steps:	(1)	(2)	(3)	(4)		
	2007 Sales	2019 Forecast	Proposed GWh Goals by JEA	Max. Achievable - E-RIM	Max. Achievable - E-TRC	Max. Achievable - E-TRC + 2-yr. Screened Measures	Market Penetration Corrections - +10%	Measures Originally Omitted	GDS Revised Goals	GDS Revised GWh Goals After Transition Period Adjustment
GWh - Totals	12,751	14,642	0.0	0.0	138.5	1,070.7	1,084.5	1,192.9	1,192.9	927.95021
GWh Added - Residential			0.0	0.0	64.7	514.5	6.5	31.9	617.5	480.31583
GWh Added - Commercial/Industrial			0.0	0.0	73.9	417.7	7.4	76.5	575.4	447.63439
Residential Cumulative as % of 2007 Sales				0.00%	0.51%	4.54%	4.59%	4.84%	4.84%	3.77%
Commercial/Industrial Cumulative as % of 2007 Sales				0.00%	0.58%	3.85%	3.91%	4.51%	4.51%	3.51%
All Sectors Cumulative Savings as % of 2007 Sales			0.00%	0.00%	0.13%	1.02%	1.03%	1.13%	9.36%	7.28%
All Sectors Cumulative as % of 2019 Forecast			0.00%	0.00%	0.12%	0.90%	0.91%	1.01%	8.15%	6.34%

Orlando Utility Commission - Cumulative Revised Goals (without Transition Period Adjustment)

	TOTAL			RESIDENTIAL			COMMERCIAL/INDUSTRIAL		
Year	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh
2010	0.7	14.9	45.6	0.02	11.20	27.56	0.7	3.7	18.1
2011	1.5	29.9	91.5	0.04	22.45	55.26	1.4	7.4	36.3
2012	2.2	45.3	138.9	0.06	34.07	83.86	2.2	11.2	55.0
2013	3.0	61.0	187.0	0.08	45.85	112.87	2.9	15.1	74.1
2014	3.9	78.4	240.3	0.11	58.94	145.08	3.8	19.4	95.2
2015	4.8	95.9	294.1	0.13	72.13	177.54	4.6	23.8	116.5
2016	5.7	114.5	351.1	0.16	86.10	211.94	5.5	28.4	139.1
2017	6.6	133.8	410.2	0.18	100.61	247.65	6.5	33.2	162.5
2018	7.7	154.7	474.2	0.21	116.31	286.29	7.5	38.4	187.9
2019	8.8	176.4	541.0	0.24	132.68	326.60	8.5	43.8	214.4

Orlando Utility Commission:

				Steps:	(1)	(2)	(3)	(4)		
	2007 Sales	2019 Forecast	Proposed GWh Goals by OUC	Max. Achievable - E-RIM	Max. Achievable - E-TRC	Max. Achievable - E-TRC + 2-yr. Screened Measures	Market Penetration Corrections - +10%	Measures Originally Omitted	GDS Revised Goals	GDS Revised GWh Goals After Transition Period Adjustment
GWh - Totals	6,079	7,874	0.0	0.0	78.8	511.2	519.1	541.0	541.0	420.81667
GWh Added - Residential			0.0	0.0	28.8	287.7	2.9	7.3	326.6	254.06132
GWh Added - Commercial/Industrial			0.0	0.0	50.1	144.7	5.0	14.6	214.4	166.75534
Residential Cumulative as % of 2007 Sales				0.00%	0.47%	5.21%	5.25%	5.37%	5.37%	4.18%
Commercial/Industrial Cumulative as % of 2007 Sales				0.00%	0.82%	3.20%	3.29%	3.53%	3.53%	2.74%
All Sectors Cumulative Savings as % of 2007 Sales			0.00%	0.00%	0.07%	0.48%	0.49%	0.51%	8.90%	6.92%
All Sectors Cumulative as % of 2019 Forecast			0.00%	0.00%	0.07%	0.43%	0.44%	0.46%	6.87%	5.34%

Florida Public Utility Company - Cumulative Revised Goals (without Transition Period Adjustment)

	TOTAL			RESIDENTIAL			COMMERCIAL/INDUSTRIAL		
Year	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh
2010	0.3	1.3	5.4	0.2	0.7	3.0	0.1	0.5	2.4
2011	0.6	2.5	10.8	0.5	1.5	6.0	0.2	1.1	4.8
2012	0.9	3.8	16.4	0.7	2.2	9.1	0.2	1.6	7.3
2013	1.3	5.1	22.1	1.0	3.0	12.3	0.3	2.1	9.8
2014	1.6	6.6	28.4	1.2	3.8	15.8	0.4	2.8	12.6
2015	2.0	8.1	34.8	1.5	4.7	19.3	0.5	3.4	15.5
2016	2.4	9.6	41.6	1.8	5.6	23.1	0.6	4.0	18.5
2017	2.8	11.3	48.6	2.1	6.6	27.0	0.7	4.7	21.6
2018	3.2	13.0	56.1	2.4	7.6	31.2	0.8	5.4	24.9
2019	3.7	14.9	64.0	2.8	8.7	35.6	0.9	6.2	28.4

Florida Public Utilities Company

				Steps:	(1)	(2)	(3)	(4)		
	2007 Sales	2019 Forecast	Proposed GWh Goals by FPUC	Max. Achievable - E-RIM	Max. Achievable - E-TRC	Max. Achievable - E-TRC + 2-yr. Screened Measures	Market Penetration Corrections - +10%	Measures Originally Omitted	GDS Revised Goals	GDS Revised GWh Goals After Transition Period Adjustment
GWh - Totals	793	793	0.0	0.0	12.9	59.2	60.5	64.0	64.0	49.817753
GWh Added - Residential			0.0	0.0	5.1	28.8	0.5	1.2	35.6	27.688112
GWh Added - Commercial/Industrial			0.0	0.0	7.8	17.5	0.8	2.4	28.4	22.129642
Residential Cumulative as % of 2007 Sales				0.00%	0.65%	4.27%	4.34%	4.49%	4.49%	3.49%
Commercial/Industrial Cumulative as % of 2007 Sales				0.00%	0.98%	3.19%	3.29%	3.59%	3.59%	2.79%
All Sectors Cumulative Savings as % of 2007 Sales			0.00%	0.00%	0.01%	0.06%	0.06%	0.06%	8.08%	6.28%
All Sectors Cumulative as % of 2019 Forecast			0.00%	0.00%	0.01%	0.05%	0.05%	0.05%	8.08%	6.28%

Florida Power and Light - GDS Recommended Cumulative Goals (Including Transition Period)

	TOTAL			RESIDENTIAL			COMMERCIAL/INDUSTRIAL		
Year	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh
2010	129.3	234.3	594.2	119.3	170.7	382.0	10.0	63.6	212.2
2011	259.2	469.9	1,191.5	239.2	342.4	766.0	20.1	127.5	425.5
2012	393.4	713.0	1,808.2	362.9	519.5	1,162.4	30.5	193.5	645.7
2013	529.5	959.6	2,433.6	488.5	699.2	1,564.5	41.0	260.4	869.1
2014	680.5	1,233.5	3,128.0	627.8	898.7	2,010.9	52.7	334.7	1,117.0
2015	985.1	1,785.5	4,528.0	908.8	1,301.0	2,911.0	76.3	484.5	1,617.0
2016	1,307.9	2,370.5	6,011.4	1,206.6	1,727.2	3,864.6	101.3	643.3	2,146.8
2017	1,642.8	2,977.6	7,550.9	1,515.6	2,169.6	4,854.4	127.2	808.0	2,696.5
2018	2,005.3	3,634.7	9,217.2	1,850.0	2,648.3	5,925.6	155.3	986.3	3,291.6
2019	2,383.5	4,320.2	10,955.6	2,198.9	3,147.8	7,043.2	184.6	1,172.4	3,912.4

Florida Power and Light - Proposed Cumulative Goals

	TOTAL			RESIDENTIAL			COMMERCIAL/INDUSTRIAL		
Year	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh
2010	33.1	60.0	74.1	24.6	26.6	33.1	8.5	33.4	41.0
2011	66.2	120.0	148.6	49.2	53.2	66.2	17.0	66.8	82.4
2012	99.4	180.0	225.6	73.9	79.5	99.0	25.5	100.5	126.6
2013	132.7	240.0	303.5	98.6	105.7	131.7	34.1	134.3	171.8
2014	166.3	300.0	390.1	123.3	131.9	164.4	43.0	168.1	225.7
2015	200.0	360.0	477.4	148.0	158.1	197.1	52.0	201.9	280.3
2016	233.9	420.5	569.9	172.7	184.3	229.8	61.2	236.2	340.1
2017	268.2	481.4	665.9	197.4	210.5	262.5	70.8	270.9	403.4
2018	303.0	543.4	769.8	222.1	236.7	295.2	80.9	306.7	474.6
2019	337.8	606.6	878.2	246.7	263.3	328.3	91.1	343.3	549.9

Progress Energy Florida - GDS Recommended Cumulative Goals (Including Transition Period)									
	TOTAL			RESIDENTIAL			COMMERCIAL/INDUSTRIAL		
Year	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh
2010	72.1	66.1	218.0	70.0	51.5	157.6	2.0	14.6	60.4
2011	144.5	132.5	437.2	140.4	103.2	316.1	4.1	29.3	121.1
2012	219.3	201.0	663.5	213.1	156.6	479.7	6.2	44.4	183.8
2013	295.2	270.5	893.0	286.8	210.8	645.6	8.3	59.7	247.4
2014	379.4	347.7	1,147.8	368.7	271.0	829.8	10.7	76.8	318.0
2015	549.2	503.4	1,661.5	533.7	392.2	1,201.3	15.5	111.2	460.3
2016	729.1	668.3	2,205.8	708.5	520.7	1,594.8	20.6	147.6	611.1
2017	915.8	839.5	2,770.8	890.0	654.1	2,003.2	25.8	185.4	767.5
2018	1,117.9	1,024.7	3,382.2	1,086.4	798.4	2,445.3	31.5	226.3	936.9
2019	1,328.8	1,218.0	4,020.1	1,291.3	949.0	2,906.5	37.5	269.0	1,113.6

Progress Energy Florida - Proposed Cumulative Goals									
	TOTAL			RESIDENTIAL			COMMERCIAL/INDUSTRIAL		
Year	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh
2010	42.42	33.34	50.64	37.68	24.57	40.22	4.74	8.77	10.42
2011	88.74	70.79	104.35	79.23	50.45	82.88	9.51	20.34	21.47
2012	142.74	120.15	162.66	122.43	78.35	129.19	20.31	41.8	33.47
2013	197.88	171.97	224.04	166.73	107.68	177.94	31.15	64.29	46.1
2014	254.15	225.88	288.49	212.13	138.32	229.13	42.02	87.56	59.36
2015	310.99	282.66	361.22	258.01	171.58	286.9	52.98	111.08	74.32
2016	380.44	349.98	430.28	316.54	214.86	341.75	63.9	135.12	88.53
2017	449.66	415.57	498.72	374.85	257.44	396.11	74.81	158.13	102.61
2018	515.71	476.26	558.56	430.08	296.67	443.64	85.63	179.59	114.92
2019	559.54	520.59	613.81	463.14	322.76	487.52	96.4	197.83	126.29

Tampa Electric Company - GDS Recommended Cumulative Goals (Including Transition Period)

	TOTAL			RESIDENTIAL			COMMERCIAL/INDUSTRIAL		
Year	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh
2010	24.2	33.9	88.6	22.8	26.8	57.0	1.3	7.1	31.7
2011	48.5	68.0	177.8	45.8	53.7	114.2	2.7	14.3	63.6
2012	73.6	103.2	269.8	69.4	81.5	173.3	4.1	21.7	96.4
2013	99.0	138.9	363.1	93.5	109.7	233.3	5.5	29.2	129.8
2014	127.2	178.6	466.7	120.1	141.0	299.8	7.1	37.5	166.8
2015	184.2	258.5	675.5	173.9	204.1	434.0	10.3	54.3	241.5
2016	244.5	343.2	896.8	230.9	271.0	576.2	13.6	72.2	320.6
2017	307.1	431.1	1,126.5	290.0	340.4	723.8	17.1	90.6	402.8
2018	374.9	526.2	1,375.1	354.0	415.6	883.5	20.9	110.6	491.6
2019	445.6	625.4	1,634.5	420.8	493.9	1,050.1	24.9	131.5	584.4

Tampa Electric Company - Proposed Cumulative Goals

	TOTAL			RESIDENTIAL			COMMERCIAL/INDUSTRIAL		
Year	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh
2010	2.1	4.1	8.2	1.2	1.4	1.9	0.9	2.7	6.3
2011	5.0	10.1	21.6	3.1	3.5	5.5	1.9	6.6	16.1
2012	8.6	17.3	39.6	5.5	6.4	10.5	3.1	10.9	29.1
2013	12.9	26.0	60.9	8.5	9.9	16.8	4.4	16.1	44.1
2014	17.6	35.3	84.3	12.0	13.9	24.0	5.6	21.4	60.3
2015	22.4	45.1	108.9	15.5	18.2	31.7	6.9	26.9	77.2
2016	27.5	55.1	133.8	19.2	22.5	39.6	8.3	32.6	94.2
2017	32.3	64.3	157.7	22.6	26.4	46.8	9.7	37.9	110.9
2018	36.8	73.5	180.4	25.7	30.1	53.3	11.1	43.4	127.1
2019	40.9	81.8	201.7	28.5	33.3	59.0	12.4	48.5	142.7

Gulf Power Company - GDS Recommended Cumulative Goals (Including Transition Period)

	TOTAL			RESIDENTIAL			COMMERCIAL/INDUSTRIAL		
Year	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh
2010	11.7	15.9	57.4	10.1	11.0	32.6	1.6	4.9	24.7
2011	23.4	31.9	115.0	20.2	22.1	65.4	3.2	9.8	49.6
2012	35.5	48.4	174.5	30.6	33.5	99.2	4.9	14.9	75.3
2013	47.8	65.1	234.9	41.2	45.1	133.6	6.6	20.0	101.3
2014	61.4	83.7	301.9	53.0	57.9	171.7	8.4	25.7	130.2
2015	88.9	121.1	437.1	76.7	83.9	248.5	12.2	37.2	188.5
2016	118.0	160.8	580.2	101.8	111.3	329.9	16.2	49.4	250.3
2017	148.3	201.9	728.8	127.9	139.9	414.4	20.4	62.1	314.4
2018	181.0	246.5	889.7	156.1	170.7	505.9	24.8	75.8	383.8
2019	210.4	278.7	1,057.5	185.6	202.9	601.3	24.8	75.8	456.2

Gulf Power Company - Proposed Cumulative Goals

	TOTAL			RESIDENTIAL			COMMERCIAL/INDUSTRIAL		
Year	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh
2010	2.3	3.1	4.7	1.8	1.9	2.0	0.5	1.2	2.7
2011	5.3	7.5	13.3	4.3	4.7	6.0	1.0	2.8	7.3
2012	9.0	13.1	25.7	7.4	8.4	12.3	1.6	4.7	13.4
2013	13.4	19.8	41.2	11.1	12.9	20.5	2.3	6.9	20.7
2014	18.4	27.3	59.0	15.4	18.0	30.3	3.0	9.3	28.7
2015	23.8	35.5	78.5	20.0	23.7	41.3	3.8	11.8	37.2
2016	29.6	44.2	99.3	25.0	29.8	53.2	4.6	14.4	46.1
2017	35.4	52.9	120.4	30.0	35.9	65.3	5.4	17.0	55.1
2018	40.9	61.1	140.4	34.7	41.6	76.5	6.2	19.5	63.9
2019	46.2	68.9	159.0	39.2	47.0	86.8	7.0	21.9	72.2

JEA - GDS Recommended Cumulative Goals (Including Transition Period)

Year	TOTAL			RESIDENTIAL			COMMERCIAL/INDUSTRIAL		
	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh
2010	1.7	14.6	50.3	0.8	9.5	26.0	0.9	5.2	24.3
2011	3.4	29.3	100.9	1.5	19.0	52.2	1.9	10.4	48.7
2012	5.2	44.5	153.2	2.3	28.8	79.3	2.9	15.7	73.9
2013	6.9	59.9	206.1	3.1	38.7	106.7	3.9	21.2	99.4
2014	8.9	77.0	264.9	4.0	49.8	137.1	4.9	27.2	127.8
2015	12.9	111.5	383.5	5.7	72.0	198.5	7.2	39.4	185.0
2016	17.1	148.0	509.2	7.6	95.6	263.6	9.5	52.4	245.6
2017	21.5	185.9	639.6	9.6	120.1	331.0	11.9	65.8	308.5
2018	26.3	226.9	780.7	11.7	146.6	404.1	14.6	80.3	376.6
2019	31.2	269.7	928.0	13.9	174.3	480.3	17.3	95.4	447.6

JEA - Proposed Cumulative Goals

Year	TOTAL			RESIDENTIAL			COMMERCIAL/INDUSTRIAL		
	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh
2010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2011	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2012	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2013	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2014	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2015	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2016	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2017	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2018	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2019	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Orlando Utility Commission - GDS Recommended Cumulative Goals (Including Transition Period)									
	TOTAL			RESIDENTIAL			COMMERCIAL/INDUSTRIAL		
Year	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh
2010	0.4	7.4	22.8	0.0	5.6	13.8	0.4	1.8	9.0
2011	0.7	14.9	45.8	0.0	11.2	27.6	0.7	3.7	18.1
2012	1.1	22.7	69.5	0.0	17.0	41.9	1.1	5.6	27.5
2013	1.5	30.5	93.5	0.0	22.9	56.4	1.5	7.6	37.0
2014	1.9	39.2	120.1	0.1	29.5	72.5	1.9	9.7	47.6
2015	2.8	56.7	173.9	0.1	42.7	105.0	2.7	14.1	68.9
2016	3.7	75.3	230.9	0.1	56.6	139.4	3.6	18.7	91.5
2017	4.7	94.6	290.0	0.1	71.1	175.1	4.6	23.5	114.9
2018	5.7	115.5	354.0	0.2	86.8	213.7	5.6	28.6	140.3
2019	6.8	137.3	420.8	0.2	103.2	254.1	6.6	34.0	166.8

Orlando Utility Commission - Proposed Cumulative Goals									
	TOTAL			RESIDENTIAL			COMMERCIAL/INDUSTRIAL		
Year	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh
2010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2011	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2012	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2013	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2014	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2015	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2016	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2017	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2018	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2019	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Florida Public Utility Company - GDS Recommended Cumulative Goals (Including Transition Period)										
	TOTAL			RESIDENTIAL			COMMERCIAL/INDUSTRIAL			
Year	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh	
2010	0.2	0.6	2.7	0.1	0.4	1.5	0.0	0.3	1.2	
2011	0.3	1.3	5.4	0.2	0.7	3.0	0.1	0.5	2.4	
2012	0.5	1.9	8.2	0.4	1.1	4.6	0.1	0.8	3.7	
2013	0.6	2.6	11.1	0.5	1.5	6.2	0.2	1.1	4.9	
2014	0.8	3.3	14.2	0.6	1.9	7.9	0.2	1.4	6.3	
2015	1.2	4.8	20.6	0.9	2.8	11.4	0.3	2.0	9.1	
2016	1.6	6.3	27.3	1.2	3.7	15.2	0.4	2.6	12.1	
2017	2.0	8.0	34.3	1.5	4.6	19.1	0.5	3.3	15.3	
2018	2.4	9.7	41.9	1.8	5.7	23.3	0.6	4.1	18.6	
2019	2.9	11.6	49.8	2.2	6.7	27.7	0.7	4.8	22.1	

Florida Public Utilities Company Proposed Cumulative Goals										
	TOTAL			RESIDENTIAL			COMMERCIAL/INDUSTRIAL			
Year	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh	Winter MW	Summer MW	Energy GWh	
2010	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2011	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2012	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2013	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2014	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2015	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2016	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2017	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2018	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
2019	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Exhibit RFS – 22: Proposed Expenditures on Renewable R&D Programs

Table 1: Proposed Expenditures on Renewable P&D Programs Based on 5-Yr. Average Funding Recovery as Determined through the Energy Cost Recovery Clause

Year	Florida Power & Light Company	Progress Energy Florida, Inc.	Tampa Electric Company	Gulf Power Company	Florida Public Utility Company
2004	$145,679,192	$60,072,362	$16,357,137	$7,619,637	$382,504
2005	$144,192,696	$59,143,076	$15,583,727	$8,826,754	$473,610
2006	$146,204,978	$59,460,367	$14,099,638	$10,205,567	$456,161
2007	$160,749,639	$67,109,815	$13,652,585	$9,107,192	$515,022
2008	$180,016,994	$77,593,960	$16,857,795	$9,257,740	$534,350
5-yr Average	$155,368,700	$64,675,916	$15,310,176	$9,003,378	$472,329
2% of 5-yr. Avg.	$3,107,374	$1,293,518	$306,204	$180,068	$9,447
5% of 5-yr. Avg.	$7,768,435	$3,233,796	$765,509	$450,169	$23,616
10% of 5-yr. Avg.	$15,536,870	$6,467,592	$1,531,018	$900,338	$47,233

ECCR Factors with Additional Amount Dedicated to Demand-Side Renewable Programs

Utility	Five-Year Average Conservation Costs (2004-2008) ($)	2009 Projected Sales at Meter (kWh)	Five-Year Average Conservation Recovery Factor (¢kWh)	2% Increase to Five-Year Average Conservation Costs (¢/kWh)	5% Increase to Five-Year Average Conservation Costs (¢/kWh)	10% Increase to Five-Year Average Conservation Costs (¢/kWh)
FPL	$155,368,700	105,989,914,000	0.147	0.150	0.154	0.161
Gulf	$9,003,378	11,936,559,000	0.075	0.077	0.079	0.083
FPUC	$472,329	771,656,238	0.061	0.062	0.064	0.067
TECO	$15,310,176	18,598,571,000	0.082	0.084	0.086	0.091
PEF	$64,675,916	40,687,466,000	0.159	0.162	0.167	0.175