

**Florida Investor-Owned Utilities' Demand-Side Management Achievements  
Comparative Analysis**  
January 20, 2011

*Executive Summary*

At the September 14, 2010 Commission Conference, the Florida Public Service Commission (FPSC) requested a comparison of the demand-side management (DSM) program achievements of Florida's investor-owned utilities (IOUs) to those of utilities from other states. In response to this request, the FPSC's staff prepared the following analysis that compares the DSM achievements of Florida's IOUs to the DSM achievements of three peer groups of utilities. The three peer groups include utilities: (1) from states with similar weather conditions, (2) with similar financial profiles, and (3) referred to by the Southern Alliance for Clean Energy (SACE).

The key points gleaned from the analysis include:

- Florida's energy usage tends to exhibit higher variation than for other states due to Florida's weather, customer base, and high reliance on electricity for cooling and heating.
- Electric cooling and heating load contribute significantly to electric peak demand and the need for new power plants.
- Florida has a unique weather profile compared to other states, with the highest cooling degree days and lowest heating degree days of any state in the continental U.S.
- Florida has a high proportion of residential and commercial customers and low industrial load.
- Florida's residential and commercial consumers rely heavily on electricity for cooling and heating.
- Given the greater variation in customer usage patterns, the benefits associated with reducing peak demand are particularly important in Florida.
- Florida's IOUs have been successful in reducing customer demand relative to the utilities analyzed in the review.
- The annual energy savings achieved by the Florida IOUs compare favorably to those achieved by all but one utility in the weather peer group and by all utilities in the financial peer group. Three utilities in the SACE utility group achieved comparable, or higher energy savings.
- The Florida IOUs' DSM achievements in the past must be put in the context of the FPSC's recently approved, aggressive DSM goals, which require significantly higher energy reduction achievements. Florida's IOUs are required to implement programs with a stronger focus on energy reduction in the future.

- DSM achievements do not come without a cost to utility ratepayers. Florida's IOUs' DSM expenditures fall within the middle of the expenditures by the peer utilities. The peer utility with the highest demand and annual energy reduction achievements spends more than twice as much annually on DSM programs compared to Florida's highest spending utility.

### ***Process***

The analysis was performed in three stages. First, the staff examined available energy efficiency information resources to determine the usefulness of these resources in comparing Florida's utilities to those in other states. A summary of this comparison can be found in Section II. In reviewing available DSM-related data resources, the annual utility data collected by the U.S. Department of Energy - Energy Information Administration (EIA) under Form-861 was found to be the most appropriate available data source for the project at hand.

Stage two of the analysis involved selecting comparable utilities from other states. Staff compared the Florida IOUs to three proxy groups of utilities. The first group was selected from states with similar weather conditions to Florida. Florida has the highest number of cooling degree days of any state in the continental U.S., indicating the highest need for cooling. The need for air conditioning plays an important role in determining each utility's load profile and the demand and energy saving opportunities available to each utility. Staff selected the utility with the greatest retail sales from the five states with the next highest cooling degree days: Arizona, Texas, Louisiana, Nevada, and Mississippi.<sup>1</sup> The second group, or financial peer group, was selected based on their similarities to the Florida IOUs in the areas of bond rating, risk, available public information, and the percent of revenues from their electric sector.<sup>2</sup> This peer group has traditionally been used by the FPSC in comparing the financial profiles of utilities. The third group was referred to by SACE in written comments filed during the FPSC's recent DSM plan approval proceedings.<sup>3</sup> SACE contends that the DSM efforts of this group of utilities surpass those of Florida's IOUs.

In the third stage, staff used the EIA data to perform a high level analysis comparing the results of the Florida IOUs' DSM efforts to those of the three peer groups of utilities. Staff reviewed basic information about each utility, including: (1) heating and cooling degree days, (2) the number of customers and usage by each customer class, (3) electricity and natural gas usage, and (4) electric rates. The results of each utility's DSM programs were then studied, including: (1) demand savings, (2) energy savings, (3) program participation, and (4) program costs. Finally, staff developed and employed metrics to compare the DSM program results for each utility, for example, the percentage of energy savings to total retail sales. The comparative utility analysis can be found in Section I. The supporting data tables are in Appendix 1.

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<sup>1</sup> The weather peer group includes: Arizona Public Service Company; Entergy Texas, Inc.; Southwest Louisiana Cooperative; Nevada Power Company; and Mississippi Power Company. The third largest utility in terms of retail sales was selected for Louisiana because the two largest utilities did not provide DSM data to EIA on Form-861.

<sup>2</sup> The financial peer group includes: Alabama Power Company, Appalachian Power Company, Georgia Power Company; Mississippi Power Company, Public Service Company of Oklahoma, and Westar Energy, Inc.

<sup>3</sup> The SACE peer group includes: Arizona Public Service Company, Duke Energy Carolinas, Interstate Power and Light of Iowa, Mid American Energy of Iowa, and Xcel Energy of Colorado.

## Section I. Utility DSM Comparative

### *Analysis*

#### *Weather and Customer Mix*

Florida's electrical demand and energy consumption follow unique patterns, which are key to understanding the importance of DSM in the state. Due to Florida's weather, customer base, and high reliance on electricity for cooling and heating, Florida's energy usage tends to exhibit higher variation during the day than other states.

Florida has the highest number of cooling degree days of any state in the continental U.S., indicating the greatest need for air conditioning in the summer. Florida also has the lowest number of heating degree days. Heating needs in Florida are typically met with electricity. Other states with a higher number of heating degree days typically rely more heavily on alternative fuels for heating, such as natural gas and oil. As shown on the table on the following page, the most comparable states to Florida in terms of the need for cooling and heating are Arizona, Texas, and Louisiana.

The high proportion of residential and commercial customers in Florida leads to more extreme usage peaks. Residential customers comprise almost 89 percent of Florida's electricity customers and purchase about 52 percent of electrical energy in the state. Commercial electrical energy usage in Florida is about 38 percent, and industrial customers purchase the remaining 10 percent of Florida's electrical energy.<sup>4</sup> In contrast, industrial customers are responsible for a much higher proportion of the sales of most of the peer group utilities, with industrial consumption ranging from 8.4 percent to 49.1 percent of retail sales. (See Table 11) In Florida, residential and commercial usage contributes more to peak demand than industrial usage, which tends to be more uniform throughout the day. Florida's high temperatures and humidity levels cause residential customers' electrical usage to fluctuate more throughout the day, peaking in the early evening in summer and in the mid-morning and late evening in winter. Commercial usage patterns are somewhat parallel to residential, with the need for daytime air conditioning, refrigeration, and lighting and night loads composed primarily of refrigeration and lighting.

The high reliance of Florida's consumers on electricity, rather than the direct use of natural gas or other fuels for heating and cooling also contributes to Florida's relatively high electric peak demand. Over 84.9 percent of Florida's residential customers' energy needs are met with electricity, with only 3.5 percent met with the direct use of natural gas, while 11.6 percent are met with other fuels. The residential customers of the peer group utilities show a much lower use of electricity, ranging between 38.2 and 78.5 percent, and higher direct use of natural gas, of between 21.5 and 61.9 percent. Other fuels account for between 5.3 and 24.4 percent of the energy needs of the peer groups' residential customers. (See Table 13) The relatively high use of electricity by Florida's residential customers for heating and cooling causes a need for greater variation in the amounts of energy supplied by Florida's electric utilities.

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<sup>4</sup> Florida Public Service Commission, *Activities Pursuant to the Florida Energy Efficiency and Conservation Act*, February 2010.

## Heating and Cooling Degree Days by State

State	Cooling Degree Days
<b>Florida</b>	<b>3,618</b>
Arizona	3,342
Texas	2,808
Louisiana	2,743
Nevada	2,425
Mississippi	2,124
Alabama	1,858
South Carolina	1,848
Oklahoma	1,691
Georgia	1,642
Arkansas	1,542
North Carolina	1,404
Tennessee	1,238
Kansas	1,151
California	1,043
Virginia	1,036
Kentucky	1,021
Missouri	1,002
New Mexico	977
Delaware	975
Maryland	944
New Jersey	730
Utah	711
Indiana	702
Nebraska	698
West Virginia	658
Illinois	640
Ohio	625
Iowa	571
Pennsylvania	559
Idaho	546
New York	540
South Dakota	498
Rhode Island	484
Connecticut	463
Michigan	366
Massachusetts	364
Minnesota	349
Oregon	335
Wisconsin	319
North Dakota	317
Washington	286
New Hampshire	245
Montana	230
Vermont	221
Colorado	218
Wyoming	207
Maine	173

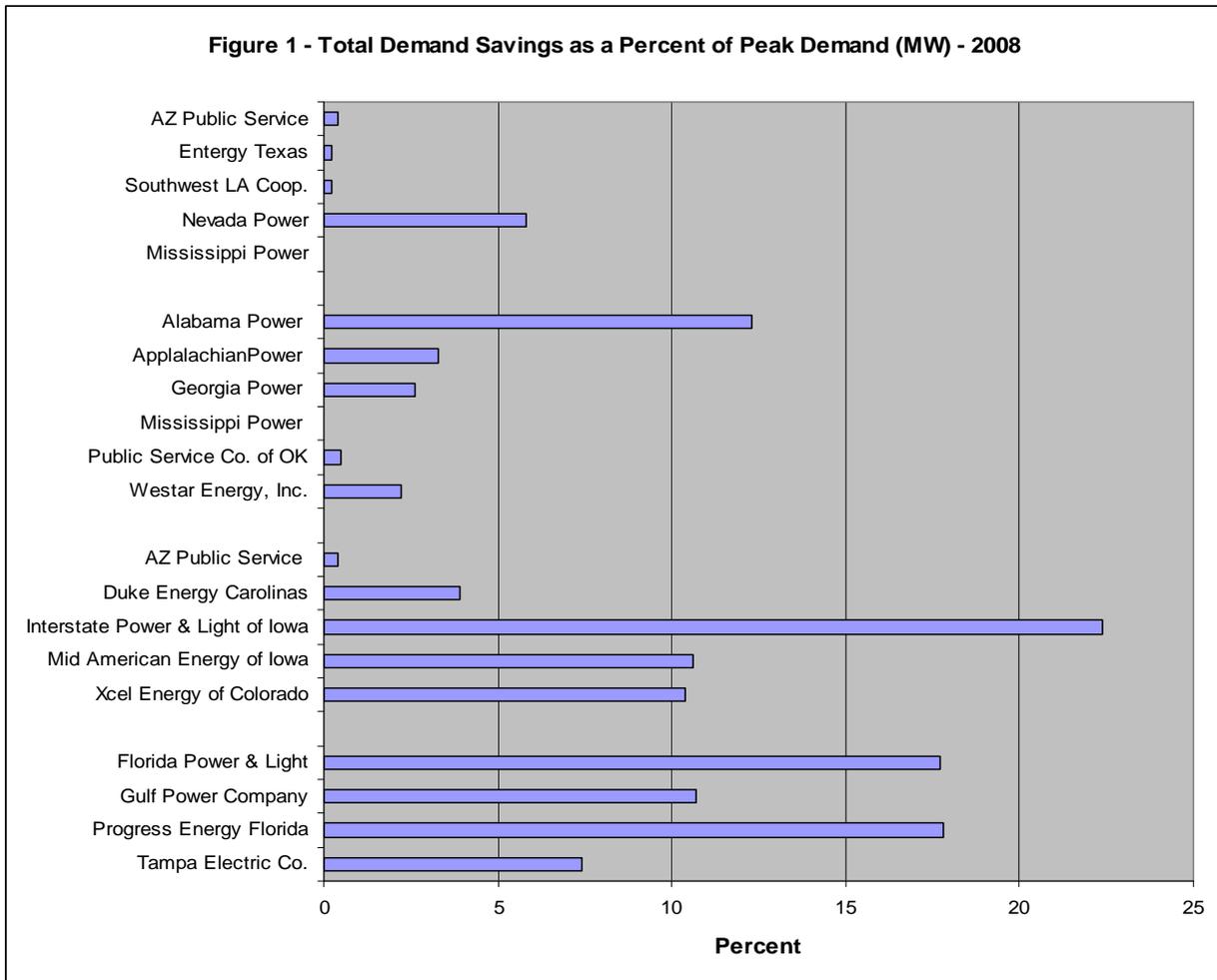
State	Heating Degree Days
North Dakota	10,129
Minnesota	8,839
Montana	8,222
Vermont	8,100
Wisconsin	8,079
Maine	8,056
South Dakota	7,996
Wyoming	7,895
New Hampshire	7,519
Iowa	7,262
Michigan	7,179
Colorado	6,802
Idaho	6,702
Nebraska	6,567
Illinois	6,525
Massachusetts	6,460
Connecticut	6,158
Utah	6,137
New York	6,042
Ohio	6,026
Indiana	5,979
Pennsylvania	5,968
Rhode Island	5,948
Washington	5,650
West Virginia	5,383
New Jersey	5,239
Oregon	5,216
Missouri	5,211
Kansas	5,108
Maryland	4,889
Kentucky	4,671
Delaware	4,646
Virginia	4,457
New Mexico	4,364
Tennessee	4,035
North Carolina	3,545
Oklahoma	3,525
Arkansas	3,522
Nevada	3,315
Georgia	3,027
South Carolina	2,849
Alabama	2,736
Mississippi	2,456
California	2,399
Arizona	1,759
Texas	1,741
Louisiana	1,566
<b>Florida</b>	<b>734</b>

Source: U.S. Department of Commerce National Oceanic and Atmospheric Administration National Environmental Satellite, Data, and Information Service; *Historical Climatology Series 5-2, Monthly State Cooling and Heating Degree Days Weighted by Population*; September 2010.

*Demand Savings from Utility-Sponsored DSM Programs*

DSM programs can be used to reduce energy consumption and demand and smooth out customer usage patterns, potentially avoiding or deferring the need for new generating capacity. Staff first reviewed the achievements of each Florida IOU and each utility in the three peer groups at reducing peak demand. The benefits associated with reducing demand are particularly important in Florida, given the greater reliance on electricity as the primary energy source. As such, the FPSC-approved IOU DSM programs have focused to a large extent on this need to reduce peak demand.

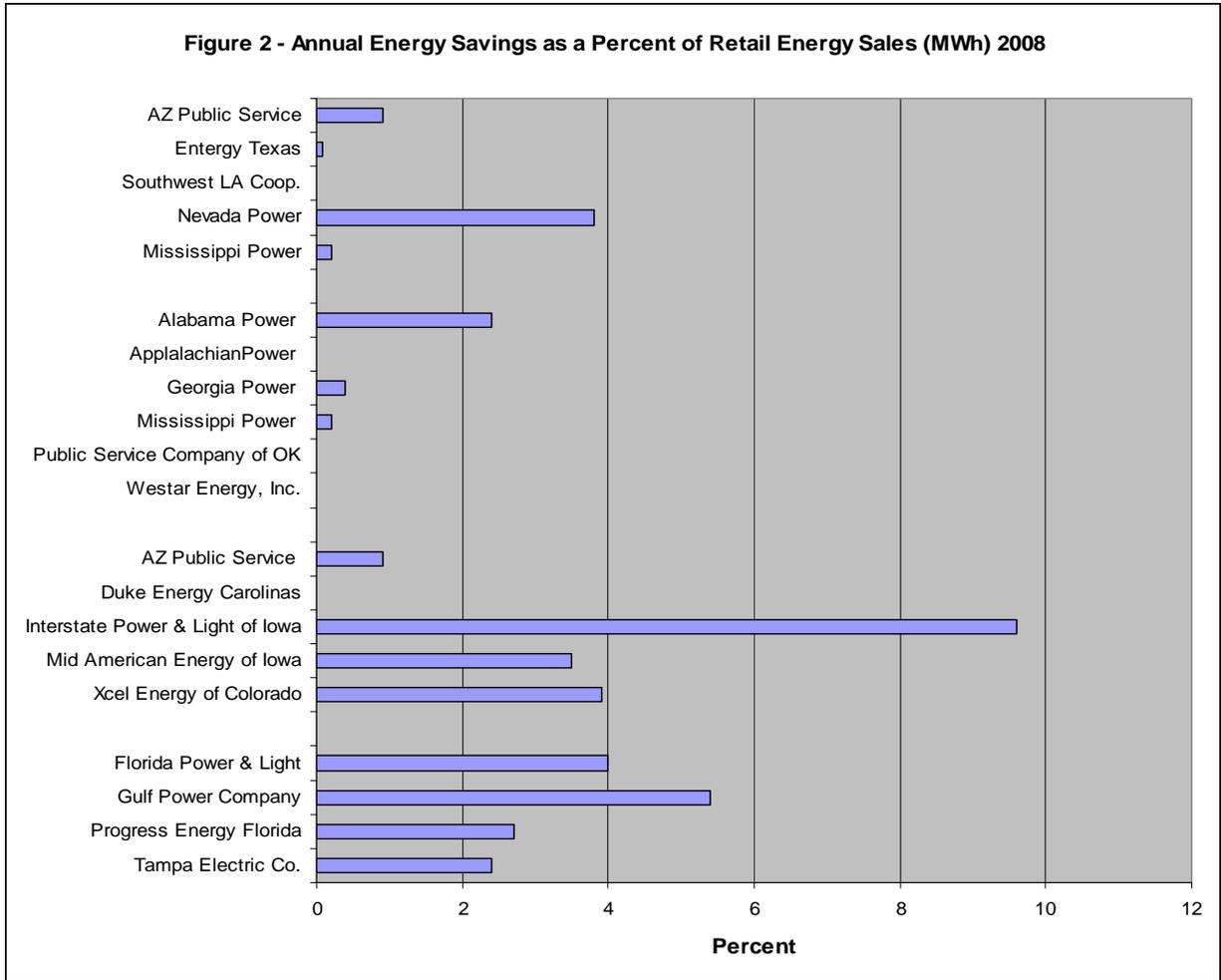
The Florida IOUs’ success at reducing peak demand, measured in megawatts (MWs), bears out in staff’s analysis. Staff reviewed the annual demand savings by customer class for each Florida IOU and each utility in the three peer groups, and calculated each utility’s demand savings achievements as a percentage of its peak demand. As shown in Figure 1 below, in general, the annual peak demand reductions from the Florida IOUs’ DSM programs compare favorably to those of the three peer groups, especially when taking into account the customer profiles of the utilities. The Florida IOUs achieved peak demand reductions between 7.4 and 17.7 percent, for an average reduction of 13.2 percent.



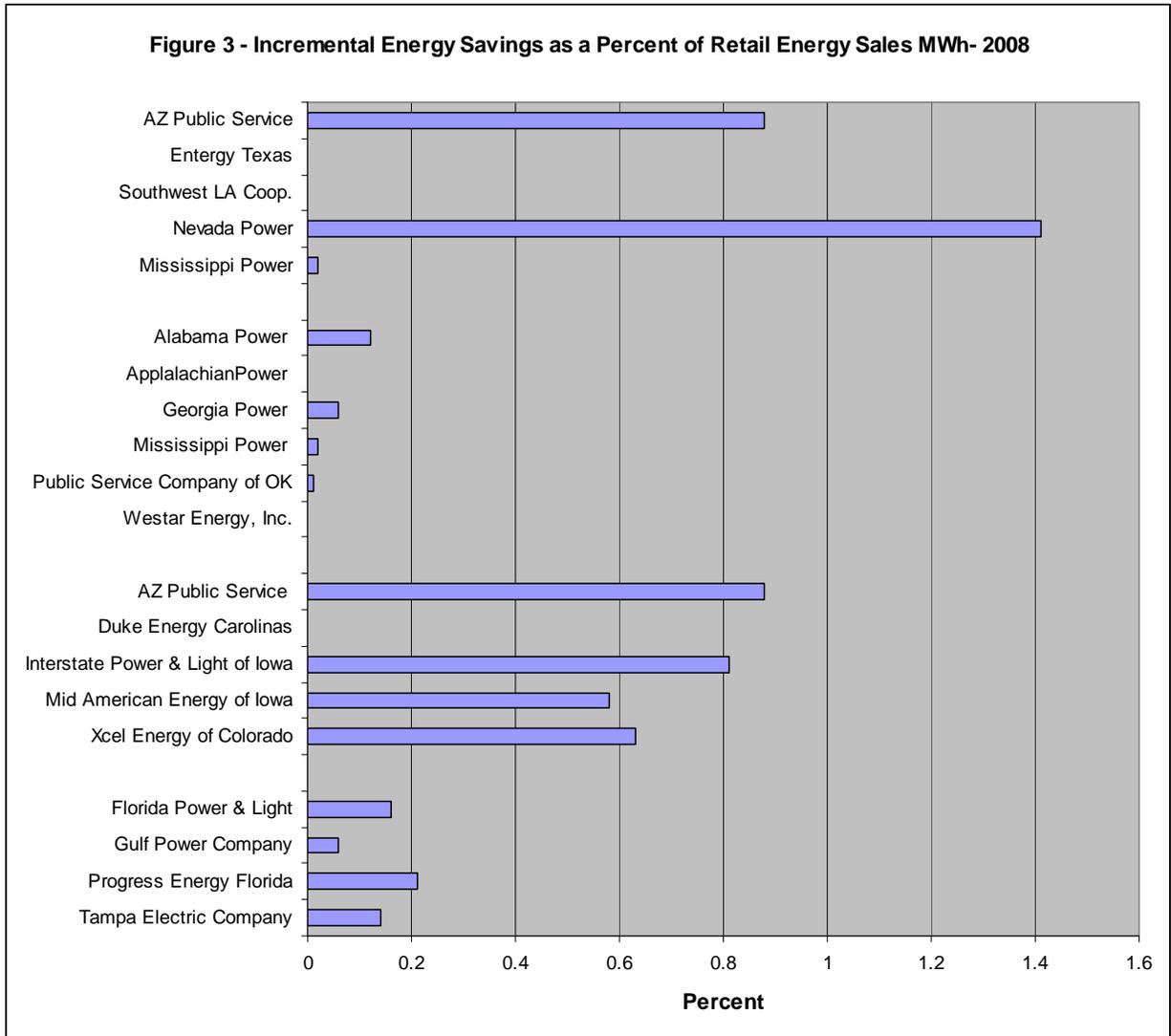
The weather peer group showed annual peak demand reductions of between 0.2 and 5.8 percent, for an average reduction of 1.3 percent. The financial peer group achieved annual demand reductions between 0 and 12.3 percent, for an average reduction of 3.5 percent; while the SACE utilities achieved reductions of from 0.4 to 22.4 percent, for an average of 9.5 percent. Two utilities in the peer groups were able to achieve very strong annual peak demand reductions, Alabama Power Company and Interstate Power and Light of Iowa. At closer inspection, however, the greater portion of these demand reductions were achieved within the industrial customer class. Industrial sales represent a relatively large percentage of retail sales for these utilities at 40 and 49 percent for Alabama Power Company and Interstate Power and Light of Iowa (Interstate Power), respectively. In contrast, industrial sales represent only 3.5 to 19.1 percent of retail sales for the Florida IOUs. (See Table 11)

### *Energy Savings from Utility-Sponsored DSM Programs*

DSM programs can also result in lower customer energy usage, which reduces utility fuel consumption. To review the success of each utility at reducing customer energy usage, staff compared the annual energy reductions from DSM programs, measured in megawatt-hours (MWhs), and calculated the annual energy savings as a percent of total retail sales. Annual energy savings account for all the energy saved within a single year by energy efficient measures that have been put in place over the life of a utility's DSM programs. Annual energy reduction data can be used to evaluate the success of a utility's DSM programs in reducing customer energy usage over time. As displayed in the Figure 2 below, the annual energy savings achieved by the Florida IOUs compares favorably to those achieved by all but one utility in the weather peer group and by all utilities in the financial proxy group. Nevada Power Company in the weather peer group, along with three utilities in the SACE utility group achieved comparable, or higher energy savings. In particular, Interstate Power achieved a 9.6 percent rate of annual energy savings. Interstate Power's higher achievements appear to be the result of two factors: (1) a greater distribution of industrial customers, with 13 percent of industrial load reduced by DSM, as well as (2) larger reductions in energy for residential (7 percent reduction) and commercial customers (8 percent reduction) than for the Florida utilities.



Staff also reviewed the most recent efforts of each group to reduce energy by comparing the incremental energy savings of each utility. Incremental energy savings represent the energy savings from new participants in a utility’s programs within a single year. Incremental energy savings data are instructive in determining a utility’s most recent DSM achievements. As shown in Figure 3 below, the most recent efforts of Florida’s IOUs to reduce energy usage compare favorably to the financial peer group. Nevada Power Company and Arizona Public Service Company of the weather peer group have surpassed the Florida IOUs’ recent achievements in reducing energy usage. The energy savings for these two utilities are strictly from residential and commercial DSM programs. It appears, from tracking the EIA Form-861 data back in time, that both these utilities have recently increased their DSM efforts. In contrast, Florida’s utilities have been required to offer DSM programs to their customers since the 1970s. Some level of saturation may therefore have been reached in the Florida utilities’ DSM programs. Four of the five SACE peer group utilities also surpassed the Florida IOUs’ recent achievements in reducing energy usage. However, recent reductions in energy consumption by industrial customers are a large component for three of the SACE utilities with strong energy savings results. The remaining SACE utility that surpassed the Florida IOUs in terms of energy savings is Arizona Public Service Company, which was discussed above as a member of the weather peer group.

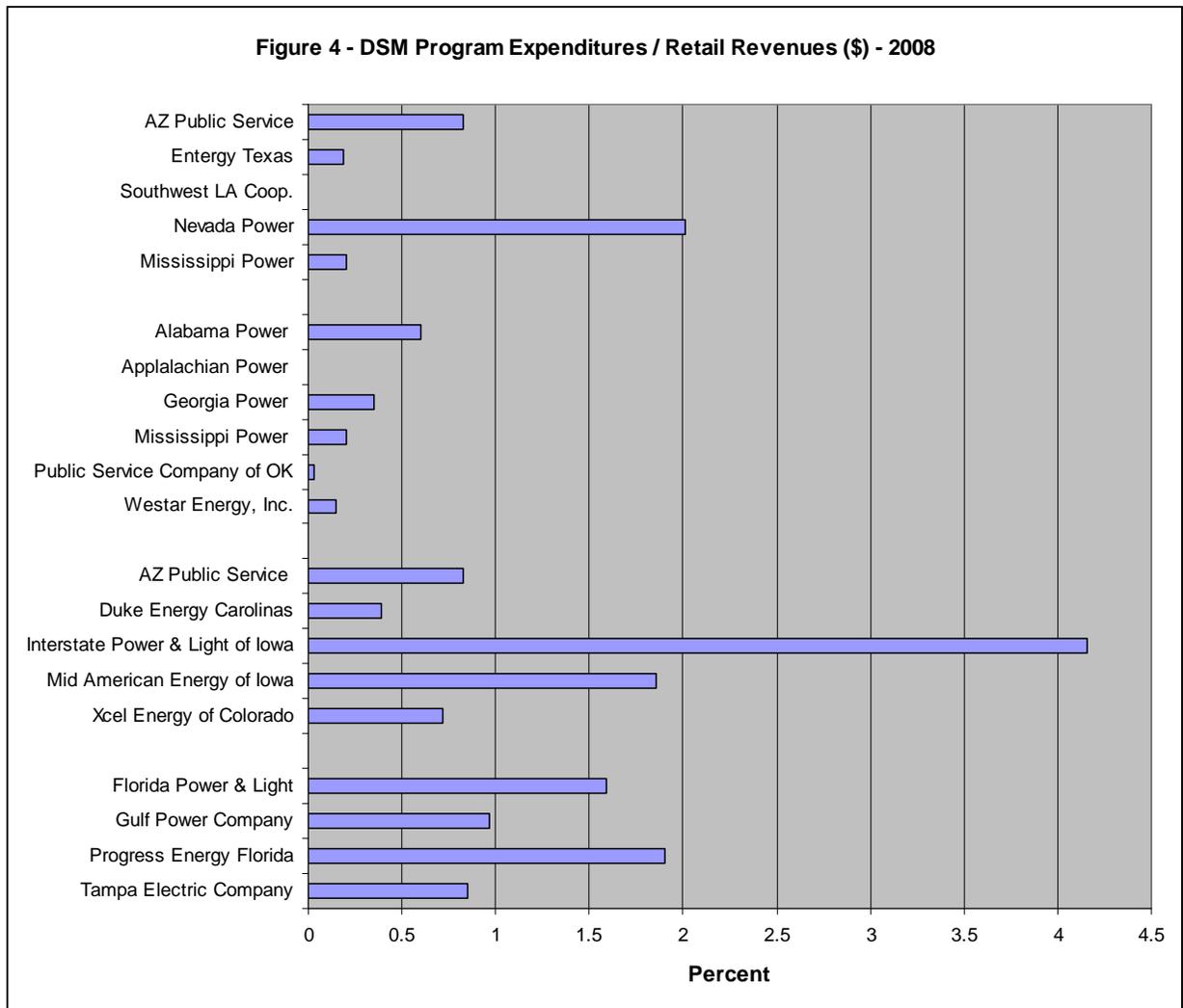


It is important to put the energy reduction achievements of the Florida IOUs in the past in the context of the FPSC’s most recent DSM goal setting proceedings. At the December 1, 2009 Commission Conference, the FPSC approved aggressive new DSM goals. These goals require significantly higher energy reduction achievements by the Florida IOUs. As a result, Florida’s IOUs are required to implement programs with a stronger focus on energy reduction.

*Utility Expenditures on DSM Programs*

DSM achievements do not come without a cost to utility ratepayers. Staff reviewed the annual expenditures by each Florida IOU and each utility in the three peer groups, and calculated the program expenditures as a percentage of retail revenues. As shown in Figure 4 below, the Florida IOUs spent approximately 1 to 2 percent of retail revenues on DSM programs in 2008. In contrast, the financial peer group has much lower expenditures. As discussed above, in general, these lower expenditures resulted in lower demand and energy reduction achievements

for the financial peer group compared to the Florida IOUs. The utilities in the weather peer group spent between 0.0 and 2.0 percent of retail revenues on DSM programs in 2008. For the SACE utilities, annual DSM program expenditures ranged between 0.4 and 4.2 percent of retail revenues. Interstate Power had the highest expenditures, at 4.2 percent, more than double the expenditures of the Florida IOUs. Interstate Power also exhibited the highest demand and annual energy savings relative to peak demand and retail sales, respectively, of all of the utilities.



A complete picture of DSM expenditures should also include a measure of whether these ratepayer dollars are used efficiently, a sort of “bang for the buck” measure. Unfortunately, the EIA Form-861 data set could not be used to provide insight on this issue. It is difficult to compare the efficiency of the expenditures by each utility in a high level review without obtaining data concerning specific DSM programs, including costs, number of participants, and demand and energy reductions. Data on each utility’s avoided generating unit would also be necessary in order to fully compare the costs and results of each program. The EIA Form-861

data set breaks down program costs for energy efficiency and load management programs. Both energy efficiency and load management programs can result in demand and energy savings. However, expenditures cannot be broken out by the dollars spent to reduce demand versus energy.

### *Conclusion*

Florida's energy usage tends to exhibit higher variation during the day than for other states. Consequently, demand reduction is particularly important in the state. Florida's IOUs have been successful at reducing demand relative to the utilities in the three peer groups, especially when taking the Florida IOUs' customer bases into account. It appears that the strong demand reductions by two utilities in the peer groups are due primarily to DSM programs aimed at their much larger industrial customer bases. In reviewing energy reductions, one utility in the weather peer group, and several utilities in the SACE peer group have shown comparable or stronger results than the Florida IOUs.

The Florida IOUs' DSM efforts in the past must be placed in the context of the aggressive DSM goals recently set by the FPSC. The revised DSM goals will require Florida's IOUs to significantly strengthen their efforts to reduce customer energy usage. It would be instructive to complete a new comparison of Florida's DSM program results to those utilities of the peer groups after these new Florida IOU DSM programs are implemented. Further analysis of the individual DSM programs of those utilities with better energy reduction results, within the context of the regulatory requirements in these states, may also be informative.

Given the variation in weather, customer mix, and energy usage patterns between utilities, a bottoms-up-approach is the preferred methodology for determining the appropriate portfolio of DSM programs for each utility. The FPSC employs this type of study in setting DSM goals for Florida's utilities. The Florida Legislature, in amending the Florida Energy Efficiency and Conservation Act (FEECA), requires the FPSC to perform a technical potential study every five years. These studies analyze the quantity of demand and energy savings that are technically available and achievable within Florida, and determine the cost-effectiveness of deploying these DSM measures.

## **Section II. Comparison of Energy Efficiency Information Resources**

The purpose of this section is to examine available energy efficiency information resources to determine the usefulness of these resources in comparing the DSM achievements of Florida's utilities to those in other states. Following consultation with representatives from the Federal Energy Regulatory Commission (FERC), Environmental Protection Agency (EPA), and Department of Energy (DOE), as well as the consultant from the most recent DSM goals hearings, FPSC staff have prepared the following summary. It is intended to examine the range of resources available, and determine how they might be of use. A list of the resources reviewed, including links, can be found in Appendix 2.

The first section of this report addresses resources available on best practices for energy efficiency program design. The largest single source for these resources was the EPA, which has made a number of reports available, largely due to a current ongoing project. The EPA resources tend to focus as much as possible on practical, easily deployable utility-level programs. Additionally, several private groups have produced reports designed to single out or encourage best practices.

The second section of the report focuses on resources that compare state policies in energy efficiency. Resources in this category likewise came from both public and private organizations. While the governmental sources tended to be more neutral, some of the resources produced by advocacy groups reflect a point of view. Nevertheless, some of the private organizations produced very useful overviews of state policies.

It is important to note that the authors of most of these reports out of necessity were forced to choose between high-level comparison and detail-oriented studies. Reports that focus on high-level comparisons usually provide a good overview of general trends or practices that affect all types of programs, without focusing on any one. As a result, they can be useful for following trends and providing overview, but are often less useful or reliable on policy specifics. On the other hand, resources that focus on detail-oriented examinations prove very useful for design of specific programs, but carry little value for a program that it does not focus on. These types of studies are most useful for program design and provide the most depth, but are less useful for comparing policies or trends across jurisdictions.

### ***Resources – Best Practices***

#### *Environmental Protection Agency (EPA)*

The EPA has a number of resources it has made available to support states in energy efficiency program design. These resources originated at least in part from an ongoing project of the EPA, their National Action Plan on Energy Efficiency (NAPEE). As part of the NAPEE, the EPA has produced reports designed to measure the impact of energy efficiency programs.

a. *“Energy Efficiency Program Best Practices”*

As part of the NAPEE, the EPA produced the report “Energy Efficiency Program Best Practices” in order to assist states. This document, published in 2006, is styled as an additional chapter to the initial NAPEE report. The document contains a number of tools to help determine best practices in energy efficiency. To aid in measuring costs and benefits from types of programs, it contains charts that document various utilities’ programs by funding type and amount, energy savings and other benefits, and various cost-effectiveness metrics. It also breaks down the individual steps involved in program design, including the potential study, cost-effectiveness testing, program design, and incentive types.

The report makes an effort to establish the importance of dividing rate classes and customer segments, including three commercial/industrial classes and four residential classes. It also provides numerous case studies and program examples that could potentially be deployed in Florida. This report advises more targeted program design than has historically been performed in Florida, and significantly distinguishes between approaches for new and existing buildings. Like many of these documents, some of the content of the report addresses issues beyond the FPSC’s jurisdiction, including building codes. Nevertheless, this report could prove useful as a guide for future DSM program evaluation and development.

One of the limitations of this report is that it mixes programs within the purview of the FEECA process with those outside of it. This problem was a common one among the reviewed resources. Many resources mixed in utility-centered programs with building codes, appliance standards, and other practices beyond the jurisdiction of the FPSC. While these programs can be an important part of overall energy efficiency, they are not directly included in the FEECA process.

b. *“Customer Incentives for Energy Efficiency through Program Offerings”*

The EPA has also produced a document that focuses on best practices in setting customer incentives. This report, titled, “Customer Incentives for Energy Efficiency through Program Offerings,” was published in February 2010. It is likewise considered part of the NAPEE.

Like the program design report, this document focuses on dividing the potential stakeholders into various sectors, and tries to match the type of incentive to the optimal market segment. This includes incentives of financial, non-financial, and combined types, and various stakeholders in the energy efficiency market. Likewise, it divides the market into seven customer types, and identifies key stakeholders, strategies, and barriers for each. Finally, it identifies the likelihood for impact from any given incentive type on various behaviors.

The EPA customer incentive report could be useful in incentive design approach, but its usefulness is tied to its approach. The NAPEE as a whole, and this document specifically, focuses on dividing the stakeholders into many more discrete categories than the FPSC has generally used in DSM program design. While the report could inform the FPSC’s next DSM goal setting process even if no change was made in approach, much of what the report advises might require a more targeted focus than the FPSC has traditionally employed.

*c. “Rapid Deployment Energy Efficiency Toolkit”*

The EPA has also produced an additional document intended to help with energy efficiency that was not directly part of the NAPEE. This document, the ‘Rapid Deployment Energy Efficiency Toolkit’ (Toolkit), was designed to help state and local authorities and energy efficiency program administrators plan and implement programs in conjunction with the American Recovery and Reinvestment Act of 2009. The Toolkit was released in late 2009, having been produced under the guidance of the NAPEE Leadership Group, the EPA, and the Department of Energy.

Unlike the NAPEE documents, the Toolkit has a fairly narrow focus on ten specific programs. These programs were divided between four residential programs and six non-residential programs. The residential programs were: (1) Energy Star Labeled Products, (2) Tier 1 Residential Energy Audit and Direct Installation, (3) Home Performance with Energy Star, and (4) Residential Efficient Heating and Cooling. The non-residential programs were: (1) Non-Residential Prescriptive Rebates, (2) Non-Residential Retrocommissioning, (3) Commercial Food Service, (4) Non-Residential (Commercial & Industrial) Custom Incentives, (5) Non-Residential Benchmarking and Performance, and (6) Non-Residential On-Site Energy Manager. These programs were chosen because they were seen to be among the most proven and cost-effective available, and thus deliver the best use of resources. For purposes of the FEECA process, however, only a handful of these are truly relevant. Energy Star, which is an appliance efficiency program, is outside of the FPSC’s jurisdiction, though utilities can encourage their use. Many of the other programs have some applicability the FPSC, however. Due to its narrower focus, the Toolkit is perhaps less useful as a general guide, but more useful for planning within its limited sphere.

For each of these programs, the Toolkit contains a breakdown of requirements for its implementation. These requirements include a program summary, a target market, infrastructure requirements, staffing and training needs, an implementation timeline, and performance expectations. It also contains separate marketing guidelines for residential and non-residential programs. Because these programs are intended to be broadly applicable, the Toolkit may be particularly useful as a comparison point. For example, if a utility program compares favorably to those in the Toolkit, then it probably requires less scrutiny than those that compare unfavorably.

*American Council for an Energy Efficient Economy (ACEEE)*

In September 2010, the American Council for an Energy Efficient Economy (ACEEE) produced “States Stepping Forward: Best Practices for State-Led Energy Efficiency Programs.” This report outlines several individual energy efficiency programs of a wide variety of types led by officials in numerous states. As a result, this is less of a general guide for energy efficiency programs and more intended as a resource for examples of good program design. Most of the programs described in the report could, at least potentially, be scaled to utility-level programs. The applicability of these programs to Florida, however, will vary due to statutory restrictions.

The report designates five programs “award winners,” a further ten programs “honorable mention” and three more “emerging.” No Florida programs are included. These programs range across a variety of areas, including several that are outside the FPSC’s jurisdiction such as home construction tax rebates and transportation incentives. However, energy audit programs, for example, might be models to emulate. Overall, the report is directed more at state energy offices than at utility regulators.

The report’s appendix includes summaries for each of the 18 programs cited. Each summary consists of three parts: program description, program performance, and lessons learned. Because each summary is fairly brief at three or four pages, the summaries are relatively high level. As such, this report is probably among the least useful in terms of program best practices. While it identifies some good programs, and thus could be used either as a comparison point or an idea source, it carries little value to anyone hoping to evaluate the relative strengths of any given approach.

#### *Institute for Energy Efficiency (IEE)*

The Institute for Energy Efficiency (IEE) issued its whitepaper “Implementing Energy Efficiency: Program Delivery Comparison Study” in March of 2010. This whitepaper is one of the few to single out Florida or any of its utilities. It examines six IOUs, including Florida Power & Light Company (FPL), and five state entities that directly administer energy efficiency programs. Unfortunately, the whitepaper provides relatively little analysis.

In its discussion of the six IOUs, the whitepaper notes significant differences between their regulatory environments. Regarding FPL, the report singles out the high amount of peak load reduction compared to other programs. The report also notes, however, given the load profiles present in Florida, peak reduction is among the most cost-effective methods for energy efficiency available in the state. It also describes the FEECA process in a largely accurate manner. Most of its data concerning FPL is drawn from the annual FPSC FEECA report.

The IEE whitepaper lacks the breadth to be a true state comparative study and the depth to be an effective best practices guide. It is most significant in that it makes a real effort to note the differences in various regulatory environments. It notes the challenges Florida faces due both to its demographics and its climate when compared with most of the other states.

#### *McKinsey and Company*

McKinsey and Company’s July 2009 report, “Unlocking Energy Efficiency in the U.S. Economy,” is a general guide to the various segments of the market, the barriers facing them, and potential methods to overcome the barriers. It could prove valuable as a source for general energy efficiency strategy, but probably is not usable as a guide for specific program design. It is perhaps better for identifying and overcoming shortcomings in program design than in modeling programs from the ground up.

This report covers much of the same territory as the EPA’s Customer Incentive Report, and could be used in much the same way. The McKinsey and Company report is more extensive

than the EPA report, however, and provides much more data to back up its approach. Significantly, while the EPA report focuses more on residential opportunities, the McKinsey and Company report treats residential, commercial, and industrial segments equally.

The main focus of this report is on identifying barriers to the adoption of energy efficiency in a given market and possible strategies on how to overcome these barriers. As a result, its conclusions could be particularly useful in evaluating the potential effectiveness of a given approach in a given market segment. The report also tends to focus more on realistic evaluations for energy efficiency. For example, it notes the difficulty in achieving significant savings in parts of the non-low-income residential market. Thus, it could aid in helping program designers direct limited resources towards the market segments where they are most likely to be effective. In doing so, of course, planners must take care not to discriminate against any rate class or classes.

### ***Resources - State Comparisons***

#### *Environmental Protection Agency (EPA)*

The EPA's "State and Regional Climate Policy Tracking" website is an internet resource that aggregates energy policies nationwide. It includes maps comparing policies in place in seven sectors: energy efficiency, energy supply, power sector, reporting, state planning and incentive structures, targets and caps, and transportation. Each of these sectors contains maps of numerous subcategories comparing policies from state to state.

The website also contains links to overviews of policies for each individual state. Its summary of Florida's is extensive, containing numerous links to Florida governmental websites, including the FPSC, as well as statute citations. The Florida webpage also contains numerous references to FPSC actions, including the renewable portfolio standard (RPS) rulemaking and the net metering and interconnection rules. The site has not been updated since at least June 2010.

This resource's primary benefit is in comparing states, though the individual state reports provide depth as well. As an internet resource, this EPA site contains possibilities static reports cannot, including more frequent updating and correction. As a result, this site contains the potential to be one of the most useful resources available.

#### *National Governors' Association (NGA)*

The National Governors' Association's (NGA) 2010 Update of their "Clean and Secure: State Energy Actions" report is the probably the most comprehensive guide to state-by-state energy policy. This report, which updates a 2008 report, provides a detailed guide to state policies in a number of areas, including: energy efficiency, clean electricity, transportation, "lead by example," greenhouse gas emissions, research and development, and green economic development. The report does not rank states, nor does it provide any comprehensive maps.

The bulk of the report consists of summaries of energy policy across all states and territories. Each individual report consists of a few pages of bullet points on policy initiatives.

The report also highlights new actions taken since the initial version of the report in 2008. The report's section on Florida includes numerous items as "new" that had been included in 2008's omnibus energy bill HB 7135. It also includes as ongoing a few stalled measures, such as the Florida Department of Environmental Protection's cap-and-trade program. For the most part, however, the NGA report is probably the most comprehensive high-level guide to Florida clean energy policies reviewed.

The NGA report is probably the most useful for determining the regulatory environment and policies in place for a given state. Because it contains no tracking or mapping of specific policies, it is best used as a starting point for a more in-depth inquiry than as a sole research source. This report probably gives the best accounting of Florida's energy policy of the documents reviewed as well.

#### *Database of State Incentives for Renewables and Efficiency (DSIRE)*

The Database of State Incentives for Renewables and Efficiency (DSIRE) is perhaps the most useful internet resource for comparisons of state programs in renewable energy and energy efficiency. This website, which was founded by the North Carolina Solar Center and the Interstate Renewable Energy Council, tracks clean energy activities throughout the U.S. DSIRE contains webpages for each state with an extensive listing of energy policy initiatives at the Federal, state and local levels. Most of these policies contain links to the program administrator and the site is frequently updated.

DSIRE's coverage of Florida contains an extensive listing of policy initiatives. The vast majority of these programs are local, taking place at the level of city, county, or municipal or rural cooperative utility. However, DSIRE also contains summaries of state-level programs, including FPSC rules. Significantly, it summarizes the FPSC's net metering and interconnection rules, and includes links to the FPSC's homepage. It also cites the Florida Administrative Code and Florida Statutes where appropriate.

Because the DSIRE website contains extensive descriptions of programs nationwide, it has the capability to serve as both a comparison piece and a practices guide. It could prove a valuable resource for anyone investigating the potential for modeling a program after a successful one in another state, as it tends to aggregate significant information regarding programs. Where DSIRE is most lacking is in analysis, however. It often presents the bare facts of a program without investigating its success rate, practicality, or potential pitfalls.

#### *American Council for an Energy Efficient Economy (ACEEE)*

The ACEEE's report, "The 2010 State Energy Efficiency Scorecard," was released in October 2010. This annual report focuses on state energy efficiency policies and programs for residential, commercial/industrial, and transportation sectors. ACEEE examines six energy efficiency policy areas: (1) utility and public benefits programs and policies, (2) transportation policies, (3) building energy codes, (4) combined heat and power, (5) state government initiatives, and (6) appliance efficiency standards. States earn points in each policy area weighted by the magnitude of its potential energy savings impact. ACEEE then ranks states

based on these calculations. In the 2010 report, Florida ranks 30<sup>th</sup> out of the 50 states and the District of Columbia.

The ACEEE Scorecard provides information on general trends in state energy efficiency policy and program activities. However, it does not provide specific information on efficiency programs. Also, ACEEE focuses solely on energy savings from utility programs in evaluating state performance in that category. Thus, efforts by states and utilities to reduce and control electric peak demand are not recognized by the ACEEE in this scorecard. Finally, the ACEEE, in its description of Florida utility policies, does not fairly and adequately represent the basis for the FPSC's decision in establishing numeric DSM goals in December 2009.

#### *Institute for Energy Efficiency (IEE)*

In addition to its best practices survey mentioned earlier, IEE has prepared a number of short, single-issue briefs on topics related to energy efficiency. In general, these reports are narrowly focused, and appear intended more to provide a snapshot than an in-depth analysis.

For example, in May 2010, IEE provided an updated brief: "Summary of Ratepayer-Funded Electric Efficiency Impacts, Expenditures, and Budgets." This report was based on data collected by IEE in conjunction with the Consortium for Energy Efficiency and the American Gas Association in 2009. This report shows Florida with 6.0 percent of the population but 7.2 percent of all energy efficiency spending in the U.S. in 2008. This figure is based on voluntary responses, however, and may be incomplete.

In December of 2010, IEE released an updated version of the same report. In contrast to the May report, it credited Florida with 6.1 percent of both the population and the energy consumption but a 2010 electric efficiency budget of 5.8 percent of the national total. The report seems to credit this from a relatively small growth in the electrical efficiency program budget from \$313.9 million to \$316.4 million, whereas other states had greater growth. The report also noted Florida in its "top ten" list of increases in expenditures on energy efficiency from 2008 to 2009. The report placed Florida in tenth place with a \$25.3 million increase.

In July 2010, IEE released another report, "State Electric Efficiency Regulatory Frameworks." This report provides a concise, high-level survey of state programs nationwide. It primarily examines four areas: direct cost recovery (through rate cases, system benefit charges, and tariff riders or surcharges); fixed cost recovery (through decoupling or a lost revenue adjustment mechanism); performance incentives; and virtual power plant. Florida is only cited under the categories tariff riders or surcharges, with no further description. Like many of the broad overviews, this report might be helpful for getting a sense of the picture nationwide, but provides few details.

#### *Pew Center on Global Climate Change*

The Pew Center on Global Climate Change has a series of U.S. climate change maps that track programs in place nationwide. The maps are very simple, and for the most part provide no details. Most of the maps merely indicate whether each state has a given policy in place or not.

A handful of maps give a brief (usually a sentence or less) summary beyond that. While this could be useful as a graphical representation of how widespread certain policies are, other resources provide similar and more detailed information.

### *Conclusion*

While each of the aforementioned resources has its strengths and weaknesses, a few appear to have particular value to stakeholders in energy efficiency in Florida. For best practices, the EPA rapid deployment Toolkit is useful within the fairly narrow range of the programs it describes. For residential customers, these programs are primarily audits and appliance replacement, while commercial programs are fairly specialized. The McKinsey and Company report is a useful general guide, as it can provide a resource for potentially any kind of program. It lacks the depth, however, of the Toolkit on any single program.

For state comparisons, the National Governors' Association report provides a summary of activities in each state in a fair and neutral manner. For more extensive research, DSIRE probably provides the most useful resource in aggregating or summarizing information. DSIRE is one of the few resources to contain both depth and breadth, but in doing so it also contains much more information than any other resource.

**Table 1**  
**Annual Demand Savings - 2008**  
(See Figure 1)

	Name of Utility Company	Annual Demand Savings from DSM Programs* (MWs)				Utility's Peak Demand (MWs)		Total Demand Savings as a Percentage of Peak Demand (%)
		Residential	Comm.	Industr.	Total	Summer	Winter	
Utilities Comparable to FL IOUs -Weather	AZ Public Service	20	10	0	30	7,026	4,404	0.4
	Entergy Texas	4	2	0	6	3,159	2,547	0.2
	Southwest LA Coop.	0	1	0	1	495	558	0.2
	Nevada Power	209	112	0	321	5,504	2,810	5.8
	Mississippi Power	0	0	0	0	2,458	2,385	0.0
Utilities Comparable to FL IOUs - Financial	Alabama Power	108	90	1,260	1,458	11,804	10,938	12.3
	Appalachian Power	0	0	257	257	6,542	7,848	3.3
	Georgia Power	146	28	271	445	17,270	14,221	2.6
	Mississippi Power	0	0	0	0	2,458	2,385	0.0
	Public Service Co. OK	0	3	18	21	4,200	2,707	0.5
	Westar Energy, Inc.	0	0	52	52	2,375	1,503	2.2
SACE Suggested Comparable Utilities	AZ Public Service	20	10	0	30	7,026	4,404	0.4
	Duke Ener. Carolinas	271	88	302	661	16,888	14,973	3.9
	Interstate P&L Iowa	134	69	457	660	2,943	2,632	22.4
	Mid American Iowa	165	113	270	548	5,147	4,680	10.6
	Xcel Colorado	274	101	331	706	6,789	5,789	10.4
FL IOUs	Florida Power & Light	2,311	1,413	0**	3,724	21,060	18,055	17.7
	Gulf Power Company	134	108	30	272	2,541	2,370	10.7
	Progress Energy FL	1,315	168	327	1,810	10,036	10,153	17.8
	Tampa Electric Co.	214	73	5	292	3,952	3,709	7.4

Source: U.S. Department of Energy/Energy Information Administration, Responses to Form EIA-861, 2008.

\* Includes actual annual demand savings from energy efficiency programs and potential annual demand savings from load management programs. Annual savings includes savings for the year 2008 from all participants regardless of the year the participant joined the program.

\*\* FPL includes demand savings from industrial customers within the commercial customer data.

**Table 2**  
**Incremental Demand Savings - 2008**

	Name of Utility Company	Incremental Demand Savings from DSM Programs* (MWs)				Utility's Peak Demand (MWs)		Incremental Demand Savings as a Percentage of Peak Demand (%)
		Residential	Comm.	Industr.	Total	Summer	Winter	
Utilities Comparable to FL IOUs - Weather	AZ Public Service	20	10	0	30	7,026	4,404	0.43
	Entergy Texas	0	0	0	0	3,159	2,547	0.00
	Southwest LA Coop.	0	0	0	0	495	558	0.00
	Nevada Power	93	35	0	128	5,504	2,810	2.33
	Mississippi Power	0	0	0	0	2,458	2,385	0.00
Utilities Comparable to FL IOUs - Financial	Alabama Power	2	4	0	6	11,804	10,938	0.05
	Appalachian Power	0	0	161	161	6,542	7,848	2.05
	Georgia Power	19	10	0	29	17,270	14,221	0.17
	Mississippi Power	0	0	0	0	2,458	2,385	0.00
	Public Service Co. OK	0	3	2	5	4,200	2,707	0.12
	Westar Energy, Inc.	0	0	0	0	2,375	1,503	0.00
SACE Suggested Comparable Utilities	AZ Public Service	20	10	0	30	7,026	4,404	0.43
	Duke Energy Carolinas	0	0	0	0	16,888	14,973	0.00
	Interstate P&L Iowa	14	6	12	32	2,943	2,632	1.09
	Mid American Iowa	12	15	19	46	5,147	4,680	0.89
	Xcel Colorado	86	14	18	118	6,789	5,789	1.74
FL IOUs	Florida Power & Light**	68	61	0	129	21,060	18,055	0.61
	Gulf Power Company	1	1	0	2	2,541	2,370	0.08
	Progress Energy FL	54	47	1	102	10,036	10,153	1.00
	Tampa Electric Co.	37	7	0	44	3,952	3,709	1.11

Source: U.S. Department of Energy/Energy Information Administration, Responses to Form EIA-861, 2008.

\* Includes incremental actual demand savings from energy efficiency programs and incremental potential demand savings from load management programs. Incremental savings include customers who first participated in a program in 2008, and it does not include savings from customers who participated in programs in the past.

\*\* FPL includes demand savings from industrial customers within the commercial customer data.

**Table 3**  
**Annual DSM Program Expenditures Per MW Saved - 2008**

	Name of Utility Company	Annual DSM Program Expenditures (\$ Thousands)				Annual Demand Savings from Programs (MWs)	Cost/ MW saved (\$ Thousands)
		Energy Efficiency	Load Mgt.	Indirect Costs	Total Cost		
Utilities Comparable to FL IOUs - Weather	AZ Public Service	20,527	0	3,642	24,169	30	805.63
	Entergy Texas	2,838	0	0	2,838	6	473.00
	Southwest LA Coop.	0	0	0	0	1	0.00
	Nevada Power	27,736	11,330	5,837	44,903	321	139.88
	Mississippi Power	41	1,506	0	1,547	0	0.00
Utilities Comparable to FL IOUs - Financial	Alabama Power	0	12,183	17,171	29,354	1,458	20.13
	Appalachian Power	0	0	0	0	257	0.00
	Georgia Power	2,927	13,001	9,975	25,903	445	58.21
	Mississippi Power	41	1,506	0	1,547	0	0.00
	Public Service Co. OK	439	0	0	439	21	20.90
	Westar Energy, Inc.	0	1,042	0	1,042	52	20.04
SACE Suggested Comparable Utilities	AZ Public Service	20,527	0	3,642	24,169	30	805.63
	Duke Energy Carolinas	0	19,880	0	19,880	661	30.08
	Interstate P&L Iowa	22,171	25,815	1,704	49,690	660	75.29
	Mid American Iowa	19,490	11,612	4,318	35,420	548	64.63
	Xcel Colorado	10,907	5,831	1,078	17,816	706	25.24
FL IOUs	Florida Power & Light	69,015	97,969	13,032	180,016	3,724	48.34
	Gulf Power Company	4,477	6,404	0	10,881	272	40.00
	Progress Energy FL	19,828	44,492	11,559	75,879	1,810	41.92
	Tampa Electric Co.	6,733	9,724	527	16,984	292	58.16

Source: U.S. Department of Energy/Energy Information Administration, Responses to Form EIA-861, 2008.

**Table 4**  
**Annual Energy Savings from DSM Programs - 2008**  
 (see Figure 2)

	Name of Utility Company	Annual Energy Savings from DSM Programs (MWhs)				Utility's Total Retail Sales (MWhs)	Total Annual Energy Savings as a Percent of Retail Sales (%)
		Residential	Commercial	Industrial	Total		
Utilities Comparable to FL IOUs - Weather	AZ Public Service	134,920	119,782	0	254,702	28,793,588	0.9
	Entergy Texas	9,914	3,447	0	13,361	15,533,487	0.09
	Southwest LA Coop.	0	273	0	273	2,097,497	0.01
	Nevada Power	463,347	354,579	0	817,926	21,612,520	3.8
	Mississippi Power	20,228	0	0	20,228	9,204,120	0.2
Utilities Comparable to FL IOUs - Financial	Alabama Power	795,802	146,119	358,251	1,300,172	55,207,195	2.4
	Appalachian Power	0	0	0	0	34,209,668	0.0
	Georgia Power	235,972	78,255	8,115	322,342	84,304,394	0.4
	Mississippi Power	20,228	0	0	20,228	9,204,120	0.2
	Public Service Co. OK	2,339	3	2	2,344	17,753,458	0.01
	Westar Energy, Inc.	0	0	0	0	9,753,196	0.0
SACE Suggested Comparable Utilities	AZ Public Service	134,920	119,782	0	254,702	28,793,588	0.9
	Duke Energy Carolinas	0	0	0	0	77,246,972	0.0
	Interstate P&L Iowa	265,072	297,270	971,267	1,533,609	15,961,349	9.6
	Mid American Iowa	195,250	483,348	391,427	1,070,025	30,302,087	3.5
	Xcel Colorado	137,961	509,373	468,486	1,115,820	28,271,320	3.9
FL IOUs	Florida Power & Light	2,121,526	1,943,627	0*	4,065,153	102,749,430	4.0
	Gulf Power Company	324,544	304,422	0	628,966	11,543,399	5.4
	Progress Energy FL	473,910	295,297	273,844	1,043,051	38,555,709	2.7
	Tampa Electric Co.	430,756	16,530	1,365	448,651	18,989,605	2.4

Source: U.S. Department of Energy/Energy Information Administration, Responses to Form EIA-861, 2008.

\* FPL includes energy savings from industrial customers within the commercial customer data.

**Table 5**  
**Incremental Energy Savings - 2008**  
 (see Figure 3)

	Name of Utility Company	Incremental Energy Savings from DSM Programs (MWhs)				Utility's Total Retail Sales (MWhs)	Incremental Energy Savings as a Percent of Retail Sales (%)
		Residential	Commercial	Industrial	Total		
Utilities Comparable to FL IOUs - Weather	AZ Public Service	134,920	119,782	0	254,702	28,793,588	0.88
	Entergy Texas	0	0	0	0	15,533,487	0.00
	Southwest LA Coop.	0	0	0	0	2,097,497	0.00
	Nevada Power	201,500	103,000	0	304,500	21,612,520	1.41
	Mississippi Power	1,139	0	464	1,603	9,204,120	0.02
Utilities Comparable to FL IOUs - Financial	Alabama Power	3,868	4,034	61,033	68,935	55,207,195	0.12
	Appalachian Power	0	0	0	0	34,209,668	0.00
	Georgia Power	17,607	32,272	0	49,879	84,304,394	0.06
	Mississippi Power	1,139	0	464	1,603	9,204,120	0.02
	Public Service Co. OK	2,339	3	2	2,344	17,753,458	0.01
	Westar Energy, Inc.	0	0	0	0	9,753,196	0.00
SACE Suggested Comparable Utilities	AZ Public Service	134,920	119,782	0	254,702	28,793,588	0.88
	Duke Energy Carolinas	0	0	0	0	77,246,972	0.00
	Interstate P&L Iowa	35,921	15,811	76,835	128,567	15,961,349	0.81
	Mid American Iowa	32,750	64,525	78,189	175,464	30,302,087	0.58
	Xcel Colorado	48,754	46,782	83,737	179,273	28,271,320	0.63
FL IOUs	Florida Power & Light*	103,519	56,788	0	160,307	102,749,430	0.16
	Gulf Power Company	2,986	3,794	0	6,780	11,543,399	0.06
	Progress Energy FL	32,498	39,588	8,053	80,139	38,555,709	0.21
	Tampa Electric Co.	10,139	14,760	1,365	26,264	18,989,605	0.14

Source: U.S. Department of Energy/Energy Information Administration, Responses to Form EIA-861, 2008.

\* FPL includes energy savings from industrial customers within the commercial customer data.

**Table 6**  
**Annual DSM Program Expenditures Per MWh Saved - 2008**

	Name of Utility Company	Annual Conservation Program Expenditures (\$ Thousands)				Annual Energy Savings from Programs (MWhs)	Cost/ MWh Saved (\$ )
		Energy Efficiency	Load Mgt.	Indirect Costs	Total Cost		
Utilities Comparable to FL IOUs -Weather	AZ Public Service	20,527	0	3,642	24,169	254,702	94.89
	Entergy Texas	2,838	0	0	2,838	13,361	212.41
	Southwest LA Coop.	0	0	0	0	273	0.00
	Nevada Power	27,736	11,330	5,837	44,903	817,926	54.90
	Mississippi Power	41	1,506	0	1,547	20,228	76.25
Utilities Comparable to FL IOUs - Financial	Alabama Power	0	12,183	17,171	29,354	1,300,172	22.58
	Appalachian Power	0	0	0	0	0	0.00
	Georgia Power	2,927	13,001	9,975	25,903	322,342	80.36
	Mississippi Power	41	1,506	0	1,547	20,228	76.25
	Public Service Co. OK	439	0	0	439	2,344	187.29
	Westar Energy, Inc.	0	1,042	0	1,042	0	0.00
SACE Suggested Comparable Utilities	AZ Public Service	20,527	0	3,642	24,169	254,702	94.89
	Duke Energy Carolinas	0	19,880	0	19,880	0	0.00
	Interstate P&L Iowa	22,171	25,815	1,704	49,690	1,533,609	32.42
	Mid American Iowa	19,490	11,612	4,318	35,420	1,070,025	33.10
	Xcel Colorado	10,907	5,831	1,078	17,816	1,115,820	15.97
FL IOUs	Florida Power & Light	69,015	97,969	13,032	180,016	4,065,153	44.28
	Gulf Power Company	4,477	6,404	0	10,881	628,966	17.30
	Progress Energy FL	19,828	44,492	11,559	75,879	1,043,051	72.75
	Tampa Electric Co.	6,733	9,724	527	16,984	448,651	37.85

Source: U.S. Department of Energy/Energy Information Administration, Responses to Form EIA-861, 2008.

**Table 7**  
**Annual DSM Program Expenditures / Retail Revenues - 2008**  
(See Figure 4)

	Name of Utility Company	Annual DSM Program Expenditures (\$ Thousands)				Retail Revenues (\$ Thousands)	DSM Program Expenditures/ Retail Revenues (%)
		Energy Efficiency	Load Mgt.	Indirect Costs	Total Cost		
Utilities Comparable to FL IOUs - Weather	AZ Public Service	20,527	0	3,642	24,169	2,899,977	0.83
	Entergy Texas	2,838	0	0	2,838	1,502,672	0.19
	Southwest LA Coop.	0	0	0	0	154,224	0.00
	Nevada Power	27,736	11,330	5,837	44,903	2,228,658	2.01
	Mississippi Power	41	1,506	0	1,547	785,434	0.20
Utilities Comparable to FL IOUs - Financial	Alabama Power	0	12,183	17,171	29,354	4,862,281	0.60
	Appalachian Power	0	0	0	0	1,974,007	0.00
	Georgia Power	2,927	13,001	9,975	25,903	7,416,574	0.35
	Mississippi Power	41	1,506	0	1,547	785,434	0.20
	Public Service Co. OK	439	0	0	439	1,421,289	0.03
	Westar Energy, Inc.	0	1,042	0	1,042	674,524	0.15
SACE Suggested Comparable Utilities	AZ Public Service	20,527	0	3,642	24,169	2,899,977	0.83
	Duke Energy Carolinas	0	19,880	0	19,880	5,092,900	0.39
	Interstate P&L Iowa	22,171	25,815	1,704	49,690	1,194,477	4.16
	Mid American Iowa	19,490	11,612	4,318	35,420	1,898,787	1.86
	Xcel Colorado	10,907	5,831	1,078	17,816	2,473,457	0.72
FL IOUs	Florida Power & Light	69,015	97,969	13,032	180,016	11,290,091	1.59
	Gulf Power Company	4,477	6,404	0	10,881	1,120,765	0.97
	Progress Energy FL	19,828	44,492	11,559	75,879	4,002,713	1.90
	Tampa Electric Co.	6,733	9,724	527	16,984	1,996,507	0.85

Source: U.S. Department of Energy/Energy Information Administration, Responses to Form EIA-861, 2008.

**Table 8**  
**Annual DSM Program Expenditures Per Participant - 2008**

	Name of Utility Company	Annual DSM Program Expenditures (\$ Thousands)				DSM Program Participants
		Energy Efficiency	Load Mgt.	Indirect Costs	Total Cost	
Utilities Comparable to FL IOUs - Weather	AZ Public Service	20,527	0	3,642	24,169	517,330
	Entergy Texas	2,838	0	0	2,838	0
	Southwest LA Coop.	0	0	0	0	19
	Nevada Power	27,736	11,330	5,837	44,903	0
	Mississippi Power	41	1,506	0	1,547	15
Utilities Comparable to FL IOUs - Financial	Alabama Power	0	12,183	17,171	29,354	2,715
	Appalachian Power	0	0	0	0	2,193
	Georgia Power	2,927	13,001	9,975	25,903	15,872
	Mississippi Power	41	1,506	0	1,547	15
	Public Service Co. OK	439	0	0	439	30
	Westar Energy, Inc.	0	1,042	0	1,042	0
SACE Suggested Comparable Utilities	AZ Public Service	20,527	0	3,642	24,169	517,330
	Duke Energy Carolinas	0	19,880	0	19,880	23,426
	Interstate P&L Iowa	22,171	25,815	1,704	49,690	68,377
	Mid American Iowa	19,490	11,612	4,318	35,420	59,035
	Xcel Colorado	10,907	5,768	1,078	17,816	0
FL IOUs	Florida Power & Light	69,015	97,969	13,032	180,016	38,684
	Gulf Power Company	4,477	6,404	0	10,881	8,740
	Progress Energy FL	19,828	44,492	11,559	75,879	413,208
	Tampa Electric Co.	6,733	9,724	527	16,984	54,262

Source: U.S. Department of Energy/Energy Information Administration, Responses to Form EIA-861, 2008.

**Table 9**  
**DSM Program Participation – 2008**

	Name of Utility Company	Residential DSM Participants		Commercial DSM Participants		Industrial DSM Participants		Total Participants	
		# participants	% of customer class	# participants	% of customer class	# participants	% of customer class	# of total part.	% of total customers
Utilities Comparable to FL IOUs -Weather	AZ Public Service	517,330	52.45	0	0.00	0	0.00	517,330	46.54
	Entergy Texas	0	0.00	0	0.00	0	0.00	0	0.00
	Southwest LA Coop.	0	0.00	19	0.28	0	0.00	19	0.02
	Nevada Power	0	0.00	0	0.00	0	0.00	0	0.00
	Mississippi Power	0	0.00	0	0.00	15	2.90	15	0.01
Utilities Comparable to FL IOUs - Financial	Alabama Power	0	0.00	1,754	0.81	961	16.33	2,715	1.22
	Appalachian Power	1,763	0.22	411	0.30	19	0.43	2,193	0.23
	Georgia Power	102	0.01	13,458	4.46	2,222	26.83	15,782	0.67
	Mississippi Power	0	0.00	0	0.00	15	2.90	15	0.01
	Public Service Co. OK	0	0.00	5	0.01	25	0.37	30	0.01
	Westar Energy, Inc.	0	0.00	0	0.00	0	0.00	0	0.00
SACE Suggested Comparable Utilities	Arizona Public Service.	517,330	52.45	0	0.00	0	0.00	517,330	46.54
	Duke Energy Carolinas	2,131	0.11	19,455	5.63	1,840	25.28	23,426	0.99
	Interstate P&L Iowa	63,231	14.25	4,723	5.94	423	12.73	68,377	12.98
	Mid American Iowa	58,243	9.35	512	0.48	280	15.83	59,035	8.07
	Xcel Colorado	0	0.00	0	0.00	0	0.00	0	0.00
FL IOUs	Florida Power & Light	11,445	0.29	26,963	5.35	276	2.06	39,684	0.88
	Gulf Power Company	8,716	2.32	5	0.01	19	6.51	8,740	2.03
	Progress Energy FL	391,551	27.02	21,121	11.28	536	20.72	413,208	25.21
	Tampa Electric Co.	50,883	8.66	3,194	4.08	185	13.02	54,262	8.13

Source: U.S. Department of Energy/Energy Information Administration, Responses to Form EIA-861, 2008.

**Table 10**  
**Heating and Cooling Degree Days by State - 2008**

**Table 10A**  
**State Cooling Degree Days**

State	Cooling Degree Days
<b>Florida</b>	<b>3,618</b>
Arizona	3,342
Texas	2,808
Louisiana	2,743
Nevada	2,425
Mississippi	2,124
Alabama	1,858
South Carolina	1,848
Oklahoma	1,691
Georgia	1,642
Arkansas	1,542
North Carolina	1,404
Tennessee	1,238
Kansas	1,151
California	1,043
Virginia	1,036
Kentucky	1,021
Missouri	1,002
New Mexico	977
Delaware	975
Maryland	944
New Jersey	730
Utah	711
Indiana	702
Nebraska	698
West Virginia	658
Illinois	640
Ohio	625
Iowa	571
Pennsylvania	559
Idaho	546
New York	540
South Dakota	498
Rhode Island	484
Connecticut	463
Michigan	366
Massachusetts	364
Minnesota	349
Oregon	335
Wisconsin	319
North Dakota	317
Washington	286
New Hampshire	245
Montana	230
Vermont	221
Colorado	218
Wyoming	207
Maine	173

**Table 10B**  
**State Heating Degree Days**

State	Heating Degree Days
North Dakota	10,129
Minnesota	8,839
Montana	8,222
Vermont	8,100
Wisconsin	8,079
Maine	8,056
South Dakota	7,996
Wyoming	7,895
New Hampshire	7,519
Iowa	7,262
Michigan	7,179
Colorado	6,802
Idaho	6,702
Nebraska	6,567
Illinois	6,525
Massachusetts	6,460
Connecticut	6,158
Utah	6,137
New York	6,042
Ohio	6,026
Indiana	5,979
Pennsylvania	5,968
Rhode Island	5,948
Washington	5,650
West Virginia	5,383
New Jersey	5,239
Oregon	5,216
Missouri	5,211
Kansas	5,108
Maryland	4,889
Kentucky	4,671
Delaware	4,646
Virginia	4,457
New Mexico	4,364
Tennessee	4,035
North Carolina	3,545
Oklahoma	3,525
Arkansas	3,522
Nevada	3,315
Georgia	3,027
South Carolina	2,849
Alabama	2,736
Mississippi	2,456
California	2,399
Arizona	1,759
Texas	1,741
Louisiana	1,566
<b>Florida</b>	<b>734</b>

Source: U.S. Department of Commerce National Oceanic and Atmospheric Administration National Environmental Satellite, Data, and Information Service; *Historical Climatology Series 5-2, Monthly State Cooling and Heating Degree Days Weighted by Population*; September 2010.

**Table 11**  
**Customer Base Per Sector as a Percent of Retail Sales - 2008**

	Name of Utility Company	Total Sales (MWh)	Customer Base as a Percent of Sales		
			Residential%	Commercial%	Industrial%
Utilities Comparable to FL IOUs - Weather	AZ Public Service	28,793,588	46.43	45.16	8.41
	Entergy Texas	15,533,487	33.76	27.94	38.29
	Southwest LA Coop.	2,097,497	73.84	16.76	9.40
	Nevada Power	21,612,520	41.83	22.26	35.87
	Mississippi Power	9,204,120	23.05	31.46	45.49
Utilities Comparable to FL IOUs - Financial	Alabama Power	55,207,195	33.29	26.72	39.99
	Appalachian Power	34,209,668	36.61	23.07	40.32
	Georgia Power	84,304,394	31.33	39.79	28.66
	Mississippi Power	9,204,120	23.05	31.46	45.49
	Public Service Co. OK	17,753,458	33.78	34.95	31.27
	Westar Energy, Inc.	9,753,196	34.99	45.26	19.74
SACE Suggested Comparable Utilities	Arizona Public Service	28,793,588	46.43	45.16	8.41
	Duke Energy Carolinas	77,246,972	35.43	35.55	29.01
	Interstate P&L Iowa	15,961,349	26.43	24.50	49.07
	Mid American Iowa	30,302,087	19.96	32.99	47.05
	Xcel Colorado	28,271,320	31.5	46.14	22.19
FL IOUs	Florida Power & Light	102,749,430	51.72	44.72	3.49
	Gulf Power Company	11,543,399	46.34	34.51	19.15
	Progress Energy FL	38,555,709	50.13	40.05	9.82
	Tampa Electric Co.	18,989,605	45.01	46.38	11.61

Source: U.S. Department of Energy/Energy Information Administration, Responses to Form EIA-861, 2008.

**Table 12**  
**Number of Customers and Customer Energy Consumption - 2008**

	Name of Utility Company	# of Customers			Consumption MWh		
		Residential	Commercial	Industrial	Residential	Commercial	Industrial
Utilities Comparable to FL IOUs - Weather	AZ Public Service	986,363	121,218	3,913	13,368,015	13,003,518	2,422,055
	Entergy Texas	347,776	44,316	4,793	5,244,889	4,340,205	5,948,393
	Southwest LA Coop.	86,258	6,811	23	1,548,912	351,462	197,123
	Nevada Power	724,942	99,081	1,653	9,041,403	4,811,449	7,751,397
	Mississippi Power	152,280	33,694	518	2,121,389	2,895,630	4,187,101
Utilities Comparable to FL IOUs - Financial	Alabama Power	1,212,244	217,241	5,885	18,379,801	14,752,778	22,074,616
	Appalachian Power	815,604	137,868	4,402	12,523,323	7,892,188	13,794,157
	Georgia Power	2,036,557	301,925	8,283	26,412,131	33,547,121	24,163,566
	Mississippi Power	152,280	33,694	518	2,121,389	2,895,630	4,187,101
	Public Service Co. OK	452,118	66,965	6,718	5,996,759	6,205,531	5,551,168
	Westar Energy, Inc.	316,326	47,212	1,214	3,412,753	4,414,769	1,925,674
SACE Suggested Comparable Utilities	AZ Public Service	986,363	121,218	3,913	13,368,015	13,003,518	2,422,055
	Duke Energy Carolinas	2,012,004	345,135	7,276	27,370,072	27,459,274	22,412,528
	Interstate P&L Iowa	443,815	79,463	3,322	4,218,254	3,910,654	7,832,441
	Mid American Iowa	622,613	106,672	1,769	6,048,254	9,996,183	14,257,650
	Xcel Colorado	1,133,153	208,122	342	8,905,338	13,044,100	6,273,298
FL IOUs	Florida Power & Light	3,992,262	504,074	13,380	53,141,214	45,945,938	3,581,316
	Gulf Power Company	374,709	54,301	292	5,348,642	3,984,160	2,210,597
	Progress Energy FL	1,449,041	187,283	2,587	19,328,406	15,441,007	3,786,296
	Tampa Electric Co.	587,602	78,242	1,421	8,546,468	8,237,603	2,204,870

Source: U.S. Department of Energy/Energy Information Administration, Responses to Form EIA-861, 2008.

**Table 13**  
**State Residential Energy Composition - 2008**

	Name of Utility Company	State	State Residential Energy Composition		
			Electric%	Gas%	Other %
Utilities Comparable to FL IOUs -Weather	AZ Public Service	Arizona	64.47	22.46	13.07
	Entergy Texas	Texas	46.45	29.20	24.35
	Southwest LA Coop.	Louisiana	68.00	26.68	5.32
	Nevada Power	Nevada	46.5	43.76	9.74
	Mississippi Power	Mississippi	62.84	24.67	12.49
Utilities Comparable to FL IOUs - Financial	Alabama Power	Alabama	76.53	23.47	9.78
	Appalachian Power	West Virginia	62.15	37.85	10.87
	Georgia Power	Georgia	63.66	36.34	7.29
	Mississippi Power	Mississippi	75.33	24.67	12.49
	Public Service Co. OK	Oklahoma	44.71	44.29	7.33
	Westar Energy, Inc.	Kansas	45.80	54.20	11.82
SACE Suggested Comparable Utilities	AZ Public Service	Arizona	77.54	22.46	13.07
	Duke Energy Carolinas	North Carolina	78.48	21.52	16.28
	Interstate P&L Iowa	Iowa	47.70	52.305	14.76
	Mid American Iowa	Iowa	47.70	52.30	14.76
	Xcel Colorado	Colorado	38.15	61.85	10.64
FL IOUs	Florida Power & Light	Florida	84.90	3.52	11.58
	Gulf Power Company	Florida	84.90	3.52	11.58
	Progress Energy FL	Florida	84.90	3.52	11.58
	Tampa Electric Co.	Florida	84.90	3.52	11.58

Source: U.S. Department of Energy/Energy Information Administration, Responses to Form EIA-861, 2008.

**Table 14**  
**KWh Revenue - 2008**

	<b>Name of Utility Company</b>	<b>KWh Revenue Per Customer Statewide (cents)</b>
Utilities Comparable to FL IOUs -Weather	AZ Public Service	9.11
	Entergy Texas	10.99
	Southwest LA Coop.	9.44
	Nevada Power	9.89
	Mississippi Power	8.99
Utilities Comparable to FL IOUs - Financial	Alabama Power	8.59
	Appalachian Power	8.00
	Georgia Power	8.84
	Mississippi Power	8.99
	Public Service Co. OK	7.81
	Westar Energy, Inc.	7.45
SACE Suggested Comparable Utilities	AZ Public Service	9.11
	Duke Energy Carolinas	7.96
	Interstate P&L Iowa	6.89
	Mid American Iowa	6.89
	Xcel Colorado	8.59
FL IOUs	Florida Power & Light	10.74
	Gulf Power Company	10.74
	Progress Energy FL	10.74
	Tampa Electric Co.	10.74

Source: U.S. Department of Energy/Energy Information Administration, Responses to Form EIA-861, 2008.

### Links to Resources

**EPA** – NAPEE - Energy Efficiency Program Best Practices:

[http://www.epa.gov/cleanenergy/documents/suca/napee\\_chap6.pdf](http://www.epa.gov/cleanenergy/documents/suca/napee_chap6.pdf)

**EPA** - NAPEE - Customer Incentives for Energy Efficiency Through Program Offerings:

[http://www.epa.gov/cleanenergy/documents/suca/program\\_incentives.pdf](http://www.epa.gov/cleanenergy/documents/suca/program_incentives.pdf)

**EPA** - Rapid Deployment Energy Efficiency Toolkit:

[http://www.epa.gov/cleanenergy/documents/suca/rdee\\_toolkit.pdf](http://www.epa.gov/cleanenergy/documents/suca/rdee_toolkit.pdf)

**ACEEE** - States Stepping Forward: Best Practices for State-Led Energy Efficiency Programs:

<http://www.aceee.org/research-report/e106>

**IEE** - Implementing Energy Efficiency: Program Delivery Comparison Study:

[http://www.edisonfoundation.net/iee/reports/IEE\\_EEProgDeliveryComparison.pdf](http://www.edisonfoundation.net/iee/reports/IEE_EEProgDeliveryComparison.pdf)

**McKinsey & Company, Inc.** - Unlocking Energy Efficiency in the U.S. Economy:

Executive Summary:

[http://www.mckinsey.com/clientservice/electricpowernaturalgas/downloads/US\\_energy\\_efficiency\\_exc\\_summary.pdf](http://www.mckinsey.com/clientservice/electricpowernaturalgas/downloads/US_energy_efficiency_exc_summary.pdf)

Full Report:

[http://www.mckinsey.com/clientservice/electricpowernaturalgas/downloads/US\\_energy\\_efficiency\\_full\\_report.pdf](http://www.mckinsey.com/clientservice/electricpowernaturalgas/downloads/US_energy_efficiency_full_report.pdf)

**EPA** - State and Regional Climate Policy Tracking:

<http://www.epa.gov/statelocalclimate/state/tracking/index.html>

**NGA** - Clean and Secure State Energy Actions:

<http://www.nga.org/Files/pdf/1008CLEANENERGY.PDF>

**DSIRE** – Database of State Incentives for Renewables and Efficiency:

<http://dsireusa.org/>

**ACEEE** - State Energy Efficiency Scorecard (requires registration for access):

<http://www.aceee.org/research-report/e107/>

**IEE** - Summary of Ratepayer-Funded Electric Efficiency Impacts, Expenditures, and Budgets:

[http://www.edisonfoundation.net/iee/issuebriefs/IEE\\_CEEUSEESummary.pdf](http://www.edisonfoundation.net/iee/issuebriefs/IEE_CEEUSEESummary.pdf)

Most Recent Update (January 2011):

[http://www.edisonfoundation.net/iee/issueBriefs/IEE\\_CEE2010\\_FINAL\\_ARupdate.pdf](http://www.edisonfoundation.net/iee/issueBriefs/IEE_CEE2010_FINAL_ARupdate.pdf)

**Pew Center on Global Climate Change** - U.S. Climate Policy Maps:

[http://www.pewclimate.org/what\\_s\\_being\\_done/in\\_the\\_states/state\\_action\\_maps.cfm](http://www.pewclimate.org/what_s_being_done/in_the_states/state_action_maps.cfm)