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June 14, 2010

Ms. Ann Cole
Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee FL 32399-0850

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COMMISSION
CLERK

Dear Ms. Cole:

RE: Gulf Power Company's DSM Plan (Docket No. 100154-EG)

As requested, attached are the original and five copies of Gulf Power Company's responses to Staff's Second Data Request in the Demand-Side Management Plan docket.

Sincerely,

Susan D. Ritenour

lw

Attachment

cc w/attach: Beggs & Lane
Jeffrey A. Stone
Florida Public Service Commission
Katherine E. Fleming
Florida Solar Energy Industry Association
Suzanne Brownless
SACE
George Cavros
Wal-Mart
Rick D. Chamberlain

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1. Please identify how many of Gulf's current DSM programs are not included in Gulf's proposed 2010 DSM plan. As part of this response, please explain why these programs are not being continued.

ANSWER:

Three programs approved in Gulf's 2005 DSM Plan are not included in the proposed 2010 DSM Plan:

- Good Cents Home/Energy Star program
- Good Cents Commercial Buildings program
- Solar for Schools

The Good Cents Home/Energy Star program is a "whole-house" energy efficiency program that requires multiple measures to be adopted in order to qualify for program participation. This program did not capture savings generated when a customer only installed one or two of the qualifying measures. In the proposed 2010 DSM Plan, Gulf has not proposed a "whole-house" program; instead the Company has proposed more specific measure-based programs that will allow Gulf to better capture all energy efficiency measure adoption as a result of increasing awareness and engagement in energy saving activities.

The Good Cents Commercial Buildings program was not included for reasons similar to those discussed above. This program required adoption of multiple measures in order to qualify for program participation. In the 2010 DSM Plan, Gulf proposes the Commercial Building Efficiency program which allows capture of measure-based savings associated with various HVAC, building envelope, and lighting improvements.

The Solar for Schools program in the 2005 DSM Plan is a voluntary customer contribution program whereby a customer can elect to pay an additional amount on their electric bill towards a fund to install small solar arrays on area schools. This program was initially operated in conjunction with the Florida Solar Energy Center's (FSEC) SunSmart schools program for teacher education, training, and data collection support. FSEC is no longer funding this program. In the 2010 DSM plan, Gulf has proposed a new Solar for Schools program that will provide up to 10KW PV systems for select schools without the need for voluntary customer contributions. In order to eliminate confusion between these two programs, Gulf has not included the original Solar for Schools program in the 2010 DSM Plan.

2. For all existing DSM programs that are being continued, please complete the chart below.

ANSWER:

See table on next page (Item No. 2, Page 2 of 2).

Year	Energy Select		Residential Geothermal (Residential Early Retirement Tier 3 & Residential Upgrade Tier 3)		Commercial Geothermal		Energy Services C/I (Custom Incentive)		RTP	
	Actual Annual Number of Program Participants (Docket No. 100154)	Projected Annual Number of Program Participants (Docket No. 100154)	Actual Annual Number of Program Participants (Docket No. 100154)	Projected Annual Number of Program Participants (Docket No. 100154)	Actual Annual Number of Program Participants (Docket No. 100154)	Projected Annual Number of Program Participants (Docket No. 100154)	Actual Annual Number of Program Participants (Docket No. 100154)	Projected Annual Number of Program Participants (Docket No. 100154)	Actual Annual Number of Program Participants (Docket No. 100154)	Projected Annual Number of Program Participants (Docket No. 100154)
2005	1156		85		3		14,079,011		4	
2006	879		86		4		684,335		3	
2007	1074		180		4		712,756		1	
2008	-115		97		3		101,841		0	
2009	234		72		14		8,740,105		0	
2010		1000		20		150		1,090,000		2
2011		1000		38		175		1,308,000		0
2012		1000		61		200		1,635,000		0
2013		1000		99		250		1,907,500		0
2014		1000		150		250		2,180,000		0
2015		1000		150		250		2,180,000		0
2016		1000		150		250		2,180,000		0
2017		1000		150		250		2,180,000		0
2018		1000		115		220		1,962,000		0
2019		1000		90		220		1,907,000		0

Footnotes:

1. The figures in this column represent the number of systems installed each year with an estimated average unit size of 11 Tons per system.
2. Proposed measurement is based upon installed tons of equipment, not upon "units" as reported in previous program years.
3. The figures in these columns do not represent individual program "participants," but instead reflect Actual Energy Savings (kWh). Participation in the Energy Services program has historically been measured in this fashion due to the nature of the program.
4. The figures in these columns do not represent individual program "participants," but instead reflect Projected Energy Savings (kWh). Participation in the Energy Services program has historically been measured in this fashion due to the nature of the program.

3. For any existing program that Gulf is projecting greater participation than has been previously realized (years 2005-2009), please explain the reason for the increase in the projection.

ANSWER:

Energy Select

The participation projections for Energy Select in the 2010 DSM Plan are intended to reflect Gulf's actual participation experience over the past five years. Given the temporary suspension of program promotion during the 2008-2009 time period, however, the projections included in the 2010 DSM Plan are actually greater than actual program participation in years 2005-2009. These projections are lower than Gulf's projections in the 2005 DSM Plan due primarily to the ongoing communication technology limitations associated with the landline telephone requirement for program participation.

Residential Geothermal

The participation projections for the Residential Geothermal Program are now reflected in the HVAC Retirement Tier 3 and HVAC Upgrade Tier 3 program measures. Gulf is not projecting any material change in participation in this program.

Commercial Geothermal

The participation projections for Commercial Geothermal are increased in the 2010 DSM Plan primarily due to elimination of the tonnage cap on eligibility for program participation. This is expected to capture some larger geothermal installations that have previously been reported under the Energy Services program.

4. For any existing program that Gulf is projecting lesser participation than has been previously realized (years 2005-2009), please explain the reason for the decrease in the projection.

ANSWER:

C/I Custom Incentive (formerly Energy Services)

Participation projections for this program are reduced primarily due to expectations of some projects previously reported under this program being captured under other new Commercial/Industrial programs. For example, savings associated with large Commercial geothermal projects will be captured under the Commercial Geothermal program in the 2010 DSM Plan.

RTP

Participation projections for this program are being reduced due to saturation of this program within the eligible customer base.

5. For all existing programs, please identify any changes to projected per customer savings energy or demand savings. As part of this response, please explain the reason for these changes.

ANSWER:

	Per Customer Savings					
	Current			Proposed		
	Annual kWh	kW Summer	kW Winter	Annual kWh	kW Summer	kW Winter
Residential Geothermal	647	0.99	-0.6			
Residential HVAC Early Retirement Tier 3				7132	1.57	1.67
Residential HVAC Upgrade Tier 3				3456	0.64	1.08
Commercial Geothermal (per avg. 11 ton system)	769	4.77	1.69			
Commercial Geothermal (per ton basis)				685	0.29	0.27

Residential Geothermal

Gulf's current approved program, Residential Geothermal, is being replaced by two new measures in the proposed DSM plan. These measures are: Residential HVAC Early Retirement Tier 3 and Residential HVAC Upgrade Tier 3.

Gulf has increased the energy and demand savings for this program due to changes in the base assumptions and higher minimum efficiency of installed equipment. The base equipment for the Early Retirement Tier 3 measure is 9 SEER with a minimum efficiency of 14 EER required for the new geothermal equipment. The base efficiency for the Upgrade Tier 3 measure is 13 SEER with a minimum efficiency of 14 EER required for the new geothermal equipment. Additionally, the savings estimates no longer weight the installation savings to reflect gas to geothermal conversions and therefore only reflect air source heat pump to geothermal upgrades.

Commercial Geothermal

Gulf changed the savings calculation methodology to capture savings on a per ton basis as opposed to an average size system. Gulf also incorporated recent experience of modeled per installation savings of actual commercial geothermal installations occurring from 2006 – 2009. The minimum efficiency for new installations eligible for this measure has been raised from 13 EER to 14 EER. Additionally, the savings estimates no longer weight the installation savings to reflect gas to geothermal conversions and therefore only reflect air source heat pump to geothermal upgrades.

6. Please clarify as to why the sum of the "annual" energy and demand savings figures reflected in the Residential table on page 1-6 of the Executive Summary of Gulf's DSM Plan does not equal the corresponding 2019 cumulative savings figures.

ANSWER:

For years 2011-2013, Gulf's proposed DSM Plan includes savings associated with the Home Energy Reporting program. This program motivates behavioral change in energy consumption. Due to the uncertainty of the long-term sustainability of these savings, Gulf did not reflect them in the cumulative savings column beyond the three years of program deployment. If, during the initial three year implementation of this program, the program results support longer-term benefit, then Gulf will reflect those savings in progress towards the cumulative goal.

7. Please complete the table below describing the contribution to peak demand Gulf expects from electric vehicles and plug in hybrid electric vehicles.

ANSWER:

Projected contribution to peak demand from EVs and PHEVs (Summer Peak kW)		
	With Energy Select Electric Vehicle Pilot	Without Energy Select Electric Vehicle Pilot
2010	57	59
2011	180	196
2012	382	434
2013	648	772

8. On page 2-5 the following statement is made: “[u]pon approval, Gulf will begin development of the cost estimates associated with these aspects of the program.” Does this statement imply that some costs are not included in Gulf’s projected residential ECCR Impacts listed on Page 1-3? If the response is yes, please provide a reasonable range for the expected rate impact associated with the discussed aspects of the program.

ANSWER:

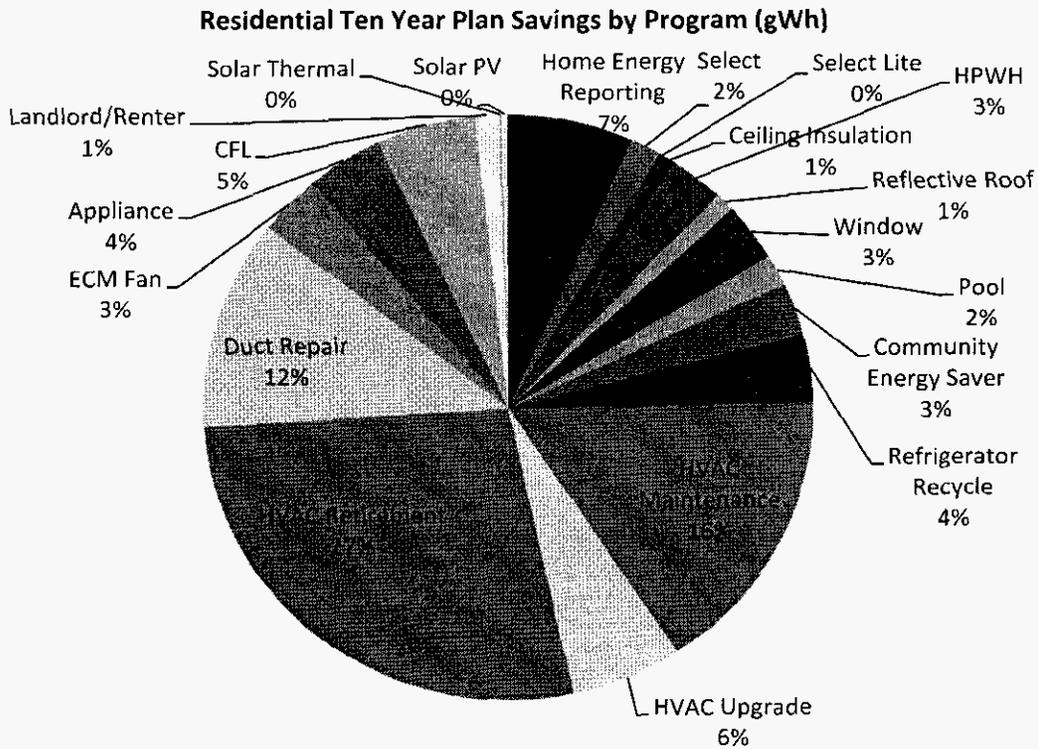
No, the statement does not imply that some costs are not included in the projected residential ECCR impacts shown on page 1-3. The projected ECCR impacts are based on cost estimates provided by Itron to achieve the Commission approved conservation goals plus estimated costs to achieve the additional savings associated with the two-year payback measures. These cost projections include estimates for expenses related to creating awareness, program marketing, and program administration. Gulf anticipates the projected ECCR impact to be inclusive of costs associated with the Residential Audit and Education program. Upon approval of Gulf’s proposed DSM Plan, the specific cost estimates associated with these aspects of the program will be developed in preparation for the upcoming 2011 ECCR projection filing.

9. Please refer to the chart on page 1-7.

- a. Please provide percentage values for each entry on the chart.
- b. Please provide a similar chart, including percentage values, describing the summer demand savings (MW) expected.
- c. Please provide a similar chart, including percentage values, describing the winter demand savings (MW) expected.

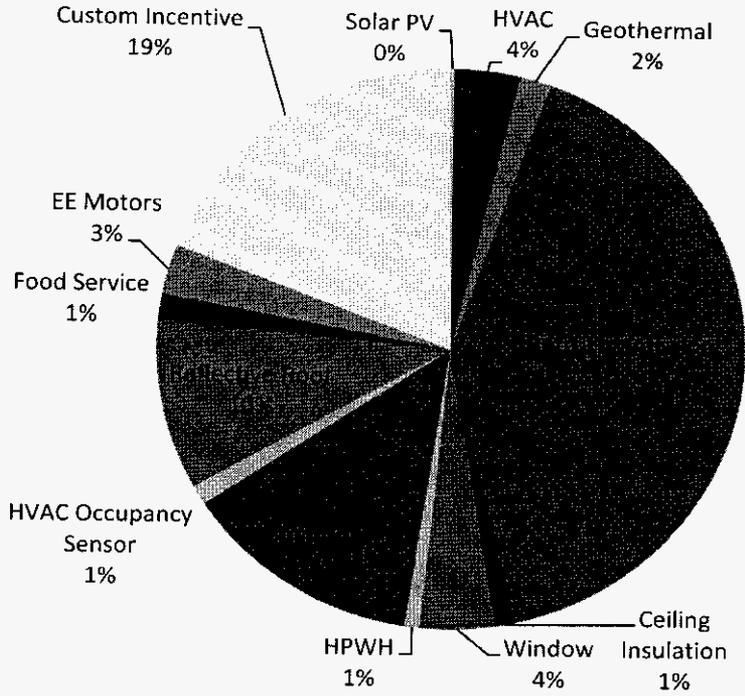
ANSWER:

a.

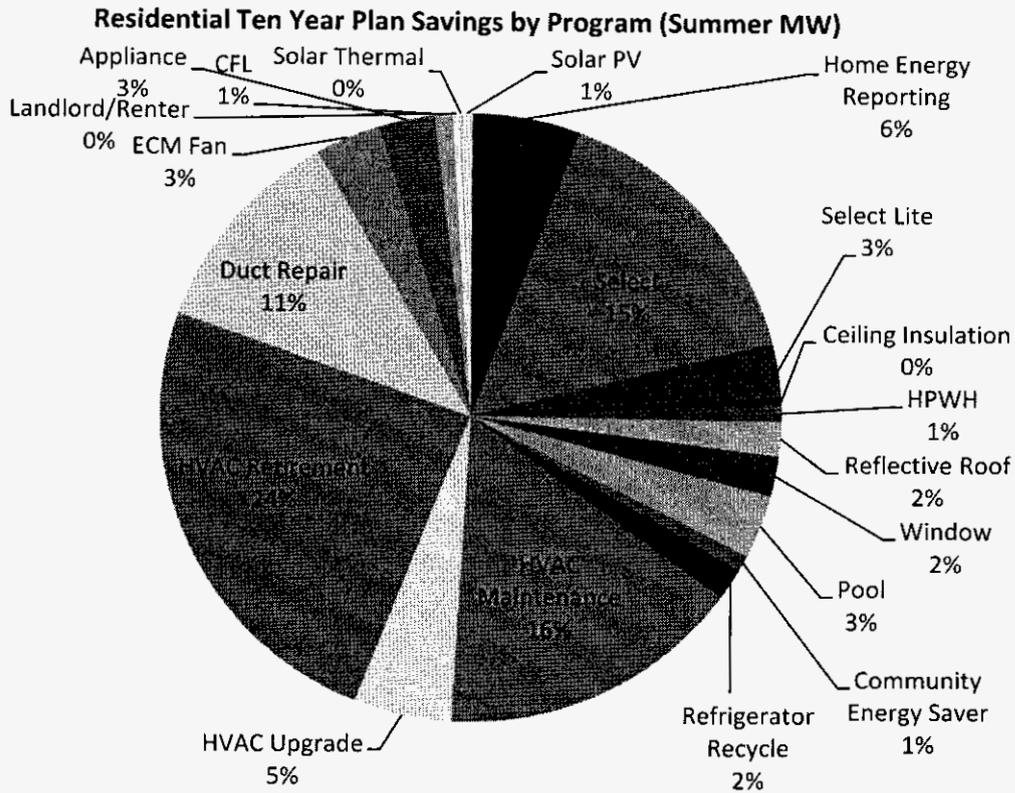


a.

Commercial/Industrial Ten Year Plan Savings by Program (gWh)

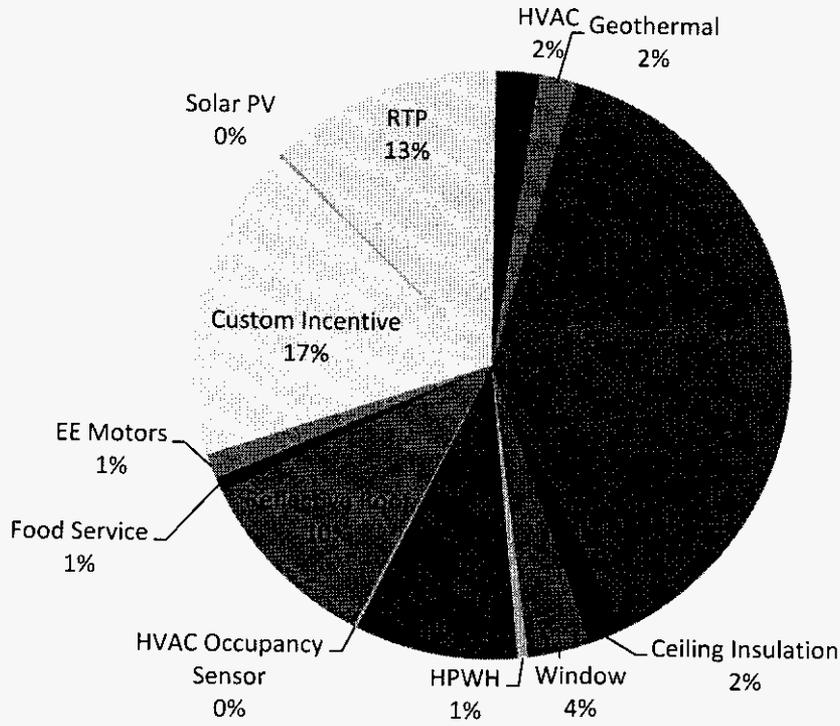


b.

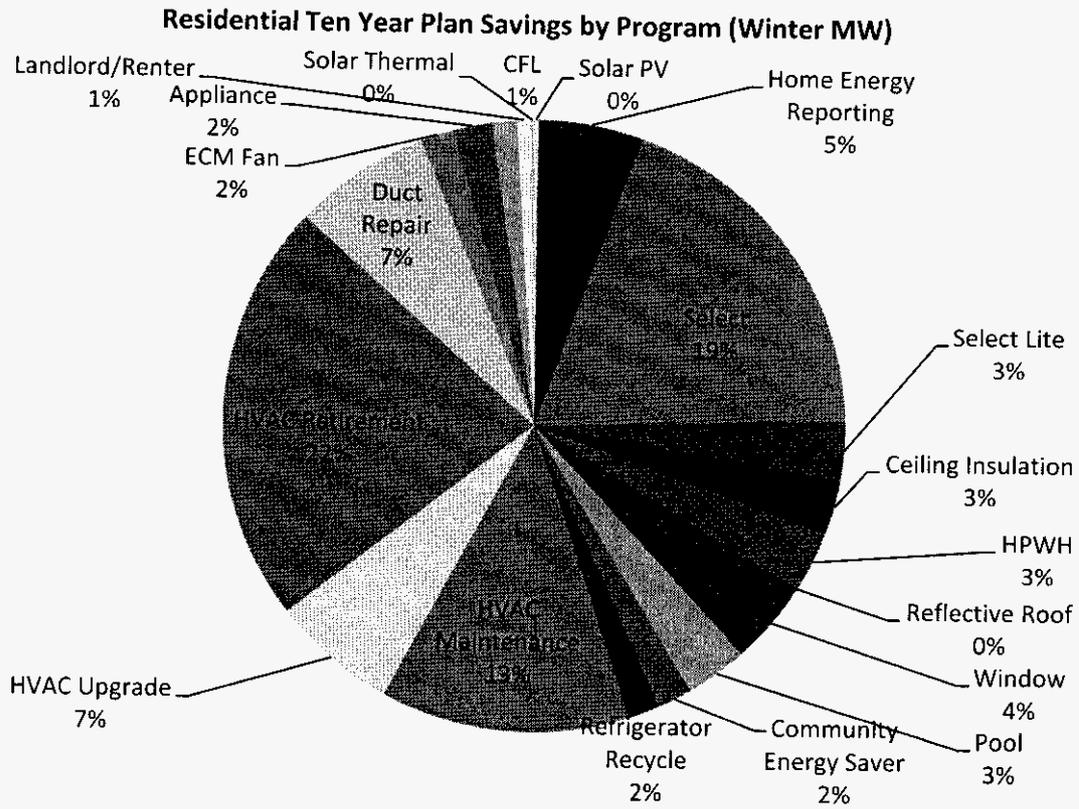


b.

Commercial/Industrial Ten Year Plan Savings by Program (Summer MW)

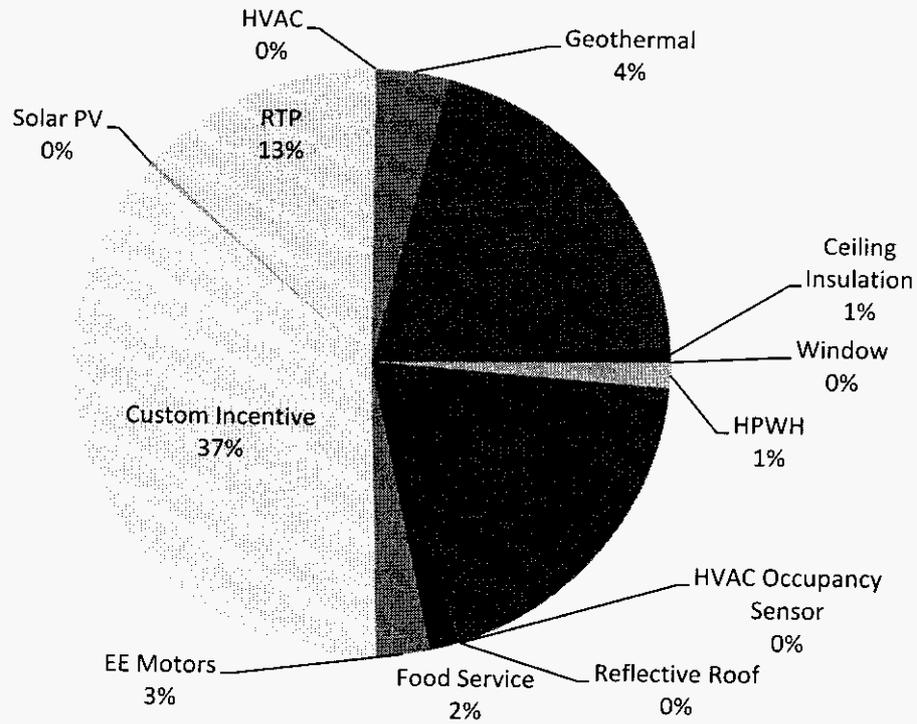


C.



C.

Commercial/Industrial Ten Year Plan Savings by Program (Winter MW)



10. Please explain or describe how Gulf's proposed 2010 DSM plan addresses incompatibilities associated with communication technology.

ANSWER:

Gulf's 2010 DSM plan addresses the incompatibilities associated with communication technology, namely the landline telephone requirement for participation in the Energy Select program, in multiple ways.

First, Gulf is introducing a variant of the traditional Energy Select program, Energy Select Lite, as a way to increase the availability of a price-responsive demand response program to customers who do not have a landline telephone. The Energy Select Lite program will utilize broadband internet connectivity to communicate critical price signals to customers instead of the landline telephone.

In addition, Gulf continues working with its technology partner in developing the latest version of the Energy Select product that will utilize the Company's AMI network as its communication system. Once the deployment of the AMI network and associated metering equipment is completed, this will allow two-way communication to each meter in Gulf's service area greatly increasing the availability of Energy Select to our customers.

11. In Docket No. 080410, Gulf witness Floyd, discussed Gulf's need to diversify its DSM programs. Please discuss the steps Gulf has taken in order to diversify its DSM programs.

ANSWER:

Gulf's 2010 DSM Plan represents the largest expansion of DSM in the Company's history. In development of the 2010 DSM Plan, numerous new programs were included in an effort to diversify the Plan and to reduce the dependence on any one program for overall goal achievement. Gulf's 2010 DSM Plan contains 25 programs incorporating 55 energy savings measures compared to 10 programs incorporating 12 measures in the 2005 DSM Plan.

In addition, Gulf's 2010 DSM Plan includes programs targeted at low-income customers, renters, and quick payback measures like CFL's. These programs are designed to allow Gulf to reach a larger population of customers for participation in energy efficiency and conservation programs. The 2010 Plan also includes incentive-based programs for solar thermal water heating and solar photovoltaic (PV) to increase the deployment of renewable technologies in the residential and commercial sector.

12. Gulf utilized a variety of sources in order to develop its kW demand and kWh energy savings for several of its proposed programs. Please explain or describe how these sources were used (i.e. weighting).

ANSWER:

Gulf used measure savings data from the Itron study, computer-based engineering modeling software, and actual program performance data gathered by Gulf Power or its energy efficiency program contractors to develop the measure energy and demand savings.

Gulf utilized actual program performance data from Gulf's own experience or from the experience of its program contractors whenever this data was available. Energy Select is an example of a program utilizing this source of savings data. For measures lending themselves to engineering modeling such as ceiling insulation and high performance windows, this method was used. For other measures like ENERGY STAR appliances and hot water pipe insulation, Gulf relied upon measure savings data from the Itron study.

Gulf only utilized one of these sources of savings data in evaluation of each measure, therefore no weighting between multiple sources was utilized.

13. Please explain or describe the computer based engineering model used by Gulf in its evaluation of kW demand and kWh energy savings.

- a. Please state whether this engineering model is used by other utilities, in Florida, for the same purposes.

ANSWER:

Gulf Power utilizes two different engineering models for the simulation of kW demand and kWh energy use in residential and commercial buildings. These models are described below as follows:

Residential

For residential applications, Wrightsoft Corporation's Right-Suite Universal modules are utilized to model home heating and air conditioning load and energy consumption. The Right-J module uses the Air Conditioning Contractors of America (ACCA) Manual J (8th Edition) Residential Load Calculation procedure to determine heat loss and heat gain on the home. The load calculation is utilized for proper equipment sizing and selection and the Right-Energy module develops a detailed energy simulation for the home.

The Right-Energy module utilizes an 8760 hour simulation method to model building heat transfer, solar gain, thermal mass and equipment efficiency in determining the energy consumption and demand profile of the entire home. Individual equipment components can be changed and differenced from a base case to determine specific operating characteristics including expected annual energy consumption and peak demand.

Commercial

For commercial applications, Gulf utilizes an internally developed computer based engineering modeling software called EnerSIM. EnerSIM, which is also used by Gulf Power's sister companies (Alabama Power, Georgia Power and Mississippi Power), is an hourly building energy simulation model used to predict energy consumption in buildings based on construction characteristics: insulation, occupancy, orientation, local weather, etc., and was used to generate peak demands and energy usage profiles for weather-sensitive end-uses. EnerSim has been certified and approved by the US Department of Energy and is listed on their website as a "Qualified Software."

- a. Gulf Power is not familiar with the modeling tools utilized by other Florida utilities.