

State of Florida



# Public Service Commission

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TALLAHASSEE, FLORIDA 32399-0850

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

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**DATE:** July 9, 2015

**TO:** Office of Commission Clerk (Stauffer)

**FROM:** Division of Engineering (Ellis, Graves) *SBB POE REG N PV*  
Division of Economics (S. Brown, Gilbert) *dec*  
Office of the General Counsel (Tan) *Tan*

**RE:** Docket No. 150086-EG – Petition for approval of demand-side management plan of Gulf Power Company.

**AGENDA:** 07/21/15 – Regular Agenda – Proposed Agency Action – Interested Persons May Participate

**COMMISSIONERS ASSIGNED:** All Commissioners

**PREHEARING OFFICER:** Administrative

**CRITICAL DATES:** None

**SPECIAL INSTRUCTIONS:** Staff recommends the Commission simultaneously consider Docket Nos. 150081-EG, 150083-EG, 150085-EG, 150086-EG, 150087-EG, 150088-EG, and 150089-EG.

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### Case Background

By Order No. PSC-14-0696-FOF-EU, the Commission established annual numeric demand-side management (DSM) goals for Gulf Power Company (Gulf) for the period 2015 through 2024.<sup>1</sup> The DSM goals were established for both Gulf's residential and commercial/industrial customer

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<sup>1</sup>FPSC Order No. PSC-14-0696-FOF-EU, Docket No. 130202-EI, Commission review of numeric conservation goals (Gulf Power Company) issued December 16, 2014.

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classes for three categories: summer peak demand, winter peak demand, and annual energy consumption.

Rule 25-17.0021(4), Florida Administrative Code (F.A.C.), requires a utility to file DSM programs for Commission approval no later than 90 days from when goals are established. On March 16, 2015, Gulf filed a petition requesting approval of its DSM Plan. As part of this filing, Gulf provided a cost-effectiveness analysis of the proposed programs pursuant to Rule 25-17.008, F.A.C.

On May 7, 2015, the Southern Alliance for Clean Energy (SACE) petitioned to intervene.

The Commission has jurisdiction over this matter pursuant to Sections 366.80 through 366.83 and 403.519, Florida Statutes (F.S.), collectively known as the Florida Energy Efficiency and Conservation Act (FEECA).

## Discussion of Issues

**Issue 1:** Is Gulf Power Company's DSM Plan projected to meet the annual numeric conservation goals established by the Commission in Order No. PSC-14-0696-FOF-EU?

**Recommendation:** Yes. Gulf's DSM Plan is cost-effective based upon the Rate Impact Measure (RIM) test and results in a net decrease in ratepayers' monthly rates. Gulf's DSM Plan is projected to meet or exceed the annual goals set by the Commission in Order No. PSC-14-0696-FOF-EU.

Staff additionally recommends that Gulf be allowed to recover expenditures, capped at \$408,000, associated with its proposed residential time of use pilot program through the ECCR. Following December 31, 2017, the termination date, Gulf should provide the Commission with its evaluation of the pilot program.

The Commission should approve the programs contained in Gulf's DSM Plan. In addition, the Commission should allow Gulf to file for cost recovery of the programs in the Energy Conservation Cost Recovery (ECCR) clause proceeding. Gulf, however, must demonstrate that its expenditures to implement these programs are reasonable and prudent in order to recover the expenditures through the ECCR clause. Staff recommends that Gulf may not discontinue its DSM programs or change its programs' rebate levels without seeking formal Commission approval.

Finally, staff further recommends that Gulf file its administrative program standards for all programs within 30 days of the Consummating Order being issued in this docket and that the Commission grant staff administrative authority to review and approve these standards. (Graves)

**Staff Analysis:** The criteria used to review the appropriateness of DSM programs are: (1) whether the program advances the policy objectives of FEECA and its implementing rules; (2) whether the program is directly monitorable and yields measurable results, and 3) whether the program is cost-effective.<sup>2</sup> Staff has reviewed Gulf's DSM Plan, including its demand and energy savings, cost-effectiveness, and rate impact. The resulting demand and energy savings appear to meet the goals established by the Commission in Order No. PSC-14-0696-FOF-EU. The programs that staff recommends should be counted towards Gulf's goals appear to be directly monitorable and measurable. Lastly, Gulf's DSM Plan as a whole appears to be cost-effective and will reduce customer bills associated with conservation.

### Description of DSM Plan

Gulf's DSM Plan contains 11 programs. A complete list of the programs and a brief description of each can be found in Attachment A. Of the 11 programs, six are residential, four are commercial/industrial, and one is a pilot program. Gulf is proposing the addition of one new program as well as the continuation of many existing programs. Gulf is also proposing to discontinue several programs that are no longer cost-effective. Table 1-1 below summarizes Gulf's proposed programs and the status (existing, modified, or new) of each program. Table 1-1

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<sup>2</sup> FPSC Order No. 22176, Docket No. 890737-PU, Implementation of Section 366.80-.85, Florida Statutes, Conservation Activities of Electric and Natural Gas Utilities, issued November 14, 1989.

also includes Gulf’s four solar pilot programs which are set to expire on December 31, 2015, and the Company’s Conservation Demonstration and Development program which is a research and development program.

**Table 1-1  
 Gulf DSM Plan Program Listing**

Program Name	Program Status		
	Existing	Modified	New
<b>Residential Programs</b>			
Residential Energy Audit and Education	x		
Community Energy Saver	x		
Residential Custom Incentive	x		
HVAC Efficiency	x	x	
Residential Building Efficiency			x
Energy Select	x		
<b>Commercial/Industrial Programs</b>			
Commercial/Industrial Energy Audit	x	x	
HVAC Retrocommissioning	x	x	
Commercial Building Efficiency	x	x	
Commercial/Industrial Custom Incentive	x		
<b>Other Programs</b>			
Conservation Demonstration & Development	x		
Residential Time of Use Rate (Pilot)			x
<b>Solar Pilot Programs<sup>3</sup></b>			
Solar for Schools	x		
Solar Thermal Water Heating	x		
Solar PV	x		
Solar Thermal Water Heating for Low-Income	x		

Source: Gulf DSM Plan Filing

Gulf is proposing modifications to several of its existing programs. Gulf has modified several programs by reducing the level of incentive offered. These programs include the Company’s HVAC Efficiency, HVAC Retrocommissioning, and Commercial Building Efficiency programs. The reduced incentive levels increase the cost-effectiveness of these programs. Gulf’s Residential Building Efficiency is a new program that contains existing measures.

Gulf’s newly proposed pilot program, listed under Other Programs in Table 1-1 above, combines a residential time of use rate with a demand responsive programmable thermostat. The pilot program will provide residential customers the opportunity to use customer-owned equipment to

<sup>3</sup> Gulf’s Pilot Programs are set to expire on December 31, 2015, pursuant to FPSC Order No. PSC-14-0632-FOF-EG.

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take advantage of a variable pricing structure with a critical peak credit component. The variable pricing structure will provide customers an opportunity to pay a lower price for electricity 85 percent of the time. The pilot program also offers customers a per event credit for allowing their thermostat to automatically reduce the HVAC equipment load during a critical event period.

Gulf estimates that the total costs of the Residential Time of Use pilot program will be no more than \$408,000. In order to control program expenses the pilot will be allowed for up to 400 residential customers. Gulf's proposed rate schedule for the pilot program states that the rate schedule shall terminate on December 31, 2017, unless extended by order of the Commission. At the conclusion of the pilot program Gulf will complete an evaluation of program results, which will determine the success of the pilot and future implementation of the time of use rate.

Based on Gulf's filing, staff concludes that its proposed Residential Time of Use pilot project will allow the company an opportunity to collect data to evaluate customers' response to a variable price rate with customer-owned equipment. Staff would recommend that the Gulf's expenditures be capped at the company's estimated \$408,000. Staff would also recommend that Gulf provide the Commission with its evaluation of the pilot program following the termination date.

### ***Audit Programs***

In accordance with Rule 25-17.003, F.A.C., Gulf will continue to offer energy audits for each sector, residential and commercial/industrial. Gulf's audit programs have no savings attributed to them, but are generally required for participation in other DSM programs. Both of the audit programs offered by Gulf are free to the participant, and potentially identify ways for participants to reduce bills through free or low cost measures.

### ***Comparison of DSM Plan to Goals***

Based upon Gulf's filings the DSM Plan meets or exceeds each of the established goals. The projected savings associated with the Commission's established goals and the company's proposed DSM Plan are summarized in Table 1-2 and Table 1-3 below.

**Table 1-2  
 Gulf Residential Sector Goals vs. DSM Plan**

Year	Summer (MW)		Winter (MW)		Annual Energy (GWh)	
	Goal	DSM Plan	Goal	DSM Plan	Goal	DSM Plan
<b>2015</b>	2.3	4.8	1.3	3.6	2.3	5.5
<b>2016</b>	3.2	4.7	1.8	3.5	3.2	5.5
<b>2017</b>	4.1	5.0	2.3	3.6	4.2	6.1
<b>2018</b>	5.0	5.5	2.9	3.8	5.1	7.1
<b>2019</b>	5.9	6.0	3.4	5.3	6.0	8.2
<b>2020</b>	6.7	6.8	3.8	6.4	6.8	9.3
<b>2021</b>	7.5	7.5	4.3	7.4	7.6	10.1
<b>2022</b>	8.1	8.2	4.6	8.3	8.3	10.9
<b>2023</b>	8.8	8.8	5.0	9.3	8.9	11.5
<b>2024</b>	9.3	9.3	5.3	10.3	9.5	12.0
<b>Total<sup>4</sup></b>	<b>60.9</b>	<b>66.7</b>	<b>34.7</b>	<b>61.5</b>	<b>61.9</b>	<b>86.1</b>

Source: FPSC Order No. PSC-14-0632-FOF-EG, Gulf’s DSM Plan Filing

**Table 1-3  
 Gulf Commercial/Industrial Sector Goals vs. DSM Plan**

Year	Summer (MW)		Winter (MW)		Annual Energy (GWh)	
	Goal	DSM Plan	Goal	DSM Plan	Goal	DSM Plan
<b>2015</b>	0.3	2.0	0.1	0.1	0.8	2.0
<b>2016</b>	0.4	2.1	0.1	0.1	1.2	2.1
<b>2017</b>	0.5	2.2	0.1	0.2	1.5	2.2
<b>2018</b>	0.6	2.3	0.2	0.2	1.8	2.3
<b>2019</b>	0.7	2.3	0.2	0.2	2.2	2.3
<b>2020</b>	0.8	2.5	0.2	0.2	2.5	2.5
<b>2021</b>	0.9	2.7	0.2	0.3	2.7	2.7
<b>2022</b>	0.9	3.0	0.3	0.3	3.0	3.0
<b>2023</b>	1.0	3.2	0.3	0.3	3.2	3.2
<b>2024</b>	1.1	3.5	0.3	0.4	3.4	3.5
<b>Total<sup>5</sup></b>	<b>7.2</b>	<b>25.8</b>	<b>2.0</b>	<b>2.2</b>	<b>22.3</b>	<b>25.8</b>

Source: FPSC Order No. PSC-14-0632-FOF-EG, Gulf’s DSM Plan Filing

A majority of Gulf’s residential seasonal peak demand goals and annual energy goals are met through the company’s HVAC Efficiency Program and its Energy Select Program. Gulf’s

<sup>4</sup> Totals may not equal due to rounding.

<sup>5</sup> Totals may not equal due to rounding.

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Energy Select Program accounts for more than 50 percent of the company's estimated residential program costs.

For commercial/industrial goals, the majority of seasonal peak demand savings and annual energy savings are projected to be achieved through the company's Commercial Building Efficiency Program which includes an incentive designed to encourage Commercial/Industrial customers to increase existing ceiling or roof insulation above conditioned spaces. Excluding costs associated with Commercial/Industrial audits, Gulf's Commercial Building Efficiency Program accounts for more than 85 percent of the company's estimated Commercial/Industrial program costs.

The values presented above are projections based upon participation rates which may or may not occur. Gulf will be responsible for monitoring actual participation rates and seeking Commission action if necessary to modify, add, or remove programs. If Gulf is unable to meet the Commission's goals, the company may be subject to appropriate action by the Commission, up to and including financial penalties.

Section 366.82(10), F.S., requires that the Commission to provide an annual report (FEECA Report) to the Governor and Legislature concerning the progress of each FEECA utility towards meeting its established goals. Rule 25-17.0021(5), F.A.C., requires that Gulf submit an annual report that summarizes the achieved results of its DSM Plan no later than March 1 of each year. Staff will continue to monitor and report the actual amount of Gulf's DSM savings each year, on an annual and cumulative basis, as part of the FEECA Report.

### **Cost-Effectiveness Review**

Pursuant to Rule 25-17.008, F.A.C., Gulf provided a cost-effectiveness analysis of its proposed programs using the RIM test, the Total Resource Cost (TRC) test, and the Participants test. While the Commission in Order No. PSC-14-0696-FOF-EU established goals based on the RIM test, staff reviewed the results for each test. Staff addresses the assumptions associated with Gulf's avoided costs and program savings below.

#### ***Avoided Cost***

Gulf's DSM Plan filing included cost-effectiveness analyses based on assumptions that have been updated since the goal-setting proceeding. Staff requested that the company provide cost-effectiveness results based on assumptions consistent with those used in the goal-setting proceeding. Consideration of the avoided costs from the goal-setting proceeding is consistent with Commission's evaluation of previous DSM Plans.

#### ***Program Savings***

Seasonal peak demand and annual energy savings for Gulf's programs were also reviewed. The energy and demand savings associated with Gulf's proposed programs were developed using a variety of sources, including: measure savings data from the ITRON study that was used in the 2009 goals proceeding; computer-based engineering modeling software; and actual program performance data gathered by Gulf or its energy efficiency program contractors. With the exception of the Community Energy Saver program, all of the measures' demand and energy savings in the DSM Plan are the same as those utilized in the goal-setting docket. For the Community Energy Saver program, ITRON study measure savings were utilized for all of the

measures except the compact fluorescent light bulbs (CFL). For the CFLs, Gulf utilized a calculation to account for the expected savings relative to the replacement of operational incandescent bulbs as opposed to replacement of burned out bulbs. In accordance with Rule 25-17.003(10), F.A.C., Gulf plans to conduct inspections of at least 10 percent of program installations to verify that the installations were performed and the installations meet quality standards.

**Cost-Effectiveness Test Results**

All proposed programs with allocated demand and energy savings pass both the RIM and Participants tests with the exception of one program which targets low-income customers. These tests consist of the benefits divided by the costs, as defined by Rule 25-17.008, F.A.C., so that programs are determined to be cost-effective if the test results in a ratio greater than 1.00. The only program to fail the RIM test is the company’s Community Energy Saver Program which targets low-income customers. This program does however pass the TRC test, and responds to the requirements to assist and educate low-income customers established in Order No. PSC-14-0696-FOF-EU. Overall, Gulf’s DSM Plan passes the RIM test on a combined basis. The cost-effectiveness test results for each program are summarized in Table 1-4 below.

**Table 1-4  
 Gulf Cost-Effectiveness Test Results by Program**

<b>Program Name</b>	<b>RIM Test</b>	<b>TRC Test</b>	<b>Participants Test</b>
<b>Residential Programs</b>			
Community Energy Saver	0.62	25.93	3.94
Residential Custom Incentive	N/A	N/A	N/A
HVAC Efficiency Program	1.02	4.53	3.28
Residential Building Efficiency	1.10	2.36	2.48
Energy Select	1.42	99.90	3.01
<b>Commercial/Industrial Programs</b>			
HVAC Retrocommissioning	1.08	5.27	4.35
Commercial Building Efficiency	1.27	2.09	2.54
Commercial/Industrial Custom Incentive	N/A	N/A	N/A

Source: Gulf Response to a Staff Data Request

Due the customized nature of Gulf’s Residential Custom Incentive Program, benefits are determined on a case by case basis with benefits capped at a RIM of 1.00 and limited to a predetermined payback period.

To perform the calculations in Table 1-4 above, Gulf estimated the administrative costs for implementing the proposed programs, and added it as a cost to the relevant tests. These administrative costs are not final. Moreover, the Commission’s acceptance of these test values would not signify that these values are reasonable for cost recovery purposes. Gulf should continue to explore ways to reduce the administrative costs associated with implementing its DSM Plan. Gulf must demonstrate that the administrative costs associated with implementing its



DSM programs are reasonable and prudent as part of its annual cost recovery filings in the ECCR clause proceeding.

**Rate Impact**

If approved, the cost to implement the programs of Gulf’s DSM Plan, would flow through to the ratepayers through the ECCR clause proceeding. In this annual docket, Gulf would file for recovery of incentives, equipment and administrative costs. The ECCR clause represents a monthly bill impact to customers as part of the non-fuel cost of energy and/or demand charges on their bill. Much like investments in generation, transmission, and distribution, investments in energy efficiency have an immediate rate impact, but produce savings over time.

Overall, the ECCR impact of Gulf’s DSM Plan is a small portion of a customer’s bill, and is anticipated to be less than the 2014 ECCR rate for every year, with the exception of 2015 for which the company’s ECCR rates have already been set. Table 1-5 below is an estimate of the monthly bill impact of the ECCR clause on a typical residential and commercial/industrial customer over a ten-year period. The estimated ECCR factors are based upon the participation rates and administrative costs used in the cost-effectiveness analysis discussed above, and are not final.

**Table 1-5  
 Gulf Estimated Monthly Bill Impact of Proposed DSM Plan**

Year	Residential Customer (1200 kWh/mo)		Commercial/Industrial Customer (400,000 kWh/mo, 1000 kW)	
	Bill Impact (\$/mo)	Savings From 2014	Bill Impact (\$/mo)	Savings From 2014
2014	\$2.71	n/a	\$836.00	n/a
2015	\$3.11	(\$0.40)	\$960.00	(\$124.00)
2016	\$1.39	\$1.32	\$408.51	\$427.49
2017	\$1.40	\$1.32	\$411.77	\$424.23
2018	\$1.43	\$1.28	\$422.22	\$413.78
2019	\$1.49	\$1.22	\$442.32	\$393.68
2020	\$1.60	\$1.11	\$476.02	\$359.98
2021	\$1.70	\$1.01	\$505.37	\$330.63
2022	\$1.80	\$0.91	\$532.10	\$303.90
2023	\$1.88	\$0.83	\$556.95	\$279.05
2024	\$1.97	\$0.74	\$580.49	\$255.51

Source: Gulf response to staff data request

Gulf’s DSM Plan includes a variety of programs that would allow participation by a wide spectrum of customer groups, including low-income, residential, and commercial/industrial customers. By participating in a DSM program, customers should be able to reduce their bills, potentially eliminating the additional cost associated with Gulf’s DSM Plan. In addition, since the Commission approved goals based on the RIM Test, which considers the impact of lost revenues, even customers who do not participate in a DSM program should see a benefit of lower rates.

### **Other Concerns**

On May 7, 2015, the Southern Alliance for Clean Energy (SACE) petitioned to intervene in this proceeding. In its Petition for Intervention, SACE posed three disputed issues: 1) do the company's DSM programs meet the requirements of the Commission's goal-setting order, 2) are the company's DSM programs designed in the most efficient way to maximize customer energy savings, and 3) is the company's evaluation, measurement and verification process adequate to capture empirical data on so called free-ridership.

With regard to SACE's first disputed issue and as discussed above, the projected demand and energy savings from Gulf's DSM Plan appears to meet the goals established by the Commission in Order No. PSC-14-0696-FOF-EU. Addressing SACE's second disputed issue, SACE's issue only addresses energy savings, and not seasonal peak demand. DSM programs should not focus solely on maximizing energy savings. Rather, programs should be a method for delivering the annual goals for seasonal peak demand and energy savings in a cost-effective manner, in order to decrease fuel consumption and to avoid or defer the construction of additional generating, transmission, and distribution facilities. As noted above, it is Gulf's burden to demonstrate that the administrative costs associated with implementing its DSM programs are reasonable and prudent in its annual cost recovery filings in the ECCR clause.

SACE's third disputed issue addresses the methodology used to determine free-ridership. In the goal-setting proceeding, the Commission established a two-year payback methodology to account for free riders, but that educational and low income programs, including those with measures with a less than two year payback, were encouraged. In its Order establishing DSM goals, the Commission stated:

In response to Rule 25-17.0021(3), F.A.C., and Order No. PSC-13-0386-PCO-EU, the FEECA utilities filed a base case with a two-year payback to account for free riders. We approved goals based on a two-year payback criterion to identify free riders since 1994 and we find it appropriate to continue this policy. Each utility should continue to broadly educate all customer groups on energy efficiency opportunities. When the FEECA utilities file their DSM implementation plans, each plan should address how the utilities will assist and educate their low income customers, specifically with respect to the measures with a two-year or less payback.<sup>6</sup>

Gulf has incorporated the two-year payback methodology into the design of its DSM Plan, and only includes savings from measures with a less than two-year payback in its residential low-income programs.

SACE's disputed issue focuses on the collection of additional data associated with Gulf's DSM Plan regarding the adoption rates of measures in order to determine free ridership. This data collection, typically done through surveys sent to customers, would result in additional administrative cost with no additional seasonal peak demand or annual energy savings.

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<sup>6</sup> FPSC Order No. PSC-14-0696-FOF-EU, Docket No. 130202-EI, Commission review of numeric conservation goals (Gulf Power Company), issued December 16, 2014, p. 27.

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### **Conclusion**

Gulf's DSM Plan is cost-effective based upon the Rate Impact Measure (RIM) test and results in a net decrease in ratepayers' monthly rates. Gulf's DSM Plan is projected to meet or exceed the annual goals set by the Commission in Order No. PSC-14-0696-FOF-EU.

Staff additionally recommends that Gulf be allowed to recover expenditures, capped at \$408,000, associated with its proposed residential time of use pilot program through the ECCR. Following December 31, 2017, the termination date, Gulf should provide the Commission with its evaluation of the pilot program.

The Commission should approve the programs contained in Gulf's DSM Plan. In addition, the Commission should allow Gulf to file for cost recovery of the programs in the Energy Conservation Cost Recovery (ECCR) clause proceeding. Gulf, however, must demonstrate that its expenditures to implement these programs are reasonable and prudent in order to recover the expenditures through the ECCR clause. Staff recommends that Gulf may not discontinue its DSM programs or change its programs' rebate levels without seeking formal Commission approval.

Finally, staff further recommends that Gulf file its administrative program standards for all programs within 30 days of the Consummating Order being issued in this docket and that the Commission grant staff administrative authority to review and approve these standards.

**Issue 2:** Should this docket be closed?

**Recommendation:** Yes. If no person whose substantial interests are affected by the proposed agency action files a protest within 21 days of the issuance of the PAA Order, a Consummating Order should be issued. If the Commission approves any programs, the programs should become effective on the date of the Consummating Order. If a protest is filed within 21 days of the issuance of the PAA Order, the programs should not be implemented until after the resolution of the protest. However, the docket should remain open for staff's verification that the program standards have been filed by the company and approved by staff. When the PAA issues become final and the program standards have been approved, this docket should be closed administratively. (Tan)

**Staff Analysis:** If no person whose substantial interests are affected by the proposed agency action files a protest within 21 days of the issuance of the PAA Order, a Consummating Order should be issued. If the Commission approves any programs, the programs should become effective on the date of the Consummating Order. If a protest is filed within 21 days of the issuance of the PAA Order, the programs should not be implemented until after the resolution of the protest. However, the docket should remain open for staff's verification that the program standards have been filed by the company and approved by staff. When the PAA issues become final and the program standards have been approved, this docket should be closed administratively.

## **Gulf Power Company's 2015 DSM Programs**

### **RESIDENTIAL PROGRAMS:**

#### ***Residential Energy Audit and Education***

The Residential Energy Audit and Education Program is the primary educational program to help customers improve the energy efficiency of their new or existing home through energy conservation advice and information that encourages the implementation of efficiency measures and behaviors resulting in energy and utility bill savings. This program also increases the awareness of energy savings opportunities among Gulf's customers.

As part of Gulf's overall DSM Plan, many of the recommendations associated with this program are complemented with incentive-based programs to increase the likelihood of customer adoption. In addition to encouraging the installation of energy efficient HVAC equipment and appliances, Gulf views this program as a vehicle to promote energy efficient new home construction techniques and thermal envelope upgrades to existing homes.

#### ***Community Energy Saver Program***

The Community Energy Saver Program will implement a comprehensive package of short payback electric conservation measures at no cost to the customer. In addition to direct installation of the conservation measures, the program will educate families on energy efficiency techniques and behavioral changes to help these customers control their energy use and reduce their monthly energy bill.

Gulf and the program administrator will identify customer neighborhoods or geographical areas to employ a door-to-door implementation strategy with a coinciding informational and educational communications campaign. This program also will leverage relationships with local weatherization agencies and low-income housing providers to gain additional efficiency measure installations.

Program goals include:

- Increasing customer awareness of the amount of energy consumed and energy efficiency opportunities.
- Reducing energy use and costs on monthly utility bills.
- Installing energy efficiency items to improve comfort and reduce energy use; and identifying customer needs that might be met by other programs and leveraging opportunities with other providers such as the Low Income Home Energy Assistance Program (LIHEAP) and Weatherization Assistance Program (WAP). Gulf will administer this program through an independent, third party contractor, and will coordinate with community-based groups to target participants.
- The incentive cost per household is expected to average \$55.00.

### ***Residential Custom Incentive Program***

The Residential Custom Incentive Program is a flexible program designed to increase energy efficiency in the residential rental property sector. The rental sector presents unique challenges for adoption of energy efficiency decisions due to split incentives associated with energy efficiency investments. These split incentives arise when the property owner making the capital investment in energy efficient equipment does not realize the benefits of such investment through bill savings. In most rental agreements, the tenant or renter has responsibility for utility bill payments and thus, realizes the benefits of the energy efficient equipment investment. This situation frequently presents a barrier to adoption of energy efficient decisions, both on the part of the owner and the tenant (renter). It is the objective of this program to offer customized solutions to overcome this barrier.

This program will promote the installation of various energy efficiency measures available through other programs including HVAC, windows, appliances, etc. Depending on the individual circumstances of the rental property, additional incentives may be necessary to overcome the split-incentive barrier. This program may also promote the installation of low cost measures associated with the Community Energy Saver Program by the landlord of multi-family properties. These measures, when provided to the landlord for installation, will benefit the renter and represent one solution to the split-incentive barrier possible with this program. The program may provide other technical assistance services such as project savings evaluation as another means of overcoming this barrier. All projects considered for additional incentives under this program will be evaluated under the Commission's cost-effectiveness procedures. The primary administration duties and outreach of the program will be done by Gulf resources. A program manager will recruit potential customers to participate in this program and develop customized solutions for each property being evaluated under this program.

- The maximum total incentive offered between this and any other program will be limited to an amount which would produce a customer payback of no less than one year.

### ***HVAC Efficiency Improvement Program***

The Heating, Ventilation and Air Conditioning (HVAC) Efficiency Improvement program is designed to increase energy efficiency and improve HVAC cooling and heating system performance for both new and existing single-family, multi-family and permanently anchored manufactured homes. Since as much as half of the energy used in a home goes to cooling and heating customers can save energy and money by installing an efficient system. The maximum incentives for each measure are identified below.

- HVAC Maintenance - \$100
- HVAC Quality Installation - \$75
- Duct Repair - \$150

### ***Residential Building Efficiency***

The Residential Building Efficiency Program is designed as an umbrella efficiency program for existing and new residential customers to encourage the installation of eligible equipment and materials as a means of reducing energy and demand. The goal of the program is to increase awareness and customer demand for energy saving measures; increase availability and market penetration; and contribute toward long-term energy savings and peak demand reductions. The maximum incentives for each measure are identified below.

- High Performance Window - \$.50 per square foot

- Reflective Roof - \$400 per installation
- Energy Star Window A/C - \$25 per unit

### ***Energy Select***

The Energy Select Program is designed to increase the efficiency of energy consumption on Gulf's system. The program is an interactive energy management system that allows residential customers to program their central heating and cooling system, electric water heater and pool pump, if applicable, to automatically respond to varying prices of electricity depending upon the time of day, day of week and season. These prices are in relation to the Company's cost of producing or purchasing energy. Energy Select consists of four elements -- a price-responsive programmable thermostat and timers for a water heater and pool pump, a rate featuring four prices for electricity, a communications gateway and an online programming portal. These elements work together to enable customers to choose their own level of comfort and savings.

With this program, customers can save money by programming the largest portion of their energy purchases to occur in the lower price periods, while providing peak demand reduction benefits during the high and critical peak price periods.

## **COMMERCIAL/INDUSTRIAL PROGRAMS:**

### ***Commercial/Industrial Audit***

The commercial/industrial (C/I) audit provides an energy analysis of a commercial building or an industrial facility and its associated energy systems to identify for the customer those measures that may improve the building or facility energy efficiency.

This program is a prime tool for the Gulf Company C/I Energy Specialists to introduce customers personally to conservation measures including low or no-cost improvements or new electro-technologies to replace old or inefficient equipment. As part of Gulf's overall DSM Plan, many of the recommendations associated with this audit program are complemented with incentive-based programs to increase the likelihood of customer adoption.

The Commercial/Industrial Audit offers two types of audit services for customers. A basic Energy Analysis Audit (EAA) is provided through either an on-site survey or an on-line analysis. Additionally, a more comprehensive analysis can be provided by conducting a Technical Assistance Audit (TAA).

### ***Commercial HVAC Retrocommissioning Program***

The Commercial HVAC Retrocommissioning Program offers basic retrocommissioning at a reduced cost for qualifying installations of existing commercial and industrial customers. It is designed to diagnose the performance of the HVAC cooling unit(s) operating in commercial buildings with the support of an independent computerized quality control process. These diagnoses include refrigerant level, evaporator airflow, refrigerant metering performance, and condenser performance. Based on the results, the best course of action to bring the cooling system to its full efficiency will be attempted. The program includes air cooled and water cooled equipment – identified as A/C, heat pump, direct expansion (DX) or geothermal cooling and heating.

- The maximum incentive per participant is \$100.

### ***Commercial Building Efficiency Program***

The Commercial Building Efficiency Program is designed as an umbrella efficiency program for existing commercial and industrial customers to encourage the installation of eligible high-efficiency equipment as a means of reducing energy and demand. The goal of the program is to increase awareness and customer demand for high-efficiency, energy-saving equipment; increase availability and market penetration of energy efficient equipment; and contribute toward long-term energy savings and peak demand reductions.

The most common critical areas in commercial buildings that affect summer peak demand are the thermal efficiency of the building and HVAC equipment efficiency. The Commercial Building Efficiency Program provides requirements for these areas that exceed the Florida Model Energy code standards, and if adhered to, will help reduce energy consumption and peak kW demand.

The maximum incentives for each measure are identified below.

- Geothermal Heat Pump - \$250 per ton
- Insulation – ceiling/roof - \$0.15 per square foot
- Reflective Roof - \$0.10 per square foot

### ***Commercial/Industrial Custom Incentive***

The Commercial/Industrial Custom Incentive program is designed to establish the capability and process to offer advanced energy services and energy efficient end-use equipment to Commercial/Industrial customers. Specifically, the types of projects covered under this program would be demand reduction or efficiency improvement retrofits that are beyond the scope of other programs included in this Plan.

Examples of custom projects may include, but not be limited to, installation of Variable Frequency Drive (VFD) Controls, Energy Management Systems (EMS), chiller efficiency upgrades, desiccant and mechanical dehumidification systems, and more complex building retrocommissioning.

The Commercial/Industrial Custom Incentive program will be administered in three phases: (1) the audit; (2) the proposal; and (3) design/construction. The energy audit will be conducted under the existing FPSC approved audit program. Once the customer accepts audit recommendations, Gulf will develop a scope and incentive proposal for the project. Any incentive associated with this program will be provided upon successful installation and verification of the energy saving measures associated with the project.

- The level of incentives contemplated under this program is limited to any combination of monetary or technical assistance that brings the project payback to no less than two years.

### **RENEWABLE PILOT PROGRAMS:**

These programs are part of a five year pilot program approved by the Commission in FPSC Order No., PSC-10-0608-PAA-EG. The first four years of the five year pilot were completed under the 2010 DSM Plan. The programs described below are offered only during 2015, the last year of the five year pilot.



### ***Solar for Schools***

Gulf's Solar for Schools program will provide capital funding to supplement deployment of PV systems up to 10 kW in qualifying public education facilities served by Gulf. As partnership opportunities are made available, Gulf intends to leverage other program resources such as those provided under the Florida Solar Energy Center's (FSEC) E-Shelter program to expand the reach of the program. Gulf's program will also offer educational benefits by providing resources to enable the data collected from the installed systems to be used in the schools' energy curriculum.

### ***Solar Thermal Water Heating (STWH)***

Gulf's Solar Thermal Water Heating Program will provide residential customers an incentive to install certified STWH systems. The STWH systems to be installed will offer customers an opportunity to reduce their hot water energy needs otherwise served by natural gas or electric resistance heating. The systems operate in conjunction with a back-up natural gas or electric resistance source of hot water to ensure an uninterrupted supply of hot water to the customer.

- Gulf's Solar Thermal Water Heating Program will provide residential customers up to \$1,000 incentive to install certified STWH systems.

### ***Solar PV***

Gulf's Solar PV Program will provide Gulf residential and commercial customers an incentive to encourage the installation of a solar energy system on their home or business. Qualifying systems will be designed to offset part or all of a customer's energy needs and will help customers save money on their energy bills.

- The incentive value for the Solar PV will be up to \$2 per watt with a maximum incentive per customer of \$10,000.

### ***Solar Thermal Water Heating for Low-Income Housing***

Under this program, Gulf will facilitate the installation of STWH systems in qualifying low-income housing. Gulf anticipates funding up to fifteen low-income installations per year.

## **OTHER PROGRAMS:**

### ***Conservation Demonstration and Development***

The primary purpose of the Conservation Demonstration and Development (CDD) program is to pursue research, development, and demonstration projects designed to promote energy efficiency and conservation. This program enhances and complements the residential, commercial, and industrial conservation programs currently implemented at Gulf.

The CDD program is designed to serve as an umbrella program for the identification, evaluation, demonstration, data collection and development of new or emerging end-use technologies. Unlike most of Gulf's conservation programs, which focus on specific end-uses, the CDD program addresses a wide variety of energy applications. This program also includes on-going end-use research necessary to support energy and demand savings associated with new or emerging technologies.

### ***Residential Service Time of Use Rate Pilot***

The proposed Residential Service Time of Use (RSTOU) rate pilot will provide residential customers the opportunity to use customer-owned equipment to automatically respond and take advantage of a variable pricing structure with a critical peak credit component. In order to control program expenses and facilitate monitoring and evaluation, the pilot will be offered to a group of approximately 400 residential customers who meet the program standards. Gulf's current offering, Energy Select, is a company-owned interactive energy management system that allows residential customers to program their central heating and cooling system, electric water heater, and pool pump to automatically respond to varying prices of electricity depending on the time of day, day of week and season. The Energy Select program is very successful in achieving demand response results through use of the critical peak price tier and the associated energy management equipment. With the increased availability of Wi-Fi enabled thermostats in the marketplace, Gulf believes that demand response results can be achieved utilizing customer-owned equipment with the capability of automatic response to a critical peak notification. In order to further encourage customers to utilize a qualifying Wi-Fi enabled thermostat, the RSTOU pilot will offer customers a per event credit for allowing their thermostat to automatically reduce the HVAC equipment load during a critical event period. This option puts the customer in complete control of their energy purchase without utility owned equipment. The objective of this pilot is to measure customers' response to a variable price rate with customer owned equipment. Customers will have the ability to save money by shifting energy purchases to the lower priced periods, while providing peak demand reduction during the high and critical periods.

Based on Gulf's prior experience with time of use rates and customer feedback the Company selected a simple two tiered solution. This rate will encompass a "High" tier and a "Low" tier option with a critical peak credit component. The rate is structured for the customer to have the opportunity to pay a lower price for electricity 85 percent of the time. This should improve the customer's willingness to shift load due to the simplicity of the options.

The proposed pilot rate structure will be described in the Residential Service Time of Use (RSTOU) tariff sheet. (Attachment B)

Gulf will manage this project utilizing a project schedule to ensure the major milestones are met. Project milestones:

- Customer acquisition and pilot setup -- 6 months.
- Pilot monitoring phase -- at least 1 year.
- Analyzing data and produce reports -- 3 months.
- Finalize next steps for program extension or deletion. In the absence of a program extension, the pilot will end on the December 31, 2017.



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**Rate Schedule RSTOU  
RESIDENTIAL SERVICE – TIME-OF-USE  
Limited Availability Experimental Rate**

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**AVAILABILITY:**

Available to customers eligible for Rate Schedule RS (Residential Service). Availability is further limited to those customers selected by Gulf Power which are willing to participate in, and which meet the standards of the Company's RSTOU pilot rate study.

Service under this rate schedule shall terminate on December 31, 2017 unless extended by order of the Florida Public Service Commission.

**APPLICABILITY:**

Applicable as an alternative to Rate Schedule RS for service used for domestic purposes and electric vehicle charging at an individually metered dwelling unit suitable for year-round family occupancy containing full kitchen facilities. Service provided hereunder shall not be shared with or resold to others.

**CHARACTER OF SERVICE:**

Available for single-phase service from local distribution lines of the Company's system at nominal secondary voltage of 120/240 volts. Service shall be metered through one metering device capable of measuring electrical consumption during the various times each energy-demand charge is in effect.

**RATES:**

Base Charge:	62¢ per day
Energy-Demand Charge:	
On-Peak Period	4.585¢ per kWh
Off-Peak Period	4.585¢ per kWh

**ISSUED BY:** S. W. Connally, Jr.



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**DETERMINATION OF THE ON-PEAK PERIOD:**

The on-peak period for calendar months May through October is defined as being those hours between 1:00 p.m. and 6:00 p.m. Central Daylight Time/Central Standard Time, Monday through Friday.

The on-peak period for calendar months November through April is defined as being those hours between 6:00 a.m. and 10:00 a.m. Central Daylight Time/Central Standard Time, Monday through Friday.

**DETERMINATION OF THE OFF-PEAK PERIOD:**

All hours not included above and all hours of the observed holidays of New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day are in the off-peak period.

**MINIMUM BILL:**

In consideration of the readiness of the Company to furnish such service, no monthly bill will be rendered for less than the Base Charge.

**CRITICAL PEAK CREDIT:**

Customers who install an approved demand response compatible thermostat will be eligible to receive a credit for each critical peak event called by Gulf Power. Participation by the customer during the critical peak event is voluntary, and the customer may override the critical peak event at any time. If the customer does not override the thermostat's automated response, the customer will receive the critical peak credit. The critical peak period shall be determined at the sole discretion of Gulf Power. Each customer will be notified by electronic signal at least one-half hour before the start of the critical peak period. The credit shall not reduce the bill below the Minimum Bill as stated above.

ISSUED BY: S. W. Connally, Jr.



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**DEPOSIT:**

A deposit amounting to twice the estimated average monthly bill may be required before service is connected at designated premises. The deposit may be applied to any final bills against the Customer for service.

**TERM OF SERVICE:**

Service under this schedule shall be for a period not less than one year.

**TAX ADJUSTMENT:**

See Sheet No. 6.37

**FRANCHISE FEE BILLING:**

See Sheet No. 6.37

**FUEL CHARGE:**

See Sheet No. 6.34

**PURCHASED POWER CAPACITY COST:**

See Sheet No. 6.35

**ENVIRONMENTAL COST:**

See Sheet No. 6.36

**ENERGY CONSERVATION:**

See Sheet No. 6.38

**GROSS RECEIPTS TAX ADJUSTMENT:**

See Sheet No. 6.37

**PAYMENT OF BILLS:**

See Sheet No. 6.37

Service under this rate schedule is subject to Rules and Regulations of the Company and the Florida Public Service Commission.

**ISSUED BY:** S. W. Connally, Jr.



Section No. VI  
 Twenty-~~Second~~Third Revised Sheet No. 6.38  
 Canceling Twenty-~~First~~Second Revised Sheet No. 6.38

**RATE SCHEDULE ECC  
 COST RECOVERY CLAUSE  
 ENERGY CONSERVATION**

PAGE 1 of 1	EFFECTIVE DATE January 4, 2016
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**APPLICABILITY:**

Applicable to the monthly rate of each filed retail rate schedule under which a Customer receives service.

**DETERMINATION OF ENERGY CONSERVATION COST RECOVERY CLAUSE  
 ADJUSTMENT:**

Bills should be decreased or increased by an adjustment calculated in accordance with the formula and procedure specified by the Florida Public Service Commission designed to reflect the recovery of conservation related expenditures by the Company.

Each rate schedule shall be increased or decreased to the nearest .001 cents for each kWh of sales to reflect the recovery of conservation related expenditures by the Company. The Company shall record both projected and actual expenses and revenues associated with the implementation of the Company's Energy Conservation Plan as authorized by the Commission. The total cost recovery adjustment per kWh applicable to energy delivered will include, when applicable, a true-up with interest to prior actual costs which will be determined in accordance with the formula and procedures specified by the Florida Public Service Commission and is subject to Commission approval. Such increase or decrease shall be adjusted for taxes which are based upon revenues. The procedure for the review, approval, recovery and recording of such costs and revenues is set forth in Commission Rule 25-17.015, F.A.C.

Energy Conservation Cost Recovery Clause factors are shown below:

<u>Rate Schedule</u>	<u>Energy Conservation Cost Recovery Factor ¢/kWh</u>
RS	0.259
RSVP Tier 1	(3.000)
RSVP Tier 2	(1.621)
RSVP Tier 3	6.270
RSVP Tier 4	60.757
<u>RSTOU On-Peak</u>	<u>18.500</u>
<u>RSTOU Off-Peak</u>	<u>(3.150)</u>
<u>RSTOU Critical Peak Credit</u>	<u>\$5.00 per Event</u>
GS	0.254
GSD, GSDT, GSTOU	0.249
LP, LPT	0.240
PX, PXT, RTP, SBS	0.235
OS-I/II	0.224
OS-III	0.242

Service under this rate schedule is subject to Rules and Regulations of the Company and the Florida Public Service Commission.

ISSUED BY: S. W. Connally, Jr.