

Docket No. 160186-EI
Gulf Power Company
Petition for rate increase by Gulf Power Company.

Witness: **Direct Testimony of Judy G. Harlow**, appearing on behalf of the staff
of the Florida Public Service Commission

Date Filed: January 13, 2017

DIRECT TESTIMONY OF JUDY G. HARLOW

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Q. Please state your name and business address.

A. My name is Judy G. Harlow. My business address is 2540 Shumard Oak Boulevard, Tallahassee, Florida, 32399-0850.

Q. By whom are you employed and in what capacity?

A. I am employed by the Florida Public Service Commission (FPSC or Commission) as the Chief of the Bureau of Conservation and Forecasting in the Division of Economics.

Q. Please describe your educational and professional background.

A. I attended Louisiana State University, where I received a B.S. in Business Administration with an Economics major in 1980 and a M.S. in Economics in 1982. Following graduate school, I was employed as a Business and Forecasting Analyst with VWR Scientific Corporation in Philadelphia, Pennsylvania. I was hired by the FPSC in 1991 as a Research and Planning Economist in the Division of Research and Regulatory Review. I then transferred to the Commission's Division of Electric and Gas as an Economic Analyst in the System Planning Section in 1996. Prior to joining the Division of Economics, I was a Senior Analyst in the Division of Regulatory Analysis. In 2012, I was promoted to Supervisor of the Conservation Section within the Commission's Division of Economics. I have held my current position as Chief of the Bureau of Conservation and Forecasting since 2015.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to highlight the potential impact on residential customer bills and energy usage resulting from Gulf Power Company's (Gulf) proposed change in rate structure, which would increase the residential customer, or base charge and

1 reduce the energy charge. I will focus on how Gulf intends to collect its revenue requirement
2 from its residential customers, rather than on the level of revenue requirement. My intent is to
3 provide a more complete record upon which the Commission may make an informed decision
4 regarding Gulf's proposed rate structure change.

5

6 Q. Are you sponsoring any exhibits with your testimony?

7 A. Yes. I sponsor Exhibits JGH-1 through JGH-6. These exhibits were prepared by me or
8 under my direct supervision. The information in the exhibits is correct to the best of my
9 knowledge.

10

11 Q. Please summarize Gulf's proposed change in rate structure for its residential customer
12 class.

13 A. Gulf's current standard Residential Service (RS) rate is composed of a base charge of
14 \$0.62 per day and an energy charge of 4.585 cents per kilowatt-hour (kWh) for costs
15 recovered through base rates. Approximately 365,000 of Gulf's 396,000 non-lighting
16 residential customers, or 92 percent, are on the RS rate. As of the October 12, 2016 testimony
17 filing date, Gulf's total energy charge, including clause recovery, was 11.4 cents per kWh.
18 Gulf has proposed an increase in the base charge to \$1.58 per day and a reduction in the
19 energy charge to 3.298 cents per kWh. For a 30-day typical billing period, Gulf's proposal
20 reflects a base charge increase from \$18.60 to \$47.40, a 155 percent increase in base charges.
21 At the same time, the energy charge would decrease 28 percent, from 4.585 to 3.298 cents per
22 kWh. Gulf's total energy charge, including cost recovery clauses, would decrease from 11.4
23 cents to 10.1 cents per kWh, or an 11 percent decrease, if both the proposed rate increase and
24 proposed rate structure are approved.

25

1 Q. How has Gulf's residential base charge changed over time?

2 A. Gulf's residential base charge was \$8.07 per month in 2001, increasing to \$10.00 in
3 2002. Gulf's base charge was increased to \$15.00 per month in 2012. In 2013, Gulf received
4 Commission approval for a rate settlement that included a daily base charge of \$0.60 in 2014,
5 increasing to \$0.62 in 2015, or \$18.60 for a 30-day typical billing period. Exhibit JGH-1
6 provides further detail on Gulf's historical base charges and the associated Commission
7 orders.

8
9 Q. How does Gulf's current residential base charge compare to those of other Florida
10 investor-owned utilities?

11 A. Gulf's current residential base charge of \$18.60 (assuming a 30-day period) is higher
12 than the residential base charges for the other four Florida investor-owned electric utilities.
13 Exhibit JGH-2 shows that as of December 31, 2015, the investor-owned utilities' base charges
14 ranged from \$7.57 per month for Florida Power & Light Company to \$18.60 for Gulf. Gulf's
15 proposed residential base charge of \$47.40 for a 30-day period would far exceed the next
16 highest investor-owned utility base charge of \$15.00, which was approved by the Commission
17 for Tampa Electric Company in 2013.

18
19 Q. How does Gulf's proposed residential base charge compare to those of the Florida
20 municipal and cooperative utilities?

21 A. As shown in Exhibit JGH-3, Gulf's current and proposed residential base charges
22 exceed the base charges for all Florida municipal utilities, which range from \$0.00 per month
23 for the City of Starke to \$15.03 per month for Key Energy Services.

24

25 As shown in Exhibit JGH-4, cooperative utilities in Florida currently have comparably higher

1 residential base charges than those of the investor-owned or municipal electric utilities.
2 Monthly residential cooperative utility base charges range from \$15.00 for Lee County
3 Electric Co-op to \$45.00 for Glades Electric Co-op. As can be seen in Exhibits JGH 2-4,
4 Gulf's proposed residential base charge of \$1.58 per day, or \$47.40 for a 30-day period, would
5 exceed that of any other electric utility within the state.

6

7 Q. How are the residential customers of investor-owned utilities in Florida typically
8 billed?

9 A. In general, Florida investor-owned utility residential customers are billed based on a
10 two-part rate composed of a fixed monthly base or customer charge and an energy charge that
11 varies with energy (kWh) usage.

12

13 Q. Please explain the types of costs that have traditionally been approved by the
14 Commission for recovery through a base or customer charge.

15 A. In general, the Commission has approved costs for recovery through the customer
16 charge that vary directly with the number of customers. These include costs such as customer
17 billing, metering, and service drop-related costs, including the meter.

18

19 Q. Did Gulf explain its methodology behind the proposed residential rate structure
20 change?

21 A. Yes. Gulf witness McGee explains that "Gulf's proposed two-part rates are designed to
22 collect revenue more like optimum three-part demand rates without using explicit demand
23 charges." Under a three-part demand rate, customer charges are designed to recover each of
24 the three broad categories of costs to provide electric service: (1) customer-related costs, (2)
25 energy-related costs, and (3) demand-related costs.

1 Gulf is proposing to employ a methodology developed by Dr. Larry Blank and Dr. Doug
2 Gegax as the basis for its rate structure change. The Blank and Gegax methodology begins
3 with the premise that a three-part demand rate is “the preferred rate design”; however, as
4 noted by Blank and Gegax, in some cases a three-part rate may not be practical due to
5 customer acceptance or the types of installed meters. Blank and Gegax use sample load
6 research data from a single electric utility to allocate the demand charges across the customer
7 and energy charges to “derive an enhanced two-part tariff, which serves as a substitute for the
8 benchmark three-part tariff.” In the 2016 article cited by Gulf, Blank and Gegax use sample
9 load data from Entergy Arkansas, Inc. to recommend that, for Entergy Arkansas, 50 percent of
10 demand-related costs should be recovered through the fixed charge and 50 percent through the
11 volumetric charge.

12
13 Gulf used its own residential load data and the Blank and Gegax methodology to determine
14 the same 50/50 recovery of its demand-related costs through its base charge and energy
15 charge. According to Gulf witness McGee, “When applied to Gulf’s residential customer data,
16 the B&G methodology suggests that approximately half of demand-related costs should be
17 allocated to the energy charge and the other half should be allocated to the base charge.”

18
19 Q. To your knowledge, has the FPSC ever employed this type of or a similar methodology
20 in setting rates?

21 A. No.

22
23 Q. Has this methodology been used by other state public utility commissions in setting
24 rates?

25 A. No, not to my knowledge.

1 Q. Do Blank and Gegax address the change in customer energy usage if their
2 methodology is used as a foundation for rate design?

3 A. No. Blank and Gegax do not estimate the impact on customer energy usage due to the
4 increased base charge and reduced energy charge that will result if their ratemaking
5 methodology is adopted. I believe the impact on customer bills and energy usage from the
6 proposed rate design merits consideration.

7

8 Q. In general, how do you believe Gulf's proposed increase in the residential base charge
9 and reduction in the energy charge will affect the utility's residential customers?

10 A. Gulf's high energy users will benefit through lower total bills; while lower usage
11 customers will experience higher bills than under the current rate structure. The proposed rate
12 structure change will also reduce customers' ability to control their bills through efficiency
13 actions or investing in distributed generation. The lower energy charge can be expected to
14 lessen the economic benefits for customers to use energy more efficiently or install distributed
15 generation, such as solar photovoltaic systems. The higher fixed base charge and lower
16 variable energy charge will also reduce volatility of customer bills from month to month.

17

18 Q. How will the proposed rate structure impact customers of varying consumption levels
19 within Gulf's residential rate class?

20 A. Gulf's proposal to recover 50 percent of its demand-related costs through the base
21 charge will increase the customer charge, resulting in a lower energy charge. Relatively low
22 usage customers, up to a breakeven point of approximately 1,200 kWh per month, will be
23 most impacted by the increased base charge, because the lower energy charge will not be
24 sufficient to overcome the higher base charge. For higher energy usage customers, the increase
25 in the base charge will be more than offset by the reduction in the energy charge. As a

1 reference point, Gulf estimates that its average monthly residential energy usage in the 2017
2 test year will be 1,112 kWh per month. Exhibit JGH-5 displays example bills based on data
3 provided by Gulf and calculates the percentage changes under the current and proposed rate
4 structures for two scenarios: (1) without Gulf's proposed rate increase, and (2) with the
5 proposed rate increase. As shown on Exhibit JGH-5, in both scenarios, the magnitude of the
6 loss from the proposed rate structure change, represented by a higher bill, will increase as
7 energy usage decreases. Conversely, the magnitude of the benefit, represented by a lower bill,
8 will increase as energy usage increases.

9

10 Q. Is there a way to determine the percentage of customers that will have higher bills due
11 to the proposed rate structure change?

12 A. Yes. The percentage of customers that will have higher or lower bills can be
13 determined based on: (1) the proposed rate structure change, (2) Gulf's distribution of
14 customers by average monthly kWh usage, and (3) any expected changes in customer energy
15 usage in response to the rate structure change. Exhibit JGH-6 displays data provided by Gulf
16 in response to staff discovery, with staff calculations of the current and proposed total
17 residential bills if the rate increase and proposed rate structure are adopted. Based on Gulf's
18 discovery response, staff calculated that approximately 57 percent of Gulf's residential
19 customers on the RS rate can be expected to have higher total bills due to the proposed rate
20 structure; while approximately 43 percent with higher energy usage will have lower bills.
21 Gulf's discovery response assumes that residential customers will react to the proposed rate
22 structure change by adjusting energy usage such that low energy users would reduce usage
23 while higher energy users would increase usage. As discussed further in my testimony, there is
24 uncertainty regarding the change in customer energy usage in response to Gulf's proposed rate
25 structure change. However, as shown in Exhibit JGH-6, given Gulf's assumptions, on a

1 percentage basis customers with the lowest usage will be the most impacted by the proposed
2 rate structure change. For example, the average bill for customers that use 0 to 2,000 kWh per
3 year will increase by 87 percent (4.7 percent of customers on the RS rate). Customers that use
4 2,000 to 4,000 kWh annually will experience an average 40 percent increase (4.2 percent of
5 RS customers). Customers that use 4,000 to 6,000 kWh annually will have a 22 percent total
6 bill increase (5.2 percent of RS customers).

7

8 Q. How will Gulf's proposal affect customers' ability to control their electric bills?

9 A. Customers cannot avoid the fixed base charge through energy efficiency measures,
10 customer behavior, or customer-owned generation. A higher fixed charge and lower energy
11 charge will reduce the bill impact of a change in customer energy usage. In addition, the
12 proposed rate structure alters the economics of investment in conservation measures by
13 creating a longer payback period. This impact affects all customers, but is a particular concern
14 for low usage customers that have already invested in energy saving measures. This leaves
15 less opportunity for these customers to implement additional conservation measures.

16

17 Q. Do you believe the proposed rate structure change can affect customer investment in
18 high efficiency equipment and customer-owned distributed generation?

19 A. Yes. A reduced energy charge will increase the payback period for consumers that are
20 considering investments in conservation measures or distributed generation. A longer payback
21 period may dissuade some customers from investing in energy efficiency measures or
22 distributed generation.

23

24 Q. How will the lower energy charge affect customer incentives to use energy efficiently?

25 A. A lower energy charge can be expected to impact customer incentives to use energy

1 efficiently. All else being equal, customers can be expected to increase energy usage due to a
2 lower energy charge. The Participants test required by Commission Rule 25-17.008, Florida
3 Administrative Code, recognizes the impact of the energy price on consumer efficiency
4 investments. This cost-effectiveness test uses the energy price as an input to determine
5 whether it is cost-effective for a customer to participate in a utility-sponsored demand-side
6 management (DSM) program. A lower energy charge will reduce the cost-effectiveness of a
7 conservation measure under the Participants test, indicating the customer would be less likely
8 to participate in a utility-sponsored program or make an investment on their own outside of a
9 program.

10

11 Q. Did Gulf provide an estimate of the price elasticity of demand for its residential
12 customers?

13 A. Yes. Price elasticity of demand is a measure of customer responsiveness to a change in
14 price. Gulf estimates a price elasticity of -0.25 percent for its residential customers. This
15 translates to an expectation that for every one percent increase in price, there is a 0.25 percent
16 decrease in the quantity demanded. Conversely, a one percent decrease in price is expected to
17 result in a 0.25 percent increase in the quantity demanded. In contrast, Gulf estimates small
18 commercial and large commercial price elasticities at -0.15 percent and -0.13 percent,
19 respectively. Thus, Gulf expects that residential customers are more likely to adjust
20 consumption in response to a change in electric prices than are commercial customers.

21

22 Q. Do you believe Gulf's forecast model appropriately accounts for the potential impact
23 on residential customer demand and energy usage due to the proposed change in rate
24 structure?

25 A. No. This question relates to the long standing argument about whether electric

1 customers react to bills or rates. Gulf's load forecast model appears to assume that residential
2 customers react to bills. To determine customer responsiveness to price, Gulf's load forecast
3 model assumes customers react to the average price on their bill, including the fixed and
4 variable components. Gulf did not provide an analysis that separates the fixed and variable
5 components of the electric price to test customer responsiveness to the rate structure change.
6 In response to staff discovery, Gulf estimated a 0.7 gigawatt-hours (GWh) increase in energy
7 sales due to the rate design change out of a total 5,371 GWh in annual residential energy sales.
8 Gulf's estimated sales increase is relatively small because Gulf projects that customers with
9 increased bills (low usage) under the new rate structure will reduce consumption, while
10 customers with decreased bills (higher usage) will increase consumption. Gulf projects that the
11 reduced consumption by the lower usage customers will partially offset the increased
12 consumption by higher usage customers. Gulf's relatively small projected increase in energy
13 sales is the result of its assumption that customers react to average price.

14
15 It is notable that Gulf's forecast model in its previous rate case also used an average price,
16 rather than separate fixed and variable components to determine residential customer
17 responsiveness to price. This rate case is significantly different for residential customers,
18 however, because in addition to a proposed rate increase, Gulf has proposed the rate structure
19 change. I do not believe Gulf has provided sufficient information to the Commission regarding
20 the potential impact on customer behavior and its sales due to the proposed rate structure
21 change. Given the proposed reduction in the energy charge under the new rate structure, Gulf
22 should have performed a separate analysis that modeled residential customer responsiveness to
23 rates, rather than bills. If customers respond to the reduction in energy charge, I believe it is
24 entirely possible that the proposed rate design may increase sales beyond that predicted by
25 Gulf's forecast model.

1 Q. Please explain the reasons you believe conservation and distributed generation
2 investments will be impacted by the rate structure change.

3 A. The lower energy charge will lengthen the payback period on energy efficiency
4 investments and customer-owned distributed generation, such as solar photovoltaic systems.
5 As noted previously, longer payback periods may impact some customers' decisions to invest
6 in certain types of energy efficiency equipment and participate in Gulf's DSM programs. All
7 else being equal, customer participation in Gulf's existing DSM programs can also be
8 expected to decline. In order to maintain or increase customer participation, Gulf may have to
9 consider higher rebates and hence higher DSM program costs. As discussed below, Gulf has
10 proposed higher rebates for some, but not all of its residential DSM program measures.

11
12 Q. Are you aware that Gulf has proposed several new and modified residential demand-
13 side management programs in this proceeding?

14 A. Yes. According to Gulf witness Floyd, Gulf is proposing to add a new residential
15 ceiling insulation program. Gulf is also proposing to modify its existing residential HVAC
16 Efficiency program to include heat pump efficiency measures. In addition, Gulf proposes
17 increased maximum rebates for specified measures in its Residential Building Efficiency
18 program (reflective roofing) and its HVAC Efficiency program (HVAC maintenance and
19 repair measures).

20
21 Q. Do these new and modified residential DSM programs alleviate your concerns
22 regarding conservation?

23 A. No. In implementing the Florida Energy Efficiency and Conservation Act (FEECA),
24 Sections 366.80 through 366.83 and 403.519, Florida Statutes, the Commission has long
25 encouraged cost-effective DSM programs. However, according to witness Floyd, these new

1 and modified DSM programs would only be cost-effective if the Commission approves Gulf's
2 proposed residential rate structure change. Therefore, I believe it is appropriate to look at the
3 effects of Gulf's proposed rate structure change on customer demand and energy usage in
4 total, rather than reviewing the results of the DSM program modifications in isolation. Gulf
5 has projected that its proposed residential DSM program modifications will save peak summer
6 and winter demand and energy usage. However, these program savings may be overwhelmed
7 by the potential impact on customer behavior and Gulf's sales due to the rate structure change.
8 A 28 percent reduction in base rate energy charges (11 percent reduction in total energy
9 charge) can be expected to increase both customer demand and energy usage. Gulf's own
10 model estimates a -0.25 price elasticity for residential customers, indicating a 1 percent
11 reduction in price will lead to 0.25 percent increase in residential sales, or an approximately
12 2.8 percent increase in sales based on the total energy charge reduction.

13
14 Q. Do you have any concerns regarding the new and modified residential DSM programs
15 Gulf has proposed in this proceeding?

16 A. Yes. The cost-effectiveness of the proposed new and modified residential DSM
17 programs cannot be determined until Gulf's rates are established in this docket. Customer
18 rates are a key input into both the Rate Impact Measure (RIM) and Participants cost-
19 effectiveness tests. These tests, along with the Total Resource Cost test, are reviewed by the
20 Commission to determine whether a proposed DSM program or program modification is cost-
21 effective.

22
23 Q. Will Gulf's proposed new and modified residential DSM programs affect customer
24 costs recovered outside of base rates?

25 A. Yes. DSM program costs are recovered through the Energy Conservation Cost

1 Recovery clause (ECCR). ECCR cost recovery can be expected to increase to recover costs
2 associated with the proposed new and modified DSM programs and higher customer rebates.
3 Gulf estimates that cost recovery for the new and modified residential DSM programs will
4 increase the ECCR charge from \$1.60 to \$1.664 per month for a typical residential customer
5 using 1,000 kWh.

6
7 Q. Are there any other potential cost impacts related to Gulf's proposed rate structure
8 change?

9 A. Yes. If customers respond to Gulf's reduced energy charge by increasing energy usage,
10 Gulf will experience higher fuel and variable O&M costs to increase dispatch at existing
11 generating facilities, and/or higher purchased power costs to meet this incremental energy
12 usage. These costs will be recovered from ratepayers through the Fuel and Purchased Power
13 cost recovery clause. In addition, increased residential demand may advance the need for new
14 capacity. There will also certainly be costs associated with Gulf's proposed Low Income Rate
15 Rider, including the customer credits, as well as administrative costs to determine customer
16 eligibility and adjust billing software and to educate customers on the program's availability.

17
18 Q. What is Gulf's rationale for the proposed residential rate structure?

19 A. Gulf witness McGee stresses cost causation as the rationale for Gulf's proposed rate
20 structure change. He contends that the current residential rate structure has an "unnecessarily
21 large energy charge," which "... causes a misalignment between cost-causers and those who
22 pay." He also states that "A three-part demand rate best aligns rates with costs because it
23 mirrors these cost categories with three discrete rate components: a customer charge, a
24 demand charge and an energy charge."

25

1 Q. Do you agree that cost causation sufficiently justifies Gulf's proposed change in
2 residential rate structure?

3 A. No. I agree that cost causation is the appropriate basis for allocating costs of service
4 across rate classes. Once costs are allocated to each customer class, rates must be designed
5 that allow a utility to recover its costs. In reviewing utility rate requests and designing rates,
6 however, the regulatory body must balance the interests of the utility with those of its
7 customers. There are often competing objectives between the utility and various classes of its
8 customers, and the regulatory body itself may have guiding ratemaking principles or goals.

9
10 In addition to cost causation, the regulatory body may take other goals into consideration in
11 setting rates, such as: (1) minimizing rate shock, (2) minimizing uneven impacts to various
12 groups of ratepayers, and (3) sending appropriate price signals to customers. Gulf has
13 identified an additional ratemaking consideration - the ease of customer understanding for a
14 proposed rate design methodology.

15
16 I believe the principle of gradualism is instructive in this case. In electric rate cases, the
17 Commission has followed the principle that no class of customers will receive a rate increase
18 of over 1.5 times the system average increase. The Commission has also followed the
19 principle that no class of customers should receive a decrease while other classes receive an
20 increase. Gulf witness Evans notes that Gulf has respected these "traditional limits", and states
21 "First, because an overall rate increase is requested, no rate class is assigned a rate decrease.
22 Second, the base rate percentage increase for each class is limited to no more than 1.5 times
23 the overall retail average percentage increase to base rates." Witness Evans further notes that
24 on MFR E-8, Gulf shows that "the increases allocated to each rate class represent base rate
25 increases of 15.9 percent to 28.8 percent." The high end of this rate increase range, 28.8

1 | percent, is 1.5 times Gulf's overall base rate increase request of 19.2 percent.

2 |

3 | Gulf has proposed a base rate increase of 14.92 percent for residential customers as a class, as
4 | shown on MFR Schedule E-8. As displayed on Exhibit JGH-5, the actual bill impact on
5 | individual customers will vary depending on usage. The bills for higher energy users will go
6 | down. At the same time, many of Gulf's relatively low usage customers will receive an
7 | increase higher than 28.8 percent, or 1.5 times Gulf's overall rate request. An argument can be
8 | made that the proposed rate structure change only impacts the class of residential ratepayers
9 | and therefore the concept of gradualism as applied historically by the Commission does not
10 | strictly apply. However, the Commission has broad authority relating to ratesetting and a long
11 | history of considering customer impacts, for example, by phasing in authorized rate changes
12 | over time.

13 |

14 | Q. Other than the DSM programs discussed above, what other proposals has Gulf made in
15 | this proceeding to address concerns with the proposed change in residential rate structure?

16 | A. Gulf is proposing an Advanced Pricing Package composed of: (1) the rate structure
17 | change under the traditional two-part RS rate, and (2) two new optional residential demand
18 | rates. The proposed optional residential demand rates are three-part rates, composed of a base
19 | charge, a maximum demand charge, and an energy charge. The proposed Residential Service
20 | – Demand Time-of-Use Conservation rate also has a monthly on-peak demand charge. Gulf is
21 | also proposing a Low Income Rider under its RS rate.

22 |

23 | Q. Do you have any comments on Gulf's proposed optional residential demand rates?

24 | A. Yes. Gulf's two optional residential demand rates may give customers who choose to
25 | participate more ability to control their bills. Three-part demand rates are also one ratemaking

1 option to better align cost causation with revenue recovery, and to send improved price signals
2 to customers on how their actions impact system costs. Due to the additional complexity of a
3 three-part rate, Gulf's efforts to educate its customers will play an important role in
4 influencing customer acceptance and participation in these optional rates.

5

6 Q. Please briefly describe Gulf's proposed low income rate rider.

7 A. As explained by witness McGee, Gulf's proposed low income rate rider will provide a
8 bill credit of \$0.69 cents per day, or \$20.70 for a 30-day billing period to eligible low income
9 customers. Witness McGee states that the credit "will be available to all Gulf Power
10 residential customers of record who are also participants in the Supplemental Nutritional
11 Assistance Program (SNAP), also known as Food Stamps, and who apply for the credit."
12 Witness McGee projects 35,000 customers will receive these credits.

13

14 Q. Do you have any comments on Gulf's proposed low income rate rider?

15 A. Yes. Gulf acknowledges that the proposed low income rider creates a subsidy from the
16 general body of residential ratepayers to low income ratepayers. It is the utility's low usage
17 customers, however, that will be most impacted by the higher base charge. According to Blank
18 and Gegax, low income customers are not necessarily low energy users. Low income
19 customers with higher energy usage will experience lower bills from the proposed lower
20 energy charge and will be eligible for the low income rider. Gulf proposes that customers must
21 request the low income bill credit; so education and customer awareness about the rider's
22 availability and eligibility requirements will be necessary.

23

24 In addition, Gulf may have underestimated the potential number of customers that will
25 participate in the low income rider, and consequently, program costs. In response to staff

1 discovery, Gulf provided data obtained from the Florida Department of Children and Families
2 (DCF) indicating that as of June 2015, approximately 70,000 households within its territory
3 participate in SNAP, or over 19 percent of Gulf's customers on the RS rate. Gulf assumed a
4 49.9 percent participation rate (based on Florida's average Lifeline participation rate) to
5 determine its expected participation of 35,000 residential customers. Thus, the number of
6 eligible customers is approximately twice Gulf's estimated number of participants. If actual
7 participation in the Low Income Rider exceeds Gulf's projections, the costs of the program
8 will be higher than Gulf's estimated \$8.8 million in annual costs. In response to staff
9 discovery, Gulf stated that these projected Low Income Rider costs would be recovered from
10 residential customers through an increase in the base charge of approximately six cents per
11 day, or \$1.80 for a 30-day period. Gulf does not appear to have included the costs to
12 administer the program in this cost estimate.

13

14 Specific SNAP eligibility requirements are established by each state within federal guidelines.
15 In Florida, the SNAP program is administered by DCF. Without a waiver from an individual
16 SNAP recipient, DCF cannot release individual SNAP account data under state privacy
17 protections. This indicates that Gulf's customers will have to prove eligibility for the program
18 with their utility. Customers may be reluctant to divulge this personal information to Gulf,
19 which may result in lower participation by those customers in need.

20

21 Administering this program will be challenging for the utility and add additional customer
22 administrative costs. For example, most SNAP recipients are on an annual renewal. However,
23 some SNAP recipients are time limited to three months of benefits within a three-year period.
24 To capture changes in SNAP status, Gulf may have to require quarterly or even monthly
25 confirmation of benefits from customers. It is not clear how frequently Gulf intends to confirm

1 SNAP eligibility, or how long Gulf intends to maintain the Low Income Rider. In response to
2 staff discovery, Gulf stated that it has not proposed a phase-out of the Low Income Rider.

3

4 Q. Does this conclude your testimony?

5 A. Yes.

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Gulf Power Company Residential Base Charge 1990-2017		
Year	Base Charge	FPSC Order
2015-Current	\$18.60*	PSC-13-0670-S-EI
2014	\$18.00**	PSC-13-0670-S-EI
2012-2013	\$15.00	PSC-12-0179-FOF-EI
2002-2011	\$10.00	PSC-02-0787-FOF-EI
1992-2001	\$ 8.07	23573
1990-1991	\$ 8.00	23573

* Daily Base Charge \$0.62 for 30-day period.

**Daily Base Charge of \$0.60 for a 30-day period.

**Typical Residential Bill for Investor-Owned Electric Utilities
 as of December 31, 2015***

Investor-Owned Electric Utilities	Customer Charge	Total Bill					
		100 KWH	250 KWH	500 KWH	750 KWH	1,000 KWH	1,500 KWH
Duke Energy Florida, LLC	\$8.76	\$19.73	\$36.23	\$63.66	\$91.12	\$118.55	\$185.26
Florida Power and Light	\$7.57	\$16.25	\$29.26	\$50.95	\$72.63	\$94.30	\$148.09
Florida Public Utilities Company-Northwest	\$14.00	\$26.36	\$44.90	\$75.79	\$106.68	\$137.57	\$211.86
Florida Public Utilities Company-Northeast	\$14.00	\$26.36	\$44.90	\$75.79	\$106.68	\$137.57	\$211.86
Gulf Power Company	\$18.60	\$30.33	\$47.90	\$77.22	\$106.51	\$135.81	\$194.43
Tampa Electric Company	\$15.00	\$24.12	\$37.81	\$60.61	\$83.40	\$106.20	\$161.81

*Excludes local taxes, franchise fees, and gross receipts taxes billed as separate line items. Includes cost recovery clause charges.

Source: Florida Public Service Commission, Comparative Rate Statistics-December 2015.

Typical Residential Bill for Municipal Electric Systems as of December 31, 2015*							
Municipal Electric Systems	Customer Charge	Total Bill					
		100 KWH	250 KWH	500 KWH	750 KWH	1,000 KWH	1,500 KWH
Alachua	\$9.14	\$21.01	\$38.80	\$68.47	\$98.13	\$127.79	\$192.22
Bartow	\$8.00	\$19.67	\$37.18	\$66.35	\$95.53	\$124.70	\$183.05
Blountstown	\$3.50	\$15.39	\$33.21	\$62.93	\$92.64	\$122.35	\$181.78
Bushnell	\$7.40	\$18.67	\$35.56	\$63.73	\$91.89	\$120.05	\$176.38
Chattahoochee	\$6.50	\$17.39	\$33.73	\$60.97	\$88.20	\$115.43	\$169.90
Clewiston	\$6.50	\$15.74	\$29.61	\$52.71	\$75.82	\$98.92	\$145.13
Fort Meade	\$12.96	\$24.12	\$40.86	\$68.76	\$96.66	\$124.56	\$180.36
Fort Pierce	\$6.01	\$16.33	\$31.82	\$57.62	\$83.43	\$111.84	\$168.66
Gainesville	\$14.25	\$26.35	\$44.50	\$74.75	\$105.00	\$138.40	\$209.40
Green Cove Springs	\$12.00	\$20.80	\$34.00	\$56.00	\$78.00	\$100.00	\$146.00
Havana	\$6.00	\$14.70	\$27.75	\$49.50	\$71.25	\$92.99	\$136.49
Homestead	\$5.60	\$16.76	\$33.51	\$61.42	\$89.32	\$117.23	\$173.05
JEA	\$5.50	\$16.07	\$31.92	\$58.33	\$84.75	\$111.16	\$163.99
Jacksonville Beach	\$4.50	\$16.34	\$34.10	\$63.71	\$93.31	\$122.91	\$182.12
Key West	\$15.03	\$25.23	\$40.52	\$66.01	\$91.51	\$117.00	\$167.98
Kissimmee	\$10.17	\$18.92	\$32.04	\$53.90	\$75.77	\$97.63	\$147.69
Lake Worth	\$10.53	\$20.95	\$36.58	\$62.63	\$88.68	\$114.73	\$166.83
Lakeland	\$9.50	\$19.24	\$33.84	\$58.19	\$82.53	\$106.87	\$158.37
Leesburg	\$12.36	\$23.09	\$39.19	\$66.01	\$92.84	\$119.67	\$184.38
Moore Haven	\$8.50	\$19.58	\$36.20	\$63.90	\$91.60	\$119.30	\$174.70
Mount Dora	\$8.95	\$19.50	\$35.32	\$61.69	\$88.07	\$114.44	\$167.18
New Smyrna Beach	\$5.65	\$15.80	\$31.00	\$56.36	\$81.71	\$107.06	\$157.77
Newberry	\$7.50	\$18.00	\$33.75	\$60.00	\$86.25	\$112.50	\$165.00
Ocala	\$9.33	\$19.66	\$35.16	\$60.99	\$86.81	\$112.64	\$164.30
Orlando	\$8.00	\$18.15	\$33.36	\$58.72	\$84.08	\$109.43	\$170.15
Quincy	\$6.00	\$15.21	\$29.02	\$52.03	\$75.04	\$98.05	\$144.08
Reedy Creek	\$2.85	\$12.81	\$27.73	\$52.61	\$77.48	\$102.36	\$152.12
Starke	\$0.00	\$9.69	\$24.22	\$48.43	\$72.64	\$96.85	\$153.05
St. Cloud	\$8.32	\$18.87	\$34.70	\$61.07	\$87.44	\$113.81	\$176.96
Tallahassee	\$7.34	\$18.07	\$34.14	\$60.95	\$87.75	\$114.55	\$168.16
Vero Beach	\$8.33	\$19.46	\$36.15	\$63.96	\$91.77	\$119.58	\$175.21
Wauchula	\$9.10	\$18.74	\$33.20	\$57.30	\$81.40	\$105.50	\$153.70
Williston	\$8.00	\$18.56	\$34.41	\$60.82	\$87.23	\$113.64	\$166.46
Winter Park	\$9.55	\$19.27	\$33.83	\$58.11	\$82.39	\$106.66	\$166.17

*Excludes local taxes, franchise fees, and gross receipts taxes billed as separate line items. Includes cost recovery clause charges.

Source: Florida Public Service Commission, Comparative Rate Statistics-December 2015.

**Typical Residential Bill for Rural Electric Cooperatives
 as of December 31, 2015***

Rural Electric Cooperatives	Customer Charge	Total Bill					
		100 KWH	250 KWH	500 KWH	750 KWH	1,000 KWH	1,500 KWH
Central Florida Electric Co-op	\$24.00	\$34.30	\$49.75	\$75.50	\$101.25	\$127.00	\$190.00
Choctawhatchee Electric Co-op	\$26.00	\$34.94	\$48.33	\$70.66	\$92.99	\$115.31	\$159.97
Clay County Electric Co-op	\$17.00	\$26.63	\$41.08	\$65.15	\$89.23	\$113.30	\$168.95
Escambia River Electric Co-op	\$30.00	\$41.50	\$58.75	\$87.50	\$116.25	\$145.00	\$202.50
Florida Keys Electric Co-op	\$30.00	\$37.38	\$48.46	\$66.92	\$85.38	\$103.84	\$157.26
Glades Coast Electric Co-op	\$45.00	\$55.10	\$70.25	\$95.50	\$120.75	\$146.00	\$215.25
Gulf Coast Electric Co-op	\$30.00	\$39.01	\$52.53	\$75.05	\$97.58	\$120.10	\$165.15
Lee County Electric Co-op	\$15.00	\$24.35	\$38.36	\$59.13	\$83.79	\$108.45	\$163.13
Okefenoke Rural Electric Membership Co-op	\$20.00	\$30.13	\$45.33	\$70.65	\$95.98	\$121.30	\$175.30
Peace River Electric Co-op	\$22.50	\$33.73	\$50.58	\$78.66	\$106.74	\$134.82	\$200.98
Sumter Electric Co-op	\$20.00	\$29.62	\$44.05	\$68.10	\$92.15	\$116.20	\$174.30
Suwannee Valley Electric Co-op	\$25.00	\$34.80	\$49.50	\$74.00	\$98.50	\$123.00	\$182.70
Talquin Electric Co-op	\$20.00	\$30.36	\$45.90	\$71.80	\$97.70	\$123.60	\$182.90
Tri-County Electric Co-op	\$22.00	\$33.55	\$50.88	\$79.75	\$108.62	\$137.50	\$205.25
West Florida Electric Co-op	\$20.00	\$35.67	\$51.75	\$78.55	\$105.34	\$132.14	\$195.51
Withlacoochee River Electric Co-op	\$25.00	\$34.87	\$49.67	\$74.35	\$99.01	\$123.68	\$174.16

*Excludes local taxes, franchise fees, and gross receipts taxes billed as separate line items. Includes cost recovery clause charges.

Source: Florida Public Service Commission, Comparative Rate Statistics-December 2015.

Gulf Power Company Bill Comparison							
Energy (kWh)	Number of Customers	Current Rate			Proposed Rate		
		Current Structure	Proposed Structure	Percent Change	Current Structure	Proposed Structure	Percent Changed
0	607	\$ 18.87	\$ 41.09	118%	\$ 20.39	\$ 48.09	136%
100	4,186	\$ 30.24	\$ 50.59	67%	\$ 32.38	\$ 57.76	78%
300	9,919	\$ 52.95	\$ 69.56	31%	\$ 56.35	\$ 77.08	37%
500	20,819	\$ 75.68	\$ 88.56	17%	\$ 80.34	\$ 96.43	20%
750	44,046	\$104.07	\$112.28	8%	\$110.30	\$120.60	9%
1,000	56,772	\$132.46	\$136.00	3%	\$140.27	\$144.76	3%
1,112	25,361	\$145.19	\$146.63	1%	\$153.69	\$155.58	1%
1,250	29,116	\$160.86	\$159.73	- 1%	\$170.25	\$168.94	- 1%
1,500	43,426	\$189.27	\$183.47	- 3%	\$200.22	\$193.10	- 4%
1,750	30,356	\$217.19	\$207.19	- 5%	\$230.18	\$217.27	- 6%
2,000	19,248	\$246.05	\$230.91	- 6%	\$260.15	\$241.43	- 7%
2,500	18,789	\$302.90	\$278.41	- 8%	\$320.10	\$289.42	- 10%
3,000	6,545	\$359.75	\$325.91	- 9%	\$380.05	\$338.13	- 11%
3,500	2,390	\$416.60	\$373.41	-10%	\$440.00	\$386.48	-12%
4,000	1,059	\$473.45	\$420.91	-11%	\$499.95	\$434.83	- 13%
4,500	495	\$530.30	\$468.41	-12%	\$559.90	\$483.18	- 14%
5,000	277	\$587.15	\$515.91	-12%	\$619.85	\$531.53	- 14%

Source: Witness Robert McGee's Exhibit RLM-1, schedule 6 and Gulf's response to Staff's Seventh Set of Interrogatories, No. 315 and analysis of the response.

Gulf Power Company's Proposed Residential Class Rate Structure Impact on Energy Sales								
Annual Energy Usage	Number of Customers per Group	Percent of Total Customers	Current Rate Structure		Proposed Rate Structure			
			Average Monthly kWh/customer	Annual GWh	Average Monthly kWh/customer	Annual GWh	Impact on Monthly kWh/customer	Impact on Annual GWh
< 2K	18,748	4.7%	67	15	51	12	-16	-3
2K-4K	16,669	4.2%	235	47	208	42	-27	-5
4K-6K	20,827	5.2%	414	104	387	97	-27	-7
6K-8K	16,669	4.2%	604	121	581	116	-23	-5
8K-10K	64,559	16.2%	749	580	731	567	-18	-13
10K-12K	70,795	17.7%	928	789	917	779	-11	-10
12K-14K	37,496	9.4%	1,101	495	1,097	494	-4	-1
14K-16K	27,063	6.8%	1,260	409	1,263	410	3	1
16K-18K	22,905	5.7%	1,421	391	1,431	393	10	2
18K-20K	37,496	9.4%	1,578	710	1,595	718	17	8
20K-22K	16,669	4.2%	1,728	346	1,752	350	24	4
22K-24K	12,512	3.1%	1,920	288	1,953	293	33	5
24K-26K	16,669	4.2%	2,067	413	2,106	421	39	8
26K-28K	2,079	0.5%	2,205	55	2,250	56	45	1
28K-30K	6,236	1.6%	2,367	177	2,421	181	54	4
30K-32K	4,157	1.0%	2,598	130	2,662	133	64	3
32K-34K	2,079	0.5%	2,748	69	2,819	70	71	1
34K-36K	0	0	0	0	0	0	0	0
36K-38K	4,157	1.0%	3,045	152	3,131	156	86	4
38K +	2,079	0.5%	3,214	80	3,308	83	94	3

*Gulf's Estimated Residential Price Elasticity: **-.253**

Source: Gulf's response to Staff's Fourth Request for Production of Documents, No. 30 and analysis of the response.

Gulf Power Company's Proposed Residential Class Rate Structure Bill Impacts						
Annual Energy Usage	Number of Customers per Group	Percent of Total Customers	Bills Under Current Rate Structure	Bills Under Proposed Rate Structure	Proposed Rate Structure Impact on Bills	Proposed Rate Structure Bill Impact -- Percent
< 2K	18,748	4.7%	\$28.41	\$53.05	\$24.64	87%
2K-4K	16,669	4.2%	\$48.60	\$68.21	\$19.61	40%
4K-6K	20,877	5.2%	\$70.06	\$85.53	\$15.47	22%
6K-8K	16,669	4.2%	\$92.77	\$104.28	\$11.51	12%
8K-10K	64,559	16.2%	\$110.20	\$118.80	\$8.60	8%
10K-12K	70,795	17.7%	\$131.67	\$136.76	\$5.09	4%
12K-14K	37,496	9.4%	\$152.38	\$154.15	\$1.77	1%
14K-16K	27,063	6.8%	\$171.46	\$170.19	-\$1.27	-1%
16K-18K	22,905	5.7%	\$190.77	\$186.45	-\$4.32	-2%
18K-20K	37,496	9.4%	\$209.52	\$202.25	-\$7.27	-3%
20K-22K	16,669	4.2%	\$227.55	\$217.44	-\$10.11	-4%
22K-24K	12,512	3.1%	\$250.59	\$236.88	-\$13.71	-5%
24K-26K	16,669	4.2%	\$268.18	\$251.72	-\$16.46	-6%
26K-28K	2,079	0.5%	\$284.67	\$265.65	-\$19.02	-7%
28K-30K	6,236	1.6%	\$304.16	\$282.10	-\$22.06	-7%
30K-32K	4,157	1.0%	\$331.83	\$305.47	-\$26.36	-8%
32K-34K	2,079	0.5%	\$349.79	\$320.65	-\$29.14	-8%
34K-36K	0	0	NA	NA	NA	0
36K-38K	4,157	1.0%	\$385.39	\$350.72	-\$34.67	-9%
38K +	2,079	0.5%	\$405.64	\$367.83	-\$37.81	-9%

Source: Gulf's response to Staff's Fourth Request for Production of Documents, No. 30 and analysis of the response.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for rate increase by Gulf Power Company.

DOCKET NO. 160186-EI

In re: Petition for approval of 2016 depreciation and dismantlement studies, approval of proposed depreciation rates and annual dismantlement accruals and Plant Smith Units 1 and 2 regulatory asset amortization, by Gulf Power Company.

DOCKET NO. 160170-EI

DATED: JANUARY 13, 2017

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that the testimony of Judy G. Harlow on behalf of the staff of the Florida Public Service Commission was electronically filed with the Office of Commission Clerk, Florida Public Service Commission, and copies were furnished to the following by electronic mail on this 13th day of January, 2017.

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