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January 4, 2016

Ms. Carlotta Stauffer
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee FL 32399-0868

Re: Docket No. 150248-EG – Gulf Power Company's Petition for Approval of
Community Solar Pilot Program

Dear Ms. Stauffer:

Attached is Gulf Power Company's response to Staff's First Data Request in the
above-referenced docket.

Sincerely,

A handwritten signature in blue ink that reads "Robert L. McGee, Jr." The signature is written in a cursive, flowing style.

Robert L. McGee, Jr.
Regulatory and Pricing Manager

md

Attachments

cc w/att.: Beggs and Lane
Jeffrey A. Stone, Esquire
Division of Economics
Sue Ollila
Office of General Counsel
Theresa Tan

1. Please explain how Gulf's community solar program will be marketed and provide a copy of the marketing materials.

RESPONSE:

In order to gain subscriptions to the community solar program, Gulf will focus on the Company's three distinct categories of customers – residential, business and industrial, each having different underlying incentives for participation. Across all categories, the marketing plan is expected to include:

1. Targeted emails, separately designed for each category. Targeted emails will be the most affordable way to effectively communicate the product offering directly to the entire customer base.
2. A bill insert for all customers that includes details on the program offering and sign-up information.
3. A collection of printed collateral that will be used to educate potential subscribers on the benefits of joining the community solar program (Gulf Solar Energy Share).
4. A webpage dedicated to the Gulf Solar Energy Share program on the Gulf Power Company website. This website will include details of the program offering and sign-up information.
5. Social media promotion to drive traffic to the Energy Share website. Social media will be a major component of the marketing plan for residential customers due to its ability to reach large groups of customers with similar interests. This campaign will include branded social media accounts dedicated specifically to the Gulf Solar Energy Share program.
6. A short video that explains the benefits of the program and illustrates how the Gulf Solar Energy Share program will operate. The video will be available on the website and in social media.

At this time, Gulf has not fully developed the associated materials for this marketing plan.

2. Please explain why Gulf's choice for this program is a 1 megawatt (MW) facility rather than a different sized facility.

RESPONSE:

The 1 MW facility size balances economies of scale with subscription achievability. Gulf chose a 1 MW facility as the Initial Facility in order to benefit from economies of scale associated with constructing a larger solar PV facility while targeting an attainable number of subscriptions to the program, a number supported by its market research.

3. Where will the Initial Facility be located and how long does Gulf expect construction to take?

RESPONSE:

The Initial Facility will be located on Gulf Power owned property located in Milton, Florida. Gulf expects construction of the facility to take approximately four months.

4. How will Gulf determine whether an additional solar facility will be constructed, e.g., once the Initial Facility is fully subscribed, what number of potential new subscriptions will Gulf require to begin construction?

RESPONSE:

The decision whether to construct an additional solar facility under this program has not been made. Any such decision made in the future will be informed by Gulf's experience gaining customer subscriptions for the Initial Facility and will take into account expectations at that time regarding customer interest in and acceptance of the program.

5. If the number of pre-enrollment subscriptions is insufficient to cover the projected annual revenue requirements of the Initial Facility, does Gulf plan to continue the build of the Initial Facility? Who will assume the risk for any unrecovered costs?

RESPONSE:

Yes. While any project of this type is not without risk, Gulf's market research indicates that sufficient customer interest exists to fully cover projected costs of this program with revenues from subscribing customers. Gulf believes that an important attribute of the marketability of this program is the commitment to build the Initial Facility. In order to gain a clear understanding of customer interest in and acceptance of this program, it is important to remove the uncertainty about whether the Initial Facility will be built. Therefore, Gulf plans to move forward with construction once it receives Commission approval while the Company is actively signing customers to subscriptions.

This program is an experimental program which is both limited in scope and scale. Gulf has designed the program to maximize customer participation and undersubscription is not anticipated. However, should undersubscription occur, it is important to recognize that the Initial Facility will continue to provide service to Gulf's system and all of its customers. This project serves multiple purposes. It responds to the desire of Gulf's customer base to have access to solar. It ensures access to solar projects for all of Gulf's customers, not just those who can afford to make multi-thousand dollar investments, even if they choose not to participate. Finally, it fulfills a public policy objective of furthering diversity in energy portfolios. The Commission has encouraged utilities to develop and offer innovative solutions for customers, and Gulf believes this initiative is consistent with the Commission's approach. Gulf requests that the Commission treat the program as a true pilot—which may succeed and become a model for further solar development, may require modifications based on lessons learned, or may require closure. As Gulf will report regularly to the Commission on the progress of the program, the program's status will be easily monitored on an ongoing basis. Once the Initial Facility is constructed and operational, should subscriptions consistently fall significantly short of the number needed to recover the costs during the pilot program, Gulf would anticipate future discussion with the Commission concerning the pilot program.

6. If, at any point during the initial five-year term, the number of subscriptions are insufficient to cover the projected annual revenue requirements, who will assume the risk for unrecovered costs?

RESPONSE:

Please see Gulf's response to Staff's First Data Request Item No. 5 with respect to potential unrecovered costs.

7. If, after the initial term of the program is complete, Gulf decides to close the community solar program, please explain how and from whom Gulf will recover the remaining costs.

RESPONSE:

Please see Gulf's response to Staff's First Data Request Item No. 5 with respect to potential unrecovered costs.

8. Will the Initial Facility (and any other additional facilities) be eligible for the federal solar investment or production tax credits? If yes, where will this credit be recorded?

RESPONSE:

The Initial Facility (and any other additional facilities) will be eligible for the federal solar investment tax credits as follows:

| For solar facilities beginning construction in: | The amount of investment tax credit is: |
|--|--|
| 2016 | 30% |
| 2017 | 30% |
| 2018 | 30% |
| 2019 | 30% |
| 2020 | 26% |
| 2021 | 22% |
| 2022 and after | 10% |

The initial credit will be recorded to FERC account 255 "Unamortized Investment Tax Credits" and it will be normalized over the life of the facility using FERC account 411 "ITC Amortization".

9. How does the cost per watt of the proposed community solar pilot program compare to the cost per watt for Gulf's utility-scale solar facilities being constructed for the Navy and Air Force?

RESPONSE:

A comparison of the cost per watt for Gulf's Energy Purchase Agreements with Gulf Coast Solar Center I, II, and III, LLC cannot be made since Gulf is purchasing energy from these facilities under energy purchase agreements rather than building them. See Docket No. 150035-EI and Order NO. PSC-15-0155-PAA-EI. However, an assumption could be made that due to the economies of scale associated with the much larger Air Force and Navy facilities, the cost per watt for such facilities would be less than the cost per watt for the community solar array.

10. Please explain how the \$99 and \$89 subscription fees were determined.

RESPONSE:

The annual subscription fee was set at \$99 in order to strike a balance between providing a low cost participation option for customers and being high enough to minimize the number of participants needed to fully subscribe the program. Gulf kept the annual subscription fee below \$100 in order to make the community solar opportunity affordable for as many customers as possible. The \$89 subscription fee was set to provide enough of a reduced pricing option to incentivize customers to commit to longer-term participation while still minimizing the number of subscriptions needed to fully subscribe the program.

11. The petition states customers can purchase multiple subscriptions. Footnote 1 (paragraph 10) states per-customer subscriptions can be capped. How will Gulf determine when individual customer subscriptions will be capped?

RESPONSE:

Gulf will limit the number of subscriptions for any individual customer to the amount of their average annual kWh consumption. For example, assuming each program subscription represents 746 kWh of annual energy, a customer with an average annual consumption of 12,000 kWh would be limited to 16 subscriptions in the first year of the program (12,000 kWh/746 kWh per subscription).

In the event that adequate historical consumption data is not available for a given customer, Gulf will utilize estimates.

12. Please clarify whether customers will be assessed a subscription fee once every 12 months per subscription. Does this mean that a given customer will receive a renewal bill 12 months from when he paid his initial bill?

RESPONSE:

Yes. Customers will be assessed a subscription fee once every 12 months. The customer will receive a renewal bill prior to the end of the initial term. The company will provide information about the customer's upcoming renewal and termination option prior to the billing statement including the renewal fee.

13. Paragraph 11 states that Gulf plans to levelize the projected annual revenue requirements over a 35-year asset life. Does this mean that the \$270,000 annual revenue requirement is a 35-year average? If yes, what are the underlying inflation factors used, and their basis, for each cost category?

RESPONSE:

The levelized annual revenue requirement is derived by summing the Net Present Values (NPVs) of required actual payments for each year, using Gulf's after tax weighted average cost of capital as a discount rate (6.79%). This Net Present Value of all future cash payments is then used to calculate a levelized payment amount required to achieve the same discounted Net Present Value of all payments. The levelized annual revenue requirement model applies the concept of time value of money when calculating the annual revenue.

14. Please provide the derivation of each year's revenue requirement over the 35 years, and the computation of the levelized annual revenue requirement.

RESPONSE:

Please see page 2 for details of the calculations.

Solar Project
 Gulf Power Company
 Calculation of Revenue Requirement and Levelized Revenue Requirement

| Year | Insurance | Fixed O&M | Administrative Costs | Property Taxes | Depreciation and Amortization | Interest Expense | Income Taxes | Preference Dividends | Cost of Equity | Total Revenue Requirement | Levelized Revenue Requirement |
|--------------|----------------|----------------|----------------------|------------------|-------------------------------|------------------|----------------|----------------------|------------------|---------------------------|-------------------------------|
| 10/1/2016 | 1,902 | 8,568 | 50,000 | 735 | 43,072 | 25,030 | 37,672 | 3,036 | 80,915 | 250,930 | \$159,641 |
| 7/1/2017 | 3,352 | 17,136 | 25,000 | 35,417 | 74,009 | 37,745 | 56,539 | 4,578 | 126,532 | 380,307 | \$269,764 |
| 7/1/2018 | 3,445 | 17,136 | 25,000 | 35,520 | 74,233 | 32,486 | 48,187 | 3,940 | 113,871 | 353,819 | \$269,764 |
| 7/1/2019 | 3,542 | 17,136 | 12,500 | 35,624 | 74,468 | 29,036 | 42,419 | 3,521 | 105,104 | 323,350 | \$269,764 |
| 7/1/2020 | 3,641 | 17,136 | 12,500 | 35,730 | 74,715 | 26,265 | 37,623 | 3,185 | 97,803 | 308,600 | \$269,764 |
| 7/1/2021 | 3,744 | 17,136 | 6,250 | 35,838 | 74,975 | 24,008 | 33,559 | 2,912 | 91,606 | 290,027 | \$269,764 |
| 7/1/2022 | 3,849 | 17,136 | - | 35,948 | 75,248 | 22,772 | 30,956 | 2,762 | 87,611 | 276,283 | \$269,764 |
| 7/1/2023 | 3,958 | 17,136 | - | 36,060 | 75,548 | 22,061 | 29,102 | 2,675 | 84,745 | 271,286 | \$269,764 |
| 7/1/2024 | 4,070 | 17,136 | - | 36,174 | 75,825 | 21,336 | 27,229 | 2,588 | 81,851 | 266,209 | \$269,764 |
| 7/1/2025 | 4,185 | 17,136 | - | 36,291 | 76,146 | 20,618 | 25,367 | 2,501 | 78,972 | 261,215 | \$269,764 |
| 7/1/2026 | 4,304 | 17,136 | - | 36,409 | 76,485 | 19,898 | 23,501 | 2,413 | 76,087 | 256,233 | \$269,764 |
| 7/1/2027 | 4,426 | 17,136 | - | 36,529 | 76,845 | 19,176 | 21,630 | 2,326 | 73,197 | 251,264 | \$269,764 |
| 7/1/2028 | 4,552 | 17,136 | - | 36,651 | 77,226 | 18,450 | 19,756 | 2,238 | 70,300 | 246,309 | \$269,764 |
| 7/1/2029 | 4,681 | 17,136 | - | 36,776 | 77,632 | 17,721 | 17,877 | 2,149 | 67,396 | 241,369 | \$269,764 |
| 7/1/2030 | 4,815 | 17,136 | - | 36,903 | 78,065 | 16,988 | 15,992 | 2,060 | 64,485 | 236,445 | \$269,764 |
| 7/1/2031 | 4,953 | 17,136 | - | 37,032 | 78,527 | 16,251 | 14,102 | 1,971 | 61,564 | 231,537 | \$269,764 |
| 7/1/2032 | 5,095 | 17,136 | - | 37,164 | 79,021 | 15,510 | 12,206 | 1,881 | 58,634 | 226,647 | \$269,764 |
| 7/1/2033 | 5,241 | 17,136 | - | 37,298 | 79,552 | 14,764 | 10,302 | 1,791 | 55,694 | 221,778 | \$269,764 |
| 7/1/2034 | 5,392 | 17,136 | - | 37,434 | 80,123 | 14,013 | 8,391 | 1,699 | 52,742 | 216,931 | \$269,764 |
| 7/1/2035 | 5,547 | 17,136 | - | 37,573 | 80,740 | 13,256 | 6,472 | 1,608 | 49,778 | 212,109 | \$269,764 |
| 7/1/2036 | 5,707 | 17,136 | - | 37,714 | 81,409 | 12,521 | 4,585 | 1,519 | 46,862 | 207,453 | \$269,764 |
| 7/1/2037 | 5,873 | 17,136 | - | 37,858 | 82,137 | 11,838 | 2,772 | 1,436 | 44,058 | 203,106 | \$269,764 |
| 7/1/2038 | 6,043 | 17,136 | - | 38,004 | 82,933 | 11,177 | 989 | 1,355 | 41,299 | 198,935 | \$269,764 |
| 7/1/2039 | 6,218 | 17,136 | - | 38,153 | 83,809 | 10,506 | (807) | 1,274 | 38,520 | 194,809 | \$269,764 |
| 7/1/2040 | 6,399 | 17,136 | - | 38,305 | 84,779 | 9,824 | (2,618) | 1,191 | 35,719 | 190,735 | \$269,764 |
| 7/1/2041 | 6,586 | 17,136 | - | 38,459 | 85,861 | 9,131 | (4,446) | 1,107 | 32,892 | 186,726 | \$269,764 |
| 7/1/2042 | 6,778 | 17,136 | - | 38,616 | 87,080 | 8,424 | (6,294) | 1,022 | 30,036 | 182,798 | \$269,764 |
| 7/1/2043 | 6,977 | 17,136 | - | 38,776 | 88,468 | 7,701 | (8,164) | 934 | 27,146 | 178,973 | \$269,764 |
| 7/1/2044 | 7,181 | 17,136 | - | 38,939 | 90,071 | 6,960 | (10,060) | 844 | 24,216 | 175,287 | \$269,764 |
| 7/1/2045 | 7,392 | 17,136 | - | 39,105 | 91,958 | 6,197 | (11,988) | 752 | 21,238 | 171,789 | \$269,764 |
| 7/1/2046 | 7,610 | 17,136 | - | 39,274 | 94,233 | 5,407 | (13,955) | 656 | 18,203 | 168,563 | \$269,764 |
| 7/1/2047 | 7,834 | 17,136 | - | 39,446 | 97,073 | 4,583 | (15,969) | 556 | 15,095 | 165,754 | \$269,764 |
| 7/1/2048 | 8,066 | 17,136 | - | 39,621 | 100,811 | 3,715 | (18,047) | 451 | 11,892 | 163,646 | \$269,764 |
| 7/1/2049 | 8,305 | 17,136 | - | 39,799 | 106,191 | 2,785 | (20,213) | 338 | 8,555 | 162,895 | \$269,764 |
| 7/1/2050 | 8,568 | 17,136 | - | 40,056 | 117,512 | 1,798 | (22,461) | 218 | 5,096 | 167,925 | \$269,764 |
| 7/1/2051 | 3,659 | 8,568 | - | 40,056 | 58,443 | 270 | (10,291) | 33 | 697 | 101,435 | \$110,123 |
| TOTAL | 193,890 | 599,760 | 131,250 | 1,315,287 | 2,935,225 | 540,221 | 381,916 | 65,516 | 1,980,412 | 8,143,478 | \$9,441,749 |

After Tax Weighted Average Cost of Capital (WACC) 6.79%

Net Present Value of Future Cash Flows

\$3,693,328

\$3,693,343

15. Explain whether or not Gulf believes Commission approval of this petition for a community solar program authorizes Gulf to construct multiple solar facilities if the original solar facility is fully subscribed.

RESPONSE:

Yes, Gulf's petition for this program is seeking the Commission's authority to proceed with additional facilities if customer interest in and acceptance of the program is demonstrated by the experience gaining subscriptions to the Initial Facility. To ensure that the Commission is fully apprised of any such actions, Gulf would expect to provide both pre- and post-construction notification to the Commission of any facilities beyond the Initial 1 MW Facility, in addition to addressing such consideration in its program reports to the Commission.

16. What is the expected installed cost of the 1 MW facility?

RESPONSE:

The installed cost of the 1 MW facility is expected to be approximately \$2.6 million based on the results of the Request for Proposals (RFP) issued by the Company on September 22, 2015.

17. Please refer to paragraph 12. Provide a breakdown and explanation of all costs associated with the Initial Facility that resulted in the levelized annual revenue requirement of approximately \$270,000. The response should also include each cost's percentage of the annual revenue requirement.

RESPONSE:

The chart below itemizes the cost components of the Initial Facility and the applicable percentage of the levelized revenue requirement of \$270,000.

| | | | Initial Facility Costs | % of Levelized Revenue Requirement |
|--|--|--|---------------------------------------|---|
| Initial Facility Costs | | | | |
| EPC | | | 2,496,366 | 81% |
| Land | | | 15,000 | 1% |
| Permitting | | | 20,000 | 1% |
| Interconnection | | | 50,000 | 2% |
| Total Initial Facility Costs | | | 2,581,366 | 85% |
| Recurring Capital Costs (Inverters, Modules, etc.) | | | | 4% |
| O&M Costs (Fixed O&M, Insurance, Marketing) | | | | 11% |
| Total | | | | 100% |

18. Are any administrative costs included in projected annual revenue requirements? If yes, please explain the type of administrative cost, state the annual amount and as a percentage of the annual revenue requirement.

RESPONSE:

Yes. Administrative costs are included in the projected annual revenue requirements entirely in the form of marketing expenses to acquire and retain customer subscriptions during the pilot period. Gulf anticipates the highest level of marketing expenses in the first year of the pilot. Marketing cost projections are reduced in subsequent years of the pilot because five-year subscriptions and recurring annual subscriptions are expected to reduce the number of annual subscriptions to be acquired in subsequent years.

Gulf has not included a projection of marketing expenses beyond the pilot period at this time. One objective of the pilot program is to evaluate what actual marketing and other administrative costs are necessary to fully subscribe this type of program. Beyond the pilot period, Gulf will adjust the annual subscription fee or number of subscriptions required based on these results.

| Year | Projected Marketing Costs | Projected Annual Declining Revenue Requirement | % of Projected Annual Declining Revenue Requirement |
|------|---------------------------|--|---|
| 2016 | \$50,000 | \$250,930 | 20% |
| 2017 | \$25,000 | \$380,307 | 7% |
| 2018 | \$25,000 | \$353,819 | 7% |
| 2019 | \$12,500 | \$323,350 | 4% |
| 2020 | \$12,500 | \$308,600 | 4% |
| 2021 | \$6,250 | \$290,027 | 2% |

19. Please explain whether or not there is a maximum number of subscriptions for this solar facility.

RESPONSE:

There is a maximum number of subscriptions for this facility. Since each subscription will represent a fixed kWh proportion of the projected facility output, the number of subscriptions will be limited so that the output of the facility will not be oversubscribed.

20. Typically, utilities determine the revenue requirement for a service or offering, and then determine cost-based rates sufficient to recover the revenue requirement. It appears that Gulf first posited rates and then determined the number of subscribers sufficient to cover the annual levelized revenue requirement. If this is correct, please explain why Gulf chose this approach and whether it yields cost-based rates.

RESPONSE:

Please refer to Gulf's Response to Staff's First Data Request Item No. 10 for an explanation of how Gulf set rates and why Gulf chose this approach. This approach yields cost-based rates because the annual subscription fee recovers the revenue requirement corresponding to the energy associated with each subscription.

21. Please refer to paragraph 13.
 - a. Please provide a copy of the RFP that Gulf issued for the engineering procurement, construction, operation and maintenance of the Initial Facility.
 - b. Please provide a summary of the responses to the RFP.
 - c. Please identify the criteria used to select the qualifying bidder, and the relative weights applied.

RESPONSE:

- a. In lieu of providing a copy of the RFP, Gulf has confirmed that a narrative description of the RFP process is acceptable. Due to its capacity, the Initial Facility is not subject to the Florida Electrical Power Plant Siting Act or the Commission's associated Request for Proposals process. Nevertheless, Gulf chose to issue an RFP for the construction of the Initial Facility. Gulf relied upon Southern Company Services Supply Chain to conduct the RFP process, following standard procedures used in all Southern RFPs. Potential bidders are selected based on ability to satisfy scope of work for the project, safety performance, financial standing, appropriate licensing and prior work performance with Southern Company (if any). A recommended bid list is presented to management (in this case, Gulf management) for approval.

After bid list approval, the Southern Company Sourcing System (SCSS) is utilized to furnish bid documents to bidders. The bidders will only have contact with the Supply Chain Management (SCM) representative during the bid cycle and until an award is made. The SCSS also provides a sealed bid process for the bidders to submit bids by the bid due date. Late bids are rarely accepted; if system or other valid reasons support acceptance of a late bid, upper management review and approval are required.

- b. In the RFP process conducted by Southern, bids are evaluated by the project team based on price, technical aspects, commercial exceptions, project objectives, diverse vendor status and work schedule. For this RFP, the responses received for the RFP all met the technical requirements set forth in the RFP documents and included energy production estimates using PVsyst.
- c. The bidders and proposals were evaluated based on technical merit, energy production, and price. Each proposal met the technical requirements, but the winning proposal had higher energy production and a lower EPC cost.

22. Does Gulf intend to outsource operations and/or maintenance? If yes, for how many years does Gulf intend to outsource operations and/or maintenance?

RESPONSE:

Yes, Gulf anticipates outsourcing operations and maintenance of the Initial Facility for the period of the pilot. Beyond the pilot period, Gulf will re-evaluate the operation and maintenance needs of the facility and determine whether to continue outsourcing O&M or utilize Gulf resources. Ultimately, this determination will hinge on which option provides the best value to Gulf's customers.

23. When does Gulf intend to begin construction of the 1 MW solar photovoltaic facility?

RESPONSE:

Gulf will begin construction of the 1 MW facility following receipt of a final non-appealable Commission order approving the program, completion of required permitting activities and receipt of ordered equipment.

24. Please refer to paragraph 15 and describe the methodology used to determine the energy output of the 1 MW solar facility. If Gulf Power Company used a model to determine this, please provide the name of the model.

RESPONSE:

The projected energy output of the 1 MW solar facility was developed using the solar design and production software PVsyst.

25. Please provide the methodology used to calculate the solar-weighted avoided energy cost.

RESPONSE:

Solar-weighted avoided energy cost is a way to express the hourly avoided energy cost of a specific photovoltaic project on an annualized basis in the form of a single annual value. It is calculated as the sum of the products of the hourly avoided energy costs and the hourly solar generation, divided by the annual solar generation.

In mathematical terms, solar-weighted avoided energy cost may be calculated using the following formula:

$$SWAEC_j = \left[\sum_{i=1}^{8760} AEC(i,j) \times SGP(i,j) \right] / \sum_{i=1}^{8760} SGP(i,j)$$

Where

$SWAEC_j$ = the solar-weighted avoided energy cost in year j (measured in ϕ/kWh)

$AEC(i,j)$ = the avoided energy cost for hour i in year j (measured in ϕ/kWh), and

$SGP(i,j)$ = the solar facility's hourly generation profile for hour i in year j (measured in kWh).

26. Is the 746 kWh number fixed or will it be updated annually based on actual output and actual subscriptions?

RESPONSE:

The 746 kWh will be updated annually and will be based on the projected facility output for the upcoming year. During the pilot program, Gulf does not intend to adjust the energy credit based on the number of actual subscriptions.

27. Does Gulf believe that the kWh amount associated with each subscription should be stated in the tariff for purpose of customer clarity? If no, please explain why.

RESPONSE:

No. The kWh amount associated with each subscription will vary each year with the projected output of the facility and should not be stated in the tariff. The kWh amount associated with each subscription will be posted annually on the Gulf Power website and will be communicated to customers during their annual enrollment process.

28. Please describe if Gulf could utilize actual output from the Initial Facility and actual as-available energy rates to provide rebates to participants in the voluntary solar pilot program.

RESPONSE:

Although the actual output of the facility and actual as-available energy rates could be used to determine the credit to participants, Gulf believes that establishing a fixed credit each year provides a simpler, more broadly appealing program design for the customer. Utilizing a fixed credit enables the customer to make an informed annual decision based upon a known credit amount, rather than having to find out each month what the credit is when the bill arrives. Utilizing a fixed credit also significantly simplifies the administration of billing for the program.

29. How does the projected solar-weighted average annual avoided energy cost in this docket differ from Gulf's average annual avoided energy cost?

RESPONSE:

The cost components of Gulf's avoided energy cost for each hour of a given year is the same in both instances. The difference is a result of how the annual averages are computed.

Gulf Power's average annual avoided energy cost is the simple arithmetic average of Gulf's avoided energy cost for each hour of a given year.

Gulf Power's projected solar-weighted average annual avoided energy cost is the arithmetic average of a weighted avoided energy cost—each hour's projected avoided energy cost multiplied by the projected normalized output of the solar facility. So, for example, the solar-weighted average annual avoided energy cost is not affected by Gulf's avoided energy cost during hours in which a solar facility is not expected to produce electricity (i.e. nighttime). See also Gulf's response to Staff's First Data Request Item No. 25.

30. Please explain whether the credit amount will be updated each year based on the number of subscriptions (in addition to facility output and avoided costs).

RESPONSE:

The credit amount will not be updated each year based on the number of actual subscriptions. Adjusting the credit amount based on the actual number of subscriptions would require a proportional adjustment of the annual subscription fee each year. Since Gulf has designed this program to keep stability in the annual subscription fee, the credit amount will only be updated based on projected facility output and projected avoided costs.

31. For the sample calculation in paragraph 15, what capacity factor is assumed for the solar facility?

RESPONSE:

A capacity factor of 24% is assumed for the solar facility and is based on the results of the RFP issued by Gulf Power on September 22, 2015.

32. Please provide the average capacity factor of a solar photovoltaic facility in the Gulf service area, of similar size to that Gulf intends to construct.

RESPONSE:

Gulf is not in possession of data responsive to this request because there are no photovoltaic facilities in Gulf's service area of a size similar to the Initial Facility. Gulf has collected data from small rooftop solar photovoltaic generators in its service area over the years, and that data could be "scaled up" to simulate a 1 MW facility. The differences between the construction and optimization of these small roof-top facilities and the Initial Facility would be sufficiently different such that the data would not be indicative of the expected output of the Initial Facility. Gulf notes, however, that an assumed 24% capacity factor for the Initial Facility is generally in line with capacity factors for similar facilities located in the Southeastern United States.

33. If a customer terminates a subscription, will his monthly bill credits cease immediately?

RESPONSE:

Provided the customer maintains an active account with Gulf Power, the customer will continue to receive the monthly bill credits for the duration of their subscription even when they terminate during a subscription period. This recognizes that annual subscription fees are paid up front.

34. Please refer to paragraph 16. To illustrate the impact on the fuel clause, please provide Schedule E-1 for 2016 as approved in the recent fuel hearing (Docket No. 150001-EI) and a revised hypothetical Schedule E-1 for 2016 assuming the proposed program is in effect and the avoided energy cost associated with the output of the solar facilities is recovered through the fuel clause.

RESPONSE:

Please see page 2 for the recently approved Schedule E-1 in Docket No. 150001-EI. Please see page 3 for a revised hypothetical Schedule E-1 reflecting the recovery of avoided energy costs associated with the output of the solar facilities. There is no expected impact on recoverable fuel costs. Gulf assumes the output of the solar facility will offset an equal amount of purchased energy at avoided cost energy rates.

SCHEDULE E-1

**FUEL AND PURCHASED POWER
COST RECOVERY CLAUSE CALCULATION
GULF POWER COMPANY
PROPOSED FOR THE PERIOD: JANUARY 2016 - DECEMBER 2016**

| Line | | | \$ | kWh | ¢ / kWh |
|------|---|-------------------|--------------|-----------------|--------------|
| 1 | Fuel Cost of System Net Generation | E-3 | 286,397,897 | 8,146,827,000 | 3.5155 |
| 2 | Coal Car Investment | | | | |
| 3 | Other Generation | E-3 | 2,857,236 | 81,612,000 | 3.5010 |
| 4 | Hedging Settlement | E-2 | | | |
| 5 | Total Cost of Generated Power | (Line 1 - 4) | 289,255,133 | 8,228,439,000 | 3.5153 |
| 6 | Fuel Cost of Purchased Power (Exclusive of Economy) | E-7 | | | |
| 7 | Energy Cost of Schedule C & X Econ. Purch. | E-9 | | | |
| 8 | Energy Cost of Other Econ. Purch. (Nonbroker) | E-9 | 223,394,000 | 6,944,290,000 | 3.2169 |
| 9 | Energy Cost of Schedule E Economy Purch. | E-9 | | | |
| 10 | Capacity Cost of Schedule E Economy Purchases | E-2 | | | |
| 11 | Energy Payments to Qualifying Facilities | E-8 | 5,291,000 | 192,036,000 | 2.7552 |
| 12 | Total Cost of Purchased Power | (Line 6 - 11) | 228,685,000 | 7,136,326,000 | 3.2045 |
| 13 | Total Available kWh | (Line 5 + 12) | | 15,364,765,000 | |
| 14 | Fuel Cost of Economy Sales | E-6 | (2,673,000) | (113,630,000) | 2.3524 |
| 15 | Gain on Economy Sales | E-6 | (564,000) | 0 | N/A |
| 16 | Fuel Cost of Other Power Sales | E-6 | (83,652,000) | (3,256,519,000) | 2.5688 |
| 17 | Total Fuel Cost & Gains on Power Sales | (Line 14 - 16) | (86,889,000) | (3,370,149,000) | 2.5782 |
| 18 | Net Inadvertant Interchange | | | | |
| 19 | Total Fuel & Net Power Trans. | (Line 5+12+17+18) | 431,051,133 | 11,994,616,000 | 3.5937 |
| 20 | Net Unbilled Sales * | | | | |
| 21 | Company Use * | | 743,501 | 20,689,000 | 3.5937 |
| 22 | T & D Losses * | | 21,900,870 | 609,424,000 | 3.5937 |
| 23 | System kWh Sales | | 431,051,133 | 11,364,503,000 | 3.7930 |
| 24 | Wholesale kWh Sales | | 12,536,358 | 330,513,000 | 3.7930 |
| 25 | Jurisdictional kWh Sales | | 418,514,775 | 11,033,990,000 | 3.7930 |
| 25a | Jurisdictional Line Loss Multiplier | | 1.0015 | | 1.0015 |
| 26 | Jurisdictional kWh Sales Adjusted for Line Losses | | 419,142,547 | 11,033,990,000 | 3.7986 |
| 27 | True-Up ** | | (19,370,087) | 11,033,990,000 | (0.1755) |
| 28 | Total Jurisdictional Fuel Cost | | 399,772,460 | 11,033,990,000 | 3.6231 |
| 29 | Revenue Tax Factor | | | | 1.00072 |
| 30 | Fuel Factor Adjusted For Revenue Taxes | | 400,060,296 | 11,033,990,000 | 3.6257 |
| 31 | GPIF Reward/(Penalty) ** | | 2,648,312 | 11,033,990,000 | 0.0240 |
| 32 | Fuel Factor Adjusted for GPIF | | 402,708,608 | 11,033,990,000 | 3.6497 |
| 33 | Fuel Factor Rounded to Nearest .001(¢ / kWh) | | | | 3.650 |

*For informational purposes only

** Calculation Based on Jurisdictional kWh Sales

SCHEDULE E-1

**FUEL AND PURCHASED POWER
COST RECOVERY CLAUSE CALCULATION
GULF POWER COMPANY**

PROPOSED FOR THE PERIOD: JANUARY 2016 - DECEMBER 2016

| Line | | | \$ | kWh | ¢ / kWh |
|------|---|-------------------|--------------|-----------------|--------------|
| 1 | Fuel Cost of System Net Generation | E-3 | 286,397,897 | 8,146,827,000 | 3.5155 |
| 2 | Coal Car Investment | | | | |
| 3 | Other Generation | E-3 | 2,857,236 | 81,612,000 | 3.5010 |
| 3a | Community Solar Generation | TBD | 73,100 | 2,150,000 | 3.4000 |
| 4 | Hedging Settlement | E-2 | | | |
| 5 | Total Cost of Generated Power | (Line 1 - 4) | 289,328,233 | 8,230,589,000 | 3.5153 |
| 6 | Fuel Cost of Purchased Power (Exclusive of Economy) | E-7 | | | |
| 7 | Energy Cost of Schedule C & X Econ. Purch. | E-9 | | | |
| 8 | Energy Cost of Other Econ. Purch. (Nonbroker) | E-9 | 223,320,900 | 6,942,140,000 | 3.2169 |
| 9 | Energy Cost of Schedule E Economy Purch. | E-9 | | | |
| 10 | Capacity Cost of Schedule E Economy Purchases | E-2 | | | |
| 11 | Energy Payments to Qualifying Facilities | E-8 | 5,291,000 | 192,036,000 | 2.7552 |
| 12 | Total Cost of Purchased Power | (Line 6 - 11) | 228,611,900 | 7,134,176,000 | 3.2045 |
| 13 | Total Available kWh | (Line 5 + 12) | | 15,364,765,000 | |
| 14 | Fuel Cost of Economy Sales | E-6 | (2,673,000) | (113,630,000) | 2.3524 |
| 15 | Gain on Economy Sales | E-6 | (564,000) | 0 | N/A |
| 16 | Fuel Cost of Other Power Sales | E-6 | (83,652,000) | (3,256,519,000) | 2.5688 |
| 17 | Total Fuel Cost & Gains on Power Sales | (Line 14 -16) | (86,889,000) | (3,370,149,000) | 2.5782 |
| 18 | Net Inadvertant Interchange | | | | |
| 19 | Total Fuel & Net Power Trans. | (Line 5+12+17+18) | 431,051,133 | 11,994,616,000 | 3.5937 |
| 20 | Net Unbilled Sales * | | | | |
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| 22 | T & D Losses * | | 21,900,870 | 609,424,000 | 3.5937 |
| 23 | System kWh Sales | | 431,051,133 | 11,364,503,000 | 3.7930 |
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| 27 | True-Up ** | | (19,370,087) | 11,033,990,000 | (0.1755) |
| 28 | Total Jurisdictional Fuel Cost | | 399,772,460 | 11,033,990,000 | 3.6231 |
| 29 | Revenue Tax Factor | | | | 1.00072 |
| 30 | Fuel Factor Adjusted For Revenue Taxes | | 400,060,296 | 11,033,990,000 | 3.6257 |
| 31 | GPIF Reward/(Penalty) ** | | 2,648,312 | 11,033,990,000 | 0.0240 |
| 32 | Fuel Factor Adjusted for GPIF | | 402,708,608 | 11,033,990,000 | 3.6497 |
| 33 | Fuel Factor Rounded to Nearest .001(¢ / kWh) | | | | 3.650 |

*For informational purposes only

** Calculation Based on Jurisdictional kWh Sales

35. Has the Commission previously approved recovery of solar-weighted avoided energy costs associated with the output of solar facilities through the Fuel and Purchased Power Cost Recovery Clause (fuel clause) as proposed in paragraph 16? If yes, please provide order numbers.

RESPONSE:

Not to Gulf's knowledge.

36. Please refer to paragraph 16.
- a. Please clarify whether Gulf is requesting recovery of fixed annual projections of energy prices and output from the facility instead of actual as-available energy deliveries from the Initial Facility. If it is seeking fixed annual projections, please describe how often this value would be updated, what methodology would be used to update the value, and in what proceeding Gulf would seek approval of the updated value.
 - b. Will the avoided energy costs associated with the solar facility's output that is to be recovered from the fuel clause be equal to the annual energy credits to be paid to subscribers?
 - c. If Gulf recovers the projected solar-weighted average annual avoided energy cost associated with the output of solar facilities through the fuel clause, won't this zero out any bill credits received by community solar subscribers? Please explain.
 - d. If this program is run through the fuel clause, how will nonparticipating customers be protected if the actual avoided energy cost is less than the projected avoided energy cost?
 - e. Please explain why it is appropriate for customers who do not participate in the pilot program to pay a portion of the monthly bill credit for participating customers, that is based upon the output of a generating resource that has not been shown to be cost-effective to the general body of ratepayers.

RESPONSE:

- a. Yes, Gulf is seeking recovery of a fixed projected average annual avoided energy cost based upon a fixed projection of facility output. The projected average annual avoided energy cost and facility output will be updated annually during preparation of Gulf's fuel cost recovery projection filing. Gulf will present the updated projections to the Commission for review in the annual fuel and purchased power cost recovery clause proceedings.
- b. The program is designed such that the avoided energy costs associated with facility output that is to be recovered through the fuel clause will be equal to the annual energy credits to be paid to subscribers if the program is fully subscribed.
- c. No. All of Gulf's customers will pay for the projected solar-weighted average annual avoided energy cost associated with the output of solar facilities (because all customers benefit from this no-fuel-cost generating resource supplying energy to the grid) but only subscribers will receive the monthly energy credit (because only subscribers, through their annual fees, will be paying for this generating resource). Thus each program subscriber will pay a very small amount (as one of

hundreds of thousands of customers) through the fuel clause for the projected solar-weighted average annual avoided energy cost associated with the output of solar facilities but will gain a larger share of benefit (as one of only a few thousand program subscribers) through the monthly energy credit.

- d. If actual avoided costs in any year differ from Gulf's projections, there is potential for non-participating customers to pay more or less than actual cost. However, given the magnitude of costs being recovered, any impact will be immaterial. A true-up mechanism could be implemented to account for these variations, but Gulf's analysis concluded that the cost and complexity of implementation far exceeded any costs to be trued-up. In the interest of mitigating the impact of such cost differentials while also avoiding undue program administration complexities and potential confusion for participating customers, Gulf determined that the preferable approach would be to re-project annually.
- e. Non-participants are only being asked to pay, through the fuel clause, for the projected solar-weighted average annual avoided energy cost associated with the output of solar facilities. This is an appropriate transaction because all customers will benefit from the no-fuel-cost output of the Facility. The non-participants are paying avoided energy costs (appropriately solar-weighted) only and are thus indifferent to the cost of the generating Facility. The community solar program participants on the other hand, are paying a premium for the solar generating Facility through their annual subscription fees. In return for paying for the solar generating Facility, program participants receive the appropriate value of the Facility's output (solar-weighted avoided energy cost) in the form of a credit on their monthly bills.

37. Please refer to paragraph number 17.
- a. How does Gulf intend to “retire” the Renewable Energy Credits (RECs)?
 - b. Does Gulf retain ownership of the RECs?
 - c. Does Gulf intend to sell or trade the RECs?
 - d. Are the RECs transferable?
 - e. How many RECs are expected to be created each year from the 1 MW solar facility associated with this pilot program?
 - f. If Gulf intends to sell the RECs, how will the funds received from the REC sales applied to the project to offset the projected revenue requirement?

RESPONSE:

- a. “Retirement” is one of several terms used interchangeably to describe the “use” or “disposition” of RECs for a particular end user or group of end users of electricity. The customers on whose behalf a REC is retired would have the exclusive right to claim that they were served with the renewable energy associated with the REC. Retirement can occur formally, through the use of a tracking system such as the North American Renewables Registry (NARR), or informally, through public “claims” that the REC has been used for a particular purpose. For example, a public statement by Gulf Power in a company press release or on the company website indicating that the renewable energy output of the community solar facilities is being consumed by program participants would effectively “retire” the RECs associated with that output on behalf of the program participants. The Company’s intention is to utilize such public statements to retire RECs on behalf of participating customers.
- b. No. When Gulf retires RECs on behalf of a particular group of customers, those customers receive the exclusive right to claim that they were served with the renewable energy associated with such RECs. Once retired, the REC is effectively consumed, and neither Gulf, nor its customers, retain an ownership interest in the REC.
- c. No. As explained above, by retiring the REC on behalf of participating customers, Gulf has effectively extinguished the REC. Because a REC can only be used for a single purpose, RECs retired on behalf of customers cannot be sold or traded.
- d. Not in this case. As explained above, once a REC is “retired” on behalf of customers, it is no longer transferrable.

- e. Based on the projected energy output of the 1 MW solar facility, the projected annual RECs expected to be created each year are outlined in the following table:

| Year | Projected RECs | Year | Projected RECs | Year | Projected RECs | Year | Projected RECs |
|-------------|-----------------------|-------------|-----------------------|-------------|-----------------------|-------------|-----------------------|
| 1 | 2,148 | 11 | 2,002 | 21 | 1,866 | 31 | 1,740 |
| 2 | 2,133 | 12 | 1,988 | 22 | 1,853 | 32 | 1,728 |
| 3 | 2,118 | 13 | 1,974 | 23 | 1,840 | 33 | 1,716 |
| 4 | 2,103 | 14 | 1,961 | 24 | 1,828 | 34 | 1,704 |
| 5 | 2,088 | 15 | 1,947 | 25 | 1,815 | 35 | 1,692 |
| 6 | 2,074 | 16 | 1,933 | 26 | 1,802 | - | - |
| 7 | 2,059 | 17 | 1,920 | 27 | 1,789 | - | - |
| 8 | 2,045 | 18 | 1,906 | 28 | 1,777 | - | - |
| 9 | 2,031 | 19 | 1,893 | 29 | 1,764 | - | - |
| 10 | 2,016 | 20 | 1,880 | 30 | 1,752 | - | - |

- f. Once a REC is "retired" on behalf of customers, it is no longer transferrable. Therefore, Gulf does not intend to sell RECs associated with this program.

38. Please refer to paragraph 18.
- a. How did the market research team determine that a majority of customers are supportive of a solar initiative?
 - b. How many Gulf residential and business customers were contacted regarding their willingness to pay a premium for solar?
 - c. How many residential customers indicated an interest in community solar?
 - d. How many small business customers indicated an interest in community solar?
 - e. What is the statistical significance of the number of customers contacted regarding their support for a solar initiative and the number of ratepayers? What is the margin of error for that statistical significance?
 - f. How was the average annual premium for solar of \$345.60 for residential customers and \$141.00 for small business determined?

RESPONSE:

- a. In Gulf Power's market research surveys, a majority of the respondents (58 percent of business customers and 61 percent of residential customers) indicated that they were supportive of solar generation in the Gulf Coast area.
- b. The number of customers contacted regarding their willingness to pay a premium for solar were 157 business customers and 406 residential customers.
- c. Fifty-eight percent (58%) of the 406 residential customers surveyed indicated they had an interest in community solar.
- d. Fifty-three percent (53%) of the 157 business customers surveyed indicated they had an interest in community solar.
- e. Based on the sample size of 157 small business customers that were surveyed, the statistical margin of error is 7.8 percentage points at the 95 percent (95%) confidence interval.

Based on a sample size of 406 residential customers that were surveyed, the statistical margin of error is 4.9 percentage points at the 95 percent (95%) confidence interval.

- f. Residential and small business customers surveyed in Gulf's market research were asked if they would be willing to pay more for solar than they currently pay for electricity from Gulf Power and how much more they were willing to pay. For

residential customers who indicated a willingness to pay more, Gulf's market research showed the average amount that they were willing to pay above their regular bill was \$28.80 per month or \$345.60 annually.

For business customers who indicated a willingness to pay more, Gulf's market research showed the average amount that they were willing to pay above their regular bill was \$34.50 per month or \$414 annually. The \$141 referenced in subpart f of this question is a typo and should reflect \$414.

39. The following questions refer to Exhibit A, Rate Rider CS:
- a. Can a customer cancel a subscription at any time during the pilot project?
If yes, please explain under what circumstances.
 - b. Under what terms or conditions can Gulf terminate a customer's subscription?

RESPONSE:

- a. Yes. Customers participating in an annual renewal option may cancel their subscription at any time and for any reason. However, the annual subscription fee is non-refundable for that year. Customers participating in the five-year subscription offering may cancel if the customer moves to a location outside of Gulf Power's service area and discontinues electric service with Gulf Power as described in the proposed Form 29. As a result, the customer shall be released from any obligation to pay Gulf Power for annual subscription fees which have yet to be billed to the customer during the contract term. However, the customer shall not be entitled to a refund for annual subscription fees which have previously been paid to the Company.
- b. Gulf may terminate a customer's subscription in the event that:
 - i. The customer fails to pay an annual subscription fee by the date specified in a billing statement; or
 - ii. The solar program is discontinued or modified by the Florida Public Service Commission. In such case, the customer shall be released from any obligation to pay Gulf Power for annual subscription fees which have yet to be billed to the customer.

40. The following questions refer to Form 29, the five-year participation agreement:
- a. Under what circumstances would Gulf discontinue or terminate this solar program?
 - b. What information does Gulf provide to customers who subscribe for fewer than five years?
 - c. For the purposes of retiring Renewable Energy Credits, does Gulf associate 700 kWhs per subscription?
 - d. If no, how many kWhs are associated per subscription?
 - e. What actions, if any, will Gulf take to enforce the agreement if a customer wishes to cancel the subscription and no longer pay the subscription fee?

RESPONSE:

- a. There are a variety of potential circumstances that could prompt Gulf to discontinue this pilot program. Examples could include less customer participation than expected and changes in the economics of the project such that all customers benefit from this facility whether they participate or not. Other regulations that impact the treatment of this investment could also be motivating factors in modifying or discontinuing this program. At this time, Gulf cannot state with certainty all circumstances which would lead to a change in this program.
- b. In addition to the information described in Gulf's response to Item No. 1 of this Data Request, customers will have access to information set forth in Rate Rider CS. For customers subscribing to the annual renewal option, they will be provided the annual subscription fee and the monthly credit values for the current calendar year.
- c. No. The 746 kWh figure set forth in Gulf's petition is an indicative number derived by dividing projected facility energy output by the maximum number of subscriptions needed to fully subscribe the facility. The number of RECs that Gulf will have available to retire on behalf of participants will be dependent on the actual output of the facility and will likely vary year to year. By way of example, if the actual output of the solar facility totals 2,100,000 kWh in a given year, the maximum number of subscriptions to the program is 3,000 and a participant has secured 10 subscriptions, then the Company would retire RECs equivalent to 7,000 kWh for that participant.
- d. Please see Gulf's response to subpart c.

- e. Once executed by Gulf Power and the customer, Form 29 will become a valid and binding contractual agreement between the parties, and Gulf Power will treat it as such. If a customer breaches the agreement, Gulf reserves all of its legal remedies including, but not limited to, judicial relief. However, as noted in section 4 of Form 29, failure to abide by the terms of the agreement will not result in Gulf's curtailment or discontinuation of electric service to the customer.

41. Please refer to paragraph 25. Please provide a history of participation in the PV Rate Rider Program, including the number of participants annually since the program's inception.

RESPONSE:

Please see the table below for Gulf's PV Rate Rider participation levels over the past 10 years—Gulf does not possess participation data for earlier years. Since the inception of Gulf's PV Rate Rider program, no customers have been billed. Because the minimum threshold (10,000 100-watt blocks) for this program was not attained and as a result, by design of the program, no solar facility was built, no solar energy was delivered, and no participant was billed. One important lesson learned from the PV Rate Rider program was how difficult it was to achieve adequate customer participation without an already operating PV facility. The community solar pilot avoids this program design deficiency.

| Year | # of Participants* |
|---------------|---------------------------|
| Prior to 2005 | 65 |
| 2005 | 70 |
| 2006 | 66 |
| 2007 | 66 |
| 2008 | 63 |
| 2009 | 59 |
| 2010 | 51 |
| 2011 | 47 |
| 2012 | 45 |
| 2013 | 45 |
| 2014 | 42 |
| YTD 2015 | 42 |

*As of December 31st of each year.

42. Regarding Gulf's photovoltaic (PV) generating systems which are referenced in the petition:
- a. Please specify the major components (e.g. PV modules, PV support structure, energy output modules, etc.) of these PV generating systems.
 - b. Do the different components discussed in question 42(a.) have the same design life? Please explain.
 - c. Do the different components discussed in question 42(a.) have the same service life? Please explain.
 - d. Do the different components discussed in question 42(a.) have the same warranty? Please explain.

RESPONSE:

Gulf's responses are prefaced on the assumption that the question is referring to the Initial Facility.

- a. The proposed major components are listed below.
 - PV Module: Solar World Sunmodule SW 320 XL MONO
 - Inverter: SMA Sunny Tripower 24000TL-US
 - Racking: RBI Solar Ground Mount
- b. No. The components do not have the same design life. Each component will be rehabilitated or replaced as needed in order to achieve the 35-year design useful life of the facility.
- c. The different components do not have the same service life. As each component reaches the end of its service life, it will need to be rehabilitated or replaced in order to achieve the 35 year design life of the facility.
- d. The different components do not have the same warranty. The proposed PV modules have a 10 year workmanship warranty and a 25 year power output warranty. The proposed string inverters have a 10 year warranty with an option to extend. The proposed racking system has a 20 year warranty.

43. The Commission has previously approved a 30-year life expectancy for utility scale solar PV facilities.¹ Please discuss Gulf's support for estimating a 35-year life for its planned solar facility.

RESPONSE:

Southern Company Services and KPMG LLP conducted a study to determine the useful life of various components of a generic solar plant. The study also identified a composite depreciable life for the plant itself. The study broke the plant into 3 components: PV Panels, Inverters, and Other. The panels were estimated to have a useful life of 35 to 40 years but were expected to require significant work beyond 35 years. The inverters were estimated to have a useful life of 20 years. The remaining infrastructure was estimated to have a useful life of 40 years. The table below shows the calculation Gulf used in its determination of the 35 year depreciable life filed with the community solar project. Gulf plans to use the FERC accounts associated with the assets in the table.

| FERC | Category | % of Initial Cost | Net Usable Life (NUL) | Weighted NUL |
|-------|---------------------|-------------------|-----------------------|--------------|
| 344 | PV Panels | 51.34% | 35 | 18 |
| 345 | Inverters | 10.33% | 20 | 2 |
| Other | Other PV Components | 38.33% | 40 | 15 |
| | Depreciable Life | 100.00% | | 35 |

¹ Order No. PSC-08-0731-PAA-EI, issued November 3, 2008, in Docket No. 080543-EI, In re: Request for approval to begin depreciating new technology solar photovoltaic plant sites for DeSoto and Space Coast Solar Energy Centers over a 30-year period, effective with in-service dates of units, by Florida Power & Light Company.

44. Do any of the solar components of the planned generating unit come with a manufacturer's warranty? If so, please identify all such components and associated warranty durations.

RESPONSE:

Gulf's response is prefaced on the assumption that the question is referring to the Initial Facility.

The proposed PV modules have a 10 year workmanship warranty and a 25 year power output warranty. The proposed string inverters have a 10 year warranty with an option to extend. The proposed racking system has a 20 year warranty.

45. Do any of the services provided by the construction contractor/installer of the planned generating unit come with a guarantee/warranty? If so, please identify all such services and associated guarantee/warranty durations.

RESPONSE:

Gulf's response is prefaced on the assumption that the question is referring to the Initial Facility.

The EPC agreement is expected to contain a workmanship warranty of at least 12 months from the in-service date of the facility.

46. For the purposes of the following request, please refer to paragraph 11. Here it is outlined that additional solar facilities may be constructed if the Initial Facility becomes fully subscribed. How would Gulf both record and report (to the Commission) any additional facilities if such facilities are constructed and placed into commercial operation?

RESPONSE:

The accounting entries to record any additional facilities would be consistent with the entries utilized to record the Initial Facility. Gulf would use the program design approved by this Commission to expand its program offering to include additional facilities. Gulf would expect to provide both pre- and post-construction notification to the Commission of any facilities beyond the Initial 1 MW Facility, in addition to addressing such consideration in its program reports to the Commission.

47. For the purposes of the following request, please refer to paragraph 12.
- a. What is the levelized annual revenue requirement if Gulf assumes a 30-year life for the 1 MW Initial Facility?
 - b. Please provide the estimated number of customers (for all three subscription price level distributions referenced in this paragraph) needed to fully subscribe the Program if a 30-year life is assumed for the 1 MW Initial Facility, as opposed to a 35 year life. Please show all work/calculation steps.

RESPONSE:

- a. If Gulf assumes a 30-year life for the 1 MW Initial Facility, the projected levelized annual revenue requirement would be approximately \$274,000.
- b. The number of annual subscriptions needed to fully subscribe the program can be determined by dividing the projected levelized annual revenue requirement by annual subscription fees.

If all customers subscribed at the \$99.00 subscription level, 2,768 customers would be needed to fully subscribe the program if a 30-year life is assumed.

$$(274,000 \div \$99.00 = 2,768)$$

If all customers subscribed at the \$89.00 level, 3,079 customers would be needed to fully the subscribe the program if a 30-year life is assumed.

$$(274,000 \div \$89.00 = 3,079)$$

If one half of the projected revenue requirements were distributed equally among the \$89.00 and \$99.00 subscription levels, 2,923 subscriptions would be needed to fully subscribe the program if a 30-year life is assumed.

$$\begin{aligned} & [(274,000 \div 2) / \$89 + (274,000 \div 2) / \$99] \\ & [(137,000 / \$89) + (137,000 / \$99)] \\ & (1,539 + 1,384) \\ & = 2,923 \end{aligned}$$

48. For the purposes of the following request, please refer to paragraph 22. What actions, if any, does Gulf anticipate it will take regarding plant depreciation in the event that Gulf determines to close/discontinue the program as a result of the pilot period evaluation?

RESPONSE:

The accumulated depreciation would be considered in any action relative to the facility. The driver would be the ultimate use of the asset itself. The accumulated depreciation would follow a similar direction.

49. For the purposes of the following request, please refer to paragraph 26. Gulf indicates that it will record plant investments within FERC accounts 340-346 "Other Power Generation." FERC accounts 340-346 are as follows:
- 340 Land and land rights
 - 341 Structures and improvements
 - 342 Fuel holders, producers, and accessories
 - 343 Prime movers
 - 344 Generators
 - 345 Accessory electric equipment
 - 346 Miscellaneous power plant equipment

For each of these accounts:

- a. Please provide a description of the plant assets Gulf intends to book to each account and indicate the respective life expectancy.
- b. Please identify the solar components or the associated equipment that will be booked, and indicate the respective life expectancy.

RESPONSE:

See Response to Item No. 43. A final budget has not yet been developed. The expected life of primary components of the facility was estimated from the KPMG study and Gulf's retirement unit manual.

50. Please discuss how Gulf intends to recover costs associated with dismantling (to include any possible environmental and site restoration) any facility constructed under its community solar program.

RESPONSE:

As a retail rate offer, dismantlement would be recovered as an annual revenue requirement of the asset class. No specific dismantlement costs have been identified at this point, but due to the relatively small foot print of this pilot facility, any such costs are expected to be minor. Any dismantling work would be performed in accordance with established construction practices and would meet FPSC guidelines.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

**IN RE: Petition for approval of Community Solar Pilot
Program by Gulf Power Company**

Docket No.: 150248-EI

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true copy of the foregoing was furnished by electronic mail this 4th day of January, 2016 to the following:

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