

GAINESVILLE REGIONAL UTILITIES AND NET METERING

Introduction

Increased interest in renewable generation has encouraged discussion and consideration of metering and payment methods and policies by utilities. This analysis will consider the current practices available for renewable generation in the Gainesville Regional Utilities territory, the history of the issue, the recent developments at the Public Service Commission and the requirements under the 2005 EPAct. A draft recommendation for a net metering policy is included.

Purpose

It is in Gainesville's interest to provide incentives to help promote the adoption of customer owned, distributed, renewable generation resources. The staff has been charged with achieving maximum conservation, and in conjunction with incentives for renewable generation, the metering and compensation policies are outlined. Important considerations for net metering include:

- Incentives to help promote the adoption of customer owned, distributed, renewable generation resources is desirable for Gainesville.
- Customer's utilizing customer owned generation to offset some or all of their electric usage helps GRU avoid fuel costs and helps to offset the need for new generation.
- Consistency with the policies and requirements of other utilities in Florida is important.
- Net metering creates an incentive for distributed renewable energy resources.
- The financial impacts of offering net metering for customer owned, distributed, renewable generation facilities are minimal.
- Some forms of customer owned generation can be powered by renewable sources and may result in lowering the greenhouse gas emissions of the City of Gainesville.

Current Practice

1) GRU's Current Metering Practice for Customer Owned Renewable Resources

GRU meter's electricity entering a customer's premise and electricity sent to the grid utilizing a single meter with two registers. At the end of each month the customer is charged based on the readings from the first register and is credited based on the readings from the second register.

Figure I shows a customer bill with Renewable Generation (RG). Any consumption from the grid is charged to the customer utilizing GRU's standard residential electric rates. Energy sold back to the grid compensated to the customer at the rate of \$0.0742 / kWh. This rate is set based on the fuel

adjustment (\$0.050), embedded fuel (0.0065) and the unbundled generation component of the base rates (\$0.0177). This is called the average avoided cost of generation and represents the average cost of generating 1 kWh of electricity for GRU. Any energy the customer uses from the RG system that is not sold to the grid reduces energy the customer purchases from GRU, this energy has a value equal to the cost of energy from GRU. GRU residential electric rates are shown in Figure II. All rate classes are billed in the same manner.

Figure I – Renewable Generation Residential Customer Bill

UTILITY SERVICE	METER NUMBER	METER READING DATES		DAYS SERVICE	AVERAGE DAILY CONSUMPTION		
		FROM	TO		THIS MONTH	LAST MONTH	12 MOS AGO
PHOTOVOLTAIC METER							
ELECTRIC E096711643		1/12/2008	2/12/2008	32	15.41	14.52	30.70
GAS C89362		1/12/2008	2/12/2008	32	0.25	0.29	0.30
WATER W52854767		1/12/2008	2/12/2008	32	0.16	0.19	0.19

UTILITY CHARGES	METER READINGS		TYPE	CONSUMPTION	AMOUNT DUE
	PREVIOUS	CURRENT			
ELECTRIC CHARGE	941	1434	ACTUAL	493 KWH	21.25
PHOTOVOLTAIC SYSTEM CREDIT				191 KWH	4.62
PV SYSTEM FUEL ADJ CREDIT					9.55
GAS CHARGE	2031	2039	ACTUAL	8 THERMS	18.78
WATER CHARGE	1093	1098	ACTUAL	5 KGALS	13.15
PROJECT SHARE					5.00
\$ 24.65 OF YOUR ELECTRIC CHARGE IS EXEMPT FROM UTILITY TAX \$ 7.96 OF YOUR NATURAL GAS CHARGE IS EXEMPT FROM UTILITY TAX					
STATE & LOCAL CHARGES (SEE REVERSE SIDE OF BILL FOR EXPLANATION)					
STORMWATER FEE				1 ERU	7.40
20 GAL REFUSE CONTAINER	CART #	2000908			13.21
FLORIDA GROSS RECEIPTS TAX					1.77
CITY UTILITY TAX					5.29
FEB 2008 CHARGES AN EFT PAYMENT WILL BE DEDUCTED FROM YOUR BANK ACCOUNT ON 03/09/2008					
PREVIOUS BALANCE		101.21			
PAYMENT(S)		101.21	- THANK YOU FOR YOUR PROMPT PAYMENT		
PAST DUE BALANCE FORWARD		0.00			
EFT PAYMENT DUE					\$ 102.66

$\$14.17 / 191 = \$.0742 / \text{kWh}$

Figure II – Residential Rate

Rate Classifications

Residential Service	<u>Standard</u>
Customer Charge	\$5.54
Energy Charge per kilowatt-hour (kWh)	(includes 6.5 mills of fuel)
0-250 kWh	\$0.025
250-750 kWh	\$0.065
Over 750 kWh	\$0.097
Fuel Adjustment	[2]

History

1) Regional Utilities Committee – Net Metering/Solar

On April 23, 2007, the City Commission referred the issue of GRU's Photovoltaic Policies to the RUC for review. Commissioner Lowe met Mr. Schackow and Mr. LaCombe about a proposed energy neutral neighborhood and they requested a review of GRU's photovoltaic policies with respect to purchasing excess energy

from photovoltaic systems. The RUC discussed this item at the June 12 and July 10, 2007 meetings. The RUC submitted an item back to the City Commission on August 27 recommending that: 1) GRU maintain existing rebate levels and dual metering policies for residential photovoltaic electric systems through FY 08; and 2) retain this item on the RUC referral list. During the August 27 meeting Commissioner Donovan moved that the Commission direct GRU staff to consider an idea presented by Rob Brinkman to reinstall old meters on the homes that have RG systems, and report back what it would cost and what benefits it might have. Commissioner Lowe clarified that this item was being retained in Committee and that the information would be brought back to the RUC in a timely manner for next budget year. At the November 26, 2007 meeting Commissioner Donovan requested that the issue of possibly amortizing the purchase of residential solar panels or issuing bonds be referred to the RUC. Commissioner Lowe recommended rolling this new referral into a pending referral regarding photovoltaic policies (file #061214).

2) Florida Public Service Commission (FPSC) and Net Metering

In January 2007 the FPSC (Florida Public Service Commission) held a workshop to further explore opportunities to develop renewable energy in Florida. This workshop allowed the FPSC to collect information from a wide range of interested parties, including renewable generators, environmental groups, Florida utilities and financial experts. Expedited interconnection and Net Metering were two issues that were discussed at this workshop. FPSC staff held workshops in April to gather further information. Following the April workshops staff drafted a rule that addressed both issues and provided this draft rule to interested parties for discussion at an August 30, 2007 FPSC rule development workshop. Following the workshop FPSC staff revised the rule and an additional staff rule development workshop on October 15, 2007. On December 7, 2007 the FPSC staff submitted a proposed amendment of Rule 25-6.065. On December 18th, 2007 the FPSC initiated rulemaking to amend Rule 25-6.065, Florida Administrative Code, relating to Interconnection and Net Metering of Customer-Owned Renewable Generation. On March 4, 2008 the FPSC adopted without change, the draft rule on Net Metering and Interconnection.

From FPSC staff memo, December 7, 2007, pages 18 - 19:

Subsections (8)(e) and (f) of staff's recommended amendments would require energy delivered to the grid during any billing cycle to be credited to the customer's consumption for the next month's billing cycle. Energy credits for excess generation would be permitted to accumulate and offset a customer's consumption in subsequent months for a period of not more than twelve months. At the end of the calendar year, the utility would pay the customer for any remaining energy credits. The rates at which these credits and end of year payments would be made are discussed in detail in the next section.

Subsection (8)(f) of staff's recommended amendments would require that for any excess customer-owned renewable generation, the IOU should compensate the

customer for any unused energy credits at the end of the calendar year at an average annual rate based on the IOU's COG-1, as available energy tariff.

3) FPSC Rule 25-6.065 Reporting Requirements

Reporting Requirements. Each electric utility, as defined in Section 366.02(2), Florida Statutes, shall file with the Commission as part of its tariff a copy of its Standard Interconnection Agreement form for customer-owned renewable generation. In addition, each electric utility shall report the following, by April 1 of each year.

- (a) Total number of customer-owned renewable generation interconnections as of the end of the previous calendar year;
- (b) Total kW capacity of customer-owned renewable generation interconnected as of the end of the previous calendar year;
- (c) Total kWh received by interconnected customers from the electric utility, by month and by year for the previous calendar year;
- (d) Total kWh of customer-owned renewable generation delivered to the electric utility, by month and by year for the previous calendar year; and
- (e) Total energy payments made to interconnected customers for customer-owned renewable generation delivered to the electric utility for the previous calendar year, along with the total payments made since the implementation of this rule.
- (f) For each individual customer-owned renewable generation interconnection:
 1. Renewable technology utilized;
 2. Gross power rating;
 3. Geographic location by county; and
 4. Date interconnected.

4) Impacts of FPSC Rulemaking:

GRU will be able to meet the reporting requirements under current interconnection policy and with information that is currently being captured. GRU will work with FMEA to address any necessary changes to existing standard interconnection agreements and file a revised agreement with the FPSC. These are the only items required of GRU in the FPSC rulemaking.

Requirements under the EAct 2005 (Public Utility Regulatory Policies Act)

The Public Utility Regulatory Policies Act of 1978 (PURPA) was enacted as part of the National Energy Act by President Jimmy Carter. The Energy Policy Act of 2005 (EAct 2005) adds five additional PURPA standards that state commissions and nonregulated utilities must consider. These include (1) net metering; (2) fuel diversity; (3) fossil fuel generation efficiency; (4) time based metering and communications; and (5) interconnection standards for distributed resources. The City Commission took initial action to meet the PURPA requirements on July 31, 2006. The City Commission received a presentation on the schedule and public participation procedure for consideration and

determination of Time Based Metering and Communications as well as Interconnection Standards for Distributed Resources on June 11, 2007. The City Commission held a public hearing on June 25, 2007 and received staff considerations and determinations and public input. No public input was submitted in writing by the June 25, 2007 deadline. The City Commission adopted findings for these items at the July 9, 2007 City Commission Meeting.

To meet the next PURPA deadline the City Commission must consider make determinations and adopt findings in regards to net metering before the August 8, 2008 deadline. A schedule to meet the PURPA deadline is included below in Figure III.

Figure III – PURPA – Net Metering – Schedule

March 19, 2008: Regional Utilities Committee Meeting

RUC recommend that the City Commission hold a public hearing to receive staff's considerations and determinations and public input at the April 21, 2008 City Commission meeting.

April 21, 2008: City Commission Meeting

City Commission hold a public hearing and staff prepare findings for final consideration and determination and adoption at the May 19, 2008 City Commission meeting.

May 19, 2008: City Commission Meeting

City Commission adopt, modify or reject findings regarding net metering at the May 19, 2008 City Commission meeting.

Draft Net Metering Considerations:

Standard 11 – *Net Metering* section 1251, Subtitle E – Amendments to PURPA of EAct 2005. Each electric utility shall make available upon request net metering service to any electric consumer that the electric utility serves. For purpose of this paragraph, the term “net metering service” means service to an electric consumer under which electric energy generated by that electric consumer from an eligible on-site generating facility and delivered to the local distribution facilities may be used to offset electric energy provided by the electric utility to the electric consumer during the applicable billing period.

- GRU currently offers a distributed resources credit rate for distributed resource(s) of less than or equal to ten (10) kW. Energy is credited at the prevailing generation component of the General Service Demand Energy charge plus prevailing retail fuel adjustment. Distributed resource(s) greater than ten (10) kW have energy credited at avoided cost as negotiated by contract.

- While customer owned generation does have an economic value to GRU this value can and does vary significantly with time which is not reflected by the concept of net metering.
- Under GRU's residential and general service non-demand electric rates the value of GRU's distribution facilities is not reflected by the concept of net metering. Under these rates costs associated with construction and maintenance of distribution facilities are not collected. Two part rates that collect for distribution costs through a demand charge account for the necessary collection of distribution costs.
- Customers with on-site generation utilize GRU's distribution system as backup and supplemental power when on-site generation is either not running or insufficient to meet 100% of the customer need.
- When on-site generation produces excess energy beyond the customer's requirements, energy must be stored in batteries, transported over GRU's electric grid or wasted.
- Between January 2007 and December 2007 the FPSC held workshops and took comments from the public regarding net metering and interconnection of customer owned renewable generation. The findings from these efforts should be adopted as part of the findings of the Gainesville City Commission in its own consideration of net metering under PURPA.
- Federal law and Florida law do not require unregulated utilities such as GRU to provide net metering to interconnected customers.
- Customer's utilizing customer owned generation to offset some or all of their electric usage helps GRU avoid fuel costs and helps to offset the need for new generation.
- Some forms of customer owned generation can be powered by renewable sources and may result in lowering the greenhouse gas emissions of the City of Gainesville.
- Currently the only widely available form of customer owned renewable generation is solar photovoltaic (PV). GRU values renewable generation from a cost avoidance perspective as well as a green house reduction perspective. This value is reflected in GRU's \$1.50 / watt PV rebate.
- On March 4th, 2008 the FPSC (Florida Public Service Commission) ratified a rulemaking to amend Rule 25-6.065, Florida Administrative Code, relating to Interconnection and Net Metering of Customer-Owned

Renewable Generation. The amendment calls for Investor Owned Utilities in Florida to offer net metering to customers.

- Net metering is available in 42 states and the District of Columbia. (dsireusa.org)
- The following municipal utilities offer net metering: City of Tallahassee, Florida Keys Electric Cooperative, JEA, Lakeland Electric, New Smyrna Beach Utilities and OUC. (dsireusa.org)
- The City of Gainesville wants to remain consistent with other utilities in the State of Florida.
- Net metering creates an incentive for distributed renewable energy resources
- Gainesville provides incentives to encourage the adoption of customer owned, distributed, renewable generation resources.
- The financial impacts of offering net metering for customer owned, distributed, renewable generation facilities are minimal.

Financial Impact of Net Metering:

The FPSC presented the estimated costs with complying with net metering as reported by utilities in Florida in a memo dated December 6, 2007, see attachment B, this memo should be adopted as part of the Gainesville City Commission’s findings. The impacts presented in Figure IV below reflect only the costs of paying the retail rate for energy delivered to the grid. Costs do not include additional reporting, metering, changes to billing systems or other compliance costs.

Figure IV – Estimated Financial Impacts

FPL	\$540 / customer / year
Progress	\$115 / customer / year
TECO	\$199 / customer / year
Gulf Power	\$42 / customer / year

Staff Recommendation: The Gainesville City Commission adopt net metering as an incentive to help promote the adoption of customer owned, distributed, renewable generation resources.