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**Standardized Permitting Committee Meeting**Tuesday, July 17, 2012   
9:00 am  
Government Center West Hearing Room (2nd floor)  
One North University Drive  
Plantation, FL 33324  
Conference call: 954-357-5480  
 **Agenda**

1. Welcome and Introductions

* Welcome by Maribel Feliciano and introductions by attendees (see sign in sheet attached)

1. Grant Objectives Related to Permitting, Net Metering, and Interconnection
   1. Maribel Feliciano, Air Quality Section Supervisor

Grant requirements – DOE Grant

* Working with partner cities to streamline permitting process for rooftop solar installations. Objectives discussed per presentation (see presentation at <http://www.broward.org/GoGreen/GoSOLAR/Pages/StakeholdersGroup.aspx> );
* Online Permitting System: Customers will be able to apply online 24/7, there will be one flat fee, option to pay on-line, and receive permit within minutes. Training of the online permitting system will be provided in the future.

1. FPL’s Net Metering and Interconnection Procedures
   1. John McComb, FPL Principle Engineer, Customer Technology Support

* Every city has different processes for permitting therefore is a great idea to streamline this process into one portal
* Net Metering is an interconnection agreement!
* Net Metering utilizes a standard meter that meters energy flow forward and backward (to and from FPL).
* Net Metering is a supplement to tariff. Every retail customer can net meter as long as they are a customer of FPL. Net metering allows customer to interconnect and offset all or a small portion of on-site energy usage. It is targeted to the small customer not a large PV power producer.
* Interconnection agreement is for safety!! i.e. Built to code, e.g. electrical inspection requirements. Building department requirements must be followed.
* The interconnection agreement has a safety standard of a UL 17.41 inverter which means that as soon as the power goes off the inverter goes off. A 17.41 inverter is a current source only unit meaning it need to have current voltage and frequency from the utility for it to operate. It only puts out current from the utility. When the power turns off the inverter turns off.
* Net metering is designed for onsite usage, not design to produce excess energy at the end of the year.
* Net metering rule was passed in March 19, 2008 but FPL has had net metering since 1997.
* The Public Service Commission (PSC) standardized all public utilities. The PSC does not control city utilities, co-ops or municipalities metering. The goal is to standardize a process for alternative energy use and metering. The rule states you must have an interconnection agreement (see Presentation).
* The State defines 8 different sources of renewable energy (see presentation slide). State has currently independent power producers such as landfills which produce energy on-site.
  + Hydroelectric not currently in FL
  + Ocean energy being researched
  + Hydrogen fuel cells technology not cost effective for small homes or business
  + Waste heat inquires but no one has applied this type
  + Geothermal energy is not conducive in Florida
  + Wind energy currently used; about 9 windmills currently
  + PV is largest type of renewable energy
* Net Metering Project Scope
  + Applies to all retail customers; its off-set
  + You cannot own a system on a customer’s property and sell energy; as per PSC if you sell electricity you must be a registered utility with the PSC. So you can’t lease a system and sell kW/hr.
  + Maximum size for the net metering rule in the state of Florida is 2 MW and must have an interconnection agreement. From a rebate standpoint FPL has limited it to 2kW and larger.
  + Net meter interconnection agreements as divided into 3 tiers; and can’t be larger than 90% of the service size.
* Tier I: 0 to 10 kW AC or less; Most roofs fall into this category; most roofs are 5 to 6 kWs
* Tier II: >10 to 100 kW AC; Small business
* Tier III: >100 AC kW to 2 MW AC; Large business
* The state defines the AC kW gross power rating of all systems to be 0.85 X DC capacity

\*\*Presentation correction: as of June 30th FPL has 1804 Tier I customers

* Tier I: No charge for an application; the Residential/small business standard application and agreement approved by the State of FL so it cannot be amended; no insurance requirements; no manual or visual disconnect switch; can’t exceed 90%; there is a $6 customer service charge/month
* For governmental customers there is a Limited liability of $300,000 as per addendum to agreement
* Tier II: $400 application fee; visible disconnection switch must be readily accessible as per addendum (and via plaque); cannot exceed 90%; customer has to pay for the upgrade as per CIAC; $1,000,000 liability insurance
* Tier III: Typically $1,000 application fee but depends on size and type of installation; $2,000,000 insurance; required disconnect
* The Meter:
* Meters act like odometers in cars, read and track; bidirectional meter is read in plus or minus, benefit of net metering is you get 100 percent of value.
* State rule is that FPL zero out the account at the end of the year.
* Q: Do you know the capability of net metering in the smart meters?
* A: Not yet because FPL must make sure every meter be programed correctly as per FPL software and there are many types of meters. FPL has 2,000 net metering customers and 4.1 million customers.
* Meter is installed AFTER interconnection paperwork is complete. The meter is bidirectional; no special wiring on the meter side
* Customer billing: If customer sent energy back to grid they only pay the $6 fee and the kWs go into a bank;
* How can a customer get information about net metering?
  + FPL websites e.g. www.fpl.com/netmetering, FPL net metering group, phone line to net metering group, fax, email to net metering group; FPL FAQs for Net Metering.
* Notes:
  + PV panel and inverter is typically a standard cost to customers but wind loads and mounting are specific therefore FPL can’t give a specific cost;
  + Must have a normal maintenance program in order to get the best benefit of PV and energy efficiency;
  + FPL does not see the solar energy received from PV system! Or what that amount is that goes from PV to the use of the electricity in the house.
  + Federal Government would like to see four to five tiers instead of 1, 2, or 3.
  + Interconnection agreement is directly with FPL.
  + FPL is relying on city as per safety requirements ie. Electrical codes; when you turn off the inverter in house the AC is not energized the DC is energized; so there is a hazard when the DC is energized – potential 600 volts; eg. Firefighters can be at risk if they are not aware of DC energized or they cut the lines. Conductors need to be secured properly.

Comment: Good articles by John Wiles – Tie raps; PV ware; stainless steel clamps; longevity installations

Q: What is the notification coordination between FPL and Building permit

A: When the permit is issued and installation passes all inspections an e-mail is sent to FPL. FPL requires an inspection and an agreement application.

Comment: Home depot starting to sell individual panels. People may buy a few and string them together which is a hazard. Also selling a battery back-up stand-alone system, (panels, converter etc.), which is a safety issue! These are not connected to the grid.

Comment: John stated he would not recommend battery back-up because of the cost efficiency. It’s about 50 percent of cost of a system. Therefore a generator is better.

Q: What is the process with FPL after application?

A: Customers are usually interconnected in approximately 2-3 weeks. Majority of customers are interconnected in less than 1 week if application is complete and correct. Majority of issues is with incomplete or incorrect paperwork.

1. Mounting Design Plans Advantage Marketing Solicitation
   1. Lenny Vialpando, PE, Assistant Director, Permitting, Licensing and Consumer Protection

* Waiting for responses from companies and engineers; talking to vendors to answer questions and ensure good responses; copies of solicitations available here and on website.

1. Latest on Electrical Schematics

* Finalizing the schematics and will be shared at next meeting

1. On-line Permitting System Update and Upcoming Training

* Completed internal and external testing of the Go SOLAR online permitting system; webinar is on our website, its 30 min long; detailed training will be provided hopefully at the end of august; need feedback as to best way to provide training to customers and partner cities staff (webinar, video tutorials, etc.); next meeting is Aug 21st, system should be up and running and would have training dates.

Comment: Monthly meeting with building officials association is a good venue to provide training (lunch meeting). Next meeting is in September. Marketing Associate will coordinate the request.

Comment: Possibly a Saturday training or webinar for contractors and installers

Q: DS5 system which clips to the metal roof, in order to allow this system contractor must vouch for roof i.e. metal roof allowance and installation. How will this assurance be done?

A: Metal roofs are designed to meet uplifts. Someone has to test it. Someone has to come up with solution. Point loads must be kept low (under 200 lbs or less), assuring roof was installed properly.

Comment: metal roof from 10 years ago are different i.e. the uploads are different

Comment: Lenny – design specifications must be met in accordance to plans.

1. New Business

Topics of interest for upcoming meetings related to grant agreement.

Comments: none

1. Adjourn

*Next Meeting: Tuesday, August 21, 2012*