

October 16, 2007

FPL's Responses to Staff's Questions from the September 27, 2007 Renewable Portfolio Standard Staff Workshop

Florida Power & Light Company (FPL) appreciates this opportunity to provide its views in response to the questions posed by the Florida Public Service Commission's (Commission's) Staff on September 27, 2007. As requested by Staff, FPL's thoughts have been organized in a manner responsive to each of Staff's questions. FPL is also submitting with these responses a Renewable Portfolio Standards (RPS) policy proposal, which expands on FPL's thinking to date with respect to objectives, design and implementation of an RPS for Florida (the FPL RPS proposal).

FPL believes the primary objective of a Renewable Portfolio Standard (RPS) should be to reduce emissions of greenhouse gases (GHG) from the production of electricity, with a focus on solar and wind, while increasing energy security, maintaining reliable electric service and reasonable prices for customers. In addition to the responses to Staff's questions, Staff also requested suggestions for topics relevant to the establishment and structure of an RPS on which further education and information would be beneficial. FPL suggests the following:

- Availability of renewable resources in Florida, including an update of the 2003 "Assessment of Renewable Generating Technologies for Florida" and any information on other renewable energy and clean energy resources that could be developed in Florida and in what timeframe.
- Current and projected development, implementation and operating costs of renewable energy and clean energy resources in Florida and their relative effectiveness in reducing GHG and in meeting other objectives.
- Analysis of the impact a Florida renewable energy target, or the alternative types of technologies, sources, and designs that could be included in it, may have on electric customers' rates and bills.
- Mechanisms that have been used to evaluate, verify, measure and track Renewable Energy Credits (RECs), including how self service generation and energy efficiency is measured and verified, and the role of the Florida Public Service Commission in ensuring compliance.
- Alternative Compliance Payments; how are they determined and how funds generated are administered and used.

1. Once a verification methodology (e.g., contract path, Renewable Energy Credits (RECs) or utility ownership of renewable facility) is chosen, how do we make it work?

Utilities should be permitted to achieve compliance with a Renewable Portfolio Standard (RPS) through the purchase or production of clean/ renewable energy and the purchase of RECs. Utilities should be deemed in compliance if either the RPS target or expenditure cap is reached (e.g. an expenditure cap of 1% of revenues from the sale of electricity). An Alternative Compliance Payment (ACP) should also be authorized, as discussed in more detail in response to Staff's Question No. 4, below.

There is a need for further workshops and education to understand how verification procedures are structured and administered. FPL does not have a recommendation now, but continues to investigate various options.

2. Who administers verification of compliance (state agency or third party)?

Verification of compliance should be administered by a third party, with auditing by and reporting to the FPSC.

3. Should there be a weighting system based on objectives (multipliers or tiered approach)?

In order to encourage the development of wind and solar, a multiplier, not set-asides, should be used. A multiplier of 3.5 should be applied to each MWh of energy produced from these sources for purposes of complying with a Florida RPS. See FPL RPS proposal section 4.1.1. The multiplier will help to levelize the RECs available from solar and wind compared to other renewable resources with higher capacity factors. Carve outs limit flexibility and may close out options for other more economic technologies.

4. Should there be a safety valve, such as an alternative compliance payment?

Yes, there should be both a safety valve and an Alternative Compliance Payment. As a safety valve, utilities should not be required to add clean/renewable energy, pursuant to the Renewable Portfolio Standard, above the reasonable cost threshold established by the Commission. The reasonable cost threshold for each year through 2017 should be set at 1% of annual retail revenues from the sale of electricity. After 2017, the reasonable cost threshold should be increased by one-fifth percent per year until January 1, 2022, at which time it will be two percent. Only RPS costs that exceed the utility's cost of avoiding conventional fossil generation will be counted toward this reasonable cost threshold. The reasonable cost threshold will help to ensure that the total cost of compliance with an RPS remains affordable. RPS costs subject to the reasonable cost threshold shall include costs for research and development, but exclude costs for nuclear and energy efficiency. See FPL RPS proposal section 6.2.

If compliance is otherwise unachievable, utilities may make an ACP. An ACP is not a penalty for non-compliance, but an additional means of compliance with an RPS. However, the ACP should not exceed an avoided cost of carbon of \$20/MWh.

Implementing an ACP and a reasonable cost threshold expense cap together works to mitigate potential renewable power price shock to customers in a supply-constrained environment, as well as limit the total cost impact to customers.

5. If there should be a safety valve, such as an alternative compliance payment, who should administer the fund, how should the funds be used, should there be cost recovery for the IOUs?

Each utility should administer and use ACP funds for research and development and/or investment in renewable/clean energy sources. See FPL RPS proposal section 8.5.

Costs associated with research and development and/or investment in renewable/clean energy sources should be recovered through the appropriate recovery clause mechanism, e.g. research and development and self-build of clean resource projects, other than new nuclear, nuclear uprates, and energy efficiency should be recovered through the capacity clause. See FPL RPS proposal section 4.2.

6. Should self-service generation be counted toward goals?

Yes. Self-service generation and provisions for net metering result in cross-subsidization by customers who do not receive the benefit of the generation. Renewable Energy Credits (RECs) associated with such generation should be retained by the utility for the benefit of all customers.

7. Should out-of-state RECs be counted? (Issues: regional limitation, requirement that energy be delivered in Florida, coordinating to prevent double counting).

Yes. A Florida RPS should be designed to allow flexibility to comply in the most economic manner possible. All verifiable RECs should be allowed for compliance. There should be no requirement to deliver energy into Florida. Such a requirement increases costs to customers. If a utility needs to purchase RECs to satisfy the RPS requirement, to the extent they are available, Florida RECs should be purchased first, but at a price not to exceed 120% of the national market price for RECs produced by each technology and capped at an avoided cost of carbon of \$20/MWh. See FPL RPS proposal, section 4.1.2.

In order to prevent Florida from becoming economically disadvantaged by higher electricity costs, a Florida RPS should be adjusted/harmonized with a Federal standard should one become law. See FPL RPS proposal section 7.

8. What flexibility measures (e.g. banking, borrowing, true-up period) should be allowed?

In order to avoid price volatility “borrowing/banking” of RECs should be allowed. See FPL RPS proposal section 8.2.

In order to allow for verification and cost-effective compliance, a reasonable true-up period should be allowed.

9. How often should utilities be reviewed (i.e., annual or interim goals)?

The Commission should set and periodically review the RPS targets to ensure they can be met without imposing unacceptable costs or adverse reliability effects on customers. See FPL RPS proposal, section 6.

There should be annual reporting of progress toward meeting specific targets, but compliance should be determined based on reaching the established target or expense cap on the date specified without interim targets, with an appropriate true-up period.

The point in time at which a Florida RPS of 20% could be met by utilities, including municipal utilities and cooperatives, at what cost, and the impact of such cost on Florida’s economy are the subject of much debate. Rather than set irreversible targets at this point, it is recommended that the Commission direct that a thorough assessment be conducted. This will facilitate the setting of appropriate targets, without interim targets, that could be met without imposing unacceptable costs or adversely impacting reliable and safe electric supply to Florida residents. This assessment should be subsequently updated every three years. See FPL RPS proposal, section 6.1.

FPL proposes the following initial targets:

5% by 2017

10% by 2025

20% by 2030

See FPL RPS proposal, section 6.4.

10 A. What is the best way to ensure compliance (penalties vs. guidelines)?

To help ensure compliance, an RPS should be flexible and allow the utility to comply in the most cost-effective manner possible. Incentives work better than penalties as the best way to ensure compliance.

The achievement of this objective and the Greenhouse Gas (GHG) emission reductions specified in the Governor’s Executive Order 07-127 will require reliance on those resources traditionally included in the definition of “renewable resources” as well as “clean resources,” e.g., nuclear generation, fossil fuel generation technology with full/partial carbon capture and sequestration, and energy efficiency measures.

The inclusion of clean resources makes it possible to achieve GHG reductions in the amounts specified in the Executive Order. Traditionally-defined renewable resources alone, while valuable, will not meet GHG reduction targets.

A narrower objective that does not include GHG reductions and clean energy would not be in the best interest of Florida's electric customers because it would result in higher cost and lower reliability.

This objective should be met equally by all electric utilities, including municipal utilities and cooperatives, with retail sales of electricity greater than 500,000 megawatt hours (MWhs) per year in Florida. (This represents approximately 98% of total retail sales in Florida.)

The structure for achieving a Florida RPS needs to address the substantial challenges of siting and permitting clean/renewable energy resources. See FPL RPS proposal, section 2.

To encourage the development of and investment in clean/renewable energy sources, up-front and expedited prudence determinations and cost recovery approvals with administrative finality are essential. See FPL RPS proposal, section 4.

The methods and incentives for complying with a Florida RPS need to be consistent with the objective to reduce emissions of GHG from the production of electricity with a focus on solar and wind while increasing energy security, maintaining reliable electric service and reasonable electricity prices for customers.

Compliance with a Florida RPS can be met through the purchase or production of clean/renewable energy or the purchase of RECs. See FPL RPS proposal, section 8.

10 B. How should penalties be applied?

Penalties are not necessary in an RPS structure designed to allow maximum flexibility for compliance. Subject to the force majeure provision below, if compliance is otherwise unachievable, utilities may make an ACP. However, the ACP should not exceed an avoided cost of carbon of \$20/MWh. See FPL RPS proposal, section 8.5.

10 C. How would funds be used? Who administers the funds?

The utility should administer and use the ACP funds for research and development and/or investment in renewable/clean energy sources. See FPL RPS proposal, section 8.5.

10 D. Should there be force majeure exceptions? Should IOUs receive recovery?

Yes. The ACP should be waived if events beyond the reasonable control of a utility prevent it from meeting its RPS requirement or if compliance is not in the best interest of stakeholders. Events or circumstances that are outside of a party's reasonable control may include weather-related damage, mechanical failure, lack of transmission capacity or availability, strikes, lockouts, actions of a governmental authority that adversely effect the generation, transmission, or distribution of renewable energy from an eligible resource under contract to a purchaser. See FPL RPS proposal, section 8.5.1.

The utility should use the ACP funds for research and development and/or investment in renewable/clean energy sources. Costs associated with research and development and/or investment in renewable/clean energy sources should be recovered through the appropriate recovery clause mechanism, e.g. research and development and self-build of clean resource projects, other than new nuclear, nuclear uprates, and energy efficiency should be recovered through the capacity clause. See FPL RPS proposal, section 4.2.

11. Should a baseline of current renewables be established? If so, what counts toward the baseline?

Yes. An assessment of clean/renewable resources in the state, both existing and potential, should be conducted. This assessment should include important characteristics of each generation and fuel type such as capacity factor, emission levels per kWh, levelized cost per kWh, and short-term and long-term total generating capacity potential in Florida. All resources that contribute to the state's policy goals of reducing GHG and other emissions in the state, provide a significant degree of energy independence to the state, provide a significant level of fuel diversity to the state, and maximize the benefit while minimizing the cost to customers should be included.

- A Florida RPS should be based on energy, i.e., MWhs as a percent of retail sales of electricity. The following clean/renewable energy sources should be included in a Florida RPS.
 - New, i.e., post 2006, nuclear generation, including uprates
 - Wind
 - Solar
 - Solar generated steam that displaces fossil fuel
 - Solar array (e.g., trough and photovoltaic)
 - Solar Photochemical
 - Solar pool and residential water heaters
 - All energy efficiency
 - All Sunshine energy subscriptions and other Green Pricing programs
 - Fossil units with full/partial carbon capture and sequestration
 - Landfill gas (e.g., methane)
 - Geothermal
 - Biomass
 - Biodiesel
 - Hydroelectric

- Waste to energy
- Waste heat
- Digesters
- Ocean
 - Ocean thermal energy
 - Ocean current energy
 - Ocean tidal energy
 - Wave energy
 - Combination of ocean energy technologies
- Fuel Cells
- Hydrogen
- Combined heat and power co-generation
- Co-firing
- Biogas
- Liquid biofuel
- Power Plant efficiency improvements at existing fossil plants implemented post 2006
- Grid improvements (e.g., efficient transformers) implemented post 2006
- In and out of State RECs produced from the above types of resources
- Global GHG offsets
- The energy sources includable in an RPS should be reviewed periodically for inclusion of new technologies. See FPL RPS proposal, section 3.

12. What reporting requirements are needed?

Utilities should report to the FPSC annually regarding progress towards achieving the targets and will provide updated views regarding the availability and cost of clean/renewable energy resources and ability to meet the next applicable target, e.g., the 5% target in 2017.

13. Should there be a process to review the RPS? (Automatic process such as conservation goals proceedings – every five years – or ongoing review with no automatic process).

The targets and the schedule for compliance should be re-evaluated every three years and modified as appropriate to account for changes in load growth, technology, costs, and other factors that affect the availability and cost of clean/renewable sources of energy. This re-evaluation should be used to adjust the targets, if necessary. See FPL RPS proposal, section 3.