State of Florida

Public Service Commission

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-M-E-M-O-R-A-N-D-U-M-

DATE: December 31, 2008

TO: Office of Commission Clerk (Cole)

FROM: Office of the General Counsel (Miller, Cibula)
Office of Strategic Analysis and Governmental Affairs (Ballinger, Chase, Crawford, Futrell, Harlow, Rudd, Trapp)

RE: Docket No. 080503-EI – Establishment of rule on renewable portfolio standard.

AGENDA: 1/09/09 – Special Agenda – Interested Persons May Participate

COMMISSIONERS ASSIGNED: All Commissioners

PREHEARING OFFICER: Argenziano

CRITICAL DATES: Draft rule due to the Legislature by February 1, 2009

SPECIAL INSTRUCTIONS: None

FILE NAME AND LOCATION: S:\PSC\SGA\WP\080503.RCM.DOC

Case Background

During the 2008 Regular Session, the Florida Legislature amended Section 366.92, Florida Statutes (F.S.), in House Bill 7135, Chapter 2008-227, Laws of Florida, to require the Florida Public Service Commission (Commission) in consultation with the Department of Environmental Protection (DEP) and the Florida Energy and Climate Commission to adopt rules to establish a renewable portfolio standard (RPS). The RPS rules are to require each investor-owned electric utility (IOU) to supply a percentage of retail electricity sales from renewable energy resources located in Florida. The Commission is required to submit a draft rule to the Legislature for ratification by February 1, 2009.

Over the past four years, the Commission has actively engaged in efforts to further encourage the development of renewable energy. This includes: (1) the implementation of

legislative policy on renewable energy contracts; (2) efforts to gather information on an RPS through public workshops; and (3) the implementation of the provisions of Section 366.92, F.S. Since July 2008, the Commission has embarked on an accelerated RPS draft rule development process with the participation of numerous stakeholders and interested persons. In this recommendation, staff presents two separate draft RPS strategies, with various policy options, in response to the Commission's direction.

Recent Legislation to Promote Renewable Energy

The 2005 Legislature established Section 366.91, F.S., (see Attachment F) requiring the IOUs and two large municipal utilities to provide by January 1, 2006, a continuous offer to purchase power from renewables with a minimum term of ten years. To facilitate implementation of the legislation, staff held a workshop in which the IOUs agreed to revise existing standard offer contracts to comply with the requirements of the new legislation. On December 27, 2005, the Commission approved the revised tariffs, and also ordered that an additional workshop be held to determine whether rulemaking or other proceedings to implement the provisions of Section 366.91, F.S., should be pursued. Following the March 6, 2006 workshop, the Commission initiated a rulemaking proceeding. The Commission adopted, in December 2006, Rules 25-17.200-.310, Florida Administrative Code (F.A.C.), which set forth the requirements for IOUs with regard to contracts for the purchase of renewable energy from non-utility renewable generators. These rules require: (1) contracts for the purchase of renewable capacity and energy must be continuously offered; (2) a separate standardized contract for each avoidable generating technology type in a utility's Ten-Year Site Plan; (3) renewable generators have the option to select a contract term from ten years up to the life of the avoided unit; (4) renewable generators may select a pricing option in which a portion of the energy payment is fixed; and (5) renewable generators or the IOU may reopen the contract if significant new environmental regulations are enacted, such as carbon legislation.

In 2006, the Legislature enacted an omnibus energy bill (SB 888). Section 366.92, F.S. (see Attachment F), expressed the Legislature's intent to further promote the development of renewable energy, protect the economic viability of Florida's existing renewable energy facilities, diversify the types of fuel used to generate electricity, lessen Florida's dependence on natural gas and fuel oil, minimize the volatility of fuel costs, encourage investment in the state, improve environmental conditions, and minimize the costs of electricity for customers. The legislation also gave the Commission authority to adopt appropriate goals for increasing the use of existing, expanded and new Florida renewable energy resources.

In response, the Commission began a broad initiative to further explore the opportunities for development of renewable energy in Florida. In January 2007, the Commission held a workshop to explore how to further encourage the development of renewable energy. At that workshop, parties discussed renewable resources available in Florida, and mechanisms to help develop these resources. At the January 2007 workshop, the parties discussed how an RPS can be used to further encourage renewable energy development. Additional mechanisms discussed included net metering and expedited interconnection of customer-owned renewable generation. These discussions ultimately led to a rulemaking proceeding in which the Commission adopted amendments to Rule 25-6.065, F.A.C. This rule requires the IOUs to expedite the

interconnection of customer-owned renewable generation, and allows customers the additional benefit of carrying forward excess generation month-to-month through net metering.

In July 2007, the Commission held a workshop to gather information on the design of an RPS for Florida. Over 30 speakers participated from the renewable industry, electric utilities and state and federal governmental entities. Based on the discussions from the July workshop, Commission staff conducted follow-up technical workshops in August, September and December 2007, to explore a number of specific elements of an RPS in more depth, including the establishment of goals, applicability, eligible resources, compliance, verification and tracking mechanisms, mechanisms to encourage specific resources, and RPS activities in other states. At these workshops, comments were received from a wide range of stakeholders.[1]

House Bill 7135 - Amendments to Section 366.92, F.S.

House Bill 7135 (HB 7135), Chapter 2008-227, Laws of Florida, enacted by the 2008 Florida Legislature, is a comprehensive state energy bill. Amendments to Section 366.92, F.S., (see Attachment F) authorize the Commission to establish RPS requirements for the IOUs, and require the Commission to submit a draft RPS rule to the Legislature by February 1, 2009 for ratification. As part of the rule development process, the Commission is to evaluate the current and forecasted installed capacity in kilowatts through 2020, and current and forecasted levelized cost in cents per kilowatt-hour (kWh) through 2020, for each renewable energy resource.

In addition to establishing the RPS percentages and timing, Section 366.92, F.S., requires that the Commission's RPS rule include the following:

- Methods of managing the cost of compliance with the RPS, whether through direct supply or procurement of renewable power or through the purchase of renewable energy credits (RECs);

- Appropriate compliance measures and conditions under which non-compliance can be excused when the supply of renewable energy is not adequate or the cost of securing renewable energy is cost prohibitive;

- Appropriate period of time for which RECs may be used for purposes of compliance with the RPS;

- Monitoring procedures for compliance with and enforcement of the RPS;

- A means of ensuring that energy credited toward compliance with the RPS may not be used for any other purpose;

[1] Attendees included representatives of: (1) the Governor's office; (2) federal, state, and county government agencies; (3) the solar, biomass, waste-to-energy, waste heat, ocean energy, landfill gas, and cogeneration industries; (4) energy efficiency measure providers; (5) investor-owned, municipal, and cooperative electric utilities; (6) customers, including large industrial customers; and (7) Florida-specific and national environmental organizations.

- Procedures to track and account for RECs, including ownership derived from customer-owned renewable energy facilities as a result of an action by a customer of an electric power supplier independent of a program sponsored by the supplier; and

- Provisions for the repeal or amendment of the rule in the event new federal law supplants or conflicts with the rule.

The Commission is authorized to provide for annual cost recovery of compliance with the RPS and adjustments to an IOU return on equity (ROE) to incentivize renewable energy. The Commission also may give added weight to energy provided by wind and solar photovoltaic (PV) over other forms of renewable energy in developing its RPS rule.

The statute also requires annual reporting to the Commission by each IOU of its compliance with the RPS in the previous year and how it plans to comply in the upcoming year. The municipal electric utilities and rural electric cooperatives are also required to develop, on their own, standards for the promotion, encouragement, and expansion of the use of renewable energy resources and energy conservation and efficiency measures and to file an annual report with the Commission.

Florida Renewable Energy Potential Assessment

In August 2008, the Commission, in cooperation with the Governor's Energy Office and the Lawrence Berkeley National Laboratory, engaged Navigant Consulting, Inc. (Navigant Consulting) to perform an assessment of renewable energy resources in Florida. Funding for this study is provided through a grant from the U.S. Department of Energy. The results of the assessment will meet the statutory requirement that the Commission evaluate the projected availability and cost of renewable resources through 2020. At the Commission's December 3, 2008 rule development workshop, Navigant Consulting presented the methodology and preliminary results of its *Florida Renewable Energy Potential Assessment*. The final report was submitted to the Commission on December 30, 2008, and provides a source of information and data to validate the final percentages and timing of the RPS.

Commission RPS Rulemaking Process

Subsequent to the 2008 legislative session, the Commission held a workshop on July 11, 2008, to provide a forum to discuss issues relevant to the development and implementation of an RPS for Florida that is consistent with the provisions of Section 366.92, F.S. At that workshop, the Commission heard from 16 speakers from renewable energy providers, the electric utilities, and other interested parties. Post-workshop comments were filed by 14 stakeholders. On August 20 and 26, 2008, Commission staff held workshops to discuss strawman draft RPS rules. The topics in the strawman draft included: Rule 25-17.400 – *Renewable Portfolio Standard design*; Rule 25-17.410 – *Renewable Energy Credit Market*; and Rule 25-17.420 – *Reporting requirements for municipal electric and rural electric cooperatives*.

On October 2, 2008, the staff filed a recommendation with a draft RPS rule which addressed the parameters established by the Legislature in Section 366.92, F.S. and was based on the information and comments developed in the workshops. At the October 14, 2008 Agenda Conference, the Commission directed staff to provide additional information on portions of the draft RPS rule. A Commission workshop was held on December 3, 2008 during which Navigant Consulting presented the results of its draft final report of the *Florida Renewable Energy Potential Assessment*. Staff also presented the information requested by the Commission on the following topics: (1) alternative RPS requirements, timing and costs; (2) oversight of RPS compliance and expenditures; (3) recovery of utility investments in renewables; (4) alternative compliance payments; and (5) feed-in tariffs. During the workshop, the Commission directed staff to develop alternative RPS rule language that would establish pricing for renewable energy contracts as a means of incentivizing the development of renewable energy in Florida. Parties submitted post-workshop comments which have been summarized in Attachment E.

The Commission has jurisdiction pursuant to Sections 350.127(2), 366.02(2), 366.04(2)(f) and (5), 366.041, 366.05(1), 366.81, 366.82(1) and (2), 366.91, and 366.92, F.S.

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Issue 5 (Page 56)

Issue 5 addresses whether the docket should be closed.

Attachment A (Pages 58 – 71)

Attachment A contains the draft rules discussed at the October 14, 2008 Agenda Conference with the modifications discussed Issue 1.

Attachment B (Pages 72 – 88)

Attachment B contains draft rule language to codify the RPS strategy discussed at the December 3, 2008 Commission rule development workshop.

Attachment C (Page 89)

Attachment C is the draft rule on reporting requirements for the municipal and cooperative electric utilities.

Attachment D (Pages 90 – 97)

Attachment D is a summary and analysis of Navigant Consulting's *Florida Renewable Energy Potential Assessment*.

Attachment E (Pages 98 – 113)

Attachment E is a summary of the post-workshop comments filed by the interested parties to the December 3, 2008 Commission rule development workshop.

Attachment F (Pages 114 – 124)

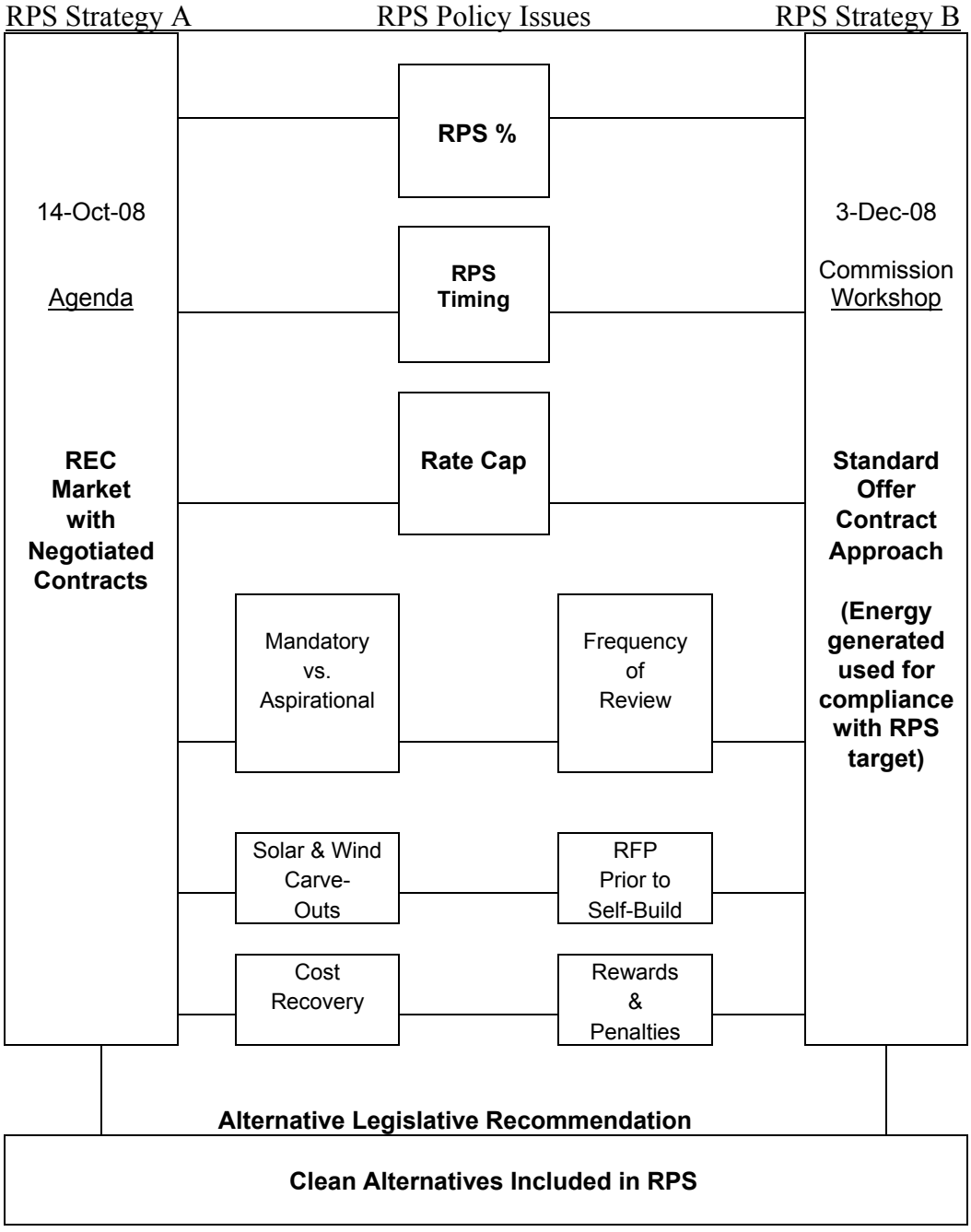
Attachment F contains copies of the relevant Florida Statutes including:

(1) Section 366.051, F.S., *Cogeneration; Small Power Production; Commission Jurisdiction*
(2) Section 366.80-.82, F.S., *Florida Energy Efficiency and Conservation Act (FEECA)*
(3) Section 366.91, F.S., *Renewable Energy*
(4) Section 366.92, F.S., *Florida Renewable Energy Policy* (per SB 888 – 2006)
(5) Section 366.92, F.S., *Florida Renewable Energy Policy* (per HB 7135 – 2008)

Executive Summary

In response to the Commission's direction at the October 14, 2008 Agenda Conference and the December 3, 2008 Commission workshop, staff's recommendation addresses two separate draft RPS strategies, within which are a number of interrelated policy issues. Figure 1 below illustrates the two RPS strategies and interrelated policy issues addressed by this recommendation.

Figure 1: Renewable Portfolio Standards – Strategies and Policy Issues



I. RPS Strategies

A. October 14, 2008 Draft Rules

In the draft rule strategy discussed at the October 14, 2008 Agenda Conference, compliance with the RPS is based on the production of, and the buying and selling of RECs. Defined in Section 366.92, F.S., a REC is a financial instrument that represents the unbundled, separable, renewable attribute of renewable energy or equivalent solar thermal energy produced in Florida and is equivalent to one megawatt-hour (MWh) or 1,000 kWhs of electricity generated by a source of renewable energy located in Florida. IOUs would be required to generate through self-build renewables, or purchase sufficient RECs from other utilities and non-utility renewable energy resources to meet the RPS standards. The use of RECs as the sole means of compliance with the RPS would facilitate the tracking and accounting of both kWh energy production by renewable energy resources and the additional costs of compliance with the RPS. Use of RECs would also allow for the inclusion of a wider range of renewable energy resources, including self-service generation used to offset customer load.

The price paid for purchased RECs would be established through negotiated contracts and spot market transactions, and would represent payment for the renewable attributes associated with each renewable energy resource. In order to minimize costs to ratepayers, the total costs paid for renewable attributes for both utility self-build renewables and non-utility renewable energy resources would be limited by an overall rate cap. The cost and payment for capacity and energy from a renewable energy resource would continue to be based on existing least-cost planning policies for utility self-build renewables and existing avoided cost pricing policies for purchases from non-utility renewable energy resources. (see Section 366.051, F.S., Attachment F)

The purchase of RECs from other utilities in Florida or from non-utility renewable energy resources would be facilitated through the development of a REC market. Both short-term spot market purchases and sales and long-term negotiated bilateral contracts would be supported. An independent third-party administrator would be selected, subject to Commission approval, to administer the Florida REC market. The structure, governance, and procedures for administering the REC market would also be subject to Commission approval.

Modifications to the October 14, 2008 Draft Rules

Based on comments and discussion subsequent to the filing of the October 14, 2008 draft RPS rule and the results of Navigant Consulting's study, the following modifications to the draft rule have been made. In draft Rule 25-17.400(3)(a), F.A.C., the initial RPS requirement for 2017 has changed from 5 percent to 6 percent. This reflects an increase in existing renewable generation as determined by Navigant Consulting. In draft Rule 25-17.400(4), F.A.C., staff has clarified that initial utility RPS implementation plans are subject to Commission approval, and that implementation plans must be submitted for approval following future Commission review proceedings of the RPS. In draft Rule 25-17.400(5)(d), F.A.C., staff has clarified the RPS compliance costs eligible to be counted against the rate cap. These costs are: (1) the cost of RECs purchased from non-utility renewable resources in Florida; (2) the administrative cost of

RECs from IOU self-build renewable projects; and (3) the incremental cost of an IOU self-build renewable project above the IOU's avoided cost of generating electricity. In draft Rule 25-17.400(7)(a), F.A.C., staff has deleted "including a separately determined ROE on total capital costs." This change clarifies that the Commission would not set a separate ROE for IOU self-build projects, but would utilize the IOU's last established ROE in a base rate proceeding. Finally, staff has included the Renewable Energy Charge representing the incremental costs of IOU self-build renewables and purchases of RECs from non-utility renewables as a separate line-item on customer bills.

With these modifications, the staff recommends submitting the October 14, 2008 draft rule to the Legislature as an RPS option. (see Attachment A)

Pros and Cons of a REC Market with Negotiated Contracts

One advantage of using RECs for compliance with the RPS is the flexibility it provides for the marketing of renewable energy in Florida. RECs can be sold either together with their associated energy in a package or sold separately depending on what is most economic for both the buying utility and the selling renewable energy resource. This expands the range of opportunities for financing renewable energy projects. The use of RECs as the sole compliance mechanism would also facilitate the tracking and accounting for both kWh energy production by renewable energy resources and the additional costs of compliance with the RPS.

Another advantage is that the use of RECs as the sole means of compliance with the RPS would allow inclusion of a wider range of renewable energy resources, including self-service generation used to offset customer load. The October 14, 2008 draft rules include the following demand-side renewable energy resources:

- greater than 2 megawatts (MW) providing on-site generation to offset all or a part of the customer's electrical needs;

- greater than 2 MW providing equivalent solar thermal energy to offset all or a part of the customer's electrical needs; and

- 2 MW or less, that have not received incentives from a Commission-approved demand-side conservation program pursuant to Sections 366.80-.82, F.S., *FEECA* (see Attachment F).

Establishing an independent REC market, administered by a third-party administrator, would add to this flexibility by providing a central marketplace to facilitate the short-term sales of RECs through electronically posted buy-sell quotes and the long-term sale of RECs through negotiated contracts. Staff envisions that the REC market would not limit itself to only the sale of RECs, but would also provide coordinated opportunities to bundle energy and the associated RECs.

Staff also believes that negotiated contracts for the purchase and sale of long-term capacity, energy, and renewable attributes represent a more efficient, cost-effective, and fair

means of marketing renewable energy in Florida. Negotiated contracts provide for the one-on-one interaction between the buying utility and selling renewable energy resource that is needed to structure an agreement that best meets the needs of both parties. To the extent that parties cannot agree and Commission involvement is required, a review of a specific renewable energy contract provides a more focused set of facts to be adjudicated.

One disadvantage of a REC-only approach is that it will take time to establish a comprehensive REC market in Florida. Under the October 14, 2008 draft rules, an independent third-party administrator would have to be selected and approved by the Commission. The structure, governance, and procedures for administering the REC market would also have to be established. The draft rules require the IOUs to solicit, select, and submit for Commission approval an independent REC market administrator within 90 days of the effective date of the rule. Within 180 days of Commission approval of the administrator, the proposed structure, governance, and procedures for administering the REC market are to be filed for Commission approval. Therefore, even with expedited review and approval by the Commission, the initial establishment of a REC market is likely to take one year or more.

B. December 3, 2008 Draft Rules

In the draft rule strategy discussed at the December 3, 2008 Commission workshop, compliance with the RPS is based primarily on renewable energy produced by investor-owned self-build renewables and purchases from non-utility renewable energy resources through standard offer contracts. Standard offer contract purchases would be priced at the IOUs' avoided cost plus a "cost added" for renewable attributes. A separate standard offer contract would be established for each of the following classes of renewables: (1) solar PV; (2) solar thermal; (3) wind; (4) biomass, including municipal solid waste; and (5) industrial waste heat, including waste heat from sulfuric acid manufacturing operations. The "cost added" for renewable attributes for each class of renewables would be determined separately in evidentiary hearings based on the level of support required to make each technology financially feasible.

In addition to renewable energy generated or purchased by an IOU, the renewable attributes associated with certain demand-side renewable generation would also count toward compliance with the RPS. First, the renewable attributes associated with self-service renewable generation produced by large commercial and industrial customers, greater than 2 MW, would qualify to be sold pursuant to a standard offer contract with payment for renewable energy attributes only. Second, the renewable attributes associated with renewable energy produced by smaller customers, less than 2 MW, receiving the benefits of net-metering would also count toward compliance with the RPS. Because of the benefits already received from net-metering, these customers would not receive any additional payment for their renewable attributes. However, to further promote the development of solar renewables, an IOU rebate program for demand-side solar PV and solar thermal installations less than 2 MW in size would be established. The renewable attributes from customers receiving a solar rebate from an IOU would count toward compliance with the utility's RPS.

While compliance with the RPS under this strategy would be met by the production or purchase of renewable energy or attributes, RECs would also be assigned for each MWh of

renewable energy produced. The RECs would become the property of the utility and would be available for resale in voluntary out-of-state REC markets. The revenues from the sale of RECs would be shared between IOU ratepayers and stockholders in an 80/20 split.

Pros and Cons of Standard Offer Contract Approach

The advantage of establishing a renewable energy market using standard offer contracts to comply with the RPS is that it may lead to a more rapid implementation and deployment of the RPS. This will rely on an expedited hearing process where the Commission establishes separate standard offer contracts to be offered by each IOU for each designated class of renewable energy resources. Each standard offer for purchases from non-utility renewable energy resources and renewable attributes would be based on "avoided cost plus" pricing. The pricing for capacity and energy provided would by based on the Commission's existing avoided cost pricing policies. The pricing of the renewable attributes provided would be separately determined for each renewable class based on the level of financial support required to make the technology financially feasible, subject to an overall rate cap.

One disadvantage of the December 3, 2008 RPS strategy is that it is heavily weighted toward a command-and-control type paradigm where the Commission must approve through hearings, aspects of each standard offer contract's pricing, terms, and conditions. A further disadvantage is the difficulty of including all existing renewable resources in the state. For example, renewable resources for which the energy is currently under contract to a municipal or rural electric cooperative utility would be ineligible to participate until such a contract expires. Section 366.92, F.S., expresses the intent to protect existing renewable resources. Finally, Rule 25-6.065, F.A.C., *Interconnection and Net Metering of Customer-Owned Renewable Generation,* and Rule 25-17.280, F.A.C., *Tradable Renewable Energy Credits (TRECs)* would require amendments to assign RECs from the customer to the host utility.

Conclusion

Staff recommends that both the October 14, 2008 and the December 3, 2008 draft rule strategies be submitted to the Florida Legislature for consideration. However, staff recommends an RPS of 20 percent by 2041 and a 2 percent rate cap in both options. Both approaches appear to reasonably meet the Legislature's intent. This complete recommendation should be sent as a package to the Legislature.

The Commission may want to consider further revisions to the draft rules which are presented as policy options below and in Section IV of Issue 1, and are based on the Commission's direction at the October 14, 2008 Agenda Conference.

II. Alternative RPS Policy Issues

As shown in Figure 1, regardless of the overall RPS strategy adopted, there are a number of interrelated policy issues that must be decided. In the discussion that follows, staff has addressed a range of alternatives for consideration by the Commission for each major policy issue.

A. Magnitude and Timing of the RPS

A pivotal issue in the design of an RPS is the magnitude and timing of the standards to be met. Section 366.92, F.S., defines "Renewable Portfolio Standard" as the minimum percentage of total annual retail electricity sales by an IOU to consumers in Florida that shall be supplied by renewable energy produced in Florida. Over the course of the workshops held by the Commission, numerous RPS percentages and timings were discussed.

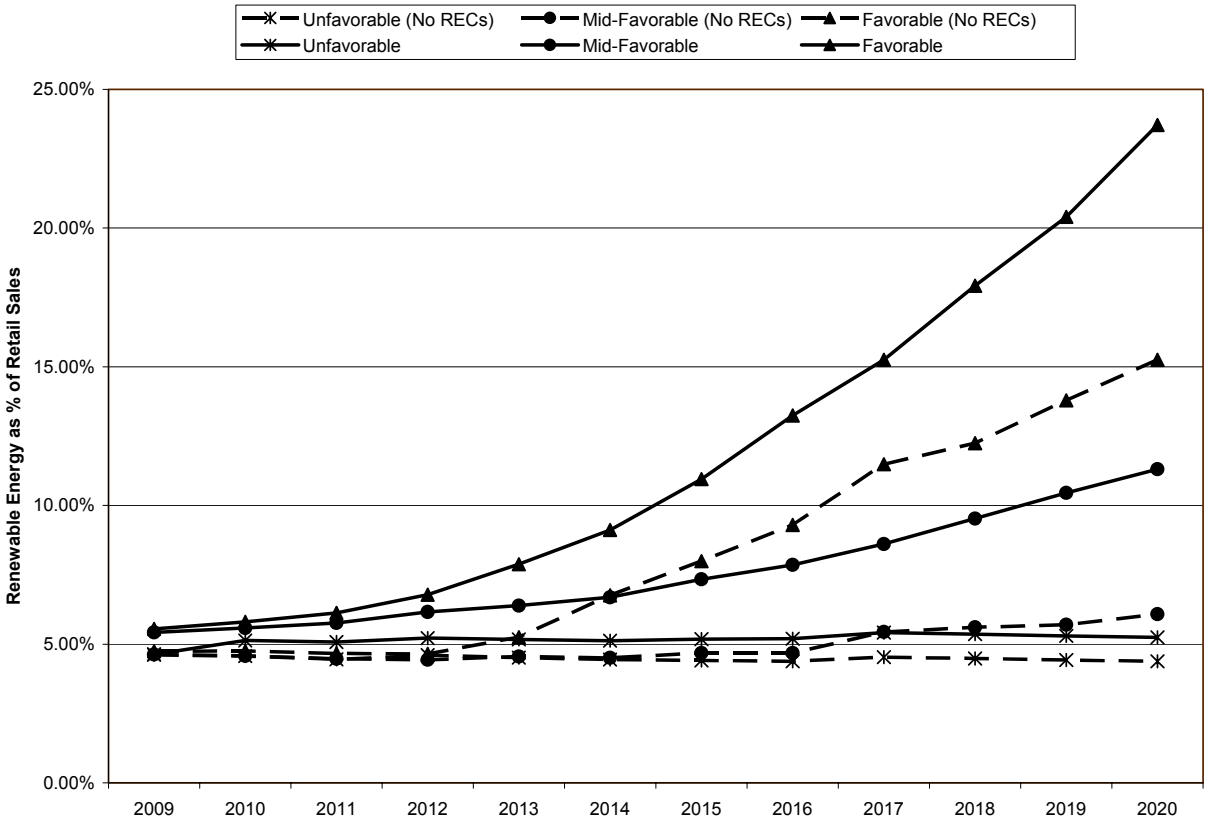
At the August 20, 2008 workshop, for discussion purposes, staff presented a draft strawman rule which proposed an overall RPS of 20 percent by 2050, with interim standards by 2017 and 2025, based on target dates for greenhouse gas emission reductions contained in the Governor's Executive Order 07-127. In response, environmental advocates and renewable energy producers proposed an overall RPS of 20 percent by 2020. Florida Power & Light Company (FPL) contended that, with the inclusion of clean energy as part of the RPS, it could meet an RPS standard of 20 percent by 2030. Subsequently, at the October 14, 2008 Agenda Conference, staff proposed an RPS standard of 20 percent by 2041.

In August 2008, the Commission, in cooperation with the Governor's Energy Office and the Lawrence Berkeley National Laboratory, engaged Navigant Consulting to perform an assessment of the technical and economic potential for renewable energy resources in Florida. The assessment provides estimates of the renewable energy resources that are currently operating in Florida and that could potentially be developed in Florida through the year 2020. The assessment also provides an estimate of the levelized life-cycle costs of existing and developing renewable technologies as well as estimates of the off-the-shelf costs of conventional utility central station generating plants. Finally, Navigant Consulting performed an economic screening analysis to model a range of estimates of the achievable potential of renewable energy that could be developed in Florida. Navigant Consulting presented the results of their draft final report at the December 3, 2008 Commission workshop and the final report was filed with the Commission on December 30, 2008.

In order to estimate the achievable potential for renewables in Florida, Navigant Consulting modeled three scenarios under different economic and policy conditions. The key assumptions driving the economic modeling were: (1) fossil fuel costs, (2) greenhouse gas policy, (3) financial incentives for renewables, (4) availability of and cost of debt and equity, and (5) renewable energy regulatory frameworks. The results of Navigant Consulting's achievable potential analysis are shown in Figure 2.[2]

[2] Navigant Consulting's estimates of achievable renewables start with a base of 4.4 percent of existing renewables, which includes an estimate of additional self-service energy produced by the pulp and paper industry not previously reported to the staff.

Figure 2
Renewable Energy as a Percentage of IOU Retail Sales



Navigant Consulting's results conclude that the potential development of renewable energy is higher under each economic scenario if renewable energy resource providers receive a payment for their RECs. Navigant Consulting's results are summarized below:

- Under the most favorable scenario for renewable development, which includes a 5 percent rate cap, renewable energy in Florida could be 24 percent of IOU retail sales by 2020;

- Under the mid-favorable scenario for renewable development, which includes a 2 percent rate cap, renewable energy in Florida could be 11 percent of IOU retail sales by 2020;

- Under the unfavorable scenario for renewable development, which includes a 1 percent rate cap, renewable energy in Florida could be 5 percent of IOU retail sales by 2020.

Navigant Consulting found that only under the most favorable circumstances for renewables would a 20 percent by 2020 RPS be achievable. The favorable scenario for renewables assumes: (1) high fossil fuel prices, (2) greenhouse gas emissions priced at $50/ton by 2020, (3) state and federal renewable energy incentive programs would not expire until 2020, (4) favorable access and cost for debt and equity, and (5) a 5 percent rate cap for RPS compliance costs. Navigant

Consulting indicates that only one driver, the price of coal, is currently in the mid-favorable scenario. All other drivers for renewable development are currently represented in the unfavorable scenario. This indicates that an RPS of between 5 and 11 percent by 2020 is more reasonably achievable. Staff's recommendation in Issue 1 is consistent with these findings.

The technical, economic, and achievable potential analyses performed by Navigant Consulting represents an initial screening of renewables compared to utility resources with similar operating characteristics. In other words, the analysis is a starting point only. The timeframe and budget for the study did not allow for a comprehensive integrated resource planning (IRP) exercise which would take into consideration all options for meeting future customer reliability and economic needs, including: (1) conservation; (2) demand-side efficiencies; (2) supply-side efficiencies; (3) existing generation resources; and (4) purchased power and alternative generating resources. The timing of the need for capacity was also not examined in the Navigant Consulting study. Much of the additional generating capacity needed to maintain reliability in the state for the next ten years has already been accounted for in utility Ten-Year Site Plans. Because Navigant Consulting's study includes the capacity benefit from renewables that Florida's ratepayers may not need, the estimates of the economic potential for renewables in Florida may be overstated.

Based on the above and as discussed in the analysis of Issue 1, staff recommends that the RPS standards for Florida be set at 20 percent of retail sales by 2041. This level represents a reasonable approach given the current limited capacity benefits that could be provided by additional renewables and the uncertainties associated with Navigant Consulting's most favorable economic scenario. A 20 percent RPS by 2041 appears to be consistent with Navigant Consulting's mid-favorable scenario which includes a 2 percent cap on RPS compliance costs. Given the numerous uncertainties associated with developing Florida's market for renewable energy resources, staff believes that a long-term horizon for the RPS standards is warranted.

B. Rate Cap

Another pivotal issue in the design of an RPS is how much should rates to consumers be allowed to increase in order to promote the development of renewable energy resources in Florida. Section 366.92, F.S., expresses the intent to minimize the cost to consumers associated with the RPS.

During the Commission workshops, the Office of Public Counsel (OPC) and AARP took the position that additional costs associated with the RPS should be capped at 1 percent of IOU annual revenue requirements. Environmental advocates and renewable energy producers generally advocated a rate cap between 3 to 5 percent. Information provided by staff at the December 3, 2008 Commission workshop indicates that a rate cap of as much as 5 to 10 percent may be required to support aggressive RPS standards and meet the financial requirements of emerging renewable energy industries, such as solar. Increasing the rate cap may improve opportunities to more rapidly develop additional renewable resources in the state. This, however, must be balanced with the need to minimize ratepayer costs, given other cost pressures facing ratepayers in the form of volatile fuel costs and the escalating materials and labor costs associated with construction of generating facilities.

Staff recommends a 2 percent annual rate cap on RPS compliance costs coupled with an RPS of 20 percent by 2041. If, however, the Commission decides at this time to adopt a more aggressive RPS percentage and timing, according to the Navigant Consulting study, a 2 percent rate cap may not be sufficient to meet the RPS.

C. Mandatory Standards or Aspirational Goals

Staff interprets Section 366.92, F.S., as requiring mandatory RPS standards. The statute mandates that the Commission's draft rule must require each IOU to supply a minimum level of renewable energy to its customers. Also, the statute requires the draft rule to include appropriate compliance measures and excusal provisions for non-attainment of the RPS requirements. Based on discussions at the rule development workshops, provisions were included in the October 14, 2008 draft rule allowing the Commission to assess penalties to an IOU that does not meet the RPS requirements. The Commission may assess a penalty of up to 50 basis points which will be paid from stockholder funds. However, as mandated by the statute, the draft rule provides that the Commission may excuse the IOU from compliance if sufficient RECs are not available, or if compliance is cost-prohibitive. These draft rule provisions would ensure that the RPS requirements of 20 percent by 2041 are mandatory. As such, the October 14, 2008 draft rule reflects an RPS strategy that is both realistic in its expected outcomes as it is demanding on the expected performance of the IOUs.

If, however, the Commission decides to establish a more aggressive RPS, such as 20 percent by 2020, the potential cost and difficulty of achieving such goals are significantly heightened. The Navigant Consulting study results show that an aggressive RPS is feasible only under the most favorable economic scenario for renewable energy which includes a 5 percent rate cap. As such, the penalty provisions of the draft rule may need to be relaxed, thus making the RPS requirements more aspirational in nature. The December 3, 2008 draft rule, which includes an RPS of 20 percent by 2020, does not include penalties due to the aggressive nature of these requirements.

D. Frequency of Review

The October 14, 2008 draft rule would require Commission review of the RPS at least once every five years. This frequency of review would allow the Commission the ability to examine each IOU's progress in complying with the 2017 and 2025 standards and the ultimate standard of 20 percent by 2041. It is also consistent with the five-year cycle established in the Commission's rules implementing FEECA conservation goals.

The December 3, 2008 draft rule would require Commission review of the RPS at least once every three years. This increased frequency of review is consistent with the more aggressive RPS standard of 20 percent by 2020 with annual incremental standards each year to reach that point.

During the Commission workshops, environmental advocates and renewable energy producers called for more frequent review of the RPS every two to three years. They contend

that more frequent review of the RPS is needed to ensure the continued development of a market for renewables in Florida.

Staff continues to believe that a five-year review cycle is appropriate because of the administrative complexity of such proceedings. Care must be taken to allow sufficient time on the front end and throughout the process for the IOUs to establish their plans and procedures to implement compliance with the RPS. If, however, the Commission adopts the more aggressive RPS requirement of 20 percent by 2020, a more frequent review every three years may be appropriate.

E. Solar and Wind Carve-Out

Section 366.92(3), F.S., provides the Commission with the authority to give greater weight to solar and wind in the formulation of the draft RPS rule. In the October 14, 2008 draft rule, this is accomplished by establishing a 25 percent carve-out for solar and wind and by allocating 75 percent of the annual revenue cap to be used to promote solar and wind. A carve-out is necessary in order to further encourage renewable resources that would improve environmental conditions. Also, early emphasis on these currently higher-cost resources may result in downward pressure on resource costs over time as solar technologies mature.

In the December 3, 2008 rule draft, separate standard offer contracts would be established for solar PV, solar thermal, and wind projects. Preference would be given to solar and wind through the rates established by the Commission in the standard offer contracts for the renewable attributes for each resource. Also, funding would be provided to support rebates to IOU customers for demand-side solar energy systems.

Staff believes that carve-outs are necessary in order to promote the development of certain renewable energy resources such as solar and wind. If the Commission decides to adopt a market approach to implement an RPS in Florida, then the carve-outs contained in the October 14, 2008 draft rule would be appropriate. If, however, the Commission decides to adopt a more hands-on approach using standard offer contracts to implement an RPS in Florida, then the solar and wind-specific contract pricing provisions, combined with funding for solar rebates contained in the December 3, 2008 rule draft would be appropriate.

F. Renewable Energy Request for Proposals (RFP)

IOU self-build renewable energy resources are encouraged in both the October 14, 2008 and the December 3, 2008 draft rules. In the October 14, 2008 draft rule, an RFP is required every two years to ensure that IOUs select the most reliable and cost-effective renewable energy resources in a negotiated contract marketplace. In the December 3, 2008 draft rule, an RFP is required only prior to the construction of an IOU self-build option to avoid gaming in the standard offer contract market.

G. Cost Recovery

Section 366.92,(3)(b)(1), F.S., gives the Commission rulemaking authority to establish annual cost recovery provisions to incentivize the development of renewable resources. As described in both the October 14, 2008 and the December 3, 2008 draft rules, a separate Renewable Energy Cost Recovery (RECR) clause would be established to recover all costs associated with renewables, including utility self-build options and purchases from non-utility renewable energy sources.

During the December 3, 2008 Commission workshop, information was provided on alternative cost recovery mechanisms. These options include recovery through base rates of costs for IOU self-build renewable projects. Commission review of such costs could occur in either a full rate case or a limited proceeding. The purchase of capacity and energy from renewable facilities through negotiated or standard offer contracts could be recovered through the existing Fuel and Purchased Power Recovery clause (Fuel clause). Currently, there is no mechanism for the recovery of RECs or the associated administrative costs. These costs could be recovered through the Environmental Cost Recovery clause (ECRC).

A dedicated clause, such as the RECR, would act as an incentive for IOU self-build renewables as recovery of costs would not be subject to the potential delay of a base rate proceeding. Also, recovery in the RECR of all costs associated with renewables, including compliance with the RPS, would be fully transparent to the Commission and other stakeholders. Other provisions of the draft rules, such as requiring renewable RFPs, in addition to normal regulatory scrutiny during the cost recovery proceedings will provide adequate safeguards to ensure the prudence of IOU self-build options.

The December 3, 2008 draft rule includes a provision that would create a separate Renewable Energy Charge on customer bills that would show the total additional costs being paid for renewable energy attributes. Staff recommends that this provision be also added to the October 14, 2008 draft rule.

H. Rewards and Penalties

Section 366.92,(3)(b)(1), F.S., gives the Commission rulemaking authority to establish incentive-based adjustments to authorized rates of return on common equity to IOUs to incentivize the development of renewable resources. The October 14, 2008 draft rule establishes a reasonably achievable RPS of 20 percent by 2041. In order to provide incentives to achieve these standards, the draft rule provides for the following rewards and penalties:

- IOUs are allowed to earn an ROE for self-build renewables, including a return on the additional capital costs associated with building renewables, and recover these costs through a separate cost recovery clause;

- Any IOU failing to meet the RPS standards shall be subject to a penalty of up to 50 basis points of the utility's approved ROE.

The December 3, 2008 draft rule provides for an ROE reward, not to exceed 25 basis points, to IOUs which meet or exceed the RPS requirements. The draft rule does not include penalties for non-compliance because of the aggressive nature of the 20 percent by 2020 RPS.

If a more aggressive RPS of 20 percent by 2020 is adopted, staff recommends that no penalty provision be included in either draft rule. This is due to the uncertainty of the ability of the IOU to comply with these standards under expected economic conditions.

III. Alternative Legislative Recommendation: Including Clean Energy in the RPS

Section 366.92, F.S., establishes that only Florida renewable energy resources are eligible for compliance with the RPS. Both the October 14, 2008 and the December 3, 2008 draft rules reflect the Legislature's intent. If an aggressive RPS, such as 20 percent by 2020, is established, the Commission may wish to recommend to the Legislature that clean electric generating resources and supply-side and demand-side efficiency improvements be included as eligible resources for compliance with the RPS. As discussed in Issue 3, these resources could include: (1) Energy from new nuclear facilities or uprates approved by the Commission since 2006; (2) integrated gasification combined cycle (IGCC) with carbon capture and sequestration plans approved by DEP; (3) energy savings from efficiency improvements to existing utility generation; and (4) savings associated with customer energy efficiency programs.

In addition, electric customers can contribute towards achieving an energy efficient Florida through buying smaller homes, owning energy-efficient appliances including air conditioning systems, and making energy-efficiency improvements to their homes to reduce energy losses. Looking forward to the future, technological advances such as "smart meters" could provide a gateway to transform the nature of energy generation and usage. These devices can remotely meter customer usage and provide price signals to individual locations. Empowering the consumer with this information will spur the development of new industries to further assist the consumer in using energy wisely. At the same time, utilities and their ratepayers will benefit from the real-time dispatchability of the customer's load.

If nuclear resources are included, staff recommends that it be limited to capacity associated with new facilities or uprates that have been approved by the Commissions since 2006. These clean energy resources are currently lower in cost and more technically feasible than some renewables, such as solar and wind. An amendment to include clean energy resources, therefore, would contribute toward the Legislature's intent to diversify fuel supplies, promote economic development, improve environmental conditions, and minimize RPS costs to consumers.

IV. Rule 25-17.420, F.A.C. - Municipal and Rural Electric Cooperative Reporting

As part of the October 14, 2008 draft rule, staff included a separate rule that requires municipal and cooperative electric utilities to report annually to the Commission their efforts to develop standards for the promotion, encouragement, and expansion of the use of renewable energy resources, and energy conservation and efficiency measures, as required by Section 366.92(5), F.S. Also, these utilities are required to submit additional data to facilitate the

Commission's efforts to track the development of renewable energy in Florida. Staff recommends that draft Rule 25-17.420, F.A.C., be submitted to the Legislature for ratification.

Discussion of Issues

Issue 1: Should the Commission submit to the Legislature the October 14, 2008 draft Rule 25-17.400, F.A.C., entitled *Florida Renewable Portfolio Standard*, and draft Rule 25-17.410, F.A.C., entitled *Florida Renewable Energy Credit Market*, as set forth in Attachment A?

Recommendation: Yes. The Commission should submit to the Legislature the October 14, 2008 draft rules as one alternative for consideration. Staff would recommend, however, minor changes to these draft rules as follows:

(1) Modification to the 2017 RPS from 5 percent to 6 percent. (See Section 25-17.400(3)(a));
(2) Clarification that the implementation plans required by the IOUs will be approved by the Commission. (See Sections 25-17.400(4));
(3) Clarification of the types of costs that can be counted toward the rate cap. (See Section 25-17.400(5)(d));
(4) Removing the provision for a separately determined ROE for IOU self-build renewable projects in the RECR clause. Thus, the IOU's last authorized ROE would be utilized. (See Section 25-17.400(7)(a)1);
(5) Three revisions to the RECR clause proceeding to change the projected period in one of the filing requirements; to remove an unnecessary filing requirement; and to include the Renewable Energy Charge as a line-item on customer bills. (See Section 25-17.400(7)(c)); and
(6) Inclusion of reference to the Commission's complaint resolution process to address disputes between IOUs and renewable energy developers. (See Rule 25-17.410(11))

These modifications to the draft rule are discussed in the staff analysis and shown in Attachment A in type and strike format.

The Commission may also decide to consider further revisions to the draft rule which are presented as policy options in Section IV of the staff analysis and based on the Commission's direction at the October 14, 2008 Agenda Conference. (Ballinger, Chase, Crawford, Futrell, Harlow)

Staff Analysis: The October 14, 2008 draft rules would set a reasonably achievable RPS of 20 percent by 2041 with a 2 percent rate cap and would establish a market-based approach to compliance through an inclusive REC-based system. Staff believes this market-based strategy can also be used to implement a more aggressive RPS, such as 20 percent by 2020. A 2 percent rate cap, however, may not be sufficient to meet such an aggressive RPS. Also, penalty provisions may need to be relaxed or removed, thus making the RPS requirements more aspirational in nature.

Draft Rule 25-17.400, F.A.C., *Renewable Portfolio Standards*, would establish a uniform mandatory RPS for the IOUs, and a procedure to review and, if appropriate, modify the RPS at least every five years. Rule 25-17.410, F.A.C., *Florida Renewable Energy Credit Market*, would require the establishment of a REC trading market to facilitate compliance with the RPS. A

detailed analysis of the October 14, 2008 draft rules was provided in the staff recommendation filed on October 2, 2008. An overview of these rules and analysis of recommended modifications is provided below.

Modifications to Draft Rule 25-17.400, and .410, F.A.C.

Based on comments and discussion subsequent to the filing of the October 14, 2008 draft RPS rule and the results of Navigant Consulting's study, the following modifications to the draft rule have been made:

(1) In draft Rule 25-17.400(3)(a), F.A.C., the initial RPS requirement for 2017 is changed from 5 percent to 6 percent. This modification is based on Navigant Consulting's estimate that existing renewable energy resources meet approximately 4.4 percent of Florida's energy needs. The initial 2017 RPS requirement of 5 percent was based on an estimate of existing renewable resources of 3.6 percent, which was derived from stakeholder data.

(2) In draft Rule 25-17.400(4), F.A.C., staff has clarified that initial utility RPS implementation plans are subject to Commission approval, and that implementation plans must be submitted for approval following initial adoption of the RPS rule and future Commission review proceedings of the RPS. The Commission's review of these plans will provide a safeguard that a utility's compliance strategy will meet or exceed the RPS in a manner that is not cost-prohibitive, and contains an appropriate mix of self-build and REC purchase options.

(3) In draft Rule 25-17.400(5)(d), F.A.C., staff has clarified the RPS compliance costs eligible to be counted against the rate cap. These costs are: (1) the cost of RECs purchased from non-utility renewable resources in Florida, (2) the administrative cost of RECs from IOU self-build renewable projects, and (3) the incremental cost of an IOU self-build renewable project above the IOU's cost of generating electricity (avoided cost). Numerous stakeholders expressed uncertainty about the language in the October 14, 2008 version of the draft rule. This modification clarifies the intent that the costs appropriate for inclusion as RPS compliance costs are those costs which are greater than IOUs' cost of generation.

(4) In draft Rule 25-17.400(7)(a), F.A.C., staff has deleted "including a separately determined ROE on total capital costs." This change clarifies that the Commission would not set a separate ROE for IOU self-build projects, but would utilize the IOU's last established ROE in a base rate proceeding.

(5) In draft Rule 25-17.400(7)(c), F.A.C., staff has made three changes to the reporting requirements for the RECR clause proceeding. First, the milestones for filing actual and projected true-up data would be adjusted to better reflect the availability of such data. Second, a requirement to file an unnecessary report is deleted. Finally, a Renewable Energy Charge representing the incremental costs of IOU self-build renewables and purchases of RECs from non-utility renewables as a separate line-item on customer bills.

(6) Finally, in draft Rule 25-17.410(11), F.A.C., staff has included a reference to the Commission's existing rules which provide a means of resolving disputes among stakeholders in the REC market.

With these modifications, the October 14, 2008 draft RPS rule as shown in Attachment A should be submitted to the Legislature as a viable RPS option.

I. Overview of Draft Rule 25-17.400, F.A.C., Renewable Portfolio Standards

The following is an overview of the October 14, 2008 draft Rule 25-17.400, F.A.C., and includes the modifications discussed above.

Initial RPS - Section 25-17.400(3) - The draft rule establishes the following percentages of the prior year's retail sales for each IOU to be provided by Florida renewable energy resources:

1. By January 1, 2017: 6 percent;
2. By January 1, 2025: 10 percent;
3. By January 1, 2033: 15 percent; and
4. By January 1, 2041: 20 percent.

These percentages represent a reasonably achievable RPS that meets the Legislature's intent to protect and encourage renewables, and minimize cost to ratepayers, and is based on a 2 percent rate cap. Navigant Consulting estimated that currently available renewable energy resources meet approximately 4.4 percent of IOUs' energy needs. This compares with the initial estimate of approximately 3.6 percent which was based on stakeholder data. The primary difference between these percentages appears to be Navigant Consulting's identification and estimate of energy produced and used by pulp and paper manufacturers in their operations. The potential expansion of renewable energy as shown in the schedule above, represents an approximate doubling of the amount of renewable energy every eight years.

Navigant Consulting identified five key drivers that could have the most impact on renewable energy development. The key drivers were varied in three economic and policy scenarios. These are described in detail in the analysis of policy option A, the magnitude and timing of the RPS. Only under the most favorable scenario for renewable energy development which includes high fossil fuel prices, high greenhouse gas emission prices, and favorable access to and cost of debt and equity, would an aggressive RPS, such as 20 percent by 2020 be achievable. The recommended RPS of 20 percent by 2041, with a 2 percent rate cap, aligns with Navigant Consulting's mid-favorable scenario for renewables. Current economic and policy conditions, however, are reflected in Navigant Consulting's unfavorable scenario which indicates renewable energy potential of 5 percent by 2020.

If the Commission decides to establish an aggressive RPS, such as 20 percent by 2020, the market-based strategy of the October 14, 2008 draft rule can be utilized. A 2 percent rate cap, however, may not be sufficient to meet such an aggressive RPS. Also, penalty provisions

may need to be relaxed or removed, thus making the RPS requirements more aspirational in nature.

Florida Renewable Energy Resources - Section 25-17.400(2)(a) – Only in-state renewables, as defined in Section 366.92(2), F.S., are eligible to be used for compliance under the rule. The statute promotes renewable energy resources that produce electrical, mechanical, and thermal energy from hydrogen, biomass, solar, geothermal, wind, ocean, waste heat or hydroelectric power.

Encouragement of Wind and Solar - Section 25-17.400(3)(b) – Staff believes it is appropriate to provide added weight to wind and solar resources, as provided for in Section 366.92(3)(b)3, F.S. Accordingly, the rule would require that at a minimum 25 percent of the RPS be provided from wind and solar resources, defined as Class I renewables. In addition, 75 percent of revenues available for RECs would be dedicated to solar and wind resources.

Renewable Portfolio Standards Proceeding - Section 25-17.400(3)(c) and (d) - The rule establishes that the Commission would hold a proceeding at least once every five years to review and, if appropriate, modify the RPS. In such a proceeding, an analysis of the technical and economic potential for Florida renewable energy resources would be provided.

Implementation Plans - Section 25-17.400(4) – Each IOU would be required to submit to the Commission within 180 days of the effective date of the rule, and following the periodic RPS review, its plan for meeting or exceeding the RPS. The implementation plans will provide the Commission with information on each IOU's expected plans to meet the RPS as the market for renewable energy and RECs develops in Florida. The Commission's review of these plans will provide a safeguard that a utility's compliance strategy will meet or exceed the RPS in a manner that is not cost-prohibitive, and contains an appropriate mix of self-build and purchased power options. Staff suggests a minor change to Section (4) of the draft rule in order to clarify that the implementation plans submitted by the IOUs are subject to Commission approval.

Compliance – Section 25-17.400(5) – Section 366.92(3)(b)1, F.S., requires the Commission to include in the draft RPS rule methods of managing the cost of compliance with the RPS, "whether through direct supply or procurement of renewable power or through the purchase of renewable credits." The statute appears to provide the Commission with the flexibility to choose one of three compliance mechanism options: (1) a REC market, (2) a contract path or energy only market, or (3) a combination of RECs and energy compliance. The draft rule requires RECs to be the sole means by which to comply with the RPS. Section 366.92(2), F.S., defines a REC as a product representing the renewable attribute of renewable energy produced in Florida and is equivalent to one MWh of electricity. IOUs may either purchase RECs from Florida renewable energy resources owned by third-parties, or use RECs from self-build renewable projects. Staff believes that requiring compliance through RECs will: (1) facilitate the ease of tracking compliance; (2) reduce the potential for double counting; (3) facilitate the inclusion of eligible customer-owned generation, including small systems, because RECs can be issued to account for the energy produced by these facilities, and (4) position the state for integration into any future federal or regional RPS.

Enforcement Mechanisms - Rewards/Penalties/Excusal – Section 25-17.400(5)(b)(c) – Staff believes that IOUs will be incented to construct renewables in two ways: (1) self-build renewable projects would add to rate base on which the IOU would have the opportunity to earn a return; and (2) the costs for these facilities would be recovered through a newly created dedicated cost recovery clause, the RECR clause. The rule also provides conditions under which an IOU may be excused for non-compliance as required by the statute. These conditions include insufficient supply of Florida renewable energy resources or prohibitive cost. If an IOU is not excused from compliance, the rule provides that an IOU which fails to meet the RPS shall be subject to a penalty up to 50 basis points of the IOU's approved rate of return on equity. The penalty would be assessed as a reduction in the amount of recoverable costs in the RECR clause.

Rate Cap – Section 25-17.400(5)(e) - The draft rule recognizes the Legislature's intent to minimize the cost of power supply to consumers by establishing a rate cap that would limit the total cost of compliance to 2 percent of each IOU's total annual revenue from retail sales of electricity. To further encourage solar and wind resources, the costs of complying with the RPS are allocated with 1.5 percent going to wind and solar, and 0.5 percent going to all other Florida renewable energy resources for a total rate cap of 2 percent.

Cost of Compliance – Section 25-17.400(5)(d) – The draft rule defines the types of costs which may be counted toward the rate cap. Staff believes it is appropriate to count those costs associated with purchasing RECs, the associated costs from the REC market, and the utility's costs of its self-build renewable resources which exceed the utility's costs for generating or purchasing traditional resources.

Based on comments made in workshops and post-workshop comments, it is apparent that this section of the draft rule has created confusion among the stakeholders. Staff has made a minor change to this section of the draft rule in order to clarify the types of costs that can be counted toward the rate cap. These costs are: (1) the cost of RECs purchased from non-utility renewable resources in Florida, (2) the administrative cost of RECs from IOU self-build renewable projects, and (3) the incremental cost of an IOU self-build renewable project above the IOU's cost of generating electricity (avoided cost).

Renewable Request for Proposals – Section 25-17.400(6) – Under the draft rule, each IOU would be required to biennially issue an RFP for Florida renewable energy resources. The IOUs would evaluate individual proposals in order to secure the most reliable and cost-effective portfolio of renewable resources. The results of the RFP would be included in each IOU's Ten-Year Site Plan. Also, any renewable capacity and/or energy acquired as a result of the RFP process would be incorporated into the IOU's IRP. Thus, the need for new power plants could be reduced by: (1) savings from energy efficiency programs, and (2) cost-effective renewable purchases. The RFP framework would utilize a market-based approach to encourage renewable developers to participate in the Florida market. Also, the Renewable RFP would provide the IOU and the Commission with information to evaluate the cost-effectiveness and need for a self-build renewable option. The Renewable RFP would be in addition to the opportunity for individual negotiations between renewable developers and the IOUs, as well as the renewable energy contracts required by Rule 25-17.200-.310, F.A.C.

Cost Recovery – Section 25-17.400(7) – The rule provides for cost recovery of reasonable and prudent costs associated with the purchase of RECs, including administrative costs, and costs associated with IOU-owned renewable facilities. The RECR clause would be created to allow for Commission review and approval of reasonable and prudent costs associated with RECs, IOU-owned renewable facilities, and capacity and energy purchased through tariffs or contracts with Florida renewable energy resources.

Staff is recommending a change to Subsection (7)(a) of the draft rule to remove the provision that a separately determined return on equity (ROE) will be established on utility investment in renewable facilities. Upon reflection, staff no longer believes it is appropriate to establish a separate ROE for each renewable facility in the RECR clause proceeding. A utility's ROE is normally set in a rate case proceeding taking into account its total investment and the associated risk and market conditions at the time. This process can be costly and time-consuming, requiring expert witnesses and thorough analyses. It would be burdensome to require a separate analysis for each self-build renewable project and unrealistic to attempt to complete the analysis in the course of the RECR proceeding each year. Further, it would lead to confusion if a utility had different ROEs for its renewable projects than for other utility investments. Therefore, staff is recommending this provision be removed from the draft rule and that the IOU's last established ROE be utilized for utility investment in renewable facilities.

Staff is recommending three additional changes to the RECR clause proceeding detailed in Subsection (7)(c) of the draft rule. First, Subsection (7)(c)2. of the draft rule requires the IOUs to submit an annual true-up filing showing eight months actual and four months projected costs. This true-up filing will be used in the RECR hearing held in November of each year to determine over- or under-recoveries. Since the true-up filings are usually submitted in September of each year, it is unreasonable to expect eight months of actual cost data to be available in September. Therefore, staff recommends that the draft rule be changed so that the true-up filings would reflect seven months actual and five months projected costs.

The second change is to eliminate Subsection (7)(c)5. of the draft rule, which requires a filing of the actual cost data within 90 days following the first six months of the annual reporting period. While this information might be somewhat useful in order to see how accurately the IOUs have estimated their annual projected costs associated with renewables, it is not necessary since the Commission will receive the actual cost data for seven months in the true-up filing discussed above. This requirement can be eliminated.

Finally, a Renewable Energy Charge representing the incremental costs of IOU self-build renewables and purchases of RECs from non-utility renewables as a separate line-item on customer bills. As part of this change, the total RECR charge would no longer be a separate line-item. Thus, only the incremental cost of compliance with the RPS would appear on customer bills.

Reporting Requirements – Section 25-17.400(8) – Each IOU would be required to provide an annual report to the Commission by April 1 concurrent with the filing of its Ten-Year Site Plan. The specific data to be provided by each IOU in these reports will facilitate the Commission's evaluation of utility efforts and costs associated with the RPS, and efforts to track the

development of renewable energy in Florida. Further, because these reports are filed concurrently with the Ten-Year Site Plans, the Commission will have a complete picture of how each utility's RPS compliance strategy fits in with the utility's integrated resource plan.

II. Overview of Draft Rule 25-17.410, F.A.C. - Renewable Energy Credit Market

The following is an overview of the October 14, 2008 draft rule 25-17.410, F.A.C., and includes the modification discussed above.

Establishment of a REC Market – Section 25-17.410(1), (2), (3)(a) and (b), and (4) – The REC market allows for the certification and accounting of RECs that may be used by the IOUs to meet the requirements of the RPS. The rule directs the IOUs to establish a REC market and select an independent third-party REC market administrator, subject to Commission approval. The administrative costs of the REC market will be collected through fees assessed to a REC. The REC market will allow the IOUs to generate their own, buy, sell, and trade the RECs needed to comply with the RPS and allow for owners of Florida renewable energy resources to benefit from the sale of RECs. The rule would require the establishment of a group to act as technical advisors to the REC market administrator in the areas of governance, fees and market rules. The IOUs, municipal electric utilities, rural electric cooperatives, and Florida renewable energy resource providers are to make up the advisory group. As part of the IOUs' request for Commission approval of the REC market structure and governance, provisions shall be made to facilitate both short-term purchases of RECs, and long-term bilateral contracts for RECs between IOUs and Florida renewable energy providers.

Full Transparency – Section 25-17.410(1), (2), (3), (11) – The rule provides for full oversight of the REC market by the Commission in several ways: (1) the REC market administrator must be approved by the Commission, (2) the rule requires Commission approval of all of the practices and procedures of the REC market, and (3) all records of the REC market must be fully transparent and open to the Commission for inspection and audit. Also, staff has modified the October 14, 2008 draft rule to include references to the Commission's dispute resolution process pursuant to Rule 25-22.032, F.A.C, *Customer Complaints*, and Rule 25-22.036, F.A.C., *Initiation of Formal Proceedings*. This will provide a forum and process for resolution of disputes among stakeholders in the REC market.

Eligible Facilities – Section 25-17.410(5) – Renewable facilities that are eligible to produce RECs must be certified by the REC market administrator. The rule lists eligible facilities, which include: (1) all utility-owned Florida renewable energy resources; (2) non-utility owned renewables for which the capacity or energy is under contract to a utility or pursuant to an approved tariff; (3) non-utility owned renewables greater than two megawatts, that offset all or part of the customer's electrical needs; and (4) customer-owned renewables, two megawatts or less, that have not received an incentive from an IOU pursuant to a Commission-approved energy efficiency program.

Treatment of RECs – Section 25-17.410(6)-(10) – The rule would require that RECs are retained by the owner of the eligible Florida renewable energy resource, unless sold or transferred, and shall have a life of two years. The rule also would ensure, pursuant to statute, that RECs credited

toward RPS compliance are not credited toward any other purpose. To prevent double counting, the rule requires that RECs produced by Florida renewable energy resources used to comply with Florida's RPS or any other state's RPS must be retired and not used for compliance with another state or regional RPS.

III. Summary of Draft Rules as Modified

In summary, staff recommends that the Commission submit to the Legislature the October 14, 2008 draft rules contained in Attachment A as one alternative for consideration. These draft rules contain changes to the drafts presented to the Commission at the October 14, 2008 Agenda Conference.

Draft Rule 25-17.400, F.A.C., *Florida Renewable Portfolio Standard*, is consistent with the requirements of Section 366.92, F.S., and offers a balanced approach to encouraging the development of renewable resources in Florida, while providing sufficient ratepayer safeguards. The rule establishes a reasonable initial uniform RPS for each IOU, and includes a procedure for the Commission to review and update these standards, as necessary, not less than every five years. Further, the rule contains two primary components to protect ratepayers from high rate impacts: (1) the procedure for the Commission to review and modify the standards, if appropriate; and (2) a rate cap based on 2 percent of each IOU's retail electric sales.

Draft Rule 25-17.410, F.A.C., *Florida Renewable Energy Credit Market*, contains appropriate procedures for the establishment and administration of a Florida REC market. The REC market will allow the IOUs to self-generate, buy, sell and trade the RECs needed to comply with the RPS and allow for owners of Florida renewable energy resources to benefit from the sale of RECs. The draft rule requires that the IOUs use an RFP process to select a third-party market administrator. The selection of the market administrator and the governance and structure of the market will be subject to Commission approval. The draft rule sets forth minimum provisions that must be contained in the REC market filing, identifies eligible facilities, addresses the ownership and life of a REC, and clarifies the prohibition of double counting of a REC created in the Florida market. Further, the rule requires the establishment of a group of stakeholders to act as technical advisors to the REC market administrator in the areas of governance and market rules. The IOUs, municipal electric utilities, rural electric cooperatives, and Florida renewable energy resource providers are to make up the advisory group. Staff believes the draft rule provides for reasonable oversight by the Commission, and will ensure a REC market that is transparent, impartial and fair to all market participants.

IV. Alternative Policy Options

The Commission directed staff at the October 14, 2008 Agenda Conference to develop information on alternatives to certain provisions of the draft RPS rule. As discussed in the following subsections, alternative policy options may be incorporated into the Commission's draft RPS rule. Each of these alternatives are interrelated and can impact the ultimate draft rule that is developed.

A. Magnitude and Timing of the Renewable Portfolio Standard

Section 366.92, F.S., defines "Renewable Portfolio Standard" as the minimum percentage of total annual retail electricity sales by an IOU to consumers in Florida that shall be supplied by renewable energy produced in Florida. The magnitude and timing of the RPS is a critical decision point in the formulation of an RPS rule, however, it does not exist in isolation. The ability for an RPS to meet legislative intent is also dependent on interrelated policy options that are discussed further, including: (1) penalty and excusal provisions, (2) rate cap, (3) eligible resources, and (4) carve-out for certain resources. To be consistent with legislative intent, an RPS should balance the need to protect existing and encourage new renewable energy resources with the need to minimize cost to ratepayers.

RPS Options

There appears to be general agreement among the stakeholders regarding a 20 percent ultimate goal, and this level was identified in the Governor's Executive Order Number 07-127. A key question remains regarding the timing of the ultimate goal, however. Through the rule development process there have been discussions and information developed on the following options:

- 20 percent by 2050 – August 20, 2008 strawman draft rule
- 20 percent by 2041 – October 14, 2008 draft rule
- 20 percent by 2030 – FPL's clean energy portfolio
- 20 percent by 2020 – Environmental and renewable energy advocates

Staff's presentation at the December 3, 2008 Commission workshop showed that the potential ratepayer impact of the RPS was dependent on the timing of the ultimate goal, the mix of renewable resources used to meet the goal, and any rate cap established in the RPS rule. For example, the following table used at the workshop provides estimates of the relative cost of RPS rollout strategies using a mix of solar and biomass resources. These are currently the renewables with the most near-term potential in Florida.

Table 1 Comparison of RPS Requirements and Estimated Costs			
25 % Solar/75% Biomass			
	20% by 2020	20% by 2030	20% by 2041
RPS Value Giga-watt hours (GWh)	**44,500**[3]	**28,000**	**21,600**
Required Solar Capacity (MW)	5,770	3,630	2,800
Existing Solar Capacity (MW)	3	3	3
# of Solar Installations by 2020	1.4 Million	0.9 Million	0.7 Million
Required Biomass Capacity (MW)	4,760	3,000	2,300
Existing Biomass Capacity (MW)	1,069	1,069	1,069
# of Biomass Installations by 2020	46	24	15
Estimated Cost ($ Billion Net Present Value (NPV))	**$24.5**	**$17.2**	**$14.3**

The RPS percentages and timing should incorporate information on an assessment of the existing and potential renewable resources, RPS policy options, and the potential cost to ratepayers.

Navigant Consulting, Inc.'s Florida Renewable Energy Potential Study

As discussed in detail in Attachment D, Navigant Consulting's renewables assessment includes an evaluation of the levelized cost, and current and projected availability of renewable energy through 2020. The study shows a range of RPS requirements of: (1) 5 percent by 2020 in the unfavorable scenario, (2) 11 percent by 2020 in the mid-favorable scenario, and (3) 24 percent by 2020 in the favorable scenario. The study results show that only under the most favorable circumstances for the development of renewable energy would a 20 percent goal be achievable by 2020. Current economic and policy conditions fall in the unfavorable scenario.

In order to project future renewable energy development, Navigant Consulting identified ten key drivers that could impact the renewable energy market. Scenarios of potential renewable development were analyzed around the five key drivers with the highest potential impacts and the most uncertainty. These drivers are: (1) fossil fuel prices, (2) cost of carbon under greenhouse gas emissions policies, (3) federal and state renewable energy tax credits and other incentives, (4) the availability and cost of debt and equity, and (5) the rate cap established for the purchase of RECs. According to Navigant Consulting, the purpose of the additional revenue stream to the renewable energy resource is to make up any difference between the cost of the renewable facility and the comparable utility generation facility in order to insure an adequate return on investment for the renewable developer.

Navigant Consulting then created three scenarios for potential renewable energy development in which the five key drivers were used. These key drivers were varied under three scenarios to determine the impact on the development of renewable energy by 2020. These scenarios are summarized as:

[3] 44,500 GWh represents approximately a 500 percent increase over existing renewable resources in Florida.

- Unfavorable – low fossil fuel prices, 1 percent rate cap, no extension of current government renewable incentives per current policies, tight financial markets, and carbon pricing of $10/ton by 2020;

- Mid-favorable – mid range fossil fuel prices, 2 percent rate cap, partial extension of government renewable incentives, moderate financial markets, and carbon pricing of $30/ton by 2020; and

- Favorable - high fossil fuel prices, 5 percent rate cap, government renewable incentives extended through 2020, widely available debt and equity, carbon pricing of $50/ton by 2020.

Navigant Consulting concluded that:

- Under the unfavorable scenario for renewable development, which includes a 1 percent rate cap, renewable energy in Florida could be 5 percent of IOU retail sales by 2020;

- Under the mid-favorable scenario for renewable development, which includes a 2 percent rate cap, renewable energy in Florida could be 11 percent of IOU retail sales by 2020; and

- Under the most favorable scenario for renewable development, which includes a 5 percent rate cap, renewable energy in Florida could be 24 percent of IOU retail sales by 2020.

Navigant Consulting found that renewable energy development would be expected to develop more extensively under a scenario with high fossil fuel prices, a 5 percent rate cap on RECs, government incentives extended through 2020, and widely available debt and equity at lower cost.

Current economic and policy conditions generally coincide with Navigant Consulting's unfavorable scenario for future renewable development. Specifically, the unfavorable scenario for carbon pricing assumes $0/ton initially, then scaling to $10/ton by 2020. Currently, there is no federal or state policy establishing carbon pricing. As shown in Attachment D, Navigant Consulting assumes in its unfavorable scenario the cost of debt to be approximately 8.5 percent, the cost of equity approximately 14 percent and ready access to debt, which would make-up 50 percent of renewable project financing. Currently, credit markets are extremely tight and it is uncertain when conditions will improve. Navigant Consulting assumes natural gas costs to be $5-$6/MMBtu in the unfavorable scenario. Currently, natural gas is trading at $5.70/MMBtu. Most forecasts project natural gas prices to increase over the long-term. Navigant Consulting projects various federal and state renewable energy financial incentives under each scenario, as shown in Attachment D. For example, in the unfavorable scenario, Florida's solar rebate program is projected to expire in 2010, with a $5 million annual funding level. The Governor's Energy Office has budget authority to spend $5 million in the 2008/09 fiscal year. It is unknown

if and to what level the Legislature will appropriate funds for the solar rebate program in future fiscal years.

It should be noted that Navigant Consulting performed their primary analysis with a solar and wind carve-out of 75 percent of RPS expenditures, identical to the October 14, 2008 draft rule. Based on comments in the rule development process, Navigant Consulting performed an alternate analysis that did not include a carve-out. This analysis shows that renewable energy could provide 4 percent under the unfavorable scenario, 9 percent under the mid-favorable scenario and 23 percent under the favorable scenario of the IOUs' retail sales by 2020.

The timeframe and scope of Navigant Consulting's study allowed only for an assessment of existing renewable resources, a comparison of the cost of renewables to comparable traditional generation options, and an assessment of the economic potential under the scenarios listed above. While the study provides useful information, a complete IRP exercise could not be performed. An IRP would have allowed for an analysis of the future need for electricity, existing resources and the associated costs, and the availability and cost of options to meet additional electrical needs. These options include energy efficiency, renewables, purchased power and traditional generation options.

Initial Magnitude and Timing of the RPS

The starting point for an RPS should be based on existing renewable resources. Staff's most recent information indicates that renewable generation provides approximately 6,339 GWh or 3.6 percent of the IOUs' energy needs. This estimate includes both energy that flows onto the grid and energy used to self-serve. Navigant Consulting's assessment shows that renewables contribute the equivalent of 7,768 GWh or 4.4 percent of the IOUs' energy needs. Navigant Consulting includes data from sources not reported to staff by the stakeholders. The primary difference between these percentages appears to be Navigant Consulting's identification and estimate of energy produced and used by pulp and paper manufacturers in their operations. Staff believes that Navigant Consulting's data provides a reasonable upper bound of the energy produced by existing renewable resources.

The information presented at the December 3, 2008 rule development workshop included three cases with an end-date and not a starting date. The October 14, 2008 draft rule would make 2017 the first year the IOUs are required to meet a standard. This date would allow for time to establish a rule and to establish the REC market. If the Commission decides to establish an alternative starting date for the RPS, care must taken to consider: (1) the potential for near-term development of renewables; (2) the rate cap established in the draft rule; and (3) the compliance provisions including penalties and excusal for non-compliance.

Ultimate Magnitude and Timing of the RPS

A key consideration in determining the ultimate magnitude and timing of the RPS is the potential to achieve the goal within the desired timeframe. The Navigant Consulting study provides insight on this issue. The study shows that renewable energy could account for 5, 11 or 24 percent of the IOUs' retail sales by 2020, depending on the assumed economic and policy scenario. Navigant Consulting found that only under the most favorable scenario for the

development of renewable energy could a 20 percent RPS be expected to be achieved by 2020. As discussed above, current economic and policy conditions would generally fall into Navigant Consulting's unfavorable scenario for renewable energy development. Navigant Consulting's conclusion must therefore be viewed only as the upper bound or maximum possible renewable development under the most favorable assumptions.

Staff notes that the ease of achieving 20 percent renewables will be affected if the resources eligible for compliance are altered. For example, if eligible resources are expanded to include clean energy resources, as discussed in Issue 3, it could be expected that the 20 percent goal would be more easily and quickly achieved by the IOUs. Therefore, the magnitude and timing of the ultimate standard should be revisited if the eligible resources change, such as by including all clean energy resources.

A second consideration involves the effect of the timing of the ultimate goal on the cost of achieving the goal. As shown in Table 1 from staff's presentation at the December 3, 2008 workshop, a near-term RPS of 20 percent would significantly increase the cost of compliance. All else being equal, advancing the schedule from 2041 to 2020 would be expected to increase the costs of achieving a 20 percent goal by approximately $10 billion NPV. The cost impact to ratepayers could be ameliorated through adjustments to the rate cap. This, however, could impact the potential for IOUs to achieve the RPS requirements.

Conclusion

Staff recommends an RPS of 20 percent by 2041. If the Commission alters the RPS percentages and timing from the October 14, 2008 draft rule, consideration must be given to available and projected renewable resources, and the interrelated policy options. These policy options will affect the ability to achieve the goal and impact the compliance costs recoverable from the ratepayers.

B. Rate Cap

Since the cost of certain renewables is likely to be higher than conventional technologies, particularly in the early years of development, staff believes it is essential to include some form of cost containment measure in the RPS policy. In addition, Section 366.92(3)(b)2, F.S., provides that noncompliance with the RPS can be excused if the cost of compliance was "cost prohibitive." The draft rule limits ratepayer cost exposure through a rate cap based on a percentage of retail sales. This cap performs the dual functions of: (1) minimizing RPS compliance costs to ratepayers, and (2) providing an excusal for the IOU in the event that compliance costs are excessive and prevent the IOU from meeting the RPS.

In this rulemaking process, OPC, other consumer advocates, and utilities suggested a rate cap of 1 percent of annual retail revenues. The environmental advocates and renewable energy producers commented that a 1 percent rate cap is too low to fully encourage the development of renewables in Florida. These parties recommended increasing the rate cap to as high as 5 percent, or removing the rate cap altogether. As an example of the various rate caps suggested by the parties, Table 2 displays 1 to 5 percent of each IOU's annual 2007 revenues.

Table 2 Rate Caps Associated with 2007 IOU Revenues					
	1% Retail Sales	**2% Retail Sales (Draft Rule)**	**3% Retail Sales**	**4% Retail Sales**	**5% Retail Sales**
FPL	$112,648,020	$225,296,040	$337,944,060	$450,592,080	$563,240,100
FPUC	$564,089	$1,128,178	$1,692,267	$2,256,356	$2,820,445
Gulf	$10,282,092	$20,564,184	$30,846,276	$41,128,368	$51,410,460
PEF	$41,383,779	$82,767,558	$124,151,337	$165,535,116	$206,918,895
TECO	$20,410,858	$40,821,716	$61,232,574	$81,643,432	$102,054,290
***Total*:**	**$185,288,838**	**$370,577,676**	**$555,866,514**	**$741,155,352**	**$926,444,190**

The October 14, 2008 draft rule contains a rate cap of 2 percent, which would provide a total of over $370 million toward compliance costs for the five IOUs in the first year of an RPS. This annual amount would move over time in concert with retail revenues. Through 2020, a 2 percent rate cap would amount to approximately $4.4 billion (nominal) above utility cost of generation.

Staff notes that the draft rule contains the flexibility for the Commission to adjust the rate cap over time if appropriate. However, the cap must be set high enough for the RPS goals to be achieved, particularly in the initial years of the RPS, prior to the Commission's first review proceeding. If the Commission determines over time that the 2 percent cap (or other initial cap value) is too low for the IOUs to meet their goals, the Commission may increase the cap in the periodic review proceeding that would occur at least once every five years.

In setting the appropriate initial rate cap, it is important to recognize the interrelationship between the costs of an RPS and other key policy decisions within the rule. As discussed above, a more aggressive RPS in terms of magnitude and timing will require higher costs for ratepayers, particularly in the early years of an RPS as the market for renewables develops. Thus, a more aggressive RPS will require a higher initial rate cap in order to improve the likelihood of compliance. As discussed in Issue 3, the costs of an RPS may be reduced by increasing the eligible resources; for example, by including energy efficiency and nuclear energy. Increasing the eligible resources may therefore reduce the required initial rate cap. Finally, as noted above, Section 366.92(3)(b)2, F.S., provides that noncompliance with the RPS can be excused if the cost of compliance was "cost prohibitive." If the rate cap is set too low, there will be more IOU requests for excusal based on this standard.

At the December 3, 2008 workshop, staff provided an analysis of the percentage of revenues necessary to achieve various RPS rollout strategies. In its analysis, staff evaluated three resource options: (1) all solar, (2) all biomass, and (3) 25 percent solar and 75 percent biomass. Each resource option was evaluated under three alternative RPS requirements: (1) 20 percent RPS by 2020, (2) 20 percent RPS by 2030, and (3) 20 percent RPS by 2041. The results of staff's analysis are contained in Table 3.

Table 3
Estimates of % Rate Cap Required
Under Alternative RPS Rollout Strategies

	20 % by 2020			20 % by 2030			20 % by 2041		
	All Solar	All Biomass	25/75 Split	All Solar	All Biomass	25/75 Split	All Solar	All Biomass	25/75 Split
2008	4%	1.5%	2%	4%	1.5%	2%	4%	1.5%	2%
2020	21%	6.5%	10%	13%	4%	6%	10%	3%	5%

The results of staff's analysis show the interrelationship between the rate cap required and the timing of the RPS, as well as the eligible resources. For example, the October 14, 2008 draft rule contains an RPS of 20 percent by 2041 with a 25/75 split between solar and biomass. This scenario can be achieved with an initial 2 percent rate cap, as contained in the October 14, 2008 draft rule, increasing to a 5 percent rate cap in 2041. However, if the 25/75 resource split is maintained and the 20 percent standard is moved up to 2020, the required cap increases from 5 to 10 percent. Staff's analysis also shows that including low-cost renewables can reduce the required rate cap. For example, a 20 percent RPS by 2020 with all solar would require a 21 percent rate cap, while the same RPS with lower cost biomass would only require a 6.5 percent rate cap.

Conclusion

Staff continues to believe that a rate cap is necessary to protect ratepayers from undue rate increases associated with the RPS, particularly in the early years as the market for renewables develops in the state. Staff recommends that the 2 percent rate cap in the draft rule is appropriate if the Commission does not significantly alter the related issues in the rule, such as the RPS schedule or eligible resources. A 2 percent cap would provide over $370 million annually toward compliance costs for the IOUs based on 2007 revenues, and would change over time with retail revenues. The draft rule also contains the flexibility for the Commission to alter the cap over time if appropriate.

C. Mandatory Standards or Aspirational Goals

Staff interprets Section 366.92, F.S., as requiring mandatory RPS standards. First, the statute mandates that the Commission's draft rule must require each IOU to supply a minimum level of renewable energy to its customers. Next, the statute requires the draft rule to include appropriate compliance measures and excusal provisions for non-attainment of the RPS requirements. Based on discussions at the rule development workshops, provisions were included in the October 14, 2008 draft rule allowing the Commission to assess penalties to an IOU that does not meet the RPS requirements. The Commission may assess a penalty of up to 50 basis points which will be paid from stockholder funds. However, as required by the statute, the draft rule provides that the Commission may excuse the IOU from compliance if sufficient RECs are not available, or if compliance is cost-prohibitive. These draft rule provisions would ensure that the RPS requirements of 20 percent by 2041 are mandatory. As such, the October 14,

2008 draft rule reflects an RPS strategy that is both realistic in its expected outcomes as it is demanding on the expected performance by the IOUs.

Mandatory compliance requires some form of penalties or alternative compliance payments (ACPs). ACPs are discussed in policy option H. Mandatory goals provide more incentive for obligated utilities to perform but may increase costs above an acceptable level if implemented without appropriate safeguards. In contrast, aspirational goals will reduce price pressure in the market for renewables but will also result in market uncertainty for renewables, which may lead to reduced investment.

The penalty provision in Subsection (5)(b) of the October 14, 2008 draft rule provides for a penalty of up to 50 basis points if an IOU fails to meet or exceed the RPS requirements and has not received excusal based on the conditions specified in Subsection (5)(c). The Commission may assess a penalty of up to 50 basis points which will be paid from stockholder funds. Table 4 below displays the 2007 revenues representing 50 basis points for each IOU.

Table 4
2007 IOU Revenues

	50 Basis Points
FPL	$54,649,664
FPUC	$115,320
Gulf	$5,538,382
PEF	$20,927,660
TECO	$9,965,900

Source: Utility surveillance reports, December 2007.

Section (7) of the draft rule requires that penalty funds shall be refunded to the ratepayers through a credit to the RECR. Staff believes that a penalty will not be effective unless it is paid by the IOU's stockholders. Further, it is appropriate to return these funds to the ratepayers because if a utility fails to comply, ratepayers will not receive all of the benefits associated with development of a renewable market in Florida.

If, however, the Commission decides to establish a more aggressive RPS, such as 20 percent by 2020, the potential cost and difficulty of achieving such goals are heightened. Many renewable technologies can take years to site and build, while other technologies remain in the developmental stages. Therefore, a more aggressive RPS will reduce the likelihood that IOUs can meet their obligations, and could be expected to increase ratepayer costs. An additional interrelated issue involves the inclusion of clean energy resources in the RPS, as discussed in Issue 3. If the Legislature chooses to amend Section 366.92(2), F.S., to expand the eligible resources to include, for example, nuclear energy, a more aggressive RPS schedule would be more easily met by the IOUs at lower potential costs. Therefore, increasing the eligible resources would mitigate the concerns of a more aggressive schedule combined with a mandatory RPS and the potential for penalties.

The Navigant Consulting study results show that an aggressive RPS is feasible only under the most favorable economic scenario for renewable energy, which includes a 5 percent rate cap. As such, the penalty provisions of the draft rule may need to be relaxed, thus making the RPS requirements more aspirational in nature. The December 3, 2008 draft rule, which includes an RPS of 20 percent by 2020, does not include penalties due to the aggressive nature of these requirements.

Conclusion

If the Commission establishes a more aggressive RPS with renewable resources identified in the statute, this may necessitate review of the penalty provision. A more aggressive RPS may require the penalty provision to be relaxed or eliminated.

D. Frequency of Review

In order to fully balance the interests of encouraging renewables while protecting ratepayers, the RPS rule must contain a process for Commission review on a regularly scheduled basis and as conditions warrant. The draft rule provides that the Commission will review, and if appropriate, modify the RPS rule at least every five years, which is similar to the timing of review of the Commission's conservation goals. This process for review will also allow the Commission to repeal or amend the rule in the event that a new provision of federal law supplants or conflicts with the rule. The draft rule further provides that any IOU or other substantially interested person may petition the Commission at any time to initiate a proceeding to modify the RPS or other aspect of the rule.

The review proceeding will provide the Commission with a forum to examine the overall success of the RPS rule in encouraging the development of a renewable market in Florida and the impact on ratepayer costs. In each regularly scheduled proceeding, the Commission will have at its disposal data from the five previous years on utility RPS compliance and the related costs, as well as an updated analysis of the technical and economic potential for Florida renewable energy resources. These data, coupled with information from the utilities' Ten-Year Site Plan, will provide the Commission with the necessary information to fully evaluate: (1) whether the RPS standards or other aspects of the design of the rule should be modified; (2) whether utility RPS compliance actions over the previous five years were appropriate, within the context of the development of the Florida renewable market; and (3) whether any changes in federal law require a modification to, or repeal of, the RPS rule.

Some stakeholders have argued that a shorter time period between review proceedings is needed, at least in the first years of the RPS. Sunshine State Solar Power and FPL recommend that the timeline should be every three years, rather than every five years. The Florida Solar Coalition (FSC) suggests that the Commission should review and revise the RPS at least once every two years for the first eight years of the standard. FSC believes that a shorter time period is needed for the Commission to respond more rapidly to the developing market for renewable resources. Southern Alliance for Clean Energy suggests that reviews should be held every three years for the first two proceedings and approximately concurrent with the conservation goals proceedings thereafter.

Conclusion

Staff believes a five-year regularly scheduled review coupled with the opportunity for parties to petition the Commission to initiate a review proceeding at any time is sufficient for the Commission to monitor the RPS under the October 14, 2008 draft rule. Further, the annual reports required by the IOUs on renewable activity will help the Commission determine whether a review is warranted between regularly scheduled proceedings. Care must be taken that sufficient time is allowed throughout the process for the IOUs to establish their plans and procedures to implement compliance with the RPS. More frequent reviews could result in a constantly changing RPS and lead to regulatory uncertainty for the IOUs and the renewable industry.

However, if the Commission makes changes to the draft rule which alter some key policy decisions, a more frequent review may be necessary. For example, if the Commission chooses a more aggressive timeline to reach a 20 percent RPS standard, a more frequent review, such as every three years, is appropriate to ensure that the IOUs are making sufficient progress in order to meet the more aggressive target.

E. Solar and Wind Carve-Out

Section 366.92, F.S., authorizes the Commission to provide added weight to solar PV or wind energy in the RPS rule. After consideration of other options, a 25 percent carve-out for compliance with the RPS for all solar resources, including solar PV and thermal, and wind energy was included in the draft rule provided in the October 14, 2008 Agenda conference. Staff believes that the inclusion of solar thermal technologies is appropriate because it conforms with the intent of Section 366.92, F.S., when it is read in its entirety, and will potentially reduce costs for ratepayers. The draft rule defines Class I resources as solar and wind, while the remaining renewable resources constitute Class II resources. The draft rule also provides added weight to solar and wind through the rate cap provision. Specifically, 75 percent of the revenues associated with the 2 percent rate cap would be dedicated to Class I resources, with the balance dedicated to Class II resources.

Providing added weight to solar and wind recognizes the ability of these resources to meet the legislative intent to improve environmental conditions. While other renewables may also provide environmental benefits, the Legislature did not express a preference for other renewable resources. Another benefit of a solar and wind carve-out is the potential to place downward pressure on the cost of these technologies over time.

Because solar and wind are currently higher cost resources, in the absence of a carve-out IOUs would choose lower cost renewable resources to comply with the RPS. OPC and AARP oppose a carve-out because they believe the lowest cost renewable resources should be utilized to comply with the RPS requirements. Navigant Consulting verifies that solar and wind are higher-cost resources. The mid-favorable scenario without RECs projects solar costs for ground-mounted solar PV ranging from $28.80/MWh in 2009 to $22.50/MWh in 2020. Similarly, onshore wind, which the study estimates has significantly limited potential, ranges from

$16.90/MWh to $16.70/MWh over the same period. For comparison, waste-to-energy costs run from $12.20/MWh to $15.20/MWh during that timeframe, while direct combustion of solid biomass runs from $10.30/MWh to $11.90/MWh.

Conclusion

Staff recommends a carve-out for solar and wind of 25 percent of the RPS and 75 percent of the rate cap. If a more aggressive RPS is established, such as 20 percent by 2020, a carve-out could have a more significant impact on Florida ratepayers and the ability of the industry to meet the demand. Thus a carve-out may not be appropriate as part of a more aggressive RPS strategy.

F. Renewable Energy Request for Proposals (RFP)

In the October 14, 2008 draft rule, an RFP is required every two years to ensure that IOUs select the most reliable and cost-effective renewable energy resources in a negotiated contract marketplace. The IOUs would evaluate individual proposals in order to secure the most reliable and cost-effective portfolio of renewable resources. The results of the RFP would be included in each IOU's Ten-Year Site Plan. Also, any renewable capacity and/or energy acquired as a result of the RFP process would be incorporated into the IOU's IRP. Thus, the need for new power plants could be reduced by: (1) savings from energy efficiency programs, and (2) cost-effective renewable purchases. The RFP framework would utilize a market-based approach to encourage renewable developers to participate in the Florida market. Also, the Renewable RFP would provide the IOU and the Commission with information to evaluate the cost-effectiveness and need for a self-build renewable option.

The Renewable RFP would be in addition to the opportunity for individual negotiations between renewable developers and the IOUs, as well as the renewable energy standard offer contracts required by Rule 25-17.200-.310, F.A.C. Pursuant to Rule 25-22.082, F.A.C., IOUs are required to issue an RFP prior to seeking a need determination for power plants subject to the Power Plant Siting Act. Such an RFP is to ensure the utility has adequately considered purchased power as an alternative to constructing a major generation addition. Some utilities have also issued separate RFPs targeting renewable resources. However, the responses to these renewable-only RFPs were not sufficient to defer the capacity need nor were the responses cost-effective compared to the utility's self-build option.

Conclusion

Staff recommends the RFP provisions of the October 14, 2008 draft rule be included in the Commission's draft rule. An alternative to this approach is in the December 3, 2008 draft rule which would require an RFP only prior to the construction of a utility self-build option to avoid gaming in the standard offer contract market. This is discussed further in Issue 2.

G. Cost Recovery

Section 366.92(3)(b)1, F.S., provides the Commission with rulemaking authority for annual recovery of costs associated with the RPS. However, the statute does not specify the ratemaking mechanism for recovery of these costs. The October 14, 2008 draft rule establishes a new cost recovery clause, the RECR clause, for the recovery by each IOU of all reasonable and prudent costs associated with: (1) the construction, operation and maintenance of renewable energy resources by an IOU (self-build projects); (2) the purchase of capacity and energy from renewable facilities; and (3) the purchase of RECs and the associated administrative costs of the Florida REC market. Pursuant to the draft rule, the Commission would conduct the annual RECR clause proceeding during the November hearing at which time the other electric cost recovery clauses are examined. The timing and filing requirements for cost recovery through the RECR clause, including projection and true-up filings, are based on those contained in the Commission's existing Energy Conservation Cost Recovery clause procedures.

With the new clause, all costs associated with renewables will be reviewed in one proceeding. In this way, the total costs for each IOU to comply with the RPS are easily identifiable and fully transparent to the Commission and other stakeholders. The RECR clause will facilitate the Commission's ability to track the compliance costs for the RPS and to evaluate all cost recovery issues associated with renewable energy. Further, the annual RECR proceeding would be a dedicated forum for all interested parties to fully vet issues involving renewable energy, such as rewards and/or penalties for IOU compliance with the requirements of the RPS.

As described previously, staff has modified the October 14, 2008 draft rule to include a Renewable Energy Charge. This charge would represent the incremental costs of IOU self-build renewables and purchases of RECs from non-utility renewables as a separate line-item on customer bills. As part of this change, the RECR charge would no longer be a separate line-item. Thus, only the incremental cost of compliance with the RPS would appear on customer bills.

Alternatives to RECR

If the Commission does not approve the use of a dedicated clause, the costs associated with the provision of renewable energy would be recovered through several mechanisms in different proceedings. The purchase of capacity and energy from renewable facilities through negotiated and standard offer contracts would continue to be recovered through the Fuel clause. The IOUs' self-build renewable projects would be recovered through base rates established in a rate case proceeding, or through a limited proceeding pursuant to Section 366.076, F.S., which would be focused only on the rate increase resulting from the addition of the renewable project to rate base. Currently, there is no mechanism for the recovery of the cost of purchasing RECs and the associated administrative costs. These costs could be recovered through the ECRC similar to the treatment allowed by Section 366.92(4), F.S., of the 110 MW of renewable energy projects that are zero greenhouse gas emitting at the point of generation.

As mentioned above, absent a dedicated clause, the costs of utility self-build renewable energy projects would be recovered through base rates in a rate case proceeding or in a limited proceeding. Electric rate case proceedings are governed by Sections 366.041 and .06, F.S.. A

rate case proceeding involves a detailed analysis of a utility's revenues, total investment, operation and maintenance expenses, taxes, and cost of capital. In a rate case, the Commission determines a utility's appropriate level of rate base, expenses, ROE, and ultimately rates to its customers. The utility is required to file a large volume of data and information that is closely scrutinized by the Commission and intervenors in the case. The rate case proceeding normally takes eight months to complete, often involving a full evidentiary hearing.

Given the regulatory lag involved in a rate case proceeding, recovery of utility self-build renewable energy projects in base rates may be a disincentive for utilities to build renewable projects in Florida. Allowing recovery of prudent costs associated with utility self-build projects through an annual clause mechanism would remove this disincentive.

However, the recovery of self-build renewable projects through a full rate case proceeding ensures that only the costs of the project that are needed in order to allow the utility the opportunity to earn a fair rate of return on its investment are passed on to the ratepayers. As explained above, a rate case involves a detailed analysis of all of a utility's investment and expenses, not just those associated with renewable projects. Depending on a utility's specific earnings position and level of revenues and expenses, it could be able to absorb some or all of the costs of a self-build renewable project and still be able to earn within its last authorized rate of return. If so, the level of costs of the self-build project allowed to be passed on to the ratepayer would be less than the amount that would be recovered through an annual clause mechanism.

A limited proceeding is an alternative to a full rate case proceeding to recover the costs of self-build renewable projects. A limited proceeding is typically focused on a single element of a utility's cost of service, and may entail less time and expense for all parties than a full rate case proceeding. However, the issues in a limited proceeding may be expanded by the Commission on its own motion or at the request of other interested parties in the proceeding. If issues other than the addition to rate base of a self-build renewable project are considered, then the cost and perhaps time to process the case would be increased.

Conclusion

Staff recommends the draft rule include the RECR as a mechanism for the Commission to consider the full cost of renewable energy. The Renewable Energy Charge represents the incremental costs of IOU self-build renewables and purchases of RECs from non-utility renewables as a separate line-item on customer bills. If the Commission elects not to establish a new dedicated clause for the recovery of costs associated with the purchase and provision of renewable energy, the only costs that would need to be addressed in the draft rule are those associated with the RECs and the administrative costs of the market.

H. Rewards and Penalties

Section 366.92, F.S., gives the Commission rulemaking authority to establish incentive-based adjustments to authorized rates of return on common equity to IOUs to incentivize the development of renewable resources. The statute also requires the draft rule to include appropriate compliance measures and excusal provisions for non-attainment of the RPS requirements. In order to provide incentives to achieve these standards, the draft rule provides for the following rewards and penalties:

- IOUs are allowed to earn a ROE for self-build renewables, including a return on the additional capital costs associated with building renewables, and recover these costs through a separate cost recovery clause;

- Any IOU failing to meet the RPS standards shall be subject to a penalty up to 50 basis points of the utility's approved ROE.

An alternative to the approach above is included in the December 3, 2008 draft rule which provides for an ROE reward, not to exceed 25 basis points, to IOUs which meet or exceed the RPS requirements. This draft rule does not include penalties for non-compliance because of the aggressive nature of the RPS requirement, which is 20 percent by 2020.

At the December 3, 2008 Commission workshop, information was provided on ACPs as a means of: (1) ensuring compliance with the RPS; (2) establishing a maximum price for RECs and thus an RPS cost containment mechanism; and (3) acting as a funding source for a public benefits fund (PBF). An ACP is a payment a utility can make in lieu of purchasing or producing a REC to achieve compliance with an RPS in a given year. An RPS strategy that features an ACP provides the utility flexibility to: (1) pay the ACP; (2) purchase the required RECs or energy; or (3) utilize energy from utility-owned renewable facilities to comply with the RPS requirements.

In many states, the funds collected through an ACP are directed to a PBF. These funds are typically directed to a designated agency to administer for a pre-determined purpose. Most PBFs are used for:

- Renewable energy development
- Energy efficiency programs
- Low-income energy assistance
- Public energy education
- Research and development of renewable energy resources

Staff does not believe an ACP should be recommended to the Legislature as part of an RPS strategy. The penalty provision contained in the draft rule is a more appropriate enforcement mechanism for the RPS. As discussed above, staff believes that any necessary penalties for unexcused non-compliance should be paid by an IOU's shareholders, rather than its ratepayers, as in an ACP. Further, staff notes that there is no statutory provision for directing ratepayer funds collected through an ACP toward a PBF. Section 366.92, F.S., does not provide

express authority for the use of any funds collected through an ACP by the Commission, another state agency, or a third-party for any purpose. The Commission may have statutory authority to direct funds collected through an ACP toward the state's general revenue fund; however, staff does not believe this is an appropriate use of ratepayer funds. There is no guarantee that these general revenue funds would be appropriated toward the development of renewable resources. Staff believes there is no justification for taking funds from ratepayers through an ACP unless these funds are used to support renewable resources. If, however, the Commission determines that an ACP or PBF are warranted, the Commission should notify the Legislature that statutory changes are needed.

Conclusion

The penalties contained in the October 14, 2008 draft rule are an appropriate compliance mechanism. If, however, the Commission determines that an ACP or PBF are warranted, the Commission should notify the Legislature that statutory changes are needed.

V. Summary of Issue 1

The Commission should submit to the Legislature the October 14, 2008 draft rules as one alternative for consideration. Staff would recommend, however, the modifications to the draft rule as discussed in the staff analysis and shown in Attachment A in type and strike format. The Commission may also decide to consider further revisions to the draft rule which are presented as policy options in Section IV of the staff analysis and based on the Commission's direction at the October 14, 2008 Agenda Conference. The October 14, 2008 draft rules would set a reasonably achievable RPS of 20 percent by 2041 with a 2 percent rate cap and would establish a market-based approach to compliance through an inclusive REC-based marketing system.

Issue 2: Should the Commission submit to the Legislature draft Rule 25-17.400, F.A.C., entitled Florida Renewable Portfolio Standard, which requires investor-owned utilities to establish standard offer contracts for each major segment of the renewable energy resource market in order to facilitate meeting the RPS standards, as set forth in Attachment B?

Recommendation: Yes. The Commission should submit Rule 25-17.400, F.A.C. requiring the establishment of standard offer contracts for each segment of the renewable energy resource market as another alternative for consideration by the Florida Legislature. However, as discussed in Issue 1, staff recommends that the RPS be set at 20 percent by 2041 with a 2 percent rate cap. (Ballinger, Futrell)

Staff Analysis: During the Commission workshop on December 3, 2008, the Commission instructed staff to explore, as an alternative, the use of standard offer contracts to implement an RPS. The salient features of such a proposal would be:

- An implementation target of 20 percent by 2020
- A rate cap of 2 percent
- Avoided cost plus model
- Standard offer contracts for utility purchases from a non-utility renewable energy resource
- Utility self-build option
- Rebates for solar photovoltaic and thermal systems

The advantages of establishing standard offer contracts as a means of implementing an RPS include utilization of the Commission's existing framework of avoided cost pricing as a building block to which a monetized value of renewable attributes (i.e., fuel diversity, economic development, and environmental benefits) would be added. Assigning and adding a value of renewable attributes to the avoided costs associated with renewable energy purchases coupled with a revenue requirement cost cap will meet the statutory requirements of Section 366.92, F.S., to promote the development of renewable energy, manage the cost of compliance with the RPS, and minimize the costs of power supply to electric utilities and their customers. Since this approach is based largely on existing regulatory mechanisms, it would result in an RPS program that is well understood, flexible, and could possibly avoid substantial delay and cost in implementing the RPS.

In the draft rule strategy discussed at the December 3, 2008 Commission workshop, compliance with the RPS is based primarily on renewable energy produced by IOU self-built renewables and purchases from non-utility renewable energy resources through standard offer contracts. Standard offer contract purchases would be priced at the IOU's avoided cost plus a "cost added" for renewable attributes. A separate standard offer contract would be established for each of the following classes of renewables: (1) solar photovoltaic; (2) solar thermal; (3) wind; (4) biomass, including municipal solid waste; and (5) industrial waste heat, including waste heat from sulfuric acid manufacturing operations. The "cost added" for renewable attributes for each class of renewables would be determined separately in evidentiary hearings based on the level of support required to make each technology financially feasible.

In addition to renewable energy generated or purchased by an IOU, the renewable attributes associated with certain demand-side renewable generation would also count toward compliance with the RPS. First, the renewable attributes associated with self-service renewable generation produced by large commercial and industrial customers, greater than 2 MW, would qualify to be sold pursuant to a standard offer contract with payment for renewable energy attributes only. The renewable attributes associated with renewable energy produced by smaller customers, less than 2 MW, receiving the benefits of net-metering would also count toward compliance with the RPS. Because of the benefits already received from net-metering, these customers would not receive any additional payment for their renewable attributes. However, to further promote the development of solar renewables, a rebate program for demand-side solar photovoltaic and solar thermal installations less than 2 MW in size would be established. The renewable attributes from customers receiving a solar rebate from an IOU would count toward compliance with the utility's RPS.

While compliance with the RPS under this strategy would be met by the production or purchase of renewable energy or attributes, RECs would also be assigned for each megawatt-hour of renewable energy produced. The RECs would become the property of the utility and would be available for resale in voluntary out-of-state REC markets. The revenues from the sale of RECs would be shared between ratepayers and stockholders on an 80/20 split.

Further, in order to promote the development of demand-side solar systems, staff recommends that 5 percent of the rate cap be devoted to IOU rebates for the installation of small demand-side solar thermal and photovoltaic systems. This would provide an option for an alternate funding source for the rebates currently offered by the Governor's Energy Office.

The magnitude and availability of the solar rebates would be identical to, and a substitute for, those currently offered by the Governor's Energy Office and are as follows:

Table 5
Solar Rebates Currently Offered by the Governor's Energy Office

Class	Solar Pool Heater	Solar Water Heating	Solar Photovoltaic
Residential	$100 per installation	$500 per installation	$4 per Watt (2 kW min size)
Residential Maximum Rebate	$100 per installation	$500 per installation	$20,000 per installation
Commercial	Not Applicable	$15 per 1,000 BTU	$4 per Watt (2 kW min size)
Commercial Maximum Rebate	Not Applicable	$5,000 per installation	$100,000 per installation

In order to flesh-out the above proposal, staff has drafted rule language contained in Attachment B. Staff is proposing the rule as a complete RPS strategy. However, any decisions the Commission makes regarding the policy options discussed in Issue 1 may be applied to the appropriate sections of this rule. A summary of the draft rule is as follows:

Rule 17.400, F.A.C., Florida Renewable Portfolio Standard

Application and Scope – Periodic Commission review of the RPS standards would be shortened from 5 years to 3 years.

Definitions – The definitions of Class I (solar and wind) and Class II (all other renewables) have been deleted. Separate standard offer contracts will be established for each major category of renewables.

Renewable Portfolio Standards

(a) Establishes an RPS of 20 percent of prior year's retail electricity sales from renewables by January 1, 2020. The RPS starts at 4 percent by January 1, 2010, which is approximately the current total energy provided to investor-owned utilities estimated by Navigant and includes existing firm contracts, as-available energy purchases, self-service, and net metering from renewables.

(b) Periodic Commission review of the RPS would be shortened from 5 years to 3 years. As with the recommendation in Issue 1, an IOU or substantially interested party may petition the Commission for a review of the RPS at any time. Any modification to the RPS or their implementation must be prospective only and shall not affect previously approved contracts and commitments.

(c) As part of any review of the RPS, each utility shall provide an analysis of the technical and economic potential for each Florida renewable energy resource. (No change from Issue 1)

Compliance

(a) Compliance with the RPS is based on :

1. energy produced by an investor-owned self-built Florida renewable energy resource;
2. energy purchased by an investor-owned utility from a Florida renewable energy resource through a Commission approved standard offer contract;
3. the unbundled renewable energy attributes associated with the energy produced by a self-service Florida renewable energy resource purchased by an investor-owned utility through a Commission approved standard offer contract;
4. the unbundled renewable energy attributes associated with the energy produced by a customer receiving electric service under a net-metering arrangement pursuant to Rule 25-6.065, F.A.C.; and
5. the unbundled renewable energy attributes associated with the energy produced by a customer receiving a rebate for the installation of a customer-owned solar energy system pursuant to the provisions of subparagraph (4)(e) of the draft rule.

Renewable energy or renewable energy attributes credited toward compliance with the RPS can not be credited toward any other purpose, such as in meeting the Commission FEECA conservation goals.

(b) Investor-owned utilities are required to make a good faith effort to comply with the RPS percentage and timing. The Commission may provide rate of return on equity incentives,

not to exceed 25 basis points, to utilities which meet or exceed the RPS. No provision for penalties for not attaining the goals is recommended because of the aggressive nature of the 20 percent by 2020 standards. An IOU may be excused from compliance in any year upon a showing that:

1. the supply of renewable energy or renewable energy attributes is not adequate to satisfy the RPS, or
2. the cost of securing renewable energy or renewable energy attributes exceeds the incremental cost cap established in subparagraph (4)(d).

(c) The cost of compliance is defined as the incremental cost associated with producing or procuring renewable energy which exceeds the costs to the utility of electric energy or capacity, or both, which but for the production or purchase of renewable energy the utility would generate itself or purchase from another source.

(d) A Renewable Energy Charge, which represents the cost of compliance, is initially set at 2 percent of each investor-owned utility's annual revenue from retail sales of electricity for the prior year. The Commission may increase or decrease, but not below two (2) percent, the compliance Renewable Energy Charge annually in the Renewable Energy Cost Recovery clause, taking into consideration prevailing economic conditions and rate impacts. Should the RPS rule be repealed because of other State or Federal legislation, costs associated with previously approved standard offer contracts would continue to be eligible for recovery from ratepayers.

(e) A total of 5 percent of the Renewable Energy Charge is to be used for residential and commercial solar rebates. The level of the rebates is taken from the current level of rebates offered by the Governor's Energy Office and assumes that funding for this program will be discontinued.

Implementation

(a) Within 90 days of the rule's effective date and every two years thereafter, each IOU would be required to file for Commission approval a standard offer contract with a minimum term of 10 years for each of the following types of renewable energy resources:

1. solar photovoltaic;
2. solar thermal;
3. wind;
4. biomass, including municipal solid waste; and
5. industrial waste heat, including waste heat from sulfuric acid manufacturing operations.

Capacity and energy payments would be made at the purchasing utility's full avoided cost pursuant to Rule 25-17.250, F.A.C. Payments for renewable attributes would be developed separately for each type of renewable energy resource in evidentiary hearings. In determining the additional financial support to be included in each standard offer contract, the Commission would take into consideration the levelized cost of the renewable energy resource and the need and avoided cost of alternative utility fossil fueled generation. In order to protect ratepayers, the cumulative total of above-avoided cost payments for renewable energy and renewable attributes is limited to the Renewable Energy Charge described in subparagraph (4)(d).

(c) Demand-side renewable energy resources which have received incentives from a Commission approved FEECA conservation program will not count toward compliance with the RPS.

(d) Prior to constructing a self-build renewable energy resource, an investor-owned utility would be required to demonstrate that the self-build option was the most cost-effective alternative by issuing a request for proposals (RFP) for the purchase of renewable energy from other renewable energy resource alternatives.

Renewable Energy Credits

(a) Renewable energy credits (RECs) would be issued for each MWh (1,000 kWh) of renewable energy produced by a utility self-build option or non-utility renewable energy resource; including self-service generation, net metering, and small demand-side solar systems. RECs would not be used to comply with the RPS. The RECs would become the property of the utility and would be available for resale in voluntary out-of-state REC markets. The revenues from the sale of RECs would be shared between ratepayers and stockholders on an 80/20 split.

(b) Each investor-owned utility would be responsible for the issuance, retirement, certification, and verification of RECs generated within its service territory.

Cost Recovery

(a) As recommended in Issue 1, staff recommends the establishment of a new Renewable Energy Cost Recovery (RECR) clause. An annual RECR cost factor would be determined in annual clause proceedings in November along with other cost recovery clauses. The RECR factor would include all reasonable and prudent costs associated with investor-owned utility self-build renewables and purchases of energy and renewable attributes from non-utility renewable energy resources. For billing purposes, the RECR factor would be separated into two components: (1) the utility's avoided cost, and (2) the cost of renewable attributes; i.e., the additional cost of complying with the RPS. The cost of renewable attributes would be shown as a separate line item on customer bills as a Renewable Energy Charge.

Reporting Requirements - Reporting requirements for renewable energy and renewable energy attributes produced by self-service, net metering, and small solar demand-side renewable energy resources has been added.

Dispute Resolution

Parties may seek resolution of disputes pursuant to existing Commission Rules 25-22.032, F.A.C., *Customer Complaints* or 25-22.036, F.A.C., *Initiation of Formal Proceedings*.

Conclusion

Staff recommends that the Commission submit to the Legislature Rule 25-17.400, F.A.C., as contained in Attachment B, requiring the establishment of standard offer contracts for each segment of the renewable energy resource market as one alternative for consideration. As discussed in Issue 1, staff recommends that the RPS be set at 20 percent by 2041 with a 2 percent rate cap.

Issue 3: Should the Commission recommend to the Legislature that the resources eligible to comply with the RPS include clean electric generating resources, and savings from supply-side and demand-side efficiency improvements?

Recommendation: Yes. The Commission should recommend to the Legislature as an addition to the recommendations in Issues 1 and 2, that eligible resources in the existing statute be expanded to include: (1) energy from new nuclear facilities and uprates approved by the Commission since 2006; (2) energy from integrated gasification combined cycle with carbon capture and sequestration plans approved by the DEP; (3) energy savings from efficiency improvements to existing utility generation; and (4) savings associated with customer energy efficiency programs. (Rudd, Trapp)

Staff Analysis: Section 366.92, F.S., outlines a specific set of resources eligible for compliance under the RPS. The definitions of "Florida renewable energy resources" and "Renewable Energy" include electrical, mechanical, or thermal energy produced from hydrogen, biomass, solar energy, geothermal energy, wind energy, ocean energy, waste heat, or hydroelectric power produced in Florida. If the Commission decides to establish a more aggressive RPS, such as 20 percent by 2020, expansion of eligible resources would place downward pressure on the cost of compliance. Additional resources would increase the likelihood of achieving compliance with the RPS. Such a change would require legislative action to amend the resources eligible to counted toward the RPS.

Staff recommends including the following resources in the statute: (1) energy from new nuclear facilities and uprates approved by the Commission since 2006; (2) energy from IGCC with carbon capture and sequestration plans approved by DEP; (3) energy savings from efficiency improvements to existing utility generation; and (4) savings associated with customer energy efficiency programs. These resources, along with renewable energy resources, would allow the IOUs to select the lowest-cost alternatives to meet the RPS requirements and meet the legislative intent to improve environmental conditions, encourage investment in the state and diversify the fuels used for electric generation, while minimizing costs to ratepayers.

I. Components to Building an Energy Efficient Florida

Pursuant to Section 366.03, F.S., each public utility has a statutory obligation to serve every customer within its service territory with reliable, safe, and affordable electric service. As the state's load and energy requirements continue to grow, Florida's utilities must continue to explore all measures to minimize the cost of serving their customers' needs. The following three components are critical to building an energy efficient Florida.

A. Energy Efficiency, Conservation and Demand-Side Management (DSM)

The first step toward building an energy efficient Florida begins with minimizing the load and energy requirements which the utilities must serve. Reduced load and energy requirements are essential in decreasing the burning of fossil fuels and deferring the need for additional generating capacity. Load and energy requirements are affected by many variables including population growth and weather patterns. Informed customer choice, however, serves as the

foundation for wise energy use in order to reduce dependence on expensive fossil fuels and reduce greenhouse gas emissions.

Utilities play an important role in educating consumers to make wise energy choices. Through energy efficiency programs, Florida's utilities can have a direct effect on customer energy usage patterns. Florida's IOUs reported more than $250 million in conservation-related expenditures in 2007, marking the highest expenditures since 1999. As discussed at the December 3, 2008 workshop, such expenditures are considered as part of the traditional IRP process.

In addition, electric customers can contribute towards achieving an energy efficient Florida through buying smaller homes, owning energy-efficient appliances including air conditioning systems, and making energy-efficiency improvements to their homes to reduce energy losses. Looking forward to the future, technological advances such as "smart meters" could provide a gateway to transform the nature of energy generation and usage. These devices can remotely meter customer usage and provide price signals to individual locations. Empowering the consumer with this information will spur the development of new industries to further assist the consumer in using energy wisely. At the same time, utilities and their ratepayers will benefit from the real-time dispatchability of the customer's load.

B. Renewable Generation

Renewable generation is another key component of building an energy efficient Florida. Currently, approximately 1,000 MW of renewable generation are available in Florida. Historically, relatively high capital and operating costs as well as limited physical applications have hampered the development of renewable energy in the state under traditional IRP methods. However, the 2008 Ten-Year Site Plans indicate approximately 500 MW of new renewable capacity are presently planned by Florida's utilities through the year 2017. Current utility-owned generation is approximately 50,000 MW, so the contribution toward fuel diversification from renewable energy remains relatively small. The RPS discussions in this docket are another effort to promote renewable generation resources in Florida, albeit outside of the IRP process.

The Commission has taken steps to promote renewable generation on the customer's side of the meter as well. On April 7, 2008, Commission amendments to Rule 25-6.065, F.A.C., relating to interconnection and net metering of small customer-owned renewable generation, became effective. Such changes will promote the development of small customer-owned renewable generation by streamlining the interconnection process and allowing for monthly credits for excess on-site renewable generation on the retail customer's bill.

C. *Utility Generation, Generator Efficiency and Fuel Diversity*

Conservation, DSM, and renewable energy resources are socially desirable alternatives to utility generation. However, current projections indicate that the state's total energy requirements will surpass projected conservation, DSM, and renewable energy programs offered by Florida's utilities. Therefore, the addition of traditional generation capacity is necessary to satisfy reliability requirements.

When considering the addition of supply-side generation, Florida's electric utilities must evaluate many environmental, economic, and reliability issues as part of the IRP process. The modernization of existing generating units plays a key role in addressing each of these issues. Such projects may require the temporary removal of existing units, thus impacting reliability until the completion of the modernization. As discussed at the December 3, 2008 workshop, recent amendments to FEECA include the promotion of generator efficiency improvements. It should be noted that generator efficiency improvements are measured as a reduction of BTUs, not kWh. Therefore, the inclusion of generator efficiency improvements as an eligible resource would entail creation of a protocol to determine the equivalent energy savings.

Fuel diversity is a strategic concern when the construction of new supply-side generation is necessary. Maintaining a balanced mix of fuel sources enhances the reliability of supply and allows utilities to mitigate the effects of volatile price fluctuations. The use of natural gas as a fuel has grown over the last 20 years and currently accounts for 38.8 percent of the state's energy needs. Because nuclear generation is one generating technology that provides base-load capacity yet produces no greenhouse gas emissions at the point of generation, it has become a cornerstone of an energy efficient Florida. Section 366.93, F.S., promotes investment, through annual cost recovery, for both nuclear and IGCC generation as a means to encourage a balanced fuel supply.

II. Clean Energy Portfolio Standard (CEPS)

An expansion of resources eligible for RPS compliance would create a "Clean Energy Portfolio Standard" (CEPS). A CEPS widens the playing field for energy sources, broadening the range of options to potentially lower-cost energy technologies and options. As a result, a CEPS could make it easier for Florida's IOUs to meet a more aggressive RPS.

In its comments following the August 20, 2008 RPS workshop, FPL proposed broadening the RPS to include nuclear power. Nuclear power fits broadly into the category of "clean" energy sources due to its negligible GHG production at the point of generation. The FPL proposal suggested only the inclusion of new nuclear power, with a service date for a build or uprate of 2006 and after. Because existing nuclear power supplied over 13 percent of Florida's power in 2007, the inclusion of existing resources would do little to encourage development of new clean resources. A CEPS also might temper the construction of new renewables. For example, in FPL's post-workshop comments, its clean energy proposal, 20 percent by 2030 would result in only 6.6 percent from renewables.

IGCC is another potential resource for inclusion in a CEPS, especially if carbon capture technology can be implemented. While IGCC has high initial capital costs, its fuel price is comparatively low due in part to the large domestic supply of coal. The carbon capture technology to render IGCC truly "clean" by reducing or eliminating its carbon dioxide emissions has not yet been developed to a point where it is practically deployable, however. Nevertheless, IGCC remains a possibility for inclusion in a CEPS if the technology continues to develop in the future.

An advantage of both nuclear power and clean IGCC capacity is that they have very high capacity factors, running at most hours of the day, year-round. As a result, a kW of nuclear or

IGCC capacity might produce as much as four times or more energy as an equivalent amount of solar or wind capacity, while meeting peak demand and serving reliability. Thus, these technologies potentially would have much more impact on replacing traditional fossil fuel generation and producing clean energy than renewable energy sources as currently defined in statute.

A third option is the inclusion of some combination of conservation, energy efficiency, and demand-side management in the CEPS. Some other states include such measures as part of their RPS, either on equal footing with renewable energy generation or as a lesser tier or capped percentage within the standard. By broadening the statute to include such measures, the potential exists for lower-cost options to be included in the CEPS, thus lowering costs to ratepayers.

Currently, the state of Florida includes all such measures as part of the FEECA goal-setting process. However, it does not appear that including conservation in a CEPS would necessitate amendments to FEECA. Nevertheless, if such measures are to be included in a CEPS, the statute must be crafted in such a way that ensures that conservation measures in response to FEECA not be double-counted as part of the CEPS as well.

The primary advantage of a CEPS is that it allows the IOUs to evaluate and select, as part of an IRP, the most effective options to meet customer needs that provides adequate, reliable service at the lowest possible cost. Also, under a more aggressive percentage target, such as 20 percent by 2020, a CEPS would be more realistically achievable. A CEPS expands the options beyond an RPS to include potentially lower-cost technologies. Additionally, new nuclear construction already has cost recovery provisions under existing statutes, and thus its costs would not be counted under the proposed rate cap.

The implementation of a CEPS would require legislative action. Section 366.92, F.S., which grants the Commission the authority to institute an RPS, contains language specifying the generation technologies allowed under a RPS. In order to establish a CEPS, amendments to legislation would be required to change all references from "Renewable Energy" in Section 366.92, F.S., to "Clean Energy" and make the following changes in definitions:

(2) As used in this section, the term:

(c) ~~"Renewable energy," means renewable energy as defined in s. 366.91(2) (d).~~ "Clean Energy," means electrical energy produced from a method that uses one or more of the following fuels or energy sources: hydrogen produced from sources other than fossil fuels, biomass, solar energy, geothermal energy, wind energy, ocean energy, ~~or~~ hydroelectric power, nuclear energy facilities or uprates approved by the Commission since 2006, integrated gasification combined cycle power with carbon capture and sequestration plans approved by the Florida Department of

Environmental Protection, or energy savings from efficiency improvements to existing utility generation. The term includes the alternative energy source, waste heat, from sulfuric acid manufacturing operations. The term also includes the energy savings from Commission-approved energy efficiency, conservation, or demand-side management programs.

(d) "Florida ~~renewable~~ clean energy resources," means electrical, mechanical, or thermal energy produced from a method that uses one or more of the following fuels or energy sources: hydrogen, biomass, solar energy, geothermal energy, wind energy, ocean energy, waste heat, ~~or~~ hydroelectric power, nuclear energy facilities or uprates approved by the Commission since 2006, integrated gasification combined cycle power with carbon capture and sequestration plans approved by the Florida Department of Environmental Protection, or energy savings from efficiency improvements to existing utility generation that is produced in Florida. The term also includes the energy savings from Commission-approved energy efficiency, conservation, or demand-side management programs.

Issue 4: Should the Commission submit to the Legislature draft Rule 25-17.420, F.A.C., entitled Municipal Electric Utility and Rural Electric Cooperative Renewable Energy Reporting?

Recommendation: Yes. The Commission should submit to the Legislature Rule 25-17.420, F.A.C., as set forth in Attachment C. (Chase, Futrell, Miller)

Staff Analysis: Section 366.92(5), F.S., requires each municipal and rural electric cooperative utility to develop standards for the promotion, encouragement, and expansion of the use of renewable energy resources and energy conservation and efficiency measures. The statute further provides that these utilities submit annual reports to the Commission identifying these standards by April 1 of each year. The draft rule specifies the annual reporting requirements for municipal and cooperative utilities. The information in these reports will facilitate the Commission's efforts to track municipal and cooperative policies regarding renewable energy and energy efficiency, as well as any resulting increase in statewide renewable resources in Florida.

The filing requirements listed in the draft rule include: (1) a detailed description of the standard adopted to promote, encourage and expand the use of renewable energy resources and energy conservation and efficiency measures; (2) the utility's plan to meet the standards it has adopted; (3) the retail MWh sales in the prior year; (4) the quantity of self-generated renewable energy in MWh separated by fuel type; (5) the quantity of renewable energy purchased in MWh separated by type of ownership and fuel type; (6) the quantity and vintage of self-generated RECs; (7) the quantity and vintage of purchased RECs; and (8) the fuel type and ownership of the Florida renewable energy resource associated with each REC.

At several of the workshops and in post-workshop comments, the Florida Electric Cooperative Association (FECA) questioned the Commission's jurisdiction to adopt any reporting requirements outside of those specifically enumerated in HB 7135. Staff notes that the Commission has the authority under Section 366.04(2)(f), F.S., to prescribe and require the filing of periodic reports and other data as may be reasonably available and as necessary to exercise its jurisdiction. The data required in the draft reporting rule should be readily available to the municipal and cooperative utilities, and will be useful in the Commission's efforts to evaluate and report on the statewide effectiveness of RPS programs in encouraging the development of renewable generation in Florida. Staff further notes that all of the reporting requirements contained in this rule are also required to be filed by the IOUs in draft Rule 25-17.400(8), F.A.C.

FECA also argued that, with the adoption of this rule, its members would be required to file three separate reports on renewables with the Commission, and that at least one of the existing rules should be deleted prior to the adoption of the draft rule in order to simplify and consolidate reporting requirements. The two existing rules that require municipal and rural electric cooperative utilities to file reports related to renewable generation are Rules 25-17.300 and 25-6.065, F.A.C.

Rule 25-17.300, F.A.C., was adopted in 2007, as part of a rule package that created a new Part IV of Chapter 25-17, titled *Obligations with Regard to Renewable Generating Facilities*. The purpose of this part of Chapter 25-17 is to implement 2006 legislative changes to Sections

366.92, F. S., regarding the promotion of renewable energy in Florida. This rule requires that certain information be filed by all utilities, including IOUs, municipals, and cooperatives as part of a utility's Ten-Year Site Plan. The information required in this rule includes: (1) the total MW and percentage of each utility's total capacity comprised of renewable generation, (2) the total MWh and percentage of each utility's net energy for load and fuel mix of energy purchased from renewable generation, and (3) the total MW and MWh of self-service generation by renewable generation. Staff agrees with FECA that this information may no longer be needed if the draft rule is adopted. If the rules are adopted a review of Rule 25-17.300, F.A.C., may be appropriate.

Rule 25-6.065, F.A.C., relating to interconnection and net metering of customer-owned renewable generation, was adopted in 2008. The purpose of the rule is to promote the development of customer-owned renewable generation up to 2 MW in size, by expediting the interconnection of such generation and by minimizing costs incurred by the customers. Only Section (10) of the rule is applicable to municipal and cooperative electric utilities. This section contains annual reporting requirements which will allow the Commission to monitor the development of customer-owned renewable generation. The reporting requirements are specific to customer-owned facilities which are two MW or less and include: (1) information about the customer-owned generation, including the technology, power rating, location and date of interconnection; (2) the total number of customer-owned renewable generation interconnected in the previous year; (3) the total kW capacity associated with the new interconnections; (4) the total kWh received by interconnected customers from the electric utility; (5) the total kWh of customer-owned generation delivered to the electric utility; and (6) the total energy payments made to interconnected customers of customer-owned renewable generation. Staff believes this information is not duplicative of the data required by the draft rule, and is necessary in order to accurately monitor the development of customer-owned renewable generation in the state.

FECA also requested the draft rule provide for reports to be developed by the Transmission and Generation cooperative utility. Staff does not recommend such a change to the draft rule. However, it is envisioned that each cooperative would provide the report and attest to its accuracy, but the data could be developed by the Transmission and Generation cooperative utility.

In conclusion, staff recommends that the Commission submit Rule 25-17.420, F.A.C., as set forth in Attachment C. The rule contains the appropriate annual reporting requirements for each municipal and cooperative electric utility as required by Section 366.92(5), F.S. The data required in the draft rule should be readily available to the municipal and cooperative electric utilities. The collection of these data will facilitate the Commission's efforts to track municipal and cooperative policies regarding renewable energy, as well as any resulting increase in statewide renewable resources in Florida. Further, at the appropriate time, staff will review the need for the report currently required by Rule 25-17.300, F.A.C., and will initiate a proceeding to recommend revision or deletion of the rule.

Issue 5: Should this docket be closed?

Recommendation: No. This docket should remain open to await further direction from the Legislature in regard to the adoption of the draft rules. If the Legislature determines that no further action will be required by the Commission, then this docket should be closed administratively. (Miller, Cibula)

Staff Analysis: Section 366.92, F.S., requires the Commission to submit a draft rule for legislative consideration by February 1, 2009. This docket should remain open to await further direction from the Legislature in regard to the adoption of the draft rules. If the Legislature determines that no further action will be required by the Commission, then this docket should be closed administratively.

Attachment List

Attachment A (Pages 58 – 71)

Attachment A contains staff's October 14, 2008 draft RPS rule with the modifications discussed above and in Issue 1.

Attachment B (Pages 72 – 88)

Attachment B contains draft rule language to codify the RPS strategy discussed at the December 3, 2008 Commission rule development workshop.

Attachment C (Page 89)

Attachment C is the draft rule on the reporting requirements for the municipal and cooperative electric utilities.

Attachment D (Page 90 – 97)

Attachment D is a summary and analysis of Navigant Consulting's *Florida Renewable Energy Potential Assessment*.

Attachment E (Pages 98 – 113)

Attachment E is a summary of the post-workshop comments filed by the interested parties to the December 3, 2008 Commission rule development workshop.

Attachment F (Pages 114 – 124)

Attachment F contains copies of the relevant Florida Statutes including:

Section 366.051, F.S., *Cogeneration; Small Power Production; Commission Jurisdiction*
Section 366.80-.82, F.S., *Florida Energy Efficiency and Conservation Act (FEECA)*
Section 366.91, F.S., *Renewable Energy*
Section 366.92, F.S., *Florida Renewable Energy Policy* (per SB 888 – 2006)
Section 366.92, F.S., *Florida Renewable Energy Policy* (per HB 7135 – 2008)

17.400 Florida Renewable Portfolio Standard

(1) Application and Scope.

The purpose of this rule is to establish and update at least every five years numerical renewable portfolio standards for investor-owned electric utilities that will promote the development of renewable energy, protect the economic viability of existing renewable energy facilities, diversify the types of fuel used to generate electricity in Florida, lessen Florida's dependence on fossil fuels for the production of electricity, minimize the volatility of fuel costs, encourage investment in the state, improve environmental conditions, and minimize the costs of power supply to electric utilities and their customers.

(2) Definitions.

(a) "Florida renewable energy resources," means electrical, mechanical, or thermal energy produced from a method that uses one or more of the following fuels or energy sources: hydrogen, biomass, solar energy, geothermal energy, wind energy, ocean energy, waste heat, or hydroelectric power that is produced in Florida.

(b) "Renewable energy," means electrical energy produced from a method that uses one or more of the following fuels or energy sources: hydrogen produced from sources other than fossil fuels, biomass, solar energy, geothermal energy, wind energy, ocean energy, and hydroelectric power. The term includes the alternative energy source, waste heat, from sulfuric acid manufacturing operations.

(c) "Biomass," means a power source that is comprised of, but not limited to, combustible residues or gases from forest products manufacturing, waste, or co-products from agricultural and orchard crops, waste or co-products from livestock and poultry operations, waste or

byproducts from food processing, urban wood waste, municipal solid waste, municipal liquid waste treatment operations, and landfill gas.

(d) "Class I renewable energy source," means Florida renewable energy resources derived from wind or solar energy systems.

(e) "Class II renewable energy source," means renewable energy derived from Florida renewable energy resources other than wind or solar energy systems.

(f) "Renewable Energy Credit," means a financial instrument that represents the unbundled, separable, renewable attribute of renewable energy or equivalent solar thermal energy produced in Florida and is equivalent to one megawatt-hour of electricity generated by a source of renewable energy located in Florida.

(g) "Renewable Portfolio Standard," means the minimum percentage of total annual retail electricity sales by an investor-owned electric utility to consumers in Florida that shall be supplied by renewable energy produced in Florida.

(h) "Solar Energy System," means equipment that provides for the collection and use of incident solar energy for water heating, space heating or cooling, or other applications that would normally require a conventional source of energy such as petroleum products, natural gas, or electricity that performs primarily with solar energy. In other systems in which solar energy is used in a supplemental way, only those components that collect and transfer solar energy shall be included in this definition.

(i) "Solar Photovoltaic System," means a device that converts incident sunlight into electrical current.

(j) "Solar thermal system," means a device that traps heat from incident sunlight in order to heat water.

(k) "Equivalent Solar Thermal Energy," means the conversion of the thermal output, measured in British Thermal Units, of a solar thermal system to equivalent units of one megawatt-hour of electricity otherwise consumed from or output to the electric utility grid.

(3) Renewable Portfolio Standard.

(a) Each investor-owned electric utility shall meet or exceed the following renewable portfolio standards through the production or purchase of renewable energy credits pursuant to Rule 17.410, F.A.C.:

1. by January 1, 2017: ~~5~~6 percent of the prior year's retail electricity sales;

2. by January 1, 2025: 10 percent of the prior year's retail electricity sales;

3. by January 1, 2033: 15 percent of the prior year's retail electricity sales; and

4. by January 1, 2041: 20 percent of the prior year's retail electricity sales.

(b) At a minimum, 25% of the renewable portfolio standards shall be provided from Class I renewable energy sources;

(c) The Commission, on its own motion, shall initiate a proceeding at least once every five years to review and, if appropriate, modify the renewable portfolio standards. An investor-owned electric utility or a substantially interested person may petition the Commission, pursuant to Section 120.54(7), F.S., to request the initiation of a proceeding to modify the renewable portfolio standards. All modifications of the approved renewable portfolio standards and the associated implementation plans shall only be on a prospective basis and shall not affect previously approved contracts and commitments.

(d) In a proceeding to review the renewable portfolio standards, each investor-owned electric utility shall provide an analysis of the technical and economic potential for Florida renewable energy resources.

(4) Implementation Plans.

Within 180 days of the effective date of this rule, each investor-owned electric utility shall submit an implementation plan for Commission approval for meeting or exceeding the renewable portfolio standards required by subsections (3)(a) and (3)(b) which shall, at a minimum, contain the following:

(a) Current and ten-year forecast of installed capacity in kilowatts and energy production in kilowatt-hours for each Florida renewable energy resource;

(b) Levelized life-cycle cost in cents per kilowatt-hour for each existing, planned, and proposed Florida renewable energy resource;

(c) Current and ten-year forecast of the effects of the utility's compliance and implementation plan on the reduction of greenhouse gas emissions in Florida;

(d) Current and ten-year forecast of the effects of the utility's compliance and implementation plan on economic development in Florida; and

(e) Current and ten-year forecast of the estimated retail rate impact for each class of customers of the utility's compliance and implementation plan.

(5) Compliance.

(a) Each investor-owned electric utility shall comply with the renewable portfolio standards approved by the Commission through the production or purchase of renewable energy credits. Each investor-owned electric utility shall make a good faith effort to acquire sufficient renewable energy credits to comply with the renewable portfolio standards.

(b) Except as provided by paragraphs (5)(c) and (5)(d), any investor-owned electric utility which fails to meet or exceed its renewable portfolio standards shall be subject to a penalty equal to an amount up to 50 basis points of the utility's approved rate of return on equity assessed by

reducing the amount of recoverable costs associated with the production or purchase of renewable energy credits pursuant to subsection (7).

(c) The Commission shall excuse an investor-owned electric utility from compliance with any renewable portfolio standards based upon a showing that:

1. the supply of renewable energy credits is not adequate to satisfy the renewable portfolio standard; or

2. the cost of securing renewable energy credits is prohibitive such that the total costs of compliance with the renewable portfolio standards exceeds the cost caps contained in paragraph (5)(e).

(d) The cost of compliance with the renewable portfolio standards shall be defined as:

1. the ~~incremental~~ costs associated with the ~~production or~~ purchase of renewable energy credits,

2. ~~which exceed~~ the costs ~~to~~ paid by the utility ~~of electric energy or capacity, or both, which but for the production or purchase of renewable energy such utility would generate itself or purchase from another source.~~ which are associated with the Renewable Energy Credit Market, and

3. the utility's cost of its self-build Florida renewable energy resource which exceed the costs to the utility of the generation source it would have otherwise built or the energy or capacity, or both, it would have purchased from another source.

(e) The cost of compliance shall be allocated separately for Class 1 and Class II renewable energy sources and shall be subject to the following cost caps.

1. For Class I renewable energy sources, the total cost of compliance shall be deemed prohibitive if such costs exceed 1.50 percent of the investor-owned electric utility's total annual

revenue from retail sales of electricity.

2. For Class II renewable energy sources, the total cost of compliance shall be deemed prohibitive if such costs exceed 0.50 percent of the investor-owned electric utility's total annual revenue from retail sales of electricity.

(6) Utility Self-Build Option.

(a) Each investor-owned electric utility seeking to construct a Florida renewable energy resource shall select the resource likely to result in the least cost option for the general body of ratepayers.

(b) Within 180 days of the effective date of this rule and biennially thereafter, each investor-owned electric utility shall issue a request for proposals for Florida renewable energy resources and report the results in the investor-owned electric utility's Ten-Year Site Plan, filed pursuant to Rule 25-22.071, F.A.C.

(7) Cost Recovery.

(a) In order to foster the development of Florida renewable energy resources, the Commission shall allow full cost recovery through a Renewable Energy Cost Recovery (RECR) clause of all reasonable and prudent costs incurred by the investor-owned electric utility for:

1. the cost of construction, operation, and maintenance of Florida renewable energy resources by the utility~~, including a separately determined return on equity on total capital costs~~. Cost includes, but is not limited to, all capital investments including rate of return, any applicable taxes and all expenses, including operation and maintenance expenses, related to or resulting from the siting, licensing, design, construction, or operation of the Florida renewable energy resource.

2. the purchase of renewable energy credits, including administrative costs of the Florida Renewable Energy Credit Market.

(b) Notwithstanding Rules 25-17.0825(6), 25-17.0832(8), and 25-17.220, F.A.C., the reasonable and prudent costs associated with the purchase of capacity and energy from existing and new renewable generating facilities shall be recovered through the RECR ~~clause and shall appear as a separate line item on customer's bills~~.

(c) The Commission shall conduct annual RECR clause proceedings during November of each calendar year. Each investor-owned electric utility may seek to recover its costs associated with renewable energy credits, the purchase of capacity and energy from Florida renewable energy resources, the purchase of as-available energy from Florida renewable energy resources, or the construction, operation, and maintenance of Florida renewable energy resources owned by an investor-owned electric utility. The costs associated with renewable energy credits shall appear as a separate line item on customer's bills and shall be designated the Renewable Energy Charge. Each investor-owned electric utility seeking cost recovery shall file the following at the times directed by the Commission:

1. An annual final true-up filing showing the actual costs, renewable energy credit costs, purchased power costs, costs associated with Florida renewable energy resource owned by an investor-owned electric utility, and actual revenues from the sale of renewable energy credits for the most recent 12-month historical period from January 1 through December 31 that ends prior to the annual RECR proceedings. As part of this filing, the utility shall include a summary comparison of the actual total costs and revenues reported to the estimated total costs and revenues previously reported for the same period covered by the filing in subsection 2. The filing shall also include the final over- or under-recovery of total renewable energy costs for the final true-up period.

2. An annual estimated/actual true-up filing showing ~~eight~~ seven months actual and ~~four~~

five months projected costs, renewable energy credit costs, purchased power costs, costs associated with Florida renewable energy resource owned by an investor-owned electric utility, and actual revenues from the sale of renewable energy credits collected. Actual costs and revenues should begin January 1 immediately following the period described in subparagraph 1. The filing shall also include the estimated/actual over- or under-recovery of total renewable energy costs for the estimated/actual true-up period.

3. An annual projection filing showing 12 months projected costs, renewable energy credit costs, purchased power costs, costs associated with Florida renewable energy resource owned by an investor-owned electric utility, and actual revenues from the sale of renewable energy credits for the period beginning January 1 following the annual hearing.

4. An annual petition setting forth proposed renewable energy cost recovery factors to be effective for the 12-month period beginning January 1 following the hearing. Such proposed cost recovery factors shall take into account the data filed pursuant to subparagraphs 1., 2., and 3.

~~5. Within the 90 days that immediately follow the first six months of the reporting period in subsection 1., each utility shall report the actual results for that period to the Director, Division of Economic Regulation, Florida Public Service Commission.~~

(d) Each utility shall establish separate accounts or subaccounts for renewable energy credits, purchased power, Florida renewable energy resource owned by an investor-owned electric utility for purposes of recording the costs incurred. Each utility shall also establish separate subaccounts for any revenues derived from the sale of renewable energy credits.

(e) A complete list of all account and subaccount numbers used for renewable energy cost recovery shall accompany each filing in subsection 1.

(8) Reporting Requirements. Each investor-owned electric utility shall file with the Commission

an annual report for the previous calendar year no later than April 1 in conjunction with the filing of its Ten-Year Site Plan. Each investor-owned electric utility's report shall include the following:

(a) Current and ten-year forecast of installed capacity in kilowatts and energy production in kilowatt-hours for each Florida renewable energy resource;

(b) Levelized life-cycle cost in cents per kilowatt-hour for each existing, planned, and proposed Florida renewable energy resource;

(c) Current and ten-year forecast of the effects of the utility's compliance and implementation plan on the reduction of greenhouse gas emissions in Florida;

(d) Current and ten-year forecast of the effects of the utility's compliance and implementation plan on economic development in Florida;

(e) Current and ten-year forecast of the estimated retail rate impact for each class of customers of the utility's compliance and implementation plan;

(f) the retail sales of the prior year in megawatt-hours;

(g) the quantity of self-generated renewable energy in megawatt-hours separated by fuel type;

(h) the quantity of renewable energy purchased in megawatt-hours, separated by type of ownership and fuel type;

(i) the quantity and vintage of self-generated renewable energy credits;

(j) the quantity and vintage of renewable energy credits purchased;

(k) the fuel type and ownership of the Florida renewable energy resource associated with each renewable energy credit;

(l) a statement as to whether it was, on an actual or projected basis, in compliance with the renewable portfolio standards; and

(m) the utility's plan for additional generation or procurement to meet the renewable portfolio standards for the current calendar year and the following two years.

Specific Authority 350.127(2), 366.05(1), FS. Law Implemented 366.02(2), 366.04(2)(c), (5), 366.041, 366.05(1), 366.81, 366.82(1),(2), 366.91(2), 366.92 FS. History–New XX-XX-09.

17.410 Florida Renewable Energy Credit Market.

(1) The renewable energy credit market shall allow for the transparent certification, buying, selling, trading, and retiring of renewable energy credits used to comply with the renewable portfolio standards of Rule 25-17.400, F.A.C. All records, including those associated with the certification of and the buying, selling, trading, or retiring of renewable energy credits shall be available to the Commission for audit purposes.

(2) Within 30 days of the effective date of this rule, the investor-owned electric utilities shall issue a request for proposals for an independent third party administrator to establish and administer a Florida Renewable Energy Credit Market. Within 90 days of the effective date of this rule, the investor-owned electric utilities shall select and submit for Commission approval a Florida Renewable Energy Credit Market administrator.

(3) Within 180 days of Commission approval of the Florida Renewable Energy Credit Market administrator, the investor-owned electric utilities shall file for Commission approval the structure, governance, and procedures for administering the renewable energy credit market. The filing shall, at a minimum, provide for the following:

(a) a committee made up of representatives from the investor-owned electric utilities, the municipal electric utilities, the rural electric cooperative utilities, and Florida renewable energy resource providers, which will act as technical advisors to the administrator in the areas of governance, market rules and guidelines.

(b) the buying, selling, and trading of renewable energy credits which shall be accomplished through the use of an electronic platform for the execution of:

1. hourly and other short-term transactions; and

2. long-term bilateral contracts.

(c) the aggregation of renewable energy credits for customer-owned Florida renewable energy resources 2 megawatts or less that have not received incentives from a Commission-approved demand-side conservation program pursuant to the Florida Energy and Efficiency Conservation Act, Sections 366.80-.85 and 403.519, F.S.

(d) the certification and verification of renewable energy credits as defined in Rule 25-17.400(2)(f), F.A.C., including renewable energy credits resulting from Equivalent Solar Thermal Energy as defined in Rule 25-17.400(2)(k), F.A.C.;

(e) an accounting system to verify compliance with the renewable portfolio standard; and

(f) a method to record each transaction, and to indicate whether the renewable energy credit is associated with a Class I or Class II renewable energy source as defined in Rule 25-17.400(2)(d) and (e), F.A.C.

(4) The administrative costs associated with the Florida Renewable Energy Credit Market shall be collected through fees assessed to a renewable energy credit. Fees shall be fair, equitable, and cost-based.

(5) The following entities are eligible to produce renewable energy credits that may be counted toward the renewable portfolio standards:

(a) Florida renewable energy resources owned by an investor-owned electric utility;

(b) Florida renewable energy resources owned by a municipal electric utility or a rural electric cooperative utility;

(c) Non-utility Florida renewable energy resources providing as-available energy to a Florida electric utility pursuant to a tariff;

(d) Non-utility Florida renewable energy resources providing net capacity and energy under a purchase power agreement with a Florida electric utility;

(e) Non-utility Florida renewable energy resources greater than 2 megawatts providing on site generation to offset all or a part of the customer's electrical needs;

(f) Non-utility Florida renewable energy resources greater than 2 megawatts providing equivalent solar thermal energy to offset all or a part of the customer's electrical needs; and

(g) Customer-owned Florida renewable energy resources, 2 megawatts or less, that have not received incentives from a Commission-approved demand-side conservation program pursuant to the Florida Energy and Efficiency Conservation Act, Sections 366.80-.85 and 403.519, F.S.

(6) A renewable energy credit is retained by the owner of the eligible Florida renewable energy resource from which it was derived unless specifically sold or transferred.

(7) A renewable energy credit shall be valid for two years after the date the corresponding megawatt-hour or equivalent solar thermal energy is certified.

(8) A renewable energy credit shall be retired after it is used to comply with the Florida or any other state, or regional renewable portfolio standard.

(9) Renewable energy credits shall not be used for compliance with the Florida renewable portfolio standards if the renewable energy credit or its associated energy has already been counted toward compliance with any other state or regional renewable portfolio standard.

(10) Renewable energy credits shall not be used for compliance with the Florida renewable portfolio standards if the renewable energy credit results from a Commission-approved demand-side conservation program pursuant to the Florida Energy Efficiency and Conservation Act, Sections 366.80-.85 and 403.519, F.S.

(11) Dispute Resolution. Parties may seek resolution of disputes arising out of the interpretation of this rule pursuant to Rule 25-22.032, F.A.C., Customer Complaints, or Rule 25-22.036, F.A.C., Initiation of Formal Proceedings.

Specific Authority 350.127(2), 366.05(1), FS. Law Implemented 366.02(2), 366.04(2)(f), (5), 366.041, 366.05(1), 366.81, 366.82(1),(2), 366.91(2), 366.92 FS. History–New XX-XX-09.

17.400 Florida Renewable Portfolio Standard

(1) Application and Scope.

The purpose of this rule is to establish and update at least every three ~~five~~ years numerical renewable portfolio standards for investor-owned electric utilities that will promote the development of renewable energy, protect the economic viability of existing renewable energy facilities, diversify the types of fuel used to generate electricity in Florida, lessen Florida's dependence on fossil fuels for the production of electricity, minimize the volatility of fuel costs, encourage investment in the state, improve environmental conditions, and minimize the costs of power supply to electric utilities and their customers.

(2) Definitions.

(a) "Florida renewable energy resources," means electrical, mechanical, or thermal energy produced from a method that uses one or more of the following fuels or energy sources: hydrogen, biomass, solar energy, geothermal energy, wind energy, ocean energy, waste heat, or hydroelectric power that is produced in Florida.

(b) "Renewable energy," means electrical energy produced from a method that uses one or more of the following fuels or energy sources: hydrogen produced from sources other than fossil fuels, biomass, solar energy, geothermal energy, wind energy, ocean energy, and hydroelectric power. The term includes the alternative energy source, waste heat, from sulfuric acid manufacturing operations.

(c) "Biomass," means a power source that is comprised of, but not limited to, combustible residues or gases from forest products manufacturing, waste, or co-products from agricultural and orchard crops, waste or co-products from livestock and poultry operations, waste or byproducts from food processing, urban wood waste, municipal solid waste, municipal liquid

waste treatment operations, and landfill gas.

~~(d) "Class I renewable energy source," means Florida renewable energy resources derived from wind or solar energy systems.~~

~~(e) "Class II renewable energy source," means renewable energy derived from Florida renewable energy resources other than wind or solar energy systems.~~

(d) ~~(f)~~ "Renewable Energy Credit," means a financial instrument that represents the unbundled, separable, renewable attribute of renewable energy or equivalent solar thermal energy produced in Florida and is equivalent to one megawatt-hour of electricity generated by a source of renewable energy located in Florida.

(e) ~~(g)~~ "Renewable Portfolio Standard," means the minimum percentage of total annual retail electricity sales by an investor-owned electric utility to consumers in Florida that shall be supplied by renewable energy produced in Florida.

(f) ~~(h)~~ "Solar Energy System," means equipment that provides for the collection and use of incident solar energy for water heating, space heating or cooling, or other applications that would normally require a conventional source of energy such as petroleum products, natural gas, or electricity that performs primarily with solar energy. In other systems in which solar energy is used in a supplemental way, only those components that collect and transfer solar energy shall be included in this definition.

(g) ~~(i)~~ "Solar Photovoltaic System," means a device that converts incident sunlight into electrical current.

(h) ~~(j)~~ "Solar thermal system," means a device that traps heat from incident sunlight in order to heat water.

(i) ~~(k)~~ "Equivalent Solar Thermal Energy," means the conversion of the thermal output,

measured in British Thermal Units, of a solar thermal system to equivalent units of one megawatt-hour of electricity otherwise consumed from or output to the electric utility grid.

(3) Renewable Portfolio Standard.

(a) Each investor-owned electric utility shall meet or exceed the following renewable portfolio standards through the production or purchase of renewable energy in Florida ~~credits pursuant to Rule 17.410, F.A.C.~~:

~~1. by January 1, 2010 2017: 5 percent of the prior year's retail electricity sales;~~

~~2. by January 1, 2025: 10 percent of the prior year's retail electricity sales;~~

~~3. by January 1, 2033: 15 percent of the prior year's retail electricity sales; and~~

~~4. by January 1, 2041: 20 percent of the prior year's retail electricity sales.~~

1. by January 1, 2010: 4 percent of the prior year's retail electricity sales;

2. by January 1, 2011: 5 percent of the prior year's retail electricity sales;

3. by January 1, 2012: 6 percent of the prior year's retail electricity sales;

4. by January 1, 2013: 7 percent of the prior year's retail electricity sales;

5. by January 1, 2014: 8 percent of the prior year's retail electricity sales;

6. by January 1, 2015: 10 percent of the prior year's retail electricity sales;

7. by January 1, 2016: 12 percent of the prior year's retail electricity sales;

8. by January 1, 2017: 14 percent of the prior year's retail electricity sales;

9. by January 1, 2018: 16 percent of the prior year's retail electricity sales;

10. by January 1, 2019: 18 percent of the prior year's retail electricity sales; and

11. by January 1, 2020: 20 percent of the prior year's retail electricity sales.

~~(b) At a minimum, 25% of the renewable portfolio standards shall be provided from Class I renewable energy sources;~~

(b) ~~(c)~~ The Commission, on its own motion, shall initiate a proceeding at least once every three ~~five~~ years to review and, if appropriate, modify the renewable portfolio standards. An investor-owned electric utility or a substantially interested person may petition the Commission, pursuant to Section 120.54(7), F.S., to request the initiation of a proceeding to modify the renewable portfolio standards. All modifications of the approved renewable portfolio standards and the associated implementation plans shall only be on a prospective basis and shall not affect previously approved contracts and commitments.

(c) ~~(d)~~ In a proceeding to review the renewable portfolio standards, each investor-owned electric utility shall provide an analysis of the technical and economic potential for Florida renewable energy resources.

~~(4) Implementation Plans.~~

~~Within 180 days of the effective date of this rule, each investor-owned electric utility shall submit an implementation plan for meeting or exceeding the renewable portfolio standards required by subsections (3)(a) and (3)(b) which shall, at a minimum, contain the following:~~

~~(a) Current and ten-year forecast of installed capacity in kilowatts and energy production in kilowatt-hours for each Florida renewable energy resource;~~

~~(b) Levelized life-cycle cost in cents per kilowatt-hour for each existing, planned, and proposed Florida renewable energy resource;~~

~~(c) Current and ten-year forecast of the effects of the utility's compliance and implementation plan on the reduction of greenhouse gas emissions in Florida;~~

~~(d) Current and ten-year forecast of the effects of the utility's compliance and implementation~~

~~plan on economic development in Florida; and~~

~~(e) Current and ten-year forecast of the estimated retail rate impact for each class of customers of the utility's compliance and implementation plan.~~

(4) ~~(5)~~ Compliance.

(a) Each investor-owned electric utility shall comply with the renewable portfolio standards approved by the Commission through the production of, or purchase, or acquisition of renewable energy or renewable energy attributes generated in Florida ~~credits~~. Each investor-owned electric utility seeking to construct or purchase energy from a Florida renewable energy resource shall select the renewable energy resource likely to result in the least cost option for the general body of ratepayers. For purposes of compliance with the renewable energy portfolio standards, the following shall be counted:

(i) energy produced by an investor-owned utility self-build Florida renewable energy resource;

(ii) energy purchased by an investor-owned utility from a Florida renewable energy resource through a Commission approved standard offer contract;

(iii) the unbundled renewable energy attributes associated with the energy produced by a self-service Florida renewable energy resource purchased by an investor-owned utility through a Commission approved standard offer contract;

(iv) the unbundled renewable energy attributes associated with the energy produced by a customer receiving electric service under a net-metering arrangement pursuant to Rule 25-6.065, F.A.C.; and

(v) the unbundled renewable energy attributes associated with the energy produced by a customer receiving a rebate for the installation of a customer-owned solar energy system pursuant to the provisions of subparagraph (4)(e) of this rule. ~~Each investor-owned electric~~

~~utility shall make a good faith effort to acquire sufficient renewable energy credits to comply with the renewable portfolio standards.~~

~~(b) Except as provided by paragraphs (5)(c) and (5)(d), any investor-owned electric utility which fails to meet or exceed its renewable portfolio standards shall be subject to a penalty equal to an amount up to 50 basis points of the utility's approved rate of return on equity assessed by reducing the amount of recoverable costs associated with the production or purchase of renewable energy credits pursuant to subsection (7).~~

(b) ~~(c)~~ Each investor-owned electric utility shall make a good faith effort to acquire sufficient renewable energy and renewable energy attributes ~~credits~~ to comply with the renewable portfolio standards. The Commission shall consider, on a case-by-case basis, incentive-based adjustments to authorized rates of return on common equity, not to exceed 25 basis points, to investor-owned electric utilities based on the degree to which the utility meets or exceeds the renewable portfolio standards. The Commission shall excuse an investor-owned electric utility from compliance with any renewable portfolio standards based upon a showing that:

1. the supply of renewable energy or renewable energy attributes ~~credits~~ is not adequate to satisfy the renewable portfolio standard; or

2. the cost of securing renewable energy or renewable attributes ~~credits~~ is prohibitive such that the total costs of compliance with the renewable portfolio standards exceeds the Renewable Energy Charge ~~cost caps~~ contained in paragraph (4)(d) ~~(5)(e)~~.

(c) ~~(d)~~ The cost of compliance with the renewable portfolio standards shall be defined as the incremental costs associated with the production or purchase of renewable energy or renewable energy attributes ~~credits~~ which exceed the costs to the utility of electric energy or capacity, or both, which but for the production or purchase of renewable energy such utility would generate

itself or purchase from another source.

(d) ~~(e)~~ Each investor-owned utility shall establish a Renewable Energy Charge initially set at 2.0 percent of each investor-owned utility's annual revenue from retail sales of electricity for the prior year. The Renewable Energy Charge shall be collected from customers pursuant to the provisions of subsection (7) of this rule and shall be subject to true-up based on the actual cost of compliance pursuant to subparagraph (4)(c). The Commission, on its own motion or as part of the annual proceedings in the Renewable Energy Cost Recovery Clause, shall determine whether the Renewable Energy Charge should be increased or decreased, but in no instance shall the Renewable Energy Charge be less than 2 percent. In its determination, the Commission shall take into consideration prevailing economic conditions and the rate impact to utility customers. Upon repeal of this rule due to changes in State or Federal law, the Renewable Energy Charge shall continue at a level necessary to fulfill previously approved contracts and commitments. ~~The cost of compliance shall be allocated separately for Class I and Class II renewable energy sources and shall be subject to the following cost caps.~~

~~1. For Class I renewable energy sources, the total cost of compliance shall be deemed prohibitive if such costs exceed 1.50 percent of the investor-owned electric utility's total annual revenue from retail sales of electricity.~~

~~2. For Class II renewable energy sources, the total cost of compliance shall be deemed prohibitive if such costs exceed 0.50 percent of the investor-owned electric utility's total annual revenue from retail sales of electricity.~~

(e) A total of 5 percent of the Renewable Energy Charge established pursuant to subparagraph (4)(d) shall be directed by each investor-owned utility to provide the following up-front rebates for the installation of customer-owned solar energy systems less than 2 MW in size used to offset

the customer's electricity consumption.

Class	Solar Pool Heater	Solar Water Heating	Solar Photo Voltaic (PV)
Residential	$100 per installation	$500 per installation	$4 per Watt (2kW Min Size)
Residential Max Rebate	$100 per installation	$500 per installation	$20,000 per installation
Commercial	Not Applicable	$15 per 1000Btu	$4 per Watt (2kW Min Size)
Commercial Max Rebate	Not Applicable	$5,000 per installation	$100,000 per installation

(5) ~~(6)~~ Implementation ~~Utility Self-Build Option~~.

~~(a) Each investor-owned electric utility seeking to construct or a Florida renewable energy resource shall select the resource likely to result in the least cost option for the general body of ratepayers.~~

(a) Within 90 days of the effective date of this rule and biennially thereafter, each investor-owned electric utility shall file for Commission approval a standard offer contract, for a minimum term of ten years, for the purchase of renewable energy and/or renewable energy attributes from each of the following classes of Florida renewable energy resources:

1, Solar photovoltaic;

2. Solar thermal;

3. Wind;

4. Biomass, including municipal solid waste; and

5. Industrial waste heat, including waste heat from sulfuric acid manufacturing operations.

Capacity and energy payments for purchases under each standard offer contract shall be pursuant to the provisions of Rule 25-17.250, F.A.C. The level of payment for renewable energy attributes for each class of renewable energy standard offer contract shall be established in

evidentiary hearings pursuant Chapter 120, Florida Statutes, and shall take into consideration the levelized cost of the renewable energy resource over the term of the standard offer contract relative to the levelized cost of alternative fossil fuel generation needed to meet the utility's system peak load and energy requirements. The cumulative total of all payments for renewable energy attributes shall not exceed the Renewable Energy Charge established under subsection (4)(d) of this rule. Each standard offer contract shall be structured to offer payments for renewable energy attributes that, in combination with applicable avoided capacity and energy payments, provide financial support for the costs of constructing and operating the renewable energy resource while minimizing the costs of power supply to electric utilities and their customers.

(b) Non-utility renewable energy resources that have received incentives from a Commission-approved demand-side management conservation program pursuant to the Florida Energy and Efficiency Conservation Act, Sections 366.80-.85 and 403.519, F.S., shall not be eligible for payments under a standard offer contract and shall not be counted toward compliance with the utility's renewable portfolio standards.

(c) ~~(b)~~ Prior to constructing a self-build renewable energy resource, an investor-owned utility shall issue a request for proposals for the purchase of renewable energy from Florida renewable energy resources. In its final selection, each investor-owned utility shall select the renewable energy resource most likely to result in the least cost option for its general body of ratepayers. In any proceeding to recover the costs of a self-build option, an investor-owned utility shall demonstrate that the life-cycle cost of the self-build option is no greater than the cost of a comparable purchase of renewable energy from a Florida renewable resource pursuant to a standard offer contract. ~~Within 180 days of the effective date of this rule and biennially~~

~~thereafter, each investor-owned electric utility shall issue a request for proposals for Florida renewable energy resources and report the results in the investor-owned electric utility's Ten-Year Site Plan, filed pursuant to Rule 25-22.071, F.A.C.~~

(6) Renewable Energy Credits.

(a) Each investor-owned electric utility shall earn a renewable energy credit for:

(i) each megawatt-hour produced by a self-build renewable generating resource;

(ii) each megawatt-hour purchased from a Florida renewable energy resource; and

(iii) each megawatt-hour of energy generated by a self-service renewable energy resource or net-metered renewable energy resource from which the corresponding renewable energy attributes have been purchased by the utility through a standard offer contract.

Renewable energy credits shall not be used for compliance with the utility's renewable portfolio standards but may be sold in out-of-state voluntary renewable energy credit markets. A total of eighty percent of the revenues derived from the sale of renewable energy credits shall be credited to customers' bills in the Renewable Energy Cost Recovery Clause, with the remaining twenty percent retained by the utility's stockholders.

(b) Each investor-owned utility shall be responsible for the issuance, retirement, certification, and verification of renewable energy credits and shall establish appropriate accounts and methods of recording each renewable energy credit transaction, including associated administrative costs.

(7) Cost Recovery.

(a) In order to foster the development of Florida renewable energy resources, the Commission shall allow full cost recovery through a Renewable Energy Cost Recovery (RECR) clause of all reasonable and prudent costs incurred by the investor-owned electric utility for:

1. the cost of construction, operation, and maintenance of Florida renewable energy resources by the utility, including a ~~separately determined~~ return on equity on total capital costs. Cost includes, but is not limited to, all capital investments including rate of return, any applicable taxes and all expenses, including operation and maintenance expenses, related to or resulting from the siting, licensing, design, construction, or operation of the Florida renewable energy resource.

2. the purchase of renewable energy pursuant to a standard offer contract approved by the Commission pursuant to these rules ~~credits, including administrative costs of the Florida Renewable Energy Credit Market~~.

(b) Notwithstanding Rules 25-17.0825(6), 25-17.0832(8), and 25-17.220, F.A.C., the reasonable and prudent costs associated with the purchase of capacity and energy from existing and new renewable generating facilities shall be recovered through the RECR clause ~~and shall appear as a separate line item on customer's bills~~. The Renewable Energy Charge established in subparagraph (4)(d) of this rule shall appear as a separate line item on customer bills.

(c) The Commission shall conduct annual RECR clause proceedings during November of each calendar year. Each investor-owned electric utility may seek to recover its costs associated with ~~renewable energy credits,~~ the purchase of capacity and energy from Florida renewable energy resources, the purchase of as-available energy from Florida renewable energy resources, or the construction, operation, and maintenance of Florida renewable energy resources owned by an investor-owned electric utility. Each investor-owned electric utility seeking cost recovery shall file the following at the times directed by the Commission:

1. An annual final true-up filing showing the actual costs, ~~renewable energy credit costs,~~ purchased power costs, costs associated with Florida renewable energy resource owned by an

investor-owned electric utility, and actual revenues from the sale of renewable energy credits for the most recent 12-month historical period from January 1 through December 31 that ends prior to the annual RECR proceedings. As part of this filing, the utility shall include a summary comparison of the actual total costs and revenues reported to the estimated total costs and revenues previously reported for the same period covered by the filing in subparagraph (7)(c)2. ~~subsection 2~~. The filing shall also include the final over- or under-recovery of total renewable energy costs for the final true-up period.

2. An annual estimated/actual true-up filing showing eight months actual and four months projected costs, ~~renewable energy credit costs,~~ purchased power costs, costs associated with Florida renewable energy resource owned by an investor-owned electric utility, and actual revenues from the sale of renewable energy credits collected. Actual costs and revenues should begin January 1 immediately following the period described in subparagraph (7)(c)1. The filing shall also include the estimated/actual over- or under-recovery of total renewable energy costs for the estimated/actual true-up period.

3. An annual projection filing showing 12 months projected costs, ~~renewable energy credit costs~~, purchased power costs, costs associated with Florida renewable energy resource owned by an investor-owned electric utility, and actual revenues from the sale of renewable energy credits for the period beginning January 1 following the annual hearing.

4. An annual petition setting forth proposed renewable energy cost recovery factors to be effective for the 12-month period beginning January 1 following the hearing. Such proposed cost recovery factors shall take into account the data filed pursuant to subparagraphs (7)(c)1., 2., and 3.

5. Within the 90 days that immediately follow the first six months of the reporting period

in subparagraph (7)(c)1. ~~subsection 1.~~, each utility shall report the actual results for that period to the Director, Division of Economic Regulation, Florida Public Service Commission.

(d) Each utility shall establish separate accounts or subaccounts for ~~renewable energy credits,~~ purchased power, Florida renewable energy resource owned by an investor-owned electric utility for purposes of recording the costs incurred. Each utility shall also establish separate subaccounts for any revenues derived from the sale of renewable energy credits.

(e) A complete list of all account and subaccount numbers used for renewable energy cost recovery shall accompany each filing in subparagraph (7)(c)1 ~~subsection 1~~.

(8) Reporting Requirements. Each investor-owned electric utility shall file with the Commission an annual report for the previous calendar year no later than April 1 in conjunction with the filing of its Ten-Year Site Plan. Each investor-owned electric utility's report shall include the following:

(a) Current and ten-year forecast of installed capacity in kilowatts and energy production in kilowatt-hours, in total and by fuel type, for each Florida renewable energy resource, including self-service generation and net-metering for which payments for renewable energy attributes have been made;

(b) Levelized life-cycle cost in cents per kilowatt-hour for each existing, planned, and proposed Florida renewable energy resource;

(c) Current and ten-year forecast of the effects of the utility's compliance and implementation plan on the reduction of greenhouse gas emissions in Florida;

(d) Current and ten-year forecast of the effects of the utility's compliance and implementation plan on economic development in Florida;

(e) Current and ten-year forecast of the estimated retail rate impact for each class of customers of

the utility's compliance and implementation plan;

(f) the retail sales of the prior year in megawatt-hours;

~~(g) the quantity of self-generated renewable energy in megawatt-hours separated by fuel type;~~

~~(g)~~ (h) the quantity of renewable energy and renewable energy attributes purchased in megawatt-hours, separated by type of ownership and fuel type;

~~(h)~~ (i) the quantity and vintage of ~~self-generated~~ renewable energy credits issued ;

(j) the quantity and vintage of renewable energy credits sold ~~purchased~~;

(k) the source and fuel type ~~and ownership~~ of the Florida renewable energy resource associated with each renewable energy credit;

(l) a statement as to whether it was, on an actual or projected basis, in compliance with the renewable portfolio standards; and

(m) the utility's plan for additional generation or procurement to meet the renewable portfolio standards for the current calendar year and the following two years.

(9) Dispute Resolution. Parties may seek resolution of disputes arising out of the interpretation of this rule pursuant to Rule 25-22.032, F.A.C., Customer Complaints, or Rule 25-22.036, F.A.C., Initiation of Formal Proceedings.

Specific Authority 350.127(2), 366.05(1), FS. Law Implemented 366.02(2), 366.04(2)(c), (5), 366.041, 366.05(1), 366.81, 366.82(1),(2), 366.91(2), 366.92 FS. History–New XX-XX-09.

~~17.410 Florida Renewable Energy Credit Market.~~

~~(1) The renewable energy credit market shall allow for the transparent certification, buying, selling, trading, and retiring of renewable energy credits used to comply with the renewable portfolio standards of Rule 25-17.400, F.A.C. All records, including those associated with the certification of and the buying, selling, trading, or retiring of renewable energy credits shall be available to the Commission for audit purposes.~~

~~(2) Within 30 days of the effective date of this rule, the investor-owned electric utilities shall issue a request for proposals for an independent third party administrator to establish and administer a Florida Renewable Energy Credit Market. Within 90 days of the effective date of this rule, the investor-owned electric utilities shall select and submit for Commission approval a Florida Renewable Energy Credit Market administrator.~~

~~(3) Within 180 days of Commission approval of the Florida Renewable Energy Credit Market administrator, the investor-owned electric utilities shall file for Commission approval the structure, governance, and procedures for administering the renewable energy credit market. The filing shall, at a minimum, provide for the following:~~

~~(a) a committee made up of representatives from the investor-owned electric utilities, the municipal electric utilities, the rural electric cooperative utilities, and Florida renewable energy resource providers, which will act as technical advisors to the administrator in the areas of governance, market rules and guidelines.~~

~~(b) the buying, selling, and trading of renewable energy credits which shall be accomplished through the use of an electronic platform for the execution of:~~

~~1. hourly and other short-term transactions; and~~

~~2. long-term bilateral contracts.~~

~~(c) the aggregation of renewable energy credits for customer-owned Florida renewable energy resources 2 megawatts or less that have not received incentives from a Commission-approved demand-side conservation program pursuant to the Florida Energy and Efficiency Conservation Act, Sections 366.80-.85 and 403.519, F.S.~~

~~(d) the certification and verification of renewable energy credits as defined in Rule 25-17.400(2)(f), F.A.C., including renewable energy credits resulting from Equivalent Solar Thermal Energy as defined in Rule 25-17.400(2)(k), F.A.C.;~~

~~(e) an accounting system to verify compliance with the renewable portfolio standard; and~~

~~(f) a method to record each transaction, and to indicate whether the renewable energy credit is associated with a Class I or Class II renewable energy source as defined in Rule 25-17.400(2)(d) and (e), F.A.C.~~

~~(4) The administrative costs associated with the Florida Renewable Energy Credit Market shall be collected through fees assessed to a renewable energy credit. Fees shall be fair, equitable, and cost-based.~~

~~(5) The following entities are eligible to produce renewable energy credits that may be counted toward the renewable portfolio standards:~~

~~(a) Florida renewable energy resources owned by an investor-owned electric utility;~~

~~(b) Florida renewable energy resources owned by a municipal electric utility or a rural electric cooperative utility;~~

~~(c) Non-utility Florida renewable energy resources providing as-available energy to a Florida electric utility pursuant to a tariff;~~

~~(d) Non-utility Florida renewable energy resources providing net capacity and energy under a purchase power agreement with a Florida electric utility;~~

~~(e) Non-utility Florida renewable energy resources greater than 2 megawatts providing on-site generation to offset all or a part of the customer's electrical needs;~~

~~(f) Non-utility Florida renewable energy resources greater than 2 megawatts providing equivalent solar thermal energy to offset all or a part of the customer's electrical needs; and~~

~~(g) Customer-owned Florida renewable energy resources, 2 megawatts or less, that have not received incentives from a Commission-approved demand-side conservation program pursuant to the Florida Energy and Efficiency Conservation Act, Sections 366.80 -.85 and 403.519, F.S.~~

~~(6) A renewable energy credit is retained by the owner of the eligible Florida renewable energy resource from which it was derived unless specifically sold or transferred.~~

~~(7) A renewable energy credit shall be valid for two years after the date the corresponding megawatt-hour or equivalent solar thermal energy is certified.~~

~~(8) A renewable energy credit shall be retired after it is used to comply with the Florida or any other state, or regional renewable portfolio standard.~~

~~(9) Renewable energy credits shall not be used for compliance with the Florida renewable portfolio standards if the renewable energy credit or its associated energy has already been counted toward compliance with any other state or regional renewable portfolio standard.~~

~~(10) Renewable energy credits shall not be used for compliance with the Florida renewable portfolio standards if the renewable energy credit results from a Commission-approved demand-side conservation program pursuant to the Florida Energy Efficiency and Conservation Act, Sections 366.80 -.85 and 403.519, F.S.~~

Specific Authority 350.127(2), 366.05(1), FS. Law Implemented 366.02(2), 366.04(2)(f), (5), 366.041, 366.05(1), 366.81, 366.82(1),(2), 366.91(2), 366.92 FS. History–New XX-XX-09.

25-17.420 Municipal Electric Utility and Rural Electric Cooperative Renewable Energy Reporting

Each municipal electric utility and rural electric cooperative utility shall file with the Commission an annual report no later than April 1 of each year for the previous calendar year. Each utility's report shall include the following:

(1) a detailed description of the standards adopted to promote, encourage, and expand the use of renewable energy resources and energy conservation and efficiency measures;

(2) the utility's plan to meet the standards;

(3) the retail sales of the prior year in megawatt-hours;

(4) the quantity of self-generated renewable energy in megawatt-hours separated by fuel type;

(5) the quantity of renewable energy purchased in megawatt-hours, separated by type of ownership and fuel type;

(6) the quantity and vintage of self-generated renewable energy credits;

(7) the quantity and vintage of renewable energy credits purchased; and

(8) the fuel type and ownership of the Florida renewable energy resource associated with each renewable energy credit;

Specific Authority 350.127(2), 366.05(1), FS. Law Implemented 366.02(2), 366.04(2)(f), (5), 366.041, 366.05(1), 366.81, 366.82(1),(2), 366.91(2), 366.92 FS. History–New XX-XX-09.

Summary Analysis of Navigant Consulting, Inc.'s
Florida Renewable Energy Potential Assessment

In August 2008, the Commission, in cooperation with the Governor's Energy Office and the Lawrence Berkeley National Laboratory, engaged Navigant Consulting, Inc. to perform an assessment of renewable energy resources that are currently operating in Florida and could potentially be developed in Florida through the year 2020. Funding for this study is provided through a grant from the U.S. Department of Energy. The final report was filed on December 30, 2008.

Navigant Consulting: (1) quantified existing renewable resources in Florida; (2) projected through 2020 future renewable development under varying economic and policy scenarios; and (3) conducted a screening analysis of renewables compared to utility resources with similar operating characteristics. The timeframe and budget of this study did not allow for a comprehensive IRP exercise in which the options to meet the electrical needs of utility customers are compared. These options include existing energy efficiency efforts, renewable energy purchases, utility generation, and other purchased power. All options for meeting future customer needs are also analyzed in an IRP including additional energy efficiency, renewable generation, purchased power, and utility generating options. An IRP would allow for a careful examination of the cost and reliability impact of including additional renewables in a utility's portfolio of resources. However, Navigant Consulting's efforts do provide useful information to determine the relative standing of renewables in comparison to traditional utility generating options.

The purpose of the Navigant Consulting study was to provide an estimate of the technical potential for the development of renewable energy resources and to bound potential development under various scenarios through the year 2020. During the first part of the study, Navigant Consulting estimated the technical potential of a variety of renewable resources. The top five contributors, in terms of potential energy production by 2020, are listed in the table below.

Capacity and Energy Estimates by 2020
Technical Potential

Resource Type	Capacity (MW)	Energy (GWH)
Ground Mounted Solar PV	89,000	173,000
Ocean Current	750	173,000
Wind-Offshore-Class 4	40,311	125,230
Biomass	13,750	99,666
Solar Water Heating – 2MW +	1,136	2,000

Note: Data taken from Navigant Consulting Study dated 12/30/08.

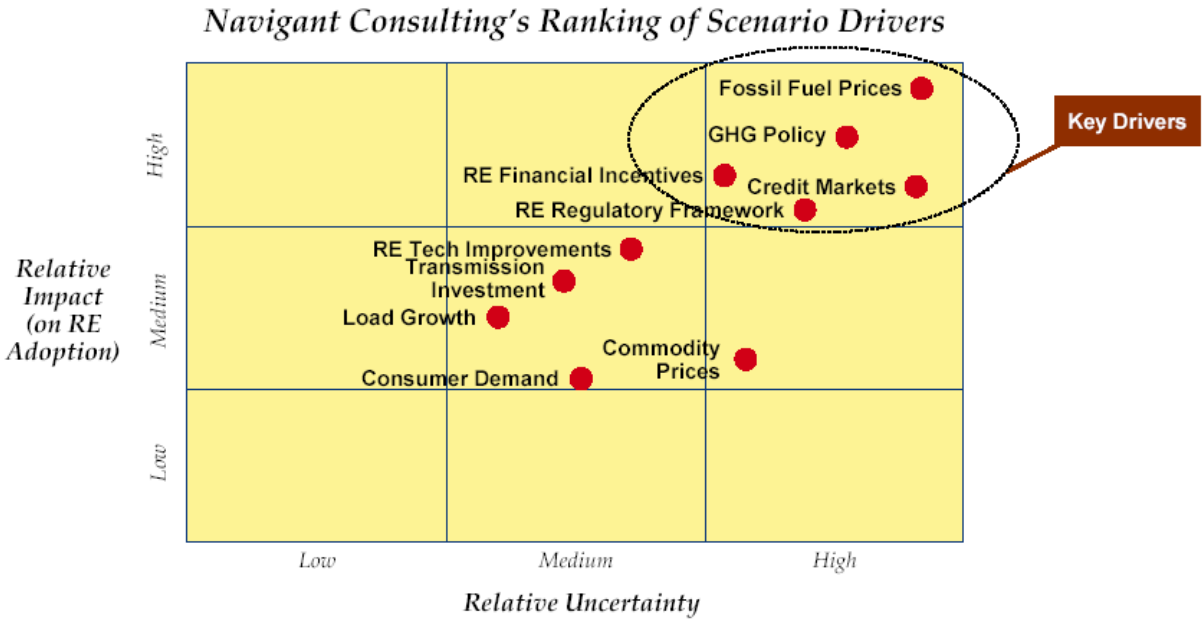
In order to examine the levels of renewable generation that could be economically developed by 2020, Navigant Consulting compared the costs of various renewable resources to

utility resources with similar operating characteristics. For example, solar PV was compared to a utility built combustion turbine unit and biomass facilities were compared to a natural gas-fired combined cycle generating unit. Navigant Consulting calculated a levelized cost of electricity (LCOE) for each resource which included capacity and operating costs. Given the recent reduction of growth figures coupled with the amount of capacity already certified or under construction, it appears that the four IOUs' capacity needs are committed through 2017 and likely through 2020. Therefore, the addition of new renewable resources would act as a fuel substitution resource and the value to retail ratepayers would be the as-available energy rate. Also, intermittent resources, such as wind and solar, may not contribute significantly to peak demand requirements and therefore the value to retail ratepayers for these types of resources is as-available energy regardless of a utility's capacity needs. Therefore, Navigant Consulting agreed that their study is a screening tool rather than a true cost-effectiveness comparison.

Assessment of Renewable Energy Potential – Key Drivers and Scenarios

In order to project future renewable energy development, Navigant Consulting identified ten drivers, shown below, that could impact the renewable energy market. Scenarios of potential renewable development were analyzed around the five key drivers with the highest potential impacts and the most uncertainty. These drivers are: (1) fossil fuel prices; (2) cost of carbon under greenhouse gas emissions policies; (3) federal and state renewable energy tax credits and other incentives; (4) the availability and cost of debt and equity; and (5) the rate cap established for the purchase of RECs. According to Navigant Consulting, the purpose of this additional revenue stream is to make up any difference between the cost of the renewable facility and the comparable utility generation facility in order to insure an adequate return on investment for the renewable developer. The following charts from Navigant Consulting explain the drivers identified in the study.

Drivers	Definition and Explanation
Commodity Prices	Level of inflation in commodity prices (including steel, concrete, and oil, but not natural gas, coal or nuclear materials) will influence RE and traditional power installed costs over time.
Consumer Demand	Degree of consumer and societal demand/support for RE (e.g., through green marketing programs) and environmentally friendly energy policies can influence RE adoption.
Fossil Fuel Prices	In addition to future RE installed costs, RE technology's competitiveness with fossil fuels out into the future will drive their adoption.
GHG Policy	This driver is based on Navigant Consulting's assessment that national or regional greenhouse gas (GHG) policy is highly likely by 2020. It examines the aggressiveness of this policy, which will influence the cost of electricity generation from traditional fuels against which RE competes.
Load Growth	The rise in electricity demand, based on established rates of economic, population, and electricity consumption growth (including the impacts of efficiency and smart grid) can influence RE demand.
RE Financial Incentives	Strength of the federal and state policies providing financial incentive for RE projects will drive RE competitiveness. The focus is on select incentives: the federal production tax credit (PTC), investment tax credit (ITC), as well as the state PTC, ITC, and sales tax exemption.
RE Regulatory Framework	The scope and form of RE regulation can influence RE adoption. This driver will primarily focus on the creation of an RPS and the resulting renewable energy credit (REC) market.
RE Tech Improvements	RE technologies' installed costs change over time (driven by learning curve impacts, efficiency improvements, and technology breakthroughs), which alters their competitiveness relative to traditional generation and therefore influences adoption.
Credit Markets	The availability of and cost of debt financing will influence RE project economics.
Transmission Investment	Development, or lack, of adequate transmission capacity to allow continued growth in renewable electricity generation and delivery can impact RE adoption.



Note: The positioning of these drivers is a qualitative assessment of their relative impact on RE adoption and the relative uncertainty surrounding the driver's future value based on Navigant Consulting's professional judgment. This analysis only applies to the period of this study 2008-2020.

Navigant Consulting then created three scenarios for potential renewable energy development in which the five key drivers were varied. These scenarios are summarized as:

- Unfavorable – low fossil fuel prices, 1 percent rate cap, government renewable incentives per current policies, tight financial markets, and carbon pricing of $10/ton by 2020;

- Mid-favorable – mid range fossil fuel prices, 2 percent rate cap, partial extension of government renewable incentives, moderate financial markets, and carbon pricing of $30/ton by 2020; and

- Favorable - high fossil fuel prices, 5 percent rate cap, government renewable incentives extended through 2020, widely available debt and equity, carbon pricing of $50/ton by 2020.

These scenarios and the levels of the key drivers are detailed in the charts below from Navigant Consulting:

Driver	Input	Unfavorable for RE Scenario	Mid Favorable for RE Scenario	Favorable for RE Scenario
GHG Policy	CO_2 Pricing ($/ton)	$0 initially, scaling to $10 by 2020	$1 initially, scaling to $30 by 2020	$2 initially, scaling to $50 by 2020
Credit Markets	Cost of Debt	See Next Slide		
	Cost of Equity			
	Availability of Debt			
Fossil Fuel Costs	Natural Gas Prices ($/MMBtu)	Utilities' Low Case: $5-$6	Utilities' Mid Case: ~$8-$9	Utilities' High Case: $11-$14
	Coal Prices ($/MMBtu)	Utilities' Low Case: $1.5-$2.5	Utilities' Mid Case: ~$2-$3	Utilities' High Case: $2.5-$3.5
RE Financial Incentives	Federal ITC	Expires 12/31/2016	Expires 12/31/2018	Expires 12/31/2020
	Federal PTC	Expires 12/31/2009	Expires 12/31/2014	Expires 12/31/2020
	State Solar Rebate Program	Expires 2009, $5M/Year Cap	Expires 2015, $5M/Year Cap	Expires 2020, $10M/Year Cap
	State Sales Tax Exemption	For this study, only applies to solar and the solar exemption does not expire.		
	State Property Tax Exemption	Only for on-site renewables and legislation does not expire at this time.		
	State PTC	Expires in 2010, $5M Cap	Expires in 2015, $5M Cap	Expires in 2020, $10M Cap
RE Regulatory Framework	REC Spending Cap	1% of utilities' annual retail revenue	2% of utilities' annual retail revenue	5% of utilities' annual retail revenue

Input	Technology Development Stage	Unfavorable for RE Scenario	Mid Favorable for RE Scenario	Favorable for RE Scenario
Cost of Debt	Established	8%	7%	6%
	Mid-Term	8.5%	7.5%	6.5%
	Future	9%	8%	7%
Cost of Equity	Established	12%	10%	8%
	Mid-Term	14%	12%	10%
	Future	16%	14%	12%
Availability of Debt (% debt financing)	Established	50%	65%	80%
	Mid-Term	50%	60%	70%
	Future	50%	55%	60%

Technology Development Stages

- **Established:** PV, Solar Water Heating, Onshore Wind, Biomass Direct Combustion[1], Waste to Energy, Landfill Gas to Energy, Farm Manure Anaerobic Digester, Waste Treatment Plant Fuel to Energy, Waste Heat, Repowering[1] (with Biomass)
- **Mid-Term:** CSP, Offshore Wind, Biomass Co-firing
- **Future:** Biomass Integrated Gasification Combined Cycle[1], Ocean Current

Note: 1) Given supply risk associated with biomass technologies, a 0.5% premium was added to Biomass Direct Combustion, Biomass repowering, and Biomass Integrated Gasification Combined Cycle.

Current economic and policy conditions generally coincide with Navigant Consulting's unfavorable scenario for future renewable development. Specifically, the unfavorable scenario for carbon pricing assumes $0/ton initially, then scaling to $10/ton by 2020. Currently, there is no federal or state policy establishing carbon pricing. As shown in Attachment D, Navigant Consulting assumes in its unfavorable scenario the cost of debt to be approximately 8.5 percent, the cost of equity approximately 14 percent and ready access to debt which would make-up 50 percent of renewable project financing. Currently, credit markets are extremely tight and it is uncertain when conditions will improve. Navigant Consulting assumes natural gas costs to be $5-$6/MMBtu in the unfavorable scenario. Currently, natural gas is trading at $5.70/MMBtu. Most forecasts project natural gas prices to increase over the long-term. Navigant Consulting projects various federal and state renewable energy financial incentives under each scenario, as shown in Attachment D. For example, in the unfavorable scenario, Florida's solar rebate program is projected to expire in 2010 with a $5 million annual funding level. The Governor's Energy Office has budget authority to spend $5 million in the 2008/09 fiscal year. It is unknown if and to what level the Legislature will appropriate funds for the solar rebate program in future fiscal years.

The level of projected renewable development under each scenario is dependent upon each assumption coming to fruition. For example, under the most favorable scenario for renewable development, fossil fuel prices must remain high, green house gases would be priced at $50/ton by 2020, state and federal incentive programs would not expire until 2020, and renewable developers could easily obtain debt financing with favorable terms. Under this

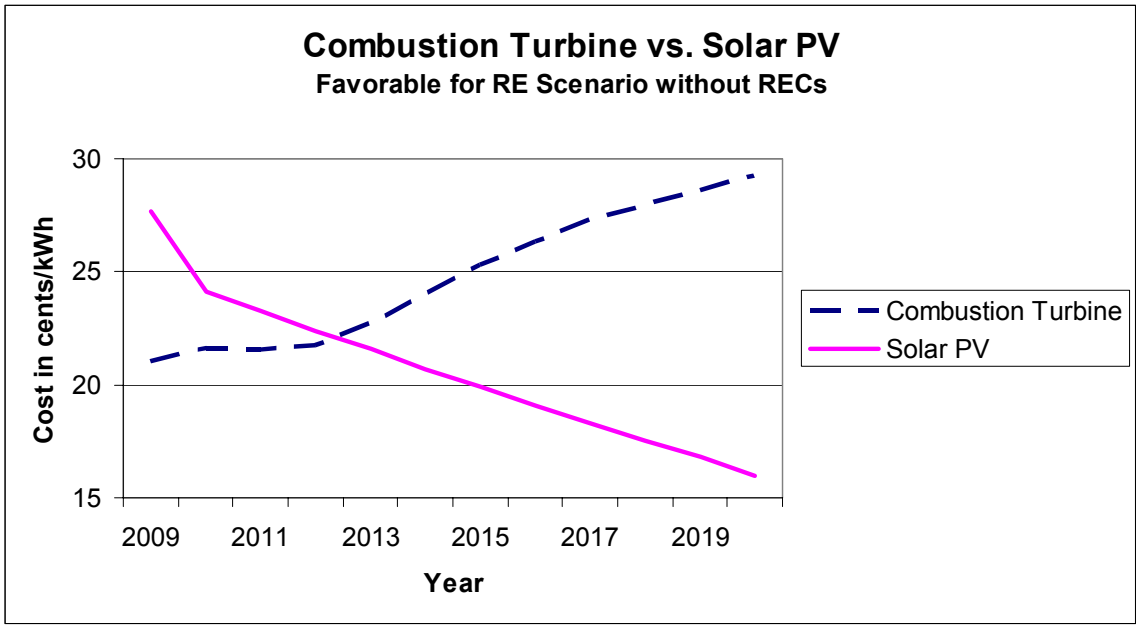
scenario, several renewable resources are projected to be less than traditional generation resources even without the additional revenue from the renewable attributes. In other words, if all of the assumptions worked together to create a favorable environment for renewable resource development, a natural progression of development would occur to a value of approximately 15 percent of retail sales by 2020. If a 5 percent rate cap were established to pay for renewable attributes, the level of development could rise to approximately 24 percent of retail sales according to the Navigant Consulting study. The top five contributors to the 24 percent figure are shown in the table below.

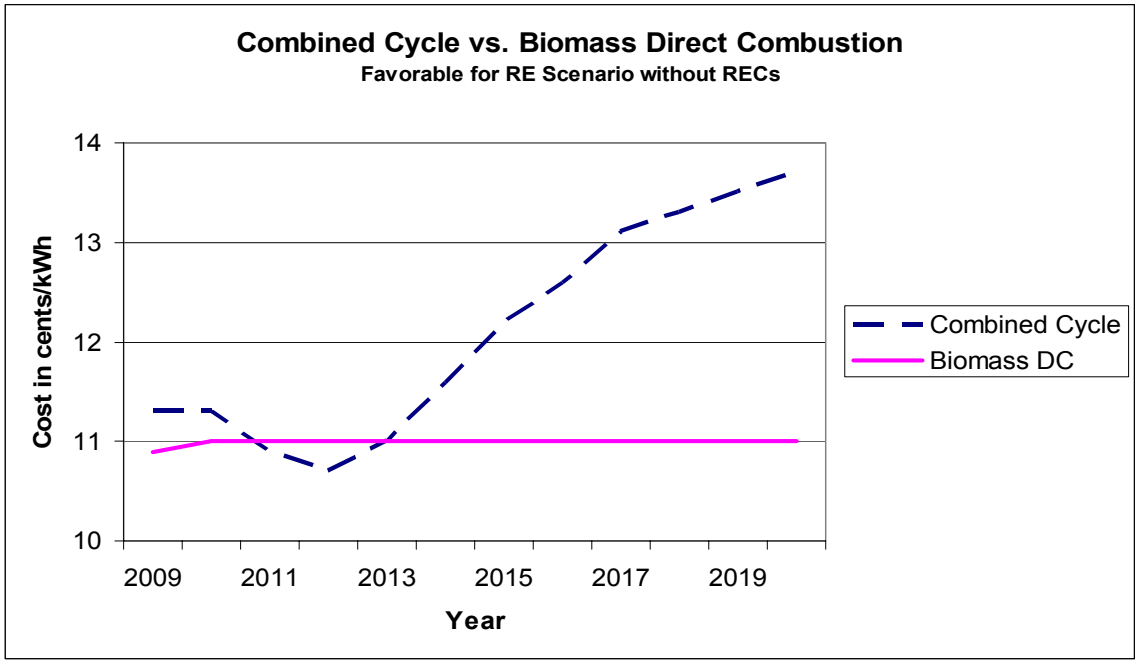
Capacity and Energy Estimates by 2020
Favorable Scenario with RECs

Resource Type	Capacity (MW)	Energy (GWH)
Ground Mounted Solar PV	9,500	21,637
Biomass - Direct Combustion	1,286	7,740
Biomass - Waste to Energy	858	5,362
Biomass - BIGCC	592	4,406
Waste Heat	425	2,985

Note: Data taken from Navigant Consulting Study dated 12/30/08.

As mentioned above, the revenue from the sale of RECs is supposed to offset the cost differential between a renewable resource and a traditional utility generation resource. As shown in the graphs below, both solar PV and direct combustion biomass are estimated to be below the LCOE for a comparable utility generator even without the additional revenue provide by the sale of RECs. As such, these facilities may not require the additional REC revenue to be cost competitive.





As shown in the graphs above, Navigant Consulting has estimated that the LCOE for both solar PV and direct combustion biomass will decrease over time while traditional utility generation will increase. Such a widening cost differential indicates that if a rate cap or assessment fee were established to pay for renewable attributes, such a charge should diminish over time.

Under a more moderate scenario for renewable development, the Navigant Consulting study estimates that approximately 11 percent of the IOUs' retail sales could be obtained from renewable generation by the year 2020. The mid-favorable scenario assumes that fossil fuel prices must remain moderate, green house gases would be priced at $30/ton by 2020, state and federal incentive programs would expire prior to 2020, and renewable developers would have to use more equity to develop projects. If all of the assumptions under the mid-favorable scenario came to fruition, a natural progression of development would occur to a value of approximately 7 percent of retail sales by 2020. If a 2 percent rate cap were established to pay for renewable attributes, the level of development could rise to approximately 11 percent of retail sales by 2020 according to the Navigant Consulting study.

The top five contributors to the 11 percent figure under the Mid-Favorable Scenario with RECs are shown in the table below.

Capacity and Energy Estimates by 2020
Mid-Favorable Scenario with RECs

Resource Type	Capacity (MW)	Energy (GWH)
Ground Mounted Solar PV	6,018	13,707
Biomass - Waste to Energy	520	2,848
Waste Heat	400	2,808
Biomass - Direct Combustion	571	2,413
Biomass – Co-firing	200	1,489

Note: Data taken from Navigant Consulting Study dated 12/30/08.

It should be noted that under the Mid-Favorable Scenario with RECs, Navigant Consulting concluded that there would be no growth in the biomass direct combustion or waste to energy sectors over the next 12 years. This would suggest that any revenues associated with RECs for these facilities would be directed to existing facilities only. As with the favorable scenario, ground mounted solar PV is estimated to provide the bulk of the renewable energy by 2020.

In summary, it appears that the Navigant Consulting results estimating the achievable potential of renewable generation are dependent on multiple variables, other than the availability of REC revenues, all coming together at once. In addition, it appears that the bulk of the estimated values are driven the development of ground mounted solar PV which is estimated to have a LCOE below comparable utility generation technology. Such interrelationships would suggest that the primary drivers for the future development of renewable resources are fossil fuel prices, greenhouse gas pricing policies, continuation of federal and state tax credits and other incentives, and the availability and cost of debt. Navigant Consulting has estimated that the LCOE for both solar PV and direct combustion biomass will decrease over time while traditional utility generation will increase. Such a widening cost differential indicates that if a rate cap or assessment fee were established to pay for renewable attributes, such a charge should diminish over time. Therefore, the additional revenue stream associated with the purchase of renewable attributes, or RECs, appears to play a lesser role in the development of renewable resources according to the results contained in the Navigant Consulting study.

RPS Post-Workshop Comments (filed Dec. 8, 2008)

Alachua County

Requests that the Commission establish targets of 10 percent or greater of total energy supplied by 2015 and 20 percent by 2020. Nuclear power should not be considered as a renewable resources under an RPS.

Mitigating climate change due to human-induced CO2 emissions, protecting our national security by becoming energy independent and revitalizing our economy with "green collar" jobs will depend upon the rapid deployment of renewable energy systems over the next 10 years.

Audubon of Florida

Supports a goal of 20 percent of electricity from each provider coming from renewable sources by 2020.

Supports allowing five percent utility annual revenue to be used to underwrite the additional costs of renewable energy, with preference for solar and wind.

Significantly reducing greenhouse gas emissions, diversifying fuel supply, providing energy independence, stimulating technological innovation and new job creation, and providing a stable and competitive playing field for business should be the drivers for this rule.

While the legislature did not provide clear direction to the Commission to consider mitigating the costs of climate change impacts on Florida's environment and economy, these external costs should be considered.

The Navigant Study clearly demonstrates that Florida has enough potential renewable energy to meet at 20 percent by 2020 target.

To implement a cost cap that restricts rate impacts to 1 percent is fundamentally unfair because it does not apply to other forms of electricity generation, such as nuclear or fossil-fuel generation and could essentially cut renewable energy development off at the knees.

Florida Alliance for Renewable Energy (late-filed)

Renewables provide energy security, creation of jobs, environmental benefits. Florida is missing massive solar investment opportunity.

Solution is a Florida Renewable Energy Freedom Act (FREA). We need every school, church, farmer, household and real estate developer to become entrepreneurs and sell back power. The Florida Legislature should prioritize immediately.

Provides description of feed-in tariffs.

There should be long-term fixed pricing and priority for renewables for grid access. There should be simple siting and permitting process, with a statewide CEO of renewables.

Tradable RECs encourage monopolies and are more expensive.

Addresses a German style Feed-in-Tariff, with a 20 year guaranteed fixed price

Florida Industrial Cogeneration Association, the City of Tampa, and The Solid Waste authority of Palm Beach County (Florida Renewable Energy Alliance or FREA)

Promoting renewables should never be divorced from electric system reliability or the cost impact of such programs on Florida's electric consumers.

Navigant's study is flawed with regard to renewable energy potential.

Waste heat, waste-to-energy and landfill gas electricity production technologies are far more cost-effective than more exotic or unproven low-carbon resources.

Solar and wind resources cannot provide reliable capacity during system peaks – especially winter peak periods occurring in early morning and late evening.

The Legislature made it clear that each MWH of electricity produced by renewables produces a REC – regardless of whether it is consumed by the producer, sold to a utility or otherwise used.

Using a standard offer contracts as the sole means for a renewable producer to sell renewable "attributes" presents two major issues. There is obviously a significant flaw in the standard offer contracts as they currently exist or have existed over the past 10 to 20 years. Only one fruitful standard offer has been executed since the early 1990s and that was for a small amount of capacity in the range of 10 MW. Also, from a legal standpoint, the Commission may not be able to require a utility to pay a price for renewable energy that exceeds the utility's avoided cost. The Commission can however "encourage" the payment. The bundling of RECs with the sale of electric energy in a standard offer or otherwise is not consistent with either Florida or Federal law.

A simple solution on Alternative Compliance payments is for the payments/penalties to be returned to the ratepayers as a per kWh credit accounted for "below the line" to assure payments/penalties are borne by the utility stockholders and not the customers. There is no requirement that the payments be invested.

Because the existing IRP process has not encouraged significant development of renewables, that failure cannot justify continuing to "suppress the addition of renewable energy resources by non-utility third parties."

Utility self-build options should be capped to the same avoided cost pricing, terms and conditions available to non-utility producers via the standard offer contracts then in effect for such utility.

FREA raises issues about nuclear power being included in renewables or "clean energy." If nuclear power is to be treated as the functional equivalent of renewable energy, then the avoided cost pricing for renewables should be equal to the avoided cost of nuclear – both fixed and variable costs.

Navigant's report underestimates the costs of solar.

FREA raises questions on Navigant's report. Unless Navigant provides an unbiased report without the pre-supposition of the staff rule, the report is meaningless. FREA questions the "forced allocations" of a 75 percent/25 percent split between Class I and II resources.

The levelized cost of energy "LCOE" numbers are misleading and should not form the basis on which to determine costs or penetrations of the various technologies in the Florida market.

If the Commission recommends a Class I/Class II distinction, then waste heat, waste to energy and landfill gas should all be placed in the same or "higher" class as solar/wind as they are either non-emitters or carbon neutral, and are not as likely to require supplemental power from fossil-fuel generators during peak periods.

Letter from Alfred E. Kahn, NERA Consulting, states that by over-specifying the allocation rules, the staff's proposal threatens to produce economically inefficient outcomes. He shares the concerns of OPC and does not support the carve outs. Solar and wind are not inherently superior to other technologies and the preference in the proposed rules is unwarranted. Technologies that provide the same kinds of environmental, cost, security and other economic benefits should receive the same encouragement. The current proposal violates this principle. He lists the benefits from pure waste heat generation systems. Like solar and wind, pure waste heat generation resources help to diversify fuel supplies and lessen Florida's dependence on foreign oil or coal and natural gas imported from other states.

Florida Industrial Power Users Group (FIPUG)

FIPUG strongly opposes mandatory 75 percent allocation of renewable resource capacity and money to solar and wind until the technology makes the cost of these resources comparable to other approaches.

FIPUG supports Commissioner Skop's concept of "environmental mercantilism plan that calls for operating within the existing framework and requesting bids to identify the least cost viable renewable energy resource."

FIPUG recommends the Commission give heed to Tom Ballinger's explanation of the Commission's Integrated Resource Plan that gives consideration to DSM along with utility supply side and renewable generation and resources.

FIPUG recommends that rate structures be redesigned so that energy efficiency by some customers does not result in increased rates for others.

FIPUG recommends that the Commission recognize that current customers are presently paying for nuclear plants from which they receive no current benefit. A mandatory RPS surcharge on top of the nuclear charges "adds insult to economic injury," may be unconstitutional in that it deprives customers of their private property without due process of law, and takes their property for public use without just compensation.

The Commission should give serious consideration to enhanced energy efficiency and distributed generation including compensation if it can be demonstrated that distributed generation results in avoided costs for full and/or capacity construction on the part of public utilities.

Navigant should be requested to revise its report to recognize alternatives other than a mandate for 75 percent solar and wind power.

Florida Pulp and Paper Association (FPPA)

Most of the renewable energy technologies are more expensive than traditional utility generation. The more aggressive the RPS goal, the greater the costs that will be imposed on all users of electricity in Florida.

The one resource that is very close to being competitive, and in some cases is in fact already competitive, with traditional generation is biomass fueled generation.

Known demands on Navigant's resource potential of 5.9 million tons (for biomass) can be reduced by almost 2 million tons The pine re-planting records for Florida show that since 2000 landowners are re-planting fewer acres annually than they are harvesting. This means that Florida's forests will be over cut within 10 years if current wood demand remains constant.

Using the optimistic upper limits of the Navigant numbers on unused woody biomass and subtracting these new demands, results in only about 3.9 million tons or about 615 MWs of new generation being available at this time. Historically, this is less than one year's new capacity growth for the entire electric grid in Florida.

A phase-in period should be available.

Without time for the agriculture sector to develop the biomass resource base, we could have unrestrained harvesting of the existing forest to meet the RPS goal which would lead to a decline in the forest sustainability and by definition threaten the definition of it being renewable. Biomass prices for existing users of wood products including manufacturers and generators could skyrocket driving many out of business and increasing generation costs for those already selling electricity from biomass under existing contracts.

FPPA believes the timeframe and percentage contained in the October 14th proposed RPS language appropriately balances these conflicting objectives. However, FPPA requests that the percentage caps be lowered to 1 percent of total retail revenue.

FPPA urges a cautious approach. They want to move forward with biomass development in a way that does not lead to unintended consequences like what happened with the government mandates for ethanol production. Destruction of Florida's forests or economic dislocations of a large manufacturing sector especially during these painful economic times is not the legacy that neither the Commission nor the Legislature want associated with too rapidly deploying renewable portfolio standards.

Florida Solar Coalition (FSC)

The FSC urges that Navigant's survey shows that the state has the technical potential to reach 20 percent RPS by 2020, without undue economic impact on the ratepayer.

Points out that Navigant's study excludes solar thermal less than 2 MW, leaving out "low cost residential and small commercial DG projects."

Navigant and Crossborder Energy studies both conclude that the cost of the RPS facilities will substantially decrease over time which will make the "least cost plan" IRP in 2020 with the RPS facilities essentially the same as that without RPS facilities.

Failure to take the declining cost of solar PV into account has significantly inflated the estimated cost of meeting all of the goals in Staff's cases A-C. Also, it has inflated the cost of meeting the 25 percent solar/75 percent biomass case as well which then inflates the percentage of retail revenues required to meet the Staff's Cases A and C goals.

FSC has calculated that if there is an allocation of 25 percent in Class I (wind and solar) and 75 percent to Class II (biomass and waste heat), 16.6 percent of retail sales can be served by renewables in 2017 using a 15 year standard offer contract with a rate impact of 2.7 percent for Class I solar and wind facilities.

With regard to "Clean Energy Portfolio," FSC does not agree that nuclear power is a renewable energy source and objects to its inclusion. This position is clearly supported by Sec. 366.92(2)(c). The inclusion of existing nuclear in a Portfolio plan would eliminate the need for FPL or Progress from being required to add <u>any</u> new renewables to meet a 20 percent by 2020 goal.

If the IOU builds its own renewable facility it gets accelerated capital recovery of all costs associated with the plant, which includes a higher ROE than its allowed rate of return. That is, the regulatory treatment for its renewable resource is better than the treatment for a nuclear or IGCC plant. When an IOU purchases RECs from a third party constructed renewable facility, the price of the REC and energy and capacity, if sold to the IOU, will be recovered through the Renewable Energy Cost Recovery Clause (RECR). The staff's proposal is strongly skewed in favor of the IOUs. It is essential that third party projects be placed on an equal footing with those of the IOUs. The way to correct this is for the IOU's capital investment in renewables to be recovered through base rates with the cost of REC market administration and the cost of purchasing RECs from third parties as well as renewable energy and capacity being recovered through the RECR.

FSC is highly supportive of Commissioner Skop's concept of expanding the standard offer contracts now in use by the Commission to include a REC component. Commissioner Skop noted that the first step is to establish a revenue cap, the second step is to determine allocations between solar rebates and standard offer contracts and the final step is to work out the details of implementing the standard offer contract, such as methods for modifying the price. This is a sound approach. FSC continues to recommend an expenditure cap of 4 percent of retail revenues. FSC recommends allowing participation of residential and small commercial solar hot water and PV systems in a rebate program. However, FSC recommends that larger net metered systems be required to participate in the standard offer REC program.

FSC agrees with Commissioner Skop, contracts must be tailored to each renewable technology based upon each technology's capital and O&M costs plus a return on equity. FSC recommends that the REC price for supply side resources represent the delta between the technology's cost and the avoided cost of power. Also, the REC prices should be set to decline over time.

FSC estimates that Class I technology can supply approximately 4,400 MW by 2017 with a rate impact of 2.7 percent of annual retail revenues using 15 year standard offer contracts allocated with a 25 percent to Class I and 75 percent to Class II technologies.

The REC component should be totally separate from the avoided cost or energy components in the standard offer contract. A renewable energy provider can pick whether it wants to supply capacity, energy on a firm or as-available basis or RECs or some combination of all three.

FSC supports the option to set a capacity target for each technology per service territory. Navigant's study concludes that the two most viable renewable technologies in Florida between now and 2020 are solar and biomass. There should continue to be a set aside for Class I wind and solar technologies as proposed in staff's draft.

FSC agrees that to the extent that an IOU has generated surplus RECs over that needed to meet its own RPS goals from the construction of its own renewable resources, those resources should be sold and any moneys credited back to ratepayers through the RECR.

However, FSC is concerned that Commissioner Skop's interpretation of Sec. 366.92(d) and (e) would lead to an unintended "double counting" of RECs. The double counting would arise when an IOU used the MWH produced from its own renewable facility to satisfy its own RPS energy goals and then sold RECs from that facility based on MWHs generated to other states. In sum, FSC does not think that MWHs generated by a renewable facility can be separated from the concept of compliance RECs.

The actual details of how a standard offer contract would work need to be the subject of a Chapter 120 administrative rulemaking proceeding with adequate time to complete the process. However, FSC strongly agrees with Commissioner Skop that the use of technology specific standard offer contracts coupled with bidding for IOU self-build projects avoids the substantial delay and costs associated with developing a Florida tradable REC market.

Even if the Legislature again decides this session to require the development of a tradable REC market, the use of standard offer contracts and IOU renewable RPS can be used to bridge the gap between the present and the date that tradable REC market is developed and operational.

Gulf Power Company (Gulf)

Gulf is generally supportive of Staff's draft rule. However, the definition of "Florida renewable energy resource" should be changed. Sec. 366.92(a) definition defines such resources as "renewable energy … that is produced in Florida." It does not require that the fuels or energy sources used to generate the renewable energy also derive from Florida. Section 17.400(2)(a) of the draft rule should be revised as follows:

> Florida renewable energy resources means electrical, mechanical, or thermal energy produced in Florida from a method that uses one or more of the following fuels or energy sources: hydrogen, biomass, solar energy, geothermal energy, wind energy, ocean energy, waste heat, or hydroelectric power.

Reward/penalty mechanism. Section 17.400(5)(b) of the draft rule should be symmetrical, with an opportunity for both a reward and penalty. It should allow for a reward or penalty of up to 25 basis points on the utility's approved rate of return on equity.

As to a return on equity for self-build projects, Gulf recommends that the Commission follow the approach taken in the Environmental Cost Recovery Clause and set the ROE for all self-build projects at the utility's last authorized rate of return.

The carve-out for solar and wind would be an impediment to the most cost-effective mix of renewables. Gulf suggests excluding the carve-out entirely, or use a multiplier approach.

The rule should contain a cost cap. Gulf has concerns that allocating the cost cap between Class I and Class II renewables would be an impediment to Gulf's obtaining the most cost-effective mix of renewables for its customers.

Gulf supports the Renewable Energy Cost Recovery Clause.

Gulf is generally supportive of a Standard Offer Contract approach. However, without more info, Gulf cannot adequately evaluate the proposal. The simplicity, low overhead cost, use of existing legal and regulatory structures and emphasis on keeping renewable energy attribute revenues in Florida are all positive characteristics of the proposal.

Gulf could likely support an appropriately priced Standard Offer Contract approach if it incorporates a reasonable cost cap (in the 1-2 percent range), reasonable cost recovery provisions (Including cost recovery for self-build projects), no carve-outs or set-asides, a modest (1 percent to 5 percent) allocation to solar rebates, and utility ownership of RECs for resale.

Investor-Owned Utilities (IOUs)

The IOUs (Gulf, Tampa Electric, Progress Energy Florida and Florida Power & Light) make suggestions to Navigant and express concerns about the study. The IOUs ask that another section be added to the report outlining what is not included within the report scope and as Navigant to more clearly define what is meant by "technical potential." It should be redefined as "theoretical resource potential" and the word "feasibly" should be deleted.

It is clear the Draft Report does not include an assessment of the practical implementation of the renewable resources and that there is no current market to support the labor and materials needed to build the resources to the degree shown. The final report "should very clearly reflect the fact that the technical capability of industry to manufacture the generating equipment shown as being installed in the early years is limited."

Items that Navigant should specify as being not included in their Final Report are: an integrated resource planning analysis; an analysis of transmission and distribution impacts and costs that would be required to connect the various levels of renewable generation shown under the various cases; and a system operations analysis that assesses reliability requirements and future energy needs should the levels and type of renewable generation estimated come into being in Florida.

The land available may be overstated for PV development in the Navigant report.

Navigant's assessment for certain technology choices (most notably the use of biomass crops) does not appear to take into account that 90 percent of Floridians depend on groundwater for drinking and potable purposes, which would be competing uses for the amount of water that would be required in order to develop those technology choices in Florida. Water is becoming a very critical constraining resource associated with most electric generation expansion and for some renewable options even more critical.

The IOUs are also concerned with the cost analysis provided for the various renewable resources and the attached questions reflect those concerns. It appears the cost analysis is based only on the "installed cost" of the project. When evaluating the cost to Florida electric customers, the entire cost over the life of a project should be taken into consideration.

The draft Final Report assumes all Renewable facilities will be owned by IPPs, which is unlikely. Also it assumes small power producers would have the same capital strength, also unlikely.

Navigant's Final Report should be made more transparent by including the impacts to retail electricity prices in the six scenarios in a table.

The IOUs raise issue with regard to whether Navigant's study took into account that IOUs serve 77 percent of Florida's load and a significant percentage of Florida's renewable capacity can be expected to be secured by municipal and cooperative utilities.

Given that the recent economic downturn has resulted in a downward adjustment in load forecasts, 20 percent by 2020 would likely require the reduced load growth be more heavily provided through renewable resources in order to get to 20 percent by 2020. Given the pace of access to renewable technology in the early years of the forecast and lower load growth, Florida's ability to achieve 20 percent of sales by 2020 will likely be negatively affected.

While there is only limited time remaining before the Commission must provide a report to the legislature, that time will be well spent continuing to seek input to confirm or improve upon Navigant's analysis.

The IOUs attached a list of questions and concerns for Navigant.

Office of Public Counsel (OPC)

Consideration of the RPS standard involves competing interests. The environmental stakeholders' objective is to maximize the reductions of greenhouse gases. The more money the Commission directs the utilities to spend on this, the better for environmental stakeholders. The producers and vendors of renewables wish to market their wares. The greater amount of money spent above and beyond the utility's "avoided cost," the better for more projects and profits. Utilities' customers, however, will bear the costs of complying with the standards. OPC is confident that most support the concept of reducing adverse impacts of generating electricity on the environment, including the impacts on climate change. Yet they are concerned with how much of the renewable initiative they can afford.

The Commission must make a fundamental choice: Should the purpose of the rule be the generation of the most renewable energy at the lowest possible cost? Or, should the rule ensure that the portfolios will incorporate some of each technology, regardless of cost differentials?

If you direct the utilities to allow the renewable producers to compete head-to-head and choose the most economical sources, the result will be the most energy for the available dollars. If, instead, you impose on the utilities something of a quota for each technology, regardless of costs, and the average cost per unit of renewable energy will increase, while the total that can be purchased with the same dollar amount will decrease.

Ratepayers are under severe financial distress. Their electric bills are being increased by volatile fuel costs, rising costs of complying with environmental regulations, the costs of conservation programs, and the huge costs of funding, in advance, the construction of massively expensive nuclear projects.

OPC favors a rule that: (1) includes no carve-outs or set-asides that would impede the ability of utilities to meet the standard using the most economical mix of renewables; (2) calls for competitive Requests for Proposals; (3) limits the amount the utilities are permitted to spend on RECs to 1 percent of their annual revenues; and (4) places a ceiling on the price of an individual REC.

OPC regards the deletion of the separate ceiling on the price of an individual REC as unfortunate.

OPC opposes the 75/25 allocation.

OPC favors the RFP provisions, as it believes the competitive bidding ensure the most economical sources of renewables are used.

Navigant's report is incomplete. They should model other scenarios than the 75/25 allocation.

Comments on Commissioner Skop's proposal: OPC regards the proposal to allocate 5 percent of the monies otherwise earmarked for RECs to the solar rebate program as a reasonable compromise. Barring legal issues, OPC favors the proposal enabling utilities to market the RECs to out-of-state entities.

OPC would prefer to see the four separate "buckets" of dollars converted into a single category.

If the format of a standard offer contract is adopted, the price of the contract should be a maximum price, and the utility should be directed by rule to conduct competitive processes designed to solicit more economical proposals.

Relating the cost of one technology to another on a "stand-alone" basis provides useful information.

A calculation based solely on the relative costs of RECs may understate the full cost to customers of a renewable source with a low capacity factor. A utility may be required to acquire separate capacity with which to meet its peak demands.

OPC firmly opposes the creation of a new cost recovery clause for renewables. To allow a utility to flow the costs of its renewables through a clause when base rates are more than adequate to absorb those costs would result in customers' total bills being higher than necessary to support an RPS.

Progress Energy Florida (PEF)

PEF supports the Commission Staff RPS draft rule as revised on 10/2/08 and PEF's submitted changes.

Staff's draft rule is based on renewable resource availability, technical capability and economic effectiveness. It has sufficient details to be an efficient and workable standard. It offers a balanced approach on encouraging Renewables while providing consumer protection.

Staff's draft rule has realistic percentages which increase over time and can be adjusted.

PEF recommends provisions that will give way to federal laws. They recommend allowing revisions to the rule subject to greenhouse gas limitations.

The IOU penalty provisions are unnecessary given the Commission already has penalty authority over IOUs that are noncompliant with the Florida Administrative Code.

Sarasota County

Sarasota County supports 20 percent by 2020.

Solar hot water offsets should be included. It is a "low hanging fruit which will make any RPS target easier and less expensive to achieve." Solar thermal in the RPS would also take advantage of a strong network of existing small businesses already engaged in the installation of the technology and prepared to quickly ramp up that effort with the right market and policy incentives.

Southern Alliance for Clean Energy (SACE)

Florida has resources to meet 20 percent by 2020. In its favorable scenario, the Navigant study demonstrates that with the right policies, Florida could achieve 27 percent of electricity from renewables.

The study would have provided even more technical and economic solar energy potential if the adoption of small solar thermal units was modeled.

A 20 percent by 2020 RPS can be achieved at a modest cost. It would be less than 2.5 percent or about $3.50 per month for a typical household using 1,000 kWh of electricity. A $3.50 per month rate impact is clearly not "cost prohibitive."

A cost cap is unnecessary. Costs can be handled on an exception basis.

The relative rate impact of a 20 percent RPS is small in the context of rate impacts from conventional generation. The average Florida utility customer bill has increased by 25 percent since 2005. Utility bills will increase by over 25 percent next year for Progress Energy customers due to nuclear early cost recovery.

The cumulative rate impact from implementing a 20 percent RPS by 2020 is $26.90 in 2020, whereas the rate impact from the proposed Levy County nuclear units is $51.92 in 2020. The impact to ratepayers from the proposed construction of nuclear units is about twice the rate impact of a 20 percent RPS.

Conventional power ties consumers to uncertainty. In contrast, upfront capital costs for renewables, such as solar PV, have been steadily dropping in price. The price per watt peak has dropped from $27 in 1982 to $4 today.

Florida's over-reliance on conventional generation has impacted consumers with substantial rate impacts from nuclear capital construction costs and fossil fuel charge volatility and increases.

Renewable energy sources can provide important hedge benefits. A number of studies show that aggressive renewable energy penetration may put downward pressure on natural gas prices by easing natural gas supply pressures. Some benefits can't be quantified.

SACE applauds Commissioner Skop for recognizing in his proposal that renewable energy developers require financial certainty, and SACE supports the idea of financial certainty behind the REC standard offer contract. The most successful RPS states require utilities to sign long-term power purchase contracts with eligible renewable developers.

SACE supports the preferential treatment for solar and wind.

A Clean Energy Portfolio is not within the scope of the RPS as envisioned in the statute.

Sunshine State Solar Power (SSSP)

Comments on Navigant Study – Refers to 2005 Study by Americans for Solar Power that was used to support design of the current California Solar Initiative. The study determined that solar power provides between $78 MWH and $224 MWH of value to California.

Job Creation – a Solar Energy Industries Association study reported that each 1 MW of solar supports 32 jobs, with 8 being local. A recent Navigant study showed the potential for up to 32,000 new jobs in Florida 2016 due to the Federal Solar ITC extension and the build-out of a solar generation platform.

While solar technology currently is more costly to install, it is the same or lower than traditional fossil-fired technologies from a value-added perspective.

Rule 17.400 - Recommends the following annual targets: 5 percent by 2010, 8 percent by 2012, 12 percent by 2014, 16 percent by 2016, and 20 percent by 2020. SSSP suggests setting the initial starting point slightly below the existing renewable generation level to provide a cushion in case of plant retirements or operational changes prior o the RPS program commencement. The Commission could also choose to waive compliance in the early years to the extent that some significant change occurred to existing assets and caused IOUs to be out of compliance before adequate new generation is developed.

Recommends the RPS program and rules be revisited more often than 5 years. SSSP suggests that the first review occur within 2 years of the program commencement and every 3 years thereafter until a determination is made that the program is working as intended and a longer review window is justified.

Recommends a 5 percent revenue cap.

Rather than adjust the 75 percent/25 percent allocation, the more appropriate correction is to eliminate payments to any existing asset that has been operating longer than 5 years prior to the RPS commencement date.

The current RPS draft rules provide incentives for the IOU to select the self-build option. Instead, a minimum of 50 percent of an IOUs RPS compliance generation should come from non-affiliated sources. The benefits are a) sharing the risk of ownership across multiple players, (b) reducing the IOUs upfront capital needs, (c) increasing economic development and job creation, and (d) a broader and more dynamic renewable energy industry.

Rule 17.410 – SSSP says a REC-based RPS program is not appropriate for the Florida electric energy market. It is unlikely that a robust trading market will develop with only 5 entities mandated to participate. REC programs have tended to be more costly and administratively burdensome than other forms of RPS compliance. Also, it does very little for smaller applications such as solar hot water and residential PV systems.

SSSP prefers that the RPS program be based on a contract-path mechanism, like long-term Standard Offer Contracts, Renewable Energy Payments or Feed-In Tariffs.

Revenue certainty is necessary. A tradable REC program typically reflects short-term and spot contracts and financing parties will not ascribe much value to these uncertain revenues.

Commissioner Skop's proposal – SSSP supports a program that uses a contract path mechanism, such as Commissioner Skop's approach. SSSP also suggests that we use as much of the structure and concepts of the current Commission Staff draft rules as possible.

SSSP supports allocating funds to both Standard Offer Contracts and Solar Rebates. The Solar Rebate allocation needs to be a meaningful amount given the current experience with the oversubscribed $5 million general fund rebate program. A set dollar amount should be used rather than a percentage of the overall Revenue Cap. The initial allocation should be at least $10 million and should be revised periodically.

SSSP supports having allocations by renewable type in the Standard Offer Contract and suggests using the Class I and Class II categories in the staff draft rule.

The Commission would engage a 3rd party consultant to determine the appropriate Standard Offer Contract pricing.

SSSP accepts utilization of an "avoided-cost plus model," however each technology should be compared to its most appropriate generation proxy rather than all technologies being compared to an avoided baseload unit.

The existing bid process should be kept, with some modifications.

As to the utility self-build option, a minimum of 50 percent of RPS compliance generation must come from non-affiliated sources.

Wheelabrator Technologies

According to Wheelabrator, there are several fundamental flaws in the Navigant study. A significant flaw is that Navigant only considered RPS scenarios using the assumption in staff's strawman rule proposal of a 75 percent-25 percent split of REC expenditures between Class 1 and Class 2 renewables. This assumption is arbitrary and Navigant should be required to run a scenario at a 50 percent-50 percent split and a scenario with no differentiation between classes as Public counsel urged.

Wheelabrator questions Navigant's assumption that Florida could achieve 6-7.5 percent RE penetration by the end of year 2009. Analysis and staff's own calculations have shown that as of 2007, RE accounts for 3.6 percent of the state's retail sales.

Also, Navigant's favorable projections of RE for 2020 could only be achieved if all the stars aligned, something that is not likely to occur.

Wheelabrator disagrees with staff's portrayal of the three approaches (renewable, DSM, utility generation) as being on equal footing. The utility generation component is and will continue to be dominant. The goal of RPS should be to reduce this dependence significantly.

A major concern is with the newly-introduced concept of a Clean Energy Portfolio. The legislature defined "renewable energy" and the definition does not include nuclear power. Arguments to include nuclear power were not well-received by the Legislature. It would be short-sighted and disingenuous for the Commission to suggest a 20 percent RPS could be achieved by making a definitional change.

Any cost recovery by the IOU should be limited to the same standards that a renewable developer would face, which is avoided cost plus the average value for RECs within the respective utility's service territory for similar renewable technology.

A "stretch" renewable energy percentage goal and a properly set alternative compliance payment (ACP) will result in a robust renewable market. Staff's belief that the Commission cannot establish an ACP because there is no authority to establish a fund is a "red herring." If there is no ACP, the Commission would likely fine the IOU. That fine would be deposited in the General Revenue Fund. There is no problem or impediment to an ACP.

The Commission should put an ACP in place and ask that the Legislature consider how to spend funds. Also, Wheelabrator disagrees that establishing an appropriate ACP is very complicated.

The Standard offer Contract (SOC) Approach – without more information and analysis, it is not possible to say whether Wheelabrator could support such a plan.

The SOC plan contains an implementation target of 20 percent renewables by 2020, yet there is no mention of how that will be reached on a year-to-year basis or milestones that should be achieved before 2020. Without clear compliance and enforcement measures, there is little to no incentive for an IOU to participate in this program.

The SOC would apparently do nothing to "protect the economic viability of Florida's existing renewable energy facilities," as Section 366.92(1) requires. The SOC would only allow for the IOU to contract with a renewable energy producer in a bundled plan, in which the IOU retains the energy and the attributes.

If there is no ability for existing renewable energy generators to sell the attributes of their renewable energy separately in the market, they will be at a competitive disadvantage compared to new developers.

Wheelabrator's proposal could be amended to allow a bundled SOC as an alternative choice for the generator.

- Wheelabrator's Draft Rule Proposal is attached and includes:

  Definition for "Equivalent Solar Thermal Energy."
  Definition for "Compliance Year."
  Definition for "Alternative Compliance Credit."
  Definition for "Force majeure."

  Revisions to RPS – By January 30, 2010, and not less than annually thereafter each investor-owned utility shall submit to the Commission an annual report demonstrating compliance renewable portfolio standards which meet or exceed the following long term standard through the production or purchase of RECs:

  By Jan. 1, 2010, 3 percent, with .5 percent from Class I and 2.5 percent from Class II.
  By Jan. 1, 2017, 6 percent, with 1 percent from Class I and 5 percent from Class II.
  By Jan. 1, 2025, 12 percent, with 3 percent from Class I and 9 percent from Class II.
  By Jan. 1, 2035, 20 percent, with 8 percent from Class I and 12 percent from Class II.

  Provides for Alternative Compliance Mechanism – authorizes utility to make an ACP. Alternative Compliance Credits would be from the Commssion or independent third party market administrator. The ACP is $60 per MWH for 2010.

  Cost Recovery language – "Reasonable and prudent costs associated with the production or purchase of renewable energy credits to meet the utility's renewable portfolio standards, including administrative costs of the Florida Renewable Energy Credit Market, shall be recovered through the Environmental Cost Recovery clause."

  REC Market (Rule 17.410) – The Commission (not the IOUs) must establish and administer, either on its own, or through contract with an independent third party, an electronic renewable energy credit market. The market must allow for the transparent production, buying, selling, and trading of RECs used to comply with the RPS.

  A REC is retained by the owner of the eligible renewable energy resource from which it is derived unless specifically sold or transferred.

Within 90 days from the effective date of the rule, the Commission must institute the structure, governance and procedures for administering the REC market.

Marni Zollinger (late-filed)

Commission presented an entirely pro-utility RPS plan.

Navigant's study was specifically designed to remove the most economically viable options of high-efficiency and investor-funded options.

Commissioner Skop's proposal "appears to be a good effort upon which the addition of a few key ideas might yield an RPS rule that actually favors the people of Florida."

Let the market dictate the rate of input of clean and green and actually uphold the tenets of a "free enterprise system." At no time should a rate be paid that is not at the market price.

Let the IOUs go ahead and fund solar rebates out of dividends only.

The avoided cost plus model is a backwards idea that the costs of making emissions have any relation at all to the cost of renewables.

As to the utility self-build option, no objection. If they fund new sources from dividends, let them own it. If they fund from cost recovery or increased rates, let the people own it.

Consumer Correspondence

Letters were received from approximately 20 consumers urging an RPS of 20 percent by 2020.

Attachment F – Florida Statutes

Section 366.051, F.S., Cogeneration, Small Power Production, Commission Jurisdiction

Section 366.80-.82, F.S., Florida Energy Efficiency and Conservation Act (FEECA)

Section 366.91, F.S., Renewable Energy

Section 366.92, F.S., Florida Renewable Energy (per SB 888 – 2006)

Section 366.92, F.S., Florida Renewable Energy (per HB 7135 – 2008)

Section 366.051, F.S., Cogeneration, Small Power Production, Commission Jurisdiction

366.051 Cogeneration; small power production; commission jurisdiction.--Electricity produced by cogeneration and small power production is of benefit to the public when included as part of the total energy supply of the entire electric grid of the state or consumed by a cogenerator or small power producer. The electric utility in whose service area a cogenerator or small power producer is located shall purchase, in accordance with applicable law, all electricity offered for sale by such cogenerator or small power producer; or the cogenerator or small power producer may sell such electricity to any other electric utility in the state. The commission shall establish guidelines relating to the purchase of power or energy by public utilities from cogenerators or small power producers and may set rates at which a public utility must purchase power or energy from a cogenerator or small power producer. In fixing rates for power purchased by public utilities from cogenerators or small power producers, the commission shall authorize a rate equal to the purchasing utility's full avoided costs. A utility's "full avoided costs" are the incremental costs to the utility of the electric energy or capacity, or both, which, but for the purchase from cogenerators or small power producers, such utility would generate itself or purchase from another source. The commission may use a statewide avoided unit when setting full avoided capacity costs. If the cogenerator or small power producer provides adequate security, based on its financial stability, and no costs in excess of full avoided costs are likely to be incurred by the electric utility over the term during which electricity is to be provided, the commission shall authorize the levelization of payments and the elimination of discounts due to risk factors in determining the rates. Public utilities shall provide transmission or distribution service to enable a retail customer to transmit electrical power generated by the customer at one location to the customer's facilities at another location, if the commission finds that the provision of this service, and the charges, terms, and other conditions associated with the provision of this service, are not likely to result in higher cost electric service to the utility's general body of retail and wholesale customers or adversely affect the adequacy or reliability of electric service to all customers. Notwithstanding any other provision of law, power generated by the customer and provided by the utility to the customers' facility at another location is subject to the gross receipts tax imposed under s. 203.01 and the use tax imposed under s. 212.06. Such taxes shall apply at the time the power is provided at such other location and shall be based upon the cost price of such power as provided in s. 212.06(1)(b).
History.--ss. 5, 22, ch. 89-292; s. 4, ch. 91-429.

Sections 366.80-.82, F.S., Florida Energy Efficiency and Conservation Act (FEECA)

366.80 Short title.--Sections 366.80-366.85 and 403.519 shall be known and may be cited as the "Florida Energy Efficiency and Conservation Act."
History.--s. 5, ch. 80-65; s. 2, ch. 81-318; ss. 20, 22, ch. 89-292; s. 4, ch. 91-429.

366.81 Legislative findings and intent.--The Legislature finds and declares that it is critical to utilize the most efficient and cost-effective demand-side renewable energy systems and conservation systems in order to protect the health, prosperity, and general welfare of the state and its citizens. Reduction in, and control of, the growth rates of electric consumption and of weather-sensitive peak demand are of particular importance. The Legislature further finds that the Florida Public Service Commission is the appropriate agency to adopt goals and approve plans related to the promotion of demand-side renewable energy systems and the conservation of electric energy and natural gas usage. The Legislature directs the commission to develop and adopt overall goals and authorizes the commission to require each utility to develop plans and implement programs for increasing energy efficiency and conservation and demand-side renewable energy systems within its service area, subject to the approval of the commission. Since solutions to our energy problems are complex, the Legislature intends that the use of solar energy, renewable energy sources, highly efficient systems, cogeneration, and load-control systems be encouraged. Accordingly, in exercising its jurisdiction, the commission shall not approve any rate or rate structure which discriminates against any class of customers on account of the use of such facilities, systems, or devices. This expression of legislative intent shall not be construed to preclude experimental rates, rate structures, or programs. The Legislature further finds and declares that ss. 366.80-366.85 and 403.519 are to be liberally construed in order to meet the complex problems of reducing and controlling the growth rates of electric consumption and reducing the growth rates of weather-sensitive peak demand; increasing the overall efficiency and cost-effectiveness of electricity and natural gas production and use; encouraging further development of demand-side renewable energy systems; and conserving expensive resources, particularly petroleum fuels.
History.--s. 5, ch. 80-65; s. 2, ch. 81-318; ss. 14, 20, 22, ch. 89-292; s. 4, ch. 91-429; s. 38, ch. 2008-227.

366.82 Definition; goals; plans; programs; annual reports; energy audits.--
(1) For the purposes of ss. 366.80-366.85 and 403.519:
(a) "Utility" means any person or entity of whatever form which provides electricity or natural gas at retail to the public, specifically including municipalities or instrumentalities thereof and cooperatives organized under the Rural Electric Cooperative Law and specifically excluding any municipality or instrumentality thereof, any cooperative organized under the Rural Electric Cooperative Law, or any other person or entity providing natural gas at retail to the public whose annual sales volume is less than 100 million therms or any municipality or instrumentality thereof and any cooperative organized under the Rural Electric Cooperative Law providing electricity at retail to the public whose annual sales as of July 1, 1993, to end-use customers is less than 2,000 gigawatt-hours.
(b) "Demand-side renewable energy" means a system located on a customer's premises generating thermal or electric energy using Florida renewable energy resources and primarily

intended to offset all or part of the customer's electricity requirements provided such system does not exceed 2 megawatts.
(2) The commission shall adopt appropriate goals for increasing the efficiency of energy consumption and increasing the development of demand-side renewable energy systems, specifically including goals designed to increase the conservation of expensive resources, such as petroleum fuels, to reduce and control the growth rates of electric consumption, to reduce the growth rates of weather-sensitive peak demand, and to encourage development of demand-side renewable energy resources. The commission may allow efficiency investments across generation, transmission, and distribution as well as efficiencies within the user base.
(3) In developing the goals, the commission shall evaluate the full technical potential of all available demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy systems. In establishing the goals, the commission shall take into consideration:
(a) The costs and benefits to customers participating in the measure.
(b) The costs and benefits to the general body of ratepayers as a whole, including utility incentives and participant contributions.
(c) The need for incentives to promote both customer-owned and utility-owned energy efficiency and demand-side renewable energy systems.
(d) The costs imposed by state and federal regulations on the emission of greenhouse gases.
(4) Subject to specific appropriation, the commission may expend up to $250,000 from the Florida Public Service Regulatory Trust Fund to obtain needed technical consulting assistance.
(5) The Florida Energy and Climate Commission shall be a party in the proceedings to adopt goals and shall file with the commission comments on the proposed goals, including, but not limited to:
(a) An evaluation of utility load forecasts, including an assessment of alternative supply-side and demand-side resource options.
(b) An analysis of various policy options that can be implemented to achieve a least-cost strategy, including nonutility programs targeted at reducing and controlling the per capita use of electricity in the state.
(c) An analysis of the impact of state and local building codes and appliance efficiency standards on the need for utility-sponsored conservation and energy efficiency measures and programs.
(6) The commission may change the goals for reasonable cause. The time period to review the goals, however, shall not exceed 5 years. After the programs and plans to meet those goals are completed, the commission shall determine what further goals, programs, or plans are warranted and adopt them.
(7) Following adoption of goals pursuant to subsections (2) and (3), the commission shall require each utility to develop plans and programs to meet the overall goals within its service area. The commission may require modifications or additions to a utility's plans and programs at any time it is in the public interest consistent with this act. In approving plans and programs for cost recovery, the commission shall have the flexibility to modify or deny plans or programs that would have an undue impact on the costs passed on to customers. If any plan or program includes loans, collection of loans, or similar banking functions by a utility and the plan is approved by the commission, the utility shall perform such functions, notwithstanding any other provision of the law. However, no utility shall be required to loan its funds for the purpose of purchasing or otherwise acquiring conservation measures or devices, but nothing herein shall

prohibit or impair the administration or implementation of a utility plan as submitted by a utility and approved by the commission under this subsection. If the commission disapproves a plan, it shall specify the reasons for disapproval, and the utility whose plan is disapproved shall resubmit its modified plan within 30 days. Prior approval by the commission shall be required to modify or discontinue a plan, or part thereof, which has been approved. If any utility has not implemented its programs and is not substantially in compliance with the provisions of its approved plan at any time, the commission shall adopt programs required for that utility to achieve the overall goals. Utility programs may include variations in rate design, load control, cogeneration, residential energy conservation subsidy, or any other measure within the jurisdiction of the commission which the commission finds likely to be effective; this provision shall not be construed to preclude these measures in any plan or program.

(8) The commission may authorize financial rewards for those utilities over which it has ratesetting authority that exceed their goals and may authorize financial penalties for those utilities that fail to meet their goals, including, but not limited to, the sharing of generation, transmission, and distribution cost savings associated with conservation, energy efficiency, and demand-side renewable energy systems additions.

(9) The commission is authorized to allow an investor-owned electric utility an additional return on equity of up to 50 basis points for exceeding 20 percent of their annual load-growth through energy efficiency and conservation measures. The additional return on equity shall be established by the commission through a limited proceeding.

(10) The commission shall require periodic reports from each utility and shall provide the Legislature and the Governor with an annual report by March 1 of the goals it has adopted and its progress toward meeting those goals. The commission shall also consider the performance of each utility pursuant to ss. 366.80-366.85 and 403.519 when establishing rates for those utilities over which the commission has ratesetting authority.

(11) The commission shall require each utility to offer, or to contract to offer, energy audits to its residential customers. This requirement need not be uniform, but may be based on such factors as level of usage, geographic location, or any other reasonable criterion, so long as all eligible customers are notified. The commission may extend this requirement to some or all commercial customers. The commission shall set the charge for audits by rule, not to exceed the actual cost, and may describe by rule the general form and content of an audit. In the event one utility contracts with another utility to perform audits for it, the utility for which the audits are performed shall pay the contracting utility the reasonable cost of performing the audits. Each utility over which the commission has ratesetting authority shall estimate its costs and revenues for audits, conservation programs, and implementation of its plan for the immediately following 6-month period. Reasonable and prudent unreimbursed costs projected to be incurred, or any portion of such costs, may be added to the rates which would otherwise be charged by a utility upon approval by the commission, provided that the commission shall not allow the recovery of the cost of any company image-enhancing advertising or of any advertising not directly related to an approved conservation program. Following each 6-month period, each utility shall report the actual results for that period to the commission, and the difference, if any, between actual and projected results shall be taken into account in succeeding periods. The state plan as submitted for consideration under the National Energy Conservation Policy Act shall not be in conflict with any state law or regulation.

(12) Notwithstanding the provisions of s. 377.703, the commission shall be the responsible state agency for performing, coordinating, implementing, or administering the functions of the state

plan submitted for consideration under the National Energy Conservation Policy Act and any acts amendatory thereof or supplemental thereto and for performing, coordinating, implementing, or administering the functions of any future federal program delegated to the state which relates to consumption, utilization, or conservation of electricity or natural gas; and the commission shall have exclusive responsibility for preparing all reports, information, analyses, recommendations, and materials related to consumption, utilization, or conservation of electrical energy which are required or authorized by s. 377.703.

(13) The commission shall establish all minimum requirements for energy auditors used by each utility. The commission is authorized to contract with any public agency or other person to provide any training, testing, evaluation, or other step necessary to fulfill the provisions of this subsection.

History.--s. 5, ch. 80-65; s. 2, ch. 81-131; s. 2, ch. 81-318; ss. 5, 15, ch. 82-25; ss. 15, 20, 22, ch. 89-292; s. 4, ch. 91-429; s. 81, ch. 96-321; s. 39, ch. 2008-227.

Section 366.91, F.S., Renewable Energy

366.91 Renewable energy.--

(1) The Legislature finds that it is in the public interest to promote the development of renewable energy resources in this state. Renewable energy resources have the potential to help diversify fuel types to meet Florida's growing dependency on natural gas for electric production, minimize the volatility of fuel costs, encourage investment within the state, improve environmental conditions, and make Florida a leader in new and innovative technologies.

(2) As used in this section, the term:

(a) "Biomass" means a power source that is comprised of, but not limited to, combustible residues or gases from forest products manufacturing, waste, byproducts, or products from agricultural and orchard crops, waste or coproducts from livestock and poultry operations, waste or byproducts from food processing, urban wood waste, municipal solid waste, municipal liquid waste treatment operations, and landfill gas.

(b) "Customer-owned renewable generation" means an electric generating system located on a customer's premises that is primarily intended to offset part or all of the customer's electricity requirements with renewable energy.

(c) "Net metering" means a metering and billing methodology whereby customer-owned renewable generation is allowed to offset the customer's electricity consumption on site.

(d) "Renewable energy" means electrical energy produced from a method that uses one or more of the following fuels or energy sources: hydrogen produced from sources other than fossil fuels, biomass, solar energy, geothermal energy, wind energy, ocean energy, and hydroelectric power. The term includes the alternative energy resource, waste heat, from sulfuric acid manufacturing operations.

(3) On or before January 1, 2006, each public utility must continuously offer a purchase contract to producers of renewable energy. The commission shall establish requirements relating to the purchase of capacity and energy by public utilities from renewable energy producers and may adopt rules to administer this section. The contract shall contain payment provisions for energy and capacity which are based upon the utility's full avoided costs, as defined in s. 366.051; however, capacity payments are not required if, due to the operational characteristics of the renewable energy generator or the anticipated peak and off-peak availability and capacity factor of the utility's avoided unit, the producer is unlikely to provide any capacity value to the utility or the electric grid during the contract term. Each contract must provide a contract term of at least 10 years. Prudent and reasonable costs associated with a renewable energy contract shall be recovered from the ratepayers of the contracting utility, without differentiation among customer classes, through the appropriate cost-recovery clause mechanism administered by the commission.

(4) On or before January 1, 2006, each municipal electric utility and rural electric cooperative whose annual sales, as of July 1, 1993, to retail customers were greater than 2,000 gigawatt hours must continuously offer a purchase contract to producers of renewable energy containing payment provisions for energy and capacity which are based upon the utility's or cooperative's full avoided costs, as determined by the governing body of the municipal utility or cooperative; however, capacity payments are not required if, due to the operational characteristics of the renewable energy generator or the anticipated peak and off-peak availability and capacity factor of the utility's avoided unit, the producer is unlikely to provide any capacity value to the utility or

the electric grid during the contract term. Each contract must provide a contract term of at least 10 years.

(5) On or before January 1, 2009, each public utility shall develop a standardized interconnection agreement and net metering program for customer-owned renewable generation. The commission shall establish requirements relating to the expedited interconnection and net metering of customer-owned renewable generation by public utilities and may adopt rules to administer this section.

(6) On or before July 1, 2009, each municipal electric utility and each rural electric cooperative that sells electricity at retail shall develop a standardized interconnection agreement and net metering program for customer-owned renewable generation. Each governing authority shall establish requirements relating to the expedited interconnection and net metering of customer-owned generation. By April 1 of each year, each municipal electric utility and rural electric cooperative utility serving retail customers shall file a report with the commission detailing customer participation in the interconnection and net metering program, including, but not limited to, the number and total capacity of interconnected generating systems and the total energy net metered in the previous year.

(7) Under the provisions of subsections (5) and (6), when a utility purchases power generated from biogas produced by the anaerobic digestion of agricultural waste, including food waste or other agricultural byproducts, net metering shall be available at a single metering point or as a part of conjunctive billing of multiple points for a customer at a single location, so long as the provision of such service and its associated charges, terms, and other conditions are not reasonably projected to result in higher cost electric service to the utility's general body of ratepayers or adversely affect the adequacy or reliability of electric service to all customers, as determined by the commission for public utilities, or as determined by the governing authority of the municipal electric utility or rural electric cooperative that serves at retail.

(8) A contracting producer of renewable energy must pay the actual costs of its interconnection with the transmission grid or distribution system.

History.--s. 1, ch. 2005-259; s. 41, ch. 2008-227.

Section 366.92, F.S. – Florida Renewable Energy Policy
Per SB 888 (2006)

366.92 Florida renewable energy policy.—
(1) It is the intent of the Legislature to promote the development of renewable energy; protect the economic viability of Florida's existing renewable energy facilities; diversify the types of fuel used to generate electricity in Florida; lessen Florida's dependence on natural gas and fuel oil for the production of electricity; minimize the volatility of fuel costs; encourage investment within the state; improve environmental conditions; and at the same time, minimize the costs of power supply to electric utilities and their
customers.
(2) For the purposes of this section, "Florida renewable energy resources" shall mean renewable energy, as defined in s. 377.803, that is produced in Florida.
(3) The commission may adopt appropriate goals for increasing the use of existing, expanded, and new Florida renewable energy resources. The commission may change the goals. The commission may review and reestablish the goals at least once every five years.
(4) The commission may adopt rules to administer and implement the provisions of this section.

Section 366.92, F.S. – Florida Renewable Energy Policy
Per HB 7135 (2008)

366.92 Florida renewable energy policy.--

(1) It is the intent of the Legislature to promote the development of renewable energy; protect the economic viability of Florida's existing renewable energy facilities; diversify the types of fuel used to generate electricity in Florida; lessen Florida's dependence on natural gas and fuel oil for the production of electricity; minimize the volatility of fuel costs; encourage investment within the state; improve environmental conditions; and, at the same time, minimize the costs of power supply to electric utilities and their customers.

(2) As used in this section, the term:

(a) "Florida renewable energy resources" means renewable energy, as defined in s. 377.803, that is produced in Florida.

(b) "Provider" means a "utility" as defined in s. 366.8255(1)(a).

(c) "Renewable energy" means renewable energy as defined in s. 366.91(2)(d).

(d) "Renewable energy credit" or "REC" means a product that represents the unbundled, separable, renewable attribute of renewable energy produced in Florida and is equivalent to 1 megawatt-hour of electricity generated by a source of renewable energy located in Florida.

(e) "Renewable portfolio standard" or "RPS" means the minimum percentage of total annual retail electricity sales by a provider to consumers in Florida that shall be supplied by renewable energy produced in Florida.

(3) The commission shall adopt rules for a renewable portfolio standard requiring each provider to supply renewable energy to its customers directly, by procuring, or through renewable energy credits. In developing the RPS rule, the commission shall consult the Department of Environmental Protection and the Florida Energy and Climate Commission. The rule shall not be implemented until ratified by the Legislature. The commission shall present a draft rule for legislative consideration by February 1, 2009.

(a) In developing the rule, the commission shall evaluate the current and forecasted levelized cost in cents per kilowatt hour through 2020 and current and forecasted installed capacity in kilowatts for each renewable energy generation method through 2020.

(b) The commission's rule:

1. Shall include methods of managing the cost of compliance with the renewable portfolio standard, whether through direct supply or procurement of renewable power or through the purchase of renewable energy credits. The commission shall have rulemaking authority for providing annual cost recovery and incentive-based adjustments to authorized rates of return on common equity to providers to incentivize renewable energy. Notwithstanding s. 366.91(3) and (4), upon the ratification of the rules developed pursuant to this subsection, the commission may approve projects and power sales agreements with renewable power producers and the sale of renewable energy credits needed to comply with the renewable portfolio standard. In the event of any conflict, this subparagraph shall supersede s. 366.91(3) and (4). However, nothing in this section shall alter the obligation of each public utility to continuously offer a purchase contract to producers of renewable energy.

2. Shall provide for appropriate compliance measures and the conditions under which noncompliance shall be excused due to a determination by the commission that the supply of renewable energy or renewable energy credits was not adequate to satisfy the demand for such

energy or that the cost of securing renewable energy or renewable energy credits was cost prohibitive.
3. May provide added weight to energy provided by wind and solar photovoltaic over other forms of renewable energy, whether directly supplied or procured or indirectly obtained through the purchase of renewable energy credits.
4. Shall determine an appropriate period of time for which renewable energy credits may be used for purposes of compliance with the renewable portfolio standard.
5. Shall provide for monitoring of compliance with and enforcement of the requirements of this section.
6. Shall ensure that energy credited toward compliance with the requirements of this section is not credited toward any other purpose.
7. Shall include procedures to track and account for renewable energy credits, including ownership of renewable energy credits that are derived from a customer-owned renewable energy facility as a result of any action by a customer of an electric power supplier that is independent of a program sponsored by the electric power supplier.
8. Shall provide for the conditions and options for the repeal or alteration of the rule in the event that new provisions of federal law supplant or conflict with the rule.
(c) Beginning on April 1 of the year following final adoption of the commission's renewable portfolio standard rule, each provider shall submit a report to the commission describing the steps that have been taken in the previous year and the steps that will be taken in the future to add renewable energy to the provider's energy supply portfolio. The report shall state whether the provider was in compliance with the renewable portfolio standard during the previous year and how it will comply with the renewable portfolio standard in the upcoming year.
(4) In order to demonstrate the feasibility and viability of clean energy systems, the commission shall provide for full cost recovery under the environmental cost-recovery clause of all reasonable and prudent costs incurred by a provider for renewable energy projects that are zero greenhouse gas emitting at the point of generation, up to a total of 110 megawatts statewide, and for which the provider has secured necessary land, zoning permits, and transmission rights within the state. Such costs shall be deemed reasonable and prudent for purposes of cost recovery so long as the provider has used reasonable and customary industry practices in the design, procurement, and construction of the project in a cost-effective manner appropriate to the location of the facility. The provider shall report to the commission as part of the cost-recovery proceedings the construction costs, in-service costs, operating and maintenance costs, hourly energy production of the renewable energy project, and any other information deemed relevant by the commission. Any provider constructing a clean energy facility pursuant to this section shall file for cost recovery no later than July 1, 2009.
(5) Each municipal electric utility and rural electric cooperative shall develop standards for the promotion, encouragement, and expansion of the use of renewable energy resources and energy conservation and efficiency measures. On or before April 1, 2009, and annually thereafter, each municipal electric utility and electric cooperative shall submit to the commission a report that identifies such standards.
(6) Nothing in this section shall be construed to impede or impair terms and conditions of existing contracts.
(7) The commission may adopt rules to administer and implement the provisions of this section.
History.--s. 18, ch. 2006-230; s. 42, ch. 2008-227.