Governor Crist and the Florida Legislature have catapulted this state to the forefront of the debate on renewable energy and the reduction of greenhouse gas emissions. With the passage and signing of HB 7135, the Legislature set Florida on a path to develop renewable energy, pursue energy independence, stabilize skyrocketing energy costs and develop the Florida economy.

11 years ago, Florida Crystals committed itself to the development of renewable energy. We have invested hundreds of millions of dollars to develop what today is the largest biomass fueled power plant in all of North America. Our plant uses a carbon neutral process to deliver up to 140 MWH of clean, reliable energy 24 hours a day, displacing approximately 360,000 tons of GHG emissions and 1 million barrels of oil barrels of oil per year. We use the process of photosynthesis to grow our energy, power our operations, and deliver to the grid. We believe if Florida is going to have a substantial amount of renewable energy production, biomass electric generation will be the predominant source of renewable production, given Florida’s highly favorable climate to grow energy crops.

I. Policy Objectives should be the guiding light.

The Governor and the Florida Legislature have established three basic policy objectives:

1) To reduce greenhouse gas emissions produced in Florida so that we can do our part to reduce global warming;

2) Advance fuel diversity and energy independence for Florida residents; and

3) To promote investment and economic development in Florida.

In addition, the Commission has a standing responsibility to ensure the production and delivery of electricity is accomplished in a cost responsible manner.

Florida Crystals respectfully submits that biomass generation meets all of the above objectives.


The biomass currently burned at Florida Crystals is burned through what is referred to as a biogenic process. Our cane is grown in our fields, absorbing CO2 through photosynthesis. The cane is harvested. The fibrous residue (bagasse) is then converted to energy in our boilers, emitting the same CO2 that was originally sequestered in the plant. This
cycle is repeated, creating a greenhouse gas neutral process. Additionally, we combust and convert to energy over 800,000 tons of wood waste that would otherwise be placed in landfills. This has an even greater GHG reduction benefit by reducing landfill methane which is 18 times more greenhouse gas potent than CO2.

The combustion of biomass in an energy efficient facility results in the production of net electrical energy. Florida Crystals delivers nearly 600,000 MWH per year to the Florida grid. This energy delivery displaces energy which would have been generated with fossil fuels and thus reduces GHG emissions by approximately 360,000 tons per year.

Numerous studies have quantified this data. Recently, a scientific study was released by the Green Power Institute in Berkeley, California authored by Gregory Morris, PHD, concluding:

*Biomass and biogas energy systems are generally recognized to be carbon neutral, because the carbon in the fuel is already part of the global stock of carbon that circulates between the atmosphere and the biosphere. As carbon-neutral energy sources, bioenergy generators will not have to acquire greenhouse-gas emissions allowances to offset their stack emissions of CO2.*

*Like all renewable and carbon-neutral energy sources, biomass and biogas energy production displaces the emissions of fossil greenhouse-gas emissions associated with energy production from fossil fuels. In addition, bioenergy production reduces net biogenic greenhouse-gas emissions by avoiding the alternative disposal of the energy resources. The reduction of net biogenic emissions associated with biomass energy production in California has a long-term global warming benefit that is comparable in magnitude to the benefit of avoiding fossil-fuel use.*

2. **Among renewables, biomass power generation offers the largest contribution to fuel diversity.**

Each technology has strengths and weaknesses in the marketplace. One clear strength of biomass is its ability to produce a consistent amount of energy on a base load basis, independent of weather conditions. Technologies that demonstrate a greater potential to provide reliable base load capacity generation should be favorably viewed by the commission and incentivized in the rulemaking process. We believe the Commission should consider the ratepayer benefits that come from technologies that provide this premium benefit and incorporate it in the rule accordingly.
3. Biomass power generation contributes directly and significantly to investment and economic activity in Florida.

The benefits of biomass to economic development are evident. Biomass is not only a renewable fuel, it is also a local, Florida fuel. The dollars spent to produce or procure the biomass fuel as well as to operate the power plant remain in the state, year after year. By contrast, the fuel dollars spent to operate a fossil fuel plant leave Florida and contribute to economic activity elsewhere.

5 years ago, an economic study was conducted by the Washington Economics Group to demonstrate the economic impact of biomass electric generation in Florida. An important fact to consider: 5 years ago, the cost of natural gas was a quarter what it is today, the cost of oil was under $40 a barrel, the cost of building a nuclear facility far less than today. Even then, this economic study concluded as follows:

Our analysis of biomass electric power generation indicated that increasing the share of Florida’s electricity produced from biomass energy is not only likely to yield positive environmental and energy security benefits, but is also likely to have strong, positive economic impacts across the state. The production of electricity with biomass technology has much stronger links to the state’s industries than those association with combined cycle technology (and those associated with technologies that use other traditional fuels). As a result of these stronger economic linkages, a small increase in the share of Florida’s electricity produced from biomass leads to an appreciable net increase in the level of employment, labor, income, and gross state product. State and local revenues are positively affected as well.

II. Other Bedrock Principles

1. Florida should not segment its renewable energy policy with set-asides, carve outs or multipliers before new technologies have had a chance to develop, or without thorough analysis of what may be an unnecessarily expensive price tag passed to consumers when one technology is given advantage over the other.

The development of new renewable technologies is rapidly advancing. Many promising technologies have not yet had the chance to be perfected and tested on a commercial scale. It is likely the renewable technology applications that will be most beneficial to Florida in the next twenty years have not been perfected. Once a technology has been “set aside” with a designated market segment, it will be nearly impossible to reduce that segment's market allocation and reallocate it to other technologies, even if other technologies prove to be less expensive and have a greater benefit for Florida.

The Legislature considered and ultimately rejected in HB 7135, directing the Commission to set aside certain technologies in the RPS. HB 7135 provided a number of statutory directives to the Commission. Section 366.92 (3) uses the term “shall” no
fewer than 10 times, imposing on the Commission certain boundaries within which the rule may be promulgated. However, only one existence of the term “may” can be found in this subsection. In 366.92 (3)(B)(3), it reads: “(The PSC) May provide added weight to energy provided by wind and solar photovoltaic over other forms of renewable energy….” We believe there is no question this permissive language was intended to entrust the Public Service Commission to use its careful judgment and exploring all impacts of “added weight” to certain technologies, or set-asides before proceeding.

In other states, the RPS process has been one of evolution and refinement over time. The Public Service Commission should learn from the mistakes made in other states and proceed with caution as it relates to setting aside technologies, or “adding weight”. Instead, it should let the marketplace unfold and encourage renewable technologies to mature, provide meaningful large scale production, and become more cost competitive. Setting aside, or providing “added weight” to expensive technologies will unnecessarily raise electric rates and may have the unintended consequence of turning the tide of public opinion against renewable energy.

2. Existing renewable resources are very valuable to the development of the RPS and the rule should reflect this reality.

The Legislature in, Chapter 366.92 (1) clearly states that “the intent of the Legislature is ... to protect the economic viability of Florida’s existing renewable energy facilities”. Existing renewables have been making the contributions described above for years and any policy that disadvantages existing facilities in the rule would risk backsliding and a contraction rather than an expansion of Florida renewable resources.

In January, 2008, the California PUC issued a report to its Assembly on the progress of their RPS. In the report it noted that while renewable contracts with investor owned utilities in California have increased substantially, the projects have been slow to develop.

The three main reasons why these contracts have not developed into completed projects are described on page three and four of the report: Transmission constraints, permitting challenges, and developer inexperience.

All three of these problems could be greatly diminished if existing renewable energy producers are provided with incentives or inducements to expand their operations, particularly at or near existing sites. An excellent example of the value of existing sites are the actions of Florida electric utilities. Over the past 15 years, a very significant %, perhaps over 50% of new generating capacity in Florida, has been the result of expansions or repowering of existing sites.

A corollary situation could well occur with existing biomass facilities. Expansion of existing projects is the real “low-hanging fruit” of renewable energy policy that will likely fast-track the development of renewable energy.

Existing renewable facilities are spending significant resources to operate, conform to environmental requirements, and to remain competitive with new
technologies. The case for including existing renewables is simple: exclusion from the benefits of an RPS or any “set aside” which favors new facilities at the expense of existing facilities would; (i) stifle the growth of renewable energy and deny the program one of the most promising expansion pathways; (ii) relegate existing facilities to an inferior class status and threaten the long term viability of these facilities; and (iii) demonstrate a fundamental unfairness.

III. Methodology and Standards for Regulatory Approval of Renewable Projects and Contracts.

1. Methodology and Standards.

As explained above, the Governor and the Legislature have established the objectives of the RPS program. These objectives are:

a) To reduce the emission of GHG within Florida.
b) To diversify the types of fuels used to generate electricity in Florida and reduce dependence on natural gas and fuel oil.
c) To promote investment and economic development within the state.
d) To advance the development of renewable generation technologies.

In addition, the Commission has a standing responsibility to consider the cost implications of any action and to achieve the above objectives with due consideration to the overall cost to produce and deliver electricity in Florida.

In evaluating the merits of any individual renewable project or alternative the Commission shall consider the performance of such individual project or alternative relative to other renewable technologies and relative to conventional fossil and nuclear fuel generation alternatives. The Commission shall conduct such analysis based on the following criteria:

a) The overall cost of the alternative, including the risk of volatility to fuel and other components of costs for such alternative.
b) The contribution to the reduction of GHG emissions in Florida.
c) The contribution to fuel diversity in Florida.
d) The contribution to investment and economic development in Florida.
e) The contribution to the advancement of renewable power generation systems.

2. Cost Prohibitive.

HB 7153 requires the Commission to consider whether the cost of securing renewable energy (on an individual or aggregate basis) is cost prohibitive.

The PSC should set in the rule a specific, equally applied definition of “cost prohibitive” taking into consideration that “avoided cost” pricing models have been
set aside in the new legislation for purposes of complying with the RPS. Florida Crystals supports the Commission’s efforts to protect ratepayers from unnecessary rate increases and supports attempts to balance the development of renewable energy with its cost to ratepayers. HB 7135 provided that noncompliance with the RPS shall be excused if “…the cost of securing renewable energy or renewable energy credits was cost prohibitive.” This “cost prohibitive” test was specifically created by the Legislature to entrust the Commission with the authority to balance these needs responsibly and appropriately. We believe the Legislature gave the Commission this authority with the intent that such a cost test would contain one clear methodology, one clear standard, and apply equally to all renewable power production, whether generated by an IOU or independent power producer. Further, we believe a “Tiered” definition of “cost prohibitive” that sets different pricing standards for different technologies violates the letter and spirit of the legislation. Ultimately, ratepayers are going to bear the burden of compliance, and any “cost prohibitive” standard that prices renewable power differently will skew market forces in favor of more expensive options, thus subjecting the ratepayer to unnecessary rate increases. Had the legislature intended otherwise, it would have prescribed such an approach.

We also believe the Commission should read this test in conjunction with the newly created 366.92 (3)(b)(1) which clearly, for purposes of complying with the RPS, sets aside avoided cost pricing models in 366.91(3) and (4). The avoided cost pricing model for renewable energy contracts previously in effect before passage of HB 7135 was a destructive force, obstructing the development of renewable energy in Florida. HB 7135 sets aside this model to allow for fair and reasonable pricing of renewable energy more reflective of the cost of producing renewable energy. We welcome this legislative change, and look forward to working with the Commission to balance these needs appropriately.

In arriving at a numerical standard, the Commission should consider at least two reference points in determining whether the cost impact of an RPS, if any, is indeed cost prohibitive.

First, the increase in retail rates over the past few years. Since the year 2000, the average price of retail electricity to Florida residential consumers has increased over 40%, from an average of 7.7 cents/kwh to over 11.0 cents/kwh. And rates continue to escalate. For example, FPL has just received approval for an additional 8% increase in fuel rates.

Up until now, this level of price increase has been approved.

Second, taxes represent nearly 15% of the average retail electricity bill.

Based on the above, it is difficult to argue that increases of at least 15% in overall electric bills and arguably much higher increases are prohibitive or unacceptable.

On behalf of Florida Crystals, our team looks forward to working with the Commission in promulgating a rule that achieves the stated purposes of reducing greenhouse gasses,
promoting energy independence, developing the Florida economy and keeping rising rates as stable as possible using the most efficient green technologies.
Comments by Florida Crystals Corporation (FCC)

FPSC Workshop on RPS,
July 11, 2008
FCC Power Plant: Size and Operations:

- Located in Palm Beach county; adjacent to Florida Crystals sugar mill and refinery
- 140 MW: Largest Biomass-to-Electricity Facility in the Country
- Operating for > 10 years
- 24/7, 90+% availability on firm contracts
- Ability to expand
Florida RPS: Policy Objectives

- Reduce GHG emissions
- Advance fuel diversity in Florida
- Promote investment and economic development in Florida
- PSC has standing call to ensure RPS is implemented in a cost responsible manner.
Benefits of Biomass:

- **Positive Impact on Global Warming**
  - FCC plant displaces 360,000 TPY of GHG emissions

- **Sensible Waste Disposal/Reduces Methane**
  - Recycles Waste ... Saves Methane and Landfill Space

- **Base Load Operation**
  - Largest contribution per MW of capacity to fuel diversity.

- **A Florida Resource/Plus for Florida Economy**
  - 85% of Money Spent Stays in Florida...*every year*
  - 10 x More Florida Economic Activity Than Fossil Fuels

- **Cost Competitive**
  - Competes favorably with other renewables and solid fuel conventional.
Approving Resources: Methodology and Standards

- Analyze each alternative for conformance to policy objectives per MW of capacity or $ invested:
  - GHG emission reductions
  - Contribution to fuel diversity
  - Economic development

- Cost performance
  - Note: 366.92(3)(b)(1) supersedes “avoided cost” standard.
  - Rank alternative vs other renewables and conventionals.
Florida RPS: Other Bedrock Principles

- **RPS: 20% by 2020**
- **No set asides**

**Existing resources must count at full value**
- Legislative direction (Ch 366.92 (1)); policy objectives
- Market access, predictability are essential for survival.
- Existing sites are valuable expansion platforms.
- Fairness

**Interpreting “Cost Prohibitive”**
- Applies “among individual alternatives” and on “aggregate” basis.
- Same standard for all alternatives; no “tiers” or “segments”.
- Reference points:
  - Florida electricity prices have increased over 40% since 2000.
  - Taxes alone account for nearly 15% of residential customer bill.