BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. UNDOCKETED

In the Matter of

RENEWABLE PORTFOLIO STANDARD (RPS).

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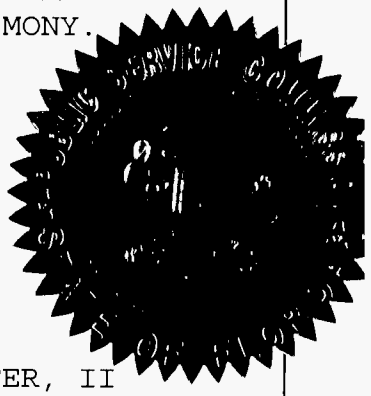

PROCEEDINGS:	WORKSHOP
BEFORE:	CHAIRMAN MATTHEW M. CARTER, II COMMISSIONER LISA POLAK EDGAR COMMISSIONER KATRINA J. McMURRIAN COMMISSIONER NANCY ARGENZIANO COMMISSIONER NATHAN A. SKOP
DATE:	Friday, July 11, 2008
TIME:	Commenced at 9:30 a.m. Concluded at 3:17 p.m.
PLACE:	Betty Easley Conference Center Joseph P. Cresse Hearing Room 148 4075 Esplanade Way Tallahassee, Florida
REPORTED BY:	MARY ALLEN NEEL, RPR, FPR

I N D E X

P R O C E E D I N G S

CHAIRMAN CARTER: Good morning to everyone. We'll ask everyone to take your seats, and welcome to our workshop on the renewable portfolio standards.

And with that, staff, would you read the notice.

MS. MILLER: Cindy Miller with the Commission legal staff. Pursuant to notice issued June 27th, 2008, this date, time, and place were set for a Florida Public Service Commission workshop on the renewable portfolio standard.

CHAIRMAN CARTER: Commissioners, just kind of a brief statement, and then we'll ask Mr. Futrell to kind of go from there for our staff presentation.

Just for the record, the Florida Public Service Commission has a longstanding policy of promoting the use of renewable energy in Florida. Today, given the growing environmental and economic concerns in our state and across our nation, it's even more important that we find ways to utilize renewable generation technology to meet more of our future energy needs.

Our Governor and the Legislature have demonstrated support for the development of renewable energy as an important part of an overall state energy

policy designed to reduce greenhouse gas emissions, increase fuel diversity and energy security, and to encourage capital investment and economic development in our great state. Recently enacted, the energy legislation requires the Commission to submit a renewable portfolio standard rule to the Legislature by February 1 of 2009 for ratification.

The purpose of our workshop today is to discuss the renewable portfolio standard requirements of the new energy legislation and hear the stakeholders' specific recommendations for elements of an RPS that should be addressed in the Commission's rule. Commissioners and those of you in the public, this workshop is a opportunity for us to take input from the interested parties who are joining us today to discuss the issues and give direction to our staff on how to move forward on the development of our RPS rule.

With that, Mr. Futrell, you're recognized.

MR. FUTRELL: Thank you, Mr. Chairman. Mark Futrell with the Commission staff. And before we move into our formal part of our agenda, I would like to just take care of a few housekeeping matters.

First, the agenda and all the presentation materials and comments that have been filed prior to the workshop are available to the audience here at this end

of the workshop. Also, Commissioners, you should have a notebook with all the presentation materials and comments that have been filed.

There's a sign-up sheet in the back of the room on this side, and we would appreciate it if all those attending would sign up so we can have a record of your attendance. We keep a list of attendees to our various workshops and use that to notify parties of upcoming Commission events and also documents that have been received and posted onto our website.

We are going to make copies of all the materials that are submitted in this workshop on our home page. Hopefully, that will start appearing on Monday, and we invite you to check that out to access those documents. Also, we'll be having post-workshop comments, and those materials will also be posted onto the website.

Commissioners, as you recall, four workshops were held last year to gather information on a renewable portfolio standard. These workshops were in many ways conceptual in nature, where the many policy considerations that go into the development of an RPS were discussed.

As the Chairman mentioned, the Legislature has given direction on a specific Florida RPS. Going

forward, we will look to the statute in developing the RPS rule. Ms. Peterson of the staff will give you a description of exactly the contents of this new statute with regard to the RPS rule.

We view the Legislature's directions that the RPS covers supply-side renewable resources, and in the energy efficiency goal setting process that the Commission will undertake, that will be the forum for discussing demand-side or customer-side resources.

Now, this morning, we'll first hear, as I mentioned, a presentation from Ms. Peterson on the RPS statute, and then we'll look forward to discussion among the parties and Commissioners on several presentations and remarks that parties have signed up to speak on. We'll also have a period at the end of the day for public comment. And also, any other parties who wish to speak, if they would come see staff during the day, during breaks any time, and give us a list of those who want to speak, we'll keep a record, and then we'll have a period of time at the end of the day for that.

First we're going to ask Ms. Angela Peterson if she would come forward and provide some remarks on the RPS requirements of the energy bill.

CHAIRMAN CARTER: Before Ms. Peterson comes, just as a heads-up, we want to have an opportunity to

hear from everyone, so we've asked, and I think staff has conveyed to those that are making presentations to kind of keep your presentations within the context of ten minutes. That way we can hear from everyone as well as have a discussion from the bench with the parties.

Ms. Peterson, good morning.

MS. PETERSON: Good morning. Among other things, House Bill 7135 included many provisions, one of which included and encouraged the development of renewable energy technologies here in Florida. I want to take the opportunity today to discuss what the law says with regard to establishing a renewable portfolio standard, in particular, looking at Section 366.92, which outlines Florida's renewable energy policy.

The legislative intent of this section remains the same, and that is to promote the development of renewable energy, to protect the economic viability of existing renewable energy facilities, to diversify the type of fuel used to provide energy, to lessen dependence on natural gas and fuel oil, to minimize the volatility of fuel costs, to encourage investment within the state, improve environmental conditions, and at the same time, to minimize the cost of power supply to electric utilities and their customers.

The PSC is directed to adopt rules in order to

establish a renewable portfolio standard, an RPS for each provider. "Provider" in this case means an investor-owned utility, an IOU.

Additionally, each municipal electric utility and rural electric cooperative is to develop its own standards for the promotion, encouragement, and expansion of its renewable energy standard and encourage energy conservation and efficiency measures. These standards are to be identified in a report submitted to the PSC on or before April 1st, 2009, and every year thereafter.

Looking at the definitions, the Florida renewable energy resources definition remains the same, that is, electrical, mechanical, or thermal energy produced from a method that uses one or more of the following fuels or energy sources: hydrogen, biomass, solar, geothermal, wind, or ocean energy, waste heat, or hydroelectric power.

Renewable energy is defined as hydrogen from sources other than fossil fuels, biomass, solar, geothermal, wind, ocean energy, and hydroelectric power. It also includes the alternative energy resource, waste heat from sulfuric acid manufacturing operations.

And the reason we're here today, an RPS or renewable portfolio standard. This 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.

In the following slides, I'll get into the detail of the RPS contents, but I want to give you the overarching requirements for rulemaking. PSC is directed to adopt rules requiring an RPS for each IOU. In developing these rules, PSC is to consult with the Department of Environmental Protection and the newly created Florida Energy and Climate Commission. The draft rule is to be presented to the Legislature by February 1, 2009, and the rules may not implemented until ratified by the Legislature.

As we've discussed, House Bill 7135 requires that the PSC develop rules in order to establish a renewable portfolio standard for each provider, each IOU, which requires them to supply renewable energy to their customers either directly, by procurement, or through renewable energy credits or RECs. We'll talk about those in a minute.

The rule is required to include methods of managing the cost of compliance. The PSC is given rulemaking authority in order to provide for annual cost recovery and incentive-based adjustments to authorized rates of return on common equity to providers. The rule

may provide added weight for energy provided by wind and solar over other forms of renewable energy.

The rule is to provide for compliance measures and conditions under which noncompliance may be excused due to a determination by the Commission that there is not is a sufficient supply of renewable energy to meet demand or it's cost-prohibitive. The rule is required to include compliance monitoring and enforcement and is to ensure that energy credited towards the requirements of the RPS is not counted towards any other program, no double counting.

Additionally, in developing the rule, the PSC is to evaluate through 2020 the current and forecasted levelized cost in cents per kilowatt-hour and current and forecasted installed capacity in kilowatts for each renewable generation method. Upon ratification of the rule by the Legislature, the PSC may approve projects and power sales agreements with renewable power producers and the sale of RECs necessary to comply with the RPS.

Renewable energy credit trading or REC trading. REC is a product that represents the unbundled, separate, renewable attribute of renewable energy produced in Florida. It's equivalent to one megawatt-hour of electricity generated by a source of

renewable energy located in Florida. The rule is required to include procedures to track and account for RECs, including ownership of RECs, relative to whether the renewable energy supplier acts independently of a utility-sponsored program. The rule is also to include the appropriate period of time for which RECs may be used.

Reporting. On or before April 1st of the year following final rule adoption, each provider, each IOU is required to submit a report to the PSC which describes the steps they've taken in the prior year and the steps planned in the future in order to add renewable energy to their portfolio. It is also to state whether they were in compliance with the requirements of the RPS in the prior year and the plans for future compliance.

Additionally, each municipal electric utility and rural electric cooperative is to develop their own renewable energy standards and energy conservation and efficiency measures. They are to report these standards through a report to the PSC on or before April 1st, 2009, and every year thereafter.

And that's it. Do you have any questions?

MR. FUTRELL: All right. Commissioners, we're now moving to the period where we've had several parties

express interest in giving some formal presentations and remarks. And we would ask those that are going to speak to please identify yourself. Our workshop today is being transcribed, so please clearly identify yourself and who you're representing.

And first on the agenda is Mr. Steve Adams with the Governor's Office, the Energy and Climate Commission.

MR. ADAMS: Commissioners, good morning. My name is Steve Adams. I am representing the Executive Office of the Governor, the newly created Florida Energy and Climate Commission. I stand before you today just 11 days since the creation of this new body by House Bill 7135.

On behalf of the Governor's Office, I want to commend the Commissioners for the work that has been invested by this body over the past year since Governor Crist signed Executive Order 127 last July at the Serve to Preserve Summit.

The Governor, as you know, called for a 20 percent RPS and called also for particular emphasis on solar and wind technologies in the constitution of that portfolio standard. Since the work has been done to date, the Legislature has enacted 7135, and the Governor proudly signed that just three weeks ago. We

were gratified by -- the content of the bill has many very important provisions that will help to reduce greenhouse gas emissions within the State of Florida as well as increase the energy security of our state.

We believe the renewable portfolio standard, the issue before you today, is one of the most vital strategies to moving this piece of work forward. We want to convey to you our willingness to work with you and with your staff over the next several months as you move through the rulemaking process.

We believe the renewable portfolio standard has very important economic development dimensions for the State of Florida. This will be a key strategy for job creation in a very important economic sector for the State of Florida moving forward, and that is in this area of advanced energy technologies.

So, Commissioners, with that, I really just wanted to say hello this morning, introduce myself, and to convey to each of you our willingness in the new commission to work with you and with your staff over the coming months.

Chairman, thank you.

CHAIRMAN CARTER: Thank you very kindly, Mr. Adams. I know you guys are doing a great job. You worked yesterday and the last two days, and now here you

are again. We appreciate your efforts.

MR. ADAMS: Thank you, Chairman.

CHAIRMAN CARTER: Commissioners? Mr. Futrell.

MR. FUTRELL: Thank you, Mr. Chairman. Next on the agenda is Mr. Michael Dobson with the Florida Renewable Energy Producers Group.

Is there any member of the Florida Renewable Energy Producers Group in attendance today?

Okay. Seeing none, we'll move to our next speaker, Ms. Christy Herig with the Solar Electric Power Association.

MS. HERIG: Okay. Well, I too have been with this group for ten days now, but the Solar Electric Power Association is a group that is -- well, a little bit about the outline, but I'm not going to do this, because we want to keep it to ten minutes. You can see it in your stuff.

It was formed in 1992 as the Utility Photovoltaic Group with a lot of funding from DOE for the purpose of developing business scenarios with utilities. It has gone through a lot of changes, but it is still focused on utilities. The membership comes from several areas, but our services are still focused on utilities. Some of the really important information I think has come out of here, and as far as the Public

Service Commissions and staffs and energy offices, we give it all away for free. There's no membership requirement, so I would encourage you to take advantage of it.

But most recently, the business scenario report that came out in which Southern Cal Edison and Duke and Southern Company, many utilities were on an advisory board to develop that report. And I think making the business work for utilities is one of the most important things here also, and before I move on, the idea of integrating, because, you know, energy service and business is going through a change, so you need to figure out how to integrate the renewable industries with the utilities, with the environmental raw wounds that we have.

So keeping it quick, I don't need to go over these real quick, but remember, I've been in solar for -- well, in 1988, I built a plant for Florida Power Corporation back then over in Orlando, so it's been a long time. I never sold this house. I lived here in Florida. In fact, even though I worked at NREL for eight years, my colleagues a couple of nights ago laughed about the fact that I seldom showed up in Colorado. I was still working from Florida.

So in Florida, our solar radiation, you either

have a total measurement or two measurements, direct and diffused. Of the total, remember, you have either -- that is what PV absorbs.

I just have to bring this up, because SEPA just took 31 utilities over to Germany for a fact-finding mission. I understand the Governor is over in Europe right now on a fact-finding mission. This is a comparison of the resources between Germany, who did 1,000 megawatts, and I think 1,000 megawatts again in 2007. The U.S. did little better in 2007. They did 200 megawatts. But our resource across the board is better. Germany looks like Alaska.

On direct, which is for concentrating solar power, Florida doesn't look real good. I've done a lot of studies for individual municipalities and counties out in California, and they can make it work. There's a lot of attributes that go into concentrating solar power. Transmission has to be nearby, just like wind.

I wanted to just -- these next two slides say that DOE has this Solar America initiative, and other than Orlando, Florida hadn't really taken part of it. There is some incredible work being done under this initiative. One item that is -- that I think Florida needs to take part in is a big smart grid consortium. And I think if we're going to make renewables work, we

need to think in terms of smart grid.

So really, the only way we've taken advantage of this is, Orlando Utilities is now a solar -- Orlando is now a solar city, and the Orlando Convention Center is one of the showcases.

And when we talk about renewable, and I know that the industry here won't let you forget, but remember, solar water heating can have a big impact here in Florida. And Lakeland has been deploying solar water heating systems and selling thermal energy for years now very successfully, and their program is looked at -- I've been working on an International Energy Agency project for five years. Their program is not only looked at across the United States, but the international community has looked at it.

We don't have to go into details here, but the U.S. has definitely fallen behind in --

CHAIRMAN CARTER: Excuse me, Christy, one second. Let me just ask you a quick question.

MS. HERIG: Sure.

CHAIRMAN CARTER: Back up for a second about the solar water heating, the cumulative value from '79 to 2006, this 136,000 solar water heaters.

MS. HERIG: Yes.

CHAIRMAN CARTER: Is that in one concentrated

area of the state, or is it just scattered throughout?

MS. HERIG: It's all over the state. It's not in a concentrated area of the state. Up until a couple of years ago, Florida, Hawaii, and California were -- and I'll look towards the industry guys to back me up on this, but Florida, Hawaii, and California were the only states that were really still deploying water heaters on a regular basis.

CHAIRMAN CARTER: Thank you. Commissioners, anything? Thank you. You may proceed.

MS. HERIG: Our annual state, as you can see -- my 2007 numbers have been updated. These were the ones that came out back in January, and I just saw an update. California did a little over 100. The other states are probably about where you see.

My point here is, though we're seeing some deployment of PV in Florida because of the rebate, it's still not where it should be. But I have -- I just came from Albany, New York, a big meeting up there, and the industry tells me that they've negotiated a few pretty large deals down here.

I also wanted to say that, you know, we're not that far away, and a lot of the industry up in New York said the same thing. You know, this is -- currently we're close to having a good rate of return. Now, this

is with incentives, this map, as far as having a rate of return.

This is without incentives with a reduction in price in 2015 and with an aggressive increase in electricity prices, and before that was the low aggressive, the low price EIA. And the EIA forecast did come out before we saw some of the incredible increases in both coal and oil that we see right now. So both the conservative and aggressive forecasts from EIA are going to be updated, according to my contacts there.

And the rooftop potential, Florida is right there. And before I go too far here, both rooftop and greenfield -- you know, I think we need to look at all applications, but let's not forget that we've got a lot of big boxes here in Florida that is essentially real estate that could be used.

And I just had to bring this in. In this trip to Germany -- and as I said, I have been working this International Energy Agency project titled "Urban Scale PV," and this is a site, 440 kilowatts of PV on a 400 kVA transformer, completely integrated. But the most impressive thing here is the energy efficiency associated with it. I mean, you see this very commonly in Germany, not so much in Spain. They have more solar farms there. But Germany, now in France, the

Netherlands, this is a common sight. And in this case, I do know the architect. He redesigned it to accommodate the PV more fully.

Setting policy. I was involved with the CEC back in 1996 when they first started. And, you know, I don't think you can set policy in isolation, and I don't think policy can be set and not re-evaluated. So all I want to say here is, you know, set up a system where there's input from the market, you're looking at the industry changes -- and when I say industry, I'm talking utilities and the renewable industry -- and adjust your policy accordingly. Looking at both Europe and Japan, China, and the U.S., you know, we're not that far away, so we need to be thinking in terms of a flexible policy.

Here is a really good graph, because it shows when California did not set their policy -- set their policy in stone and moved forward and then took away the policy, you just don't get a good market transformation.

Alternatively, when you look at Japan, though their market has declined somewhat with a zero subsidy, they still have a substantial market deploying in Japan. And they went after, you know, a segment, had a policy in place that was transparent, managed to bring prices down, grow industry, and have an environmental impact as well as a sustained market.

And this just says, you know what, there's a lot of people looking at dropping policies. And I really do think that when you design a policy, you need to make sure that you are considering the market and adjust it accordingly.

These are policy objectives actually developed by a lot of people that are in the room, a lot of the groups, the Solar Alliance, the Vote Solar. Again, I may be repeating myself, and I'm not going to go through all of them, but one thing I'm going to really bring up is the economic development and job.

I've been working with Duke with their recent filing, and I was just very pleased when they came to me and they said, "Well, you know, our economic development guys have a bunch of questions we can't answer. If we got a plant here, how many kilowatt-hours does it take?" Well, I happened to be working in that area, and I could tell them, you know, if you have a 100-megawatt plant, what kind of sales they're going to see from a 100-megawatt plant, what kind of jobs.

I had a calculator where I bought -- I used to buy the economic -- the Census Bureau, the economic arm of the Census Bureau multipliers to develop how many jobs came from solar and the decrease in utility jobs, and I've been using that from a number of years. We now

have empirical data from Europe, and you get about 10 job-years for every megawatt deployed. And remember, that's one job for one year. People say jobs often when they really mean job-years.

And again, the administrative transparency and simplicity, remember the economist's rule of a real market is always transparent to all players.

Moving on, I also agreed with the Florida Solar Energy Association's decision to represent -- I'm sorry. I'm moving too fast. I also want to say, with the recent rulemaking, another area that I work in is land use in municipalities, urban planning. When I brought it up five years ago to this group of 22 countries working on urban scale PV, they said, "Oh, it's not important." It is now the focus of the study of 22 countries, and we guesstimate about $10 million. The EU alone put 3 million into this project. You know, you can see it probably on your computer screen better. I don't know how the printout looks.

But working with municipalities, the recent legislation in Florida, where the comp plan is going to include an energy element and the other elements are going to include consideration of energy, you know, give some more guidance to the municipalities and the counties and regions in Florida that develop that

trickle-down comp plan, because I think the hassle factor when it come to not just solar, but every renewable energy, is one of the most important issues that you can take advantage of, and that's part of this whole integration.

Okay. Moving on, I know that you guys have had some workshops, but things change so quickly. I developed these tables of the 50 states and where the policies are, and I have to update them every six months. You know, the state RPS, state RPS with solar, the information is out there. I'm sure you know about the DSIRE webbase, website. And, you know, just ask, because SEPA is a resource, and DOE is an incredible resource also.

Florida related energy goals, I did this analysis when the Governor first made his announcement, looking at what his announcement was in the executive order and whether we would reach it. And what I did was, I looked at the base year, the 2012, 2025, and 2050, subtracted out energy efficiency and the renewable portfolio standard. We can get there. We can get there with a portfolio, because I -- I was uncertain we could. But we look sort of like Illinois and New York as far as the energy mix goes, and New York is very aggressive.

I want to make the point one more time about

integration. I was on one of the committees for the 2020 Commission back -- way back when, and one of the advice -- one of the advisories that came out of the committee was, you know, look to your universities, you know, look to your utilities, look to your industry and state, and do a lot of coordination. I think that's getting done, I think, but I just -- I think it needs to be in the forefront of your mind, on the radar screen at all times. Anyway, I just wanted to hand that out.

And then I also agreed to bring forth the position of the Florida Solar Energy Industries Association, and that is that they're thinking in terms of a suite of policies, and here they are.

I don't have to go over all of them, but one that they accepted that I really stuck in there because I'm here in Florida working with municipalities, when undergrounding neighborhoods, think about design for DG compatibility. There's a lot of undergrounding going on here in the State of Florida. I'm really glad to see it, because I think it makes us look esthetically much better, and I think it helps us with storms, but DG compatibility is an issue.

And they also are thinking in terms of the market responsive renewable energy payment. I don't think that's an influence, from the trip to Germany,

since only one utility went with us from Florida.

And the benefits, these were calculated. The jobs were not empirical, but I would like to go back and use some of the empirical numbers that we now have.

And I just had to pull it in, and Ed Reagan said I could use this quote. He was one of the people that did go to Germany with us. And he came back -- we went out there with a lot of lot of conservative utility guys who said, "This just won't work in the U.S." By the end of the week, they said, "This is real, and we need to figure it out." And so he's thinking in terms of, you know, using a consortium of municipalities, putting together their own kind of renewable energy payment or feed-in tariff, you know.

And in the same sentence that he was talking about this, he also said, "Well, you know, we're not under the jurisdiction of the Public Service Commission, but that net metering bill they just passed, we're going to adopt it, because it was just good." So, you know, even though they're not in your jurisdiction, they do look at what you do.

So thank you. I hope I didn't go too much over ten minutes.;

CHAIRMAN CARTER: That's okay.

MS. HERIG: I just want to say that the most

important issue is to integrate your environmental, your industry, your municipalities, and the economic development values, and, you know, typically you can make it work.

CHAIRMAN CARTER: Hang on one second, Christy. Commissioner Argenziano.

COMMISSIONER ARGENZIANO: Yes. Thank you for that. And I have a question you may be able to help me with, and it deals with the efficiency of the cell technology. And from what I understood, there was the -- I guess it's a high efficiency concentrator that has been used with cell technology that actually has broken the 40 percent barrier. I think I'm saying it right.

MS. HERIG: Yes.

COMMISSIONER ARGENZIANO: And that actually, by using this, I guess, optical concentrator, you can actually increase the intensity, sunlight intensity, creating more efficiency. Is that anywhere near marketing?

MS. HERIG: I would say yes. It's not a building integrating technology. It's more of a free-field technology, but it is being deployed. There's Hawaii and Arizona. But it's still PV. You get better advantages with the higher direct. And because

of our humid, we have diffused sunlight.

So, no, that's real. You know, bringing in the universities, I took the afternoon off Wednesday and looked at -- they had a venture capitalist forum where they had entrepreneurs with their new inventions presenting, and then the venture capitalists critiqued it. CitiBank was there. The New York Investment Fund was there. I mean, some big guys were there.

And they -- I mean, there's things like, you know, building glass with a strip of solar cells with holographs on the building, on the glass, directing -- you know, it's a different kind of concentrator, not much concentration, just 5 percent, but it makes a difference, and it's also a building integrated technology.

COMMISSIONER ARGENZIANO: I guess what I'm trying to figure out is when the greater efficiency comes in with solar panels, which it seems like we're on the cusp of getting greater and greater efficiency. It makes a very big difference on how we look at spending our dollars today. And I guess -- I think, in my mind, if we have greater efficiency in solar paneling, because a lot of times the argument is, "Well, you know, it costs so much to retrofit a house because the efficiency is not -- it takes forever to get the money back." And

if you have greater efficiency to begin with, I guess capturing more of the sun, the colors of the sun, or however it works --

MS. HERIG: It does make a difference, but at the same time, the thin film technology, it's out there, you know, and being sold at $4 a watt installed. I just did the economics for GRU, and I guess their rates are at 13 to 14 cents. They could make a renewable energy payment of 16 cents, very willing to do that, when the price is it $7 a watt. So if they could, you know, get a consortium together and get $4 a watt, the IRR there -- and I think the IRR on that, I say it's 8 percent. They say it's 12. You know, that's always -- you know. But I know it would be up in the double digits at $4 a watt.

And that thin film has the -- you know, I was always doubtful. That plant I built in 1988 was thin film, and that was the promise of the low cost technology. It's not going to be super high efficiency, but it's a building integrated product, and it looks good. I mean, you know, it could replace granite.

COMMISSIONER ARGENZIANO: Thank you.

CHAIRMAN CARTER: Thank you. Commissoners? Commissioner Skop.

COMMISSIONER SKOP: Thank you. Good morning.

Just one quick follow-up question.

MS. HERIG: Do you want me to stay here?

COMMISSIONER SKOP: Yes, ma'am. I guess the Commission had a consumer write in about a company, and you mentioned that you had the opportunity to attend a venture capitalist meeting, and perhaps this technology came up. I think it was a company named Nanosolar.

MS. HERIG: This was at the Nanotech Center.

COMMISSIONER SKOP: That was making -- you know, apparently they have some new solar fabrication technologies, more like -- almost like ink jet printing, where you're printing like in a printing press. Has your organization evaluated their claims in terms of being able to actually delivery on a dollar per watt solar, which would be $1,000 per kilowatt?

MS. HERIG: Not in a due diligence form. And I think that price, I think they have a 2012 date on it, so I'm -- a dollar a watt. Okay. Intuitively, you know, I think they could maybe get $1.50 a watt. You know, you're just asking me, you know, off the cuff. I have not seen -- I have not heard any due diligence.

One of my mentors is an elderly gentleman that has done over 20 companies on due diligence around the world. He just came back from China. And he always shares things with me, and then I can -- sometimes, you

know, he tells me what I can say publicly and what I can't. But I don't know about Nanosolar specifically.

COMMISSIONER SKOP: Okay. Thank you.

CHAIRMAN CARTER: Thank you, Commissioners. Mr. Futrell.

MR. FUTRELL: Next we have Mr. Christopher Maingot representing the Solar Coalition.

MR. MAINGOT: Good morning, Commissioners and Mr. Chairman. Thank you for the opportunity to speak here today in front of the Commission.

First I would like to thank Governor Crist, the Florida Legislature, and the Florida Public Service Commission, and the Department of Environmental Protection for their commitment to develop a market for renewable energy resources such as solar under an RPS. Our coalition appreciates the opportunity to provide input.

But let me just go back. Sorry. I'm with FlaSEIA, which is the Florida Solar Energy Industries Association. I also represent the Solar Alliance, which is a group of PV manufacturers and integrators, and Vote Solar, which is a -- Vote Solar is a nonprofit organization with members throughout Florida and the U.S. that aims to address global warning and energy independence by bringing solar energy into the

mainstream, and we formed a coalition to bring this presentation to you.

For the time being, we would like to limit our comments to the role solar can play under the RPS in Florida and what the solar community views as essential to create a thriving, self-sufficient local solar industry with markets that will continue to grow beyond state-established goals.

At present, financial support is needed to drive sustained, orderly development of Florida's solar markets. For solar to ultimately move away from subsidies and become mainstream for Floridians, the State needs to stimulate investment and build local markets in a stable manner.

As part of House Bill 7135, Section 42, which establishes guidelines for the RPS, the PSC was given latitude to provide added weight to energy production from solar and wind resources. To this end, our Solar Coalition believes that the RPS should optimize the following objectives:

(1) Market diversity to encourage a wide variety of customers and applications, such as residential retrofit, new construction, and small to large scale commercial. These programs should include solar thermal and solar electric systems.

(2) Economic development and job creation. Solar jobs are high quality jobs that require skilled labor and pay good wages. Jobs created as a direct result of solar energy development can be broken into two categories, manufacturing/integration jobs and installation/maintenance jobs. Manufacturing jobs are associated with the integration of solar energy systems and the fabrication of original solar energy equipment. Installation and maintenance jobs include skilled trades such as solar contractors, electricians, plumbers, roofers, and designers.

(3) A distributed solar market. Solar water heating and PV systems are most beneficial when deployed at the distribution level, where they serve as a dedicated end use and reduce the amount of power that must be transmitted over long distances. By emphasizing distributed solar energy, the State can ensure an in-state solar market without running afoul of the Interstate Commerce Clause.

Reduction of system installed cost. The RPS program should be designed to encourage cost reductions. Solar power technologies, like other high technologies, are ideally suited to have significant cost reduction with the increase of volume over time.

Long-term program. Ensuring availability of

long-term, continuously available programs, for example, ten years, gives the confidence necessary to engage the financial community, educational institutions, and manufacturing sector to commit to massive business development and long-term sustainable investment. Without state regulatory policy certainty, the industry will be hampered with a start-stop market.

Flexible program. Policies should be crafted with a market feedback mechanism as well as a market driven incentive reduction process. Set a biannual review process for the purpose of measuring the program's effectiveness and economic efficiency.

Adequate funding. Combined with program flexibility, an adequate level of funding is essential in order to achieve the goals set by the State.

Value grid benefits. For example, distributed solar thermal and PV benefits the grid by reduced peak demand, as well as avoided generation fuel costs, avoided transmission and distribution upgrade costs, and avoided T&D losses.

Value societal and environmental benefits. As a distributed, domestically produced energy resource, solar energy can increase our energy independence and security.

Further, as the Commission crafts RPS rules

with consideration to providing added weight to production from solar and wind, as per House Bill 7135, the industry sees the following design criteria as key to developing incentives that will result in a strong solar market:

Set a specific goal for solar. In past comments, we have offered that the industry would be well prepared to meet a 4 percent solar goal, with 2 percent solar electric and 2 percent solar thermal, by 2020.

Maximize investor confidence. Provide a secure revenue stream that will reduce risk premiums and lower the cost of financing projects and ensure a reasonable rate of return for all stakeholders.

Economic efficiency. Structure incentives to ensure that the program has cost-effectiveness and allows for market expansion and diversity. Ensure that projects are not oversubsidized or undersubsidized.

Program monitoring. Program incentives should incorporate a digression schedule to allow for adjustments to meet the program cost goals. Through vast deployment and innovation, solar energy cost reduction will occur and propel the solar industry towards energy cost parity and self-sufficiency.

Administrative transparency and simplicity.

The success of any solar incentive program will require that all stakeholders have readily available access to market information and the ability to analyze the program effectiveness. The data collection, effective communication, and transparent processing between all participants will be important to the health of the program and the ability to respond to necessary adjustments in the program in order to adjust to changing market conditions.

And that is my presentation. Any questions?

CHAIRMAN CARTER: Thank you so very much. We appreciate all of our speakers so far to adhere within the recommended time frame. That gives us an opportunity as Commissioners for questions. We also have a wrap-up session in the afternoon for further give and take.

Commissioners, any questions?

Thank you. Let's kind of -- staff, let's back up for a second. I see Mr. Dobson has come in, so let's kind of reverse order. We'll call Michael Dobson. That will be item number 2. Mr. Dobson.

MR. DOBSON: Do I have a PowerPoint on there?

MR. POTTS: Is that correct, sir?

MR. DOBSON: Give me just a moment.

CHAIRMAN CARTER: Do we need to pass over you,

Mr. Dobson, and move on?

MR. DOBSON: I'm ready. Yes. I'm Michael Dobson with the Florida Renewable Energy Producers Association. And what we are, just briefly, we are -- for lack of a better word, we're a trade association for renewable energy developers and producers interested in doing business in Florida. And our main focus is to work with the Public Service Commission, the Florida Legislature, and the Executive Branch with respect to creating the policy landscape that better makes for a renewable energy industry in Florida that will spur growth in that particular industry.

I want to just give a brief outline on what I'm going to discuss, what an RPS is, its expectations, and how it benefits the renewable energy development industry, renewable energy resources in Florida, renewable energy technologies that are more readily available for applications, RPS design features, key components to implement a successful RPS in Florida, elements for RPS compliance, consideration for RPS tracking and monitoring.

And as you know, an RPS is -- essentially, it's a mandate that requires that each utility reach a certain percentage of their generation be renewable.

And our legislative goals of the RPS statute

are the following: To increase the amount of renewable energy integration in Florida, promote stable electric prices through a mix of energy resources, protect the public's health by promoting the use of cleaner energy resources, improve the quality of Florida's environment, stimulate economic development by building a vibrant renewable energy market in Florida, reduce dependence on foreign fuels, and make us as a country more secure by accomplishing the previous goals.

Some key considerations for a successful RPS program in Florida are to identify feedstocks and resources that generate power today, develop incentives geared toward helping developers with the economics of a renewable energy project, make sure that incentives are long-term and consistent from year to year, put more focus and investment into proven technologies, promote flexibility from utilities on price, encourage utilities to factor in the life span of a project in cost considerations.

And what I have is, I have a few maps that are in my presentation. One is an average daily solar radiation per month map, and what it shows clearly is that Florida is certainly a great state for solar energy. And also, I have a map that goes over the month of July. The first one talks about January, because,

you know, we often hear that Florida has many clouds, et cetera, and what I wanted to do is to kind of give you some idea of what January looks like and what July looks like. And the map that indicates July would also show you that Florida ranks up to the upper medium range as it relates to solar PV radiation.

And we have another map regarding renewable generation that was a map from the year 2005 that provides an indication as to the amount of biomass activity we currently have in Florida. And as you may know, particularly here in North Florida and Northwest Florida, there's a lot of current biomass activity.

And we have a very general map that outlines biomass resources available in the United States, and as you see, Florida is very active again.

And there's always that question of wind. And I would admit that I am guilty that in previous discussions, we've often said Florida is a questionable place for wind. But we do have a model that NREL has provided that indicates that there is some possibilities for wind in Florida, and I think that's something to pursue. And I know that others are pursuing that as we speak, so I just want to mention that, because when we talk about what resources will be considered in our RPS, we may want to continue to look at wind as one of those

possibilities.

And regarding Florida renewable energy opportunities today, essentially what we have is solar, and we have wind with the question marks. We have biomass, we have landfill gas and digester gas, waste-to-fuel. Those are the things that we have today.

And I do have a slide here that you probably don't have, but I do have one slide that talks briefly about nuclear. And the reason I mention that is because in previous discussions before this Commission and in other venues, nuclear has often been discussed with respect to renewable energy. And we think that at the end of the day, what we're talking about are energy solutions, and nuclear is always going to be a part of the discussion, and long-term, nuclear is going to be a part of the mix.

But we also want to indicate that it has its problems. It has its problems with siting and problems with respect to the length of time it takes to get it online, and I know that the Legislature and others are working on those issues. But it is not a renewable, and we just want to make it a point that we certainly recognize its place in the mix with regards to the solutions that we seek in Florida and in our nation.

And I just wanted to talk briefly about

emerging technologies. We talked about what's available today. Of course, cellulosic ethanol is one that we often talk about, but not necessarily with respect to an RPS, although I think some would indicate that you can take a biofuel and power a generator for power generation, but that's an emerging technology. There are some small scale production processes in place currently.

And, of course, ocean wave energy, that is certainly RPS eligible. More R&D is needed. I'm sure you've probably heard from Dr. Driscoll and the wonderful work that they're doing.

Coal gasification is another emerging technology, which, of course, there's more R&D involved with that as well.

All those are part of our energy solutions, so I think I would be remiss in not mentioning those.

And where we are today, the last time we were here last summer, we had that infamous map that we constantly looked at, and Florida was missing with respect to RPS. And today we have a map that shows Florida as one of those states that has a mandated RPS, and then there are several states that do not have a -- that have a voluntary RPS. Along with Florida, I think North Carolina has joined us, and I believe, I want to

say -- it's either Ohio or Oregon. I can't remember exactly which one.

The first steps of an RPS is to identify what technologies and resources we're going to use. And I think that's going to be one of the initial challenges that you guys are going to face in terms of talking about what's going to be in that mix, and then you're going to have to set the level of standards and its rate of increase over time, i.e., if you're going to have a 20 percent RPS, how far out is that going to go, and things of that nature. And I think that's going to require a lot more discussions beyond today.

Key RPS details are going to indicate, of course, that mandate, i.e. the targets, the target date and the target amount, and the assignment of responsibilities as it relates to who is going to monitor compliance, what would be the Public Service Commission's responsibilities or what would be the responsibilities of other entities that would be involved. And that leads to enforcement and performance, tracking compliance and management of the details.

Key RPS design requirements moving forward, Florida will need strong political support, which we currently have, regulatory commitments which will be

unwavering in the future. We'll need clear and well thought out renewable energy rules. The design must be consistent, long-term targets that will ensure a new renewable energy supply. The standards must be achievable given various challenges and practical constraints, such as siting, et cetera.

Enforcement must be credible and automatic. It is also key that the penalties exceed the cost of compliance. The design requirements must be applied to the utilities that are financially in a position to enter long-term contracts.

RPS design requirements, we suggest that there be a period of review established for the Public Service Commission to review the RPS program. We suggest that that period of review could be two years, three years, but early on, we're going to have to take a look at what we end up with at the end of the day to figure out, you know, are we doing it right, do we need to tweak it, or what do we need to do. And we suggest that each regulated utility subject to the RPS file an annual report regarding its compliance in the previous year, while outlining renewable resource plans for the next one year, along with perhaps a forecasted resource plan for the next five years.

Other RPS design requirements -- and I think

we mentioned long-term contracts, and I want to stress that, because however we frame this from the perspective of renewable energy developers or producers, having a framework that supports long-term contracts is key for market stability, and it's key for investor interest in the State of Florida and how this industry moves forward.

And I'm just going to briefly mention the fact that, you know, Florida joined the ranks of many states that have included RECs with this RPS compliance. You know, that's an extremely important feature for renewable developers. It generally helps with getting the deals done and just kind of getting over some of the hurdles with respect to the pricing. But what it does, it simply encourages renewable development. By policy, RECs may not be geographically restricted, so it enables the development of the most cost-effective resources. That could be debated, of course.

The REC revenue stream is enticing to developers and will therefore spur the industry in Florida, especially given the RPS. It will increase market efficiency, therefore, more players, more competition, more liquidity. It will provide contracting flexibility. It facilitates compliance.

Utilities that are otherwise finding it

difficult to make long-term energy commitments can find a way to do it with RECs. It helps the deal pencil a little bit better. RECs reduce long-term contracting risks for utilities that may have fluctuating or uncertain future energy loads.

CHAIRMAN CARTER: Mr. Dobson, are you close? I gave you a little time because of your technical difficulties, but are you close?

MR. DOBSON: I'll wind it down.

CHAIRMAN CARTER: Please do.

MR. DOBSON: Okay. I'll wind it down by just talking briefly, and very briefly, regarding the importance of the market. At the end of the day, the RPS should create a framework in which renewable development is certainly market driven. And the elements of market driven again is the stability that the RPS will provide, as well as the ability to enter into long-term contracts.

Investors are watching what Florida does. They will be watching what the Public Service Commission does, and they will be watching what the Legislature approves come February. And their reaction would have a long way to go with where we're going to be a few years from now with respect to our RPS.

And thank you for indulging me. I appreciate

it.

CHAIRMAN CARTER: Thank you, Mr. Dobson. Commissioners, any questions?

Thank you. Mr. Futrell.

MR. FUTRELL: Thank you, Mr. Chairman. Next is Mr. Mark Sinclair, who is representing the Clean Energy Group. That will be number 5, Commissioners.

MR. SINCLAIR: Good morning. It's good to be here. I appreciate your time.

My name is Mark Sinclair. I represent a nonprofit called Clean Energy Group. We work to advance policy and finance to advance clean energy. We also manage an alliance of 20 states with clean energy programs called the Clean Energy States Alliance, or CESA.

Relative to this proceeding, we're working with a lot of states across the country on their RPS laws. We've actually got funding from the Department of Energy to facilitate a state and federal collaborative to advance thinking and learning about RPS success, and some of your staff have been involved in our webinars and discussions. This collaborative is developing some best practice recommendations based on what seems to be working best across the states.

In some ways, Florida is very fortunate, in

that you can look and see what mistakes have been made by other states, the 26 other states that have RPS laws. So I think this is an opportunity for you to learn from what has gone on before and to develop one of the best RPS laws in the country, and our organization would be very pleased to assist as we can in providing objective information.

And we provided some preliminary comments. I just want to summarize a couple of the key elements from our perspective as you design this RPS for Florida.

Many states have determined that critical to the success of an RPS is also the establishment of a clean energy fund, a public benefit fund, to offer incentives and technical support to encourage the development of the higher cost renewable energy technologies. In fact, some 21 states have used a public benefit fund, some in combination with their RPS, to ensure acceleration of project development. So we recommend that Florida consider providing financial support through a renewable energy fund as part of this RPS program, with a focus on distributed generation and higher cost technologies, and with funding coming from a modest system benefits charge. We also recommend that funds that are generated from an alternative compliance payment system go to this fund.

In terms of RPS targets, we don't really have any specific recommendations at this point, but I will point out that an RPS really needs to be aggressive if we are to reduce greenhouse gas emissions and address the huge challenge of climate change. Regardless of the specific targets, we believe it's important that those targets and that the program rules remain very stable over time and not subject to sudden or frequent changes. Try to get it right the first time. That will create an investment climate that will be conducive to project development and long-term financing.

We also submit that the primary goal of the RPS in Florida should be to drive new renewable projects and increase production of renewable electricity. Eligibility of the existing generators we think should be somewhat limited to support more targeted support for new renewable energy project development.

In terms of eligibility, we think it's very important that eligibility definitions be clear, especially when it comes to technologies and fuels like biomass and hydropower. To that end, we over the last year and a half worked with a number of states in New England and the Mid-Atlantic region to come up with some recommended resource definitions based upon input from those states and commonalities among their definitions.

And in an appendix to my comments, we provided some what we think are smart definitions that take a lot of the argument out of what is eligible. Now, obviously, you're going to have to decide what technologies are eligible, but we provide definitions that if you choose, for example, hydropower, a definition that we think is rational and clear.

In terms of the use of RECs, I think it's very important that the Legislature has authorized the use of RECs. States have found that that is an important tool both for compliance tracking and for lower cost compliance.

We will make one comment. We believe that since the primary purpose of the RPS is to stimulate renewable energy development and enable a wider market, that there should be a clear prevention of the use of a REC for compliance and for voluntary markets. There should really be a prevention of double counting. That's consistent with the statute that says that you shall ensure that the energy credited toward compliance with the requirements of this section is not credited toward any other purpose.

Consumers who choose to buy voluntarily and pay more for renewable energy are doing so to promote additional development above and beyond RPS

requirements, so to protect those consumers, we believe voluntary green power sales should be prohibited to satisfy your RPS.

On the issue of enforcement, the statute says that you shall provide for appropriate compliance measures. We recommend that you consider the use of an alternative compliance payment, which is an effective enforcement approach. We think the rule should allow for utilities to pay a set price into a renewable energy development fund in lieu of procuring electricity as a less punitive enforcement approach. And we believe it's important for those payments to be dedicated to this fund for the development of available renewable energy. And we think the ACP payment that you set should be at a level significantly higher than the estimated compliance costs if we're going to actually drive additional generation.

I think the final point I want to make today is the issue -- dealing with the issue of differential support for solar and distributed generation. Your statute does allow for you to provide more weight to energy provided by solar PV and for wind over other forms. Pursuant to that, we believe you should look very closely at differential support for solar technologies and for distributed generation

applications.

According to recent research from the Lawrence Berkeley National Lab -- we work with LBNL quite often on the RPS issues. They've found that RPS policies with no differential support for solar are unlikely to provide any meaningful support for customer-sited or utility scale photovoltaics or for solar thermal.

And typically, differential support provided by a set-aside or by a multiplier, evidence from states using those tools shows that the solar set-aside requirement is likely to be much more effective than multipliers in growing the solar market within an RPS. So because of the value that solar and DG provide to reduce peak loads, emissions, and load congestion, we recommend that the Commission consider establishing a set-aside for solar and for distributed generation.

With that, I'll wrap up my comments. I just want to congratulate the State of Florida in pursuing an RPS, and I offer our information and assistance as useful in developing a strong program. Thank you for your time.

CHAIRMAN CARTER: Thank you, Mr. Sinclair. We sincerely appreciate your help, and we look forward to your continuing relationship with our staff.

Let me ask you this, kind of in reverse order.

Commissioners, no problem if you have any questions. I just want to get it out before I have one of my over-50 moments. On the public benefit fund that you found in these states, how significant has that been? In essence, were they able to put together a fund with enough magnitude to create a market?

MR. SINCLAIR: Certain states have. Other states have not. It really depends not so much on the amount of funding as it does the duration of funding and clever use of the funds, both through grants, but also through things like loans and even equity investments. California has been very successful with their public benefit fund at driving solar markets. New Jersey has been somewhat successful. New York has also been successful.

Even a state like Vermont, which is using about $10 million a year for assistance for renewable energy development, has been successful in some sectors. They focused on, for example, manure on farms to electricity, and it has helped the economy and farmers successfully to reduce energy costs and drive some renewable energy development.

So overall, the public benefit funds have shown great success. Certainly trying to focus on distributed generation has been more difficult, because

there needs to be a host of policies if you're going to drive the customer-sited generation. But we've got a lot of information we can provide you on how to design a public benefit fund with a smart design.

CHAIRMAN CARTER: One other question. On the solar set-aside, can you kind of -- just kind of speak to that for one second, please, on how you did on your experiences with that.

MR. SINCLAIR: We've been working -- we work a lot with the Lawrence Berkeley National Lab, which we fund, as does DOE. And they've been looking very closely at the use of solar set-asides and multipliers. And if you see, in the last couple of years, a host of states have implemented set-asides for solar and for distributed generation, because otherwise, the RPS laws just have not been driving those more expensive technologies, and wind has been the predominant winner. So states have found that to be effective at driving distributed generation and the use of solar technologies, they really need to use a set-aside.

The Lawrence Berkeley National Lab in looking at the results from the different approaches has found that multipliers have so far not really been effective at supporting these higher cost technologies. That may be because the multipliers aren't set high enough. But

most states have determined that a set-aside is a more specific, definite approach to support these technologies that have great promise and have social benefits that may not be as typically quantified and recognized.

CHAIRMAN CARTER: Thank you. Commissioner McMurrian and then Commissioner Skop.

COMMISSIONER McMURRIAN: Thank you. I wanted to follow up actually on the Chairman's first question about public benefits funds. And I know that you said that -- you suggested that we consider them, and your answer to the Chairman went along the same lines. But I wanted to ask, you suggested a modest system benefits charge, and you mentioned some of the states who were more successful already. In some of those states that were more successful when they've implemented system benefits charges, what was sort of the modest system benefits charge? Can you give us an idea or sort of a range? I know some of them include broader goals in their system benefits charges as well, so I'm not sure how to get a good handle on --

MR. SINCLAIR: Many, many states have used a system benefits charge for energy efficiency. There has been less use of a public benefit charge for renewable energy. I would submit that that is a bigger challenge

and needs more assistance from state investment, so a system benefits charge focusing on renewable energy to me makes great sense.

Energy efficiency can pay back very quickly. Renewable energy can't. Renewable energy markets need to be built. So it's important for the State to use smart dollars to create markets and to help higher cost technologies happen.

To your specific question, most states who have created public benefit funds for renewable energy have looked at 1 to 2 percent of the rate base. Again, you know, California is spending $200 million a year on renewable energy through their public benefit fund. Vermont is spending 10 million.

I would submit again that it's not as important, the amount of money, as it is that you have the right delivery mechanism. Most states have found that these funds should be independently administered by an administrator that is not within a utility and is typically not within a state agency, but there is almost like an economic development organization that helps to spend these dollars so that it's really focused on finance and investment and where those dollars can do the most good.

I can also provide you with a whole graph of

what the charges are for those 21 states. In fact, your staff has done a great job of that already. In the workshop proceedings, in the back, there's a graph of how much states are spending and what the charge on the tariff-- what the tariff is. And I can provide you with updated information to show you how much those states are spending. Typically, these are coming from a system benefits charge.

Some states, however, have used other approaches, like an alternative compliance payment, like in the states in the Northeast with their RGGI initiative. They're going to use some of the auction allowances for this purpose. And then several states have put charges on the storage of nuclear waste to go towards a renewable energy fund. So there are lots of creative ways outside the rate base, but the majority of the states are using the rate base.

COMMISSIONER McMURRIAN: So are there any states that have a specific system benefits charge just for renewable energy development?

MR. SINCLAIR: Yes, roughly 20 states.

COMMISSIONER McMURRIAN: Twenty. Okay. Thank very much.

MR. SINCLAIR: Sure.

COMMISSIONER McMURRIAN: Thank you for

offering more information. I'm sure you can work with our staff and get that for us. Thank you very much.

MR. SINCLAIR: Thank you.

CHAIRMAN CARTER: Commissioner Skop.

COMMISSIONER SKOP: Thank you, Mr. Chairman.

Good morning, Mr. Sinclair. To the point that was raised by Commissioner McMurrian, we heard generally public benefits fund, system benefits charge, alternative compliance payments. Again, I think when you have that broad category, it sometimes leads to the propensity for the moneys maybe to go to their nonintended purposes. So I guess to the point I think you were just speaking to, and you may have answered this, but should there be a renewable energy charge, in your view, so that those funds are solely dedicated to renewable energy?

MR. SINCLAIR: My answer is yes. We greatly support energy efficiency. However, we believe energy efficiency really does pay for itself, and the technology is fairly accepted. Markets are there. We believe that where the greater need is for limited dollars from the ratepayer is to invest in renewable energy, because those markets in many cases need a jump-start.

So we would recommend that your system

benefits charge certainly be dedicated towards renewable energy. You may also want to be doing work on energy efficiency. That's a great resource. But we think -- what we're arguing for is a system benefits charge in association with the RPS that focuses on renewable energy deployment.

COMMISSIONER SKOP: And I guess to that point, I guess the nomenclature is what gets me. To me, you know, if there were such a thing, I would probably prefer that it would be specifically identified as renewable energy. That way you can't, you know, morph it into other unintended purposes.

But also, too, getting to your comments about carve-outs, to me, I'm a little torn on that, because I think each state is different, and I've seen the experiences in New Jersey and the price of the RECs as a result of the carve-out, and also in California. I guess Florida is a little bit different because, again, we have a marginal wind resource, perhaps a better solar resource, but certainly not as much as in some other states.

But in terms of a carve-out, is it really fair to favor a single emission-free generation source and disadvantage other emission-free sources? For instance, in Florida, you know, you have that tradeoff between

wind and solar. And certainly I agree with you that distributed PV generation is a great thing, as well as solar, but I just worry about, you know, if you incentivize one specific emission-free source of generation -- you know, it seems to me that all emission-free sources should be equally valued.

MR. SINCLAIR: That is a huge issue, and intelligent people can take different positions on the merits of a carve-out. What I would say is that if one of your -- and it really depends on what your objectives are for your RPS. If one of your objectives is fuel diversity, then I think a set-aside is going to be necessary. Without it, you're probably going to be looking at primarily biomass and wind.

So if fuel diversity is important, resource diversity, then I think a set-aside is a necessary tool. But you've got to shape it very cleverly with the industry, and I would argue, as California has done, you've got to sunset the requirements so that the industry is basically forced to bring down costs over time.

My sense, though, in Florida, not knowing that much about the state, is that solar resources can be a tremendous economic development boon here, and the costs are coming down. So I see this as a temporary tool to

help that industry create market share. And I would argue that all the energy generation sources in the state are being subsidized, so it's a question of what is your objective in using smart subsidies.

COMMISSIONER SKOP: Right. And to that point, I think that's what I'm somewhat struggling with, because I do see -- and I think you've very much clarified and articulated some very excellent points on carve-outs. To me, I'm trying to balance the carve-out versus -- you know, the carve-outs or the set-asides, which certainly have worked in other states, versus a multiplier, which effectively can somewhat accomplish the same thing as a carve-out or a set-aside and do it in a manner that provides maybe some flexibility. But I think the points that you made have helped clarify and shape some of my views on that point, so thank you.

MR. SINCLAIR: You may want to ask, and we can help with this, somebody from the New Jersey program, which is using the solar REC, because they're living with this, struggling with this realtime, and --

COMMISSIONER SKOP: Actually, yes, I spoke to someone the other day that manages that program in New Jersey. So thank you.

MR. SINCLAIR: Thank you.

CHAIRMAN CARTER: Thank you, Mr. Sinclair.

Mr. Futrell.

MR. FUTRELL: Yes, Mr. Chairman. The sixth speaker on the agenda is Mr. Gus Cepero from Florida Crystals.

MR. CEPERO: Good morning.

CHAIRMAN CARTER: Good morning.

MR. CEPERO: My name is Gus Cepero. Thank you for the opportunity to offer some remarks.

I represent Florida Crystals, and just in the way of an introduction, we are located in Palm Beach County. We're an agricultural company that has also expanded into energy in the last few years. And we have been able to develop a 140-megawatt biomass power plant, and we believe it's the largest biomass-to-electricity facility in the country, in Palm Beach County, and we have been operating for over ten years pretty successfully.

And we really operate very much like a power plant, like a conventional power plant. We achieve about a 90 percent capacity factor on an annual basis. We operate on a year-round basis, 24/7. And given favorable market conditions, we have the ability to expand our facility in Palm Beach County, and certainly we're eager to develop other biomass facilities in Florida.

I think that all of us should start at the beginning. And Chairman Carter started at the beginning by reviewing the policy objectives of this renewable portfolio standard. I think the Legislature has done and Governor Crist has done a great job in identifying what the policy objectives are, and I think that we need to be disciplined and just very careful to meet those objectives and not start sort of creating our own separate set of objectives here.

And just to briefly review, objective number one is to reduce greenhouse gas emissions in Florida.

Objective number two is to advance fuel diversity in Florida. I read that as advancing fuel diversity, renewables versus fossil. I suppose you could read that as fuel diversity among renewables, but I think that we can all agree that the big issue that we have is that something like 75 or 80 percent of Florida's energy comes from fossil resources. So when we talk about fuel diversity, we're trying to reduce the dependency on the fossil fuels, particularly the natural gas and the oil, which are the ones -- well, and even coal, which is now over $100 a ton. So fuel diversity.

Third, promote investment and economic development in Florida, in Florida, not in different states. And let's look at the -- let's look rigorously

at the renewable alternatives that do the best job of promoting investment and economic development.

And finally, I think I readily acknowledge that the Public Service Commission has a standing obligation to look after costs and to do what is cost-effective and cost-competitive and always be responsible to, you know, the issue of what will it cost to do anything.

This light is a little bit offset. I don't know if you can move it down a little bit.

I would like to briefly show how biomass relates to these objectives that we just described. First of all, in terms of greenhouse gas emissions, a lot of people believe that biomass, because it's a combustion technology, it's dirty or it contributes to global warming. I'm here to tell you that the combustion of biomass is a carbon neutral activity. And I think most people agree with that, because the greenhouse gas emissions which are emitted when the biomass is combusted are numerically equivalent to the carbon dioxide which is absorbed when the plant is growing. So, for example, in our case, sugar cane absorbs carbon dioxide as part of the photosynthesis process, and the amount of carbon dioxide which is absorbed by that plant when it's growing over the course

of a year is numerically equivalent to the amount of carbon dioxide which is released when we combust the fiber component of that plant.

Where the positive comes in is that we are able to combust that fiber in a very efficient way and generate net positive electricity and export that electricity to the grid. We have actually done some very, we consider, pretty complete and rigorous studies of our carbon footprint as a corporation, and we have been able to demonstrate that our power plant reduces carbon dioxide or greenhouse gas emissions in Florida by 360,000 tons per year.

In addition, in our particular case, not always true of all biomass facilities, but in our particular case, about 50 percent of our fuel supply is urban wood waste that we clean. It's not painted wood or treated wood. It's clean wood material, vegetative material. But that material, if we did not use it or recycle it in our facility, would end up in landfills and would release methane, so there's an additional corollary benefit to the kind of activity we do.

We're a base load operation, so each megawatt of capacity that we have operates 90 percent of the time, and so we're able to achieve fuel diversity. That energy achieves the maximum amount of fuel diversity and

the maximum amount of greenhouse gas emissions displacement.

A very important point. We are a Florida resource. Our fuel is homegrown, and 85 percent of the dollars that we spent to operate that facility stay in the local economy, stay in Florida. I contrast that with a fossil application, where 80 percent or 85 percent, particularly in something like natural gas, of the dollars used to operate a combined cycle natural gas facility leave the State of Florida and have no positive impact in terms of job creation, economic activity, et cetera.

We have also quantified this in the form of a study by professional economists. We have made that study available to your staff, and we'll be happy to talk about that at a different time or elaborate on that point. But 85 percent of our dollars every year, not one time, but every year that that plant operates for the last ten years and for the next whatever many years stay in Florida and contribute to jobs and tax income.

Finally, we're cost-competitive, we believe, with other renewables and with conventional solid fuel alternatives like coal.

I think one of the key questions facing the Commission is what methodology do we use to determine to

approve particular projects or contracts, and what standards do we use. Up until now, the standard has been, generally speaking, avoided cost. If you are able to meet avoided cost or are below that, you're good; if you don't meet avoided cost, you're out of here. I'm oversimplifying, but I think that's not too much of an oversimplification.

I think we go back to the policy objectives in the bill and say what is the impact of any particular decision on greenhouse gas emissions, what is the impact on fuel diversity, what is the impact on economic development, and certainly what is the cost performance. And I think we need to be numerical, analytical, and quantitative in our approach here and really have the discipline to say for each of these projects or initiatives that will be presented to you where you have to make decisions, have a structure where you look at these objectives, emission reductions, diversity, economic development, and cost, in a numerical way, you know, what does it do per megawatt of capacity, and make your decisions accordingly.

I will politely remind you that the bill explicitly has a clause that supersedes the avoided cost standard and states that renewable projects or contracts will be approved if they contribute to the RPS, and if

there's any conflict with the avoided cost standard, that the avoided cost standard is superseded.

Finally, I'll give you my opinions on some other key issues that are in front of you. First, how much. I think Governor Crist has been as clear as he can be on that point, and he has proposed a number of 20 percent RPS. Now, he has not proposed 20 percent by 2020. Twenty percent by 2020 is my proposal. But I will note that Governor Crist has proposed aggressive targets for greenhouse gas reductions, and I certainly agree with the prior speaker that we need to be aggressive in setting the goal. So we would support an aggressive ramp-up as well as a 20 percent target within the reasonably near future.

Second, we would propose no set-asides. I think Commissioner Skop voiced our concerns with set-asides. It's really unfair to single out a particular alternative over others, and you really then face the issue, well, how much, and why, et cetera.

So we do recognize that solar in particular may have a lot of promise and may require some special help, and we would support that. We just think that it should be not at the expense of other alternatives, that it should be something that is controlled and measured, and maybe a public trust fund is the way to go.

And on the issue of should existing resources count at full value, first of all, I would simply refer you to the legislative language. The legislative language clearly in the opening paragraph states that -- I'll read it to you. "It is the intent of the Legislature to promote the development of renewable energy and protect the economic viability of Florida's existing renewable energy facilities." So to me, that kind of settles the issue. But besides that statement, I think it makes a lot of sense to include existing resources, because you can't assume that just because a resource is existing, it will continue to exist and survive and so on forever.

Let me give you another point. Existing sites such as ours are probably very favorable candidates for expansion. All you have to do is look at the utilities. I would venture to say, without having studied it rigorously, that over 50 percent of the generating capacity in the State of Florida in the last ten years has taken place at existing sites. Just look at the FPL expansion plan and how much they have used their existing sites.

If you take existing out of the equation, you're taking a very promising resource for expansion out of the equation. You would get into enormous, very

difficult situations to sort if you say, "Well, you can expand at existing sites, but how about if you use the same fuel yard? How about if you use the same electrical transmission interconnection?" Let's avoid all that. Let's heed what the Legislature said. Let's include existing resources, full dignity with everybody else.

CHAIRMAN CARTER: Mr. Cepero, can you wind it down, sir?

MR. CEPERO: Yes, sir.

CHAIRMAN CARTER: I appreciate it.

MR. CEPERO: The last point, cost-prohibitive. We're very sensitive, like everybody else, to what has happened with the electric rates over the last several years. I just would suggest that RPS not play second cousin or poor cousin to everything. It's okay to raise rates when fuel prices go up, but it's not okay to raise rates for RPS, that to me sounds like a bit of a double standard.

Thank you for your patience, and I apologize for running over.

CHAIRMAN CARTER: Thank you. Commissioner Skop, you're recognized, sir.

COMMISSIONER SKOP: Thank you, Mr. Chairman.

Good morning. I just wanted to touch upon

some points that you had made. Certainly biomass will certainly play a major role in meeting any RPS requirement on a forward-going basis. And I think as you correctly have stated, this industry already provides a tremendous and tangible economic benefit to the state, and I think that is one huge part of renewables in Florida, because certainly there is that resource there.

And certainly, you know, as you stated about the combustion of the biomass itself and the tradeoff between what that means in terms of actual carbon neutrality or what have you, you know, I think as you stated also too, there's a balance between that and emission-free generation, and I think that everyone will find that happy medium. On a forward-going basis, I hope that biomass, just by its inherent nature of being a base load generator, plays an important part in meeting that.

So thank you for your comments, and thank you for your contribution to Florida's economic development.

MR. CEPERO: All right.

CHAIRMAN CARTER: Thank you. Commissioners, anything further?

Particularly, thank you for the 85 percent of the economic development standard.

MR. CEPERO: We're proud of that. I advertise it. Thank you.

CHAIRMAN CARTER: Thank you very kindly.

Mr. Futrell, before I come back to you, I'm looking over at the court reporter, and I think we've kind of got her going. This may be an appropriate time to take a break for the court reporter. Commissioners, I'm looking at coming back at -- this time I'm going to look at the clocks on the wall. What is that?

How about 22 after, we come back at 22 after. That gives us ten minutes and will give the court reporter the opportunity to take a break, and also gives the staff time to take care of the technical difficulties. We're on recess.

(Short recess.)

CHAIRMAN CARTER: We are back on the record. And before we proceed further with our next presenter, Commissioners, just for planning purposes, and those of you here within the confines of the building, just for your purposes as well, to assist you, our plans are to go until about one o'clock, and we'll break for lunch from 1:00 to 1:15, and that way -- that's 15 minutes?

Well, see, I was going to buy, but now that you guys are asking for more time, the offer to buy is over now. So we'll go from 1:00 to 2:15, but then lunch

will be on your own. That will give an opportunity -- we've got a good streak going here. We've got a good flow of things, and we can kind of go from that, as well as give an opportunity for staff to kind of recablibrate some things as we do take that break. So we'll take a break for lunch at 1:00 to 2:15. We'll return at 2:15.

With that, Mr. Futrell, you're recognized, sir.

MR. FUTRELL: Mr. Chairman, seventh on the agenda is a joint presentation by Clay Bethea and Michelle Curtis with Buckeye Florida.

CHAIRMAN CARTER: Good morning and welcome.

MR. BETHEA: Thank you, Mr. Chairman and Commissioners. We appreciate this opportunity that we can come here and present.

Just to give you a little background on myself, I've been in the energy business my whole career and had the opportunity to design and build a solar car and race it through the State of Florida from Orlando to Detroit back in 1990, and worked for IG -- excuse me, Eastman Chemical Company, who is a premier company in gasification. And I have worked in three of the renewable facilities in the State of Florida, managed one of them for a number of years in the production of electricity and energy. So that's my background.

Buckeye, we're in Perry, and we're a pulp mill, and we operate a cogeneration facility currently. We do agree with diversify Florida's electrical generation fuels to reduce greenhouse gases. We agree that increasing the amount of electricity generated from renewable resources is a good thing. And we also agree with using more the efficient technologies that require less biomass per megawatt generated. We think that's very key, and we'll show that in this presentation. And we also think that utilizing and managing Florida's natural resources in a sustainable manner -- and that's very key in this presentation. We've been managing those resources for 50 years, and as we go through the presentation, we'll share some of that.

And just to let you know, back in the 1980s, our company did an initiative, basically what the State is doing now. We are the only company, we believe, that brings in the whole tree already. We did try to bring in the stump at that time. The technology, the conversion technology did not allow us to do that. But we think there's technology out there now, and we're looking at bringing in the stump also.

And we encourage you guys -- I'm sorry. We encourage you to come down. We would love to give you tours on how the integrated process works, from the

logging to the planting to the sustainable forests and the conversion process.

Our agenda today is importance of energy efficiency, Florida's forest resources, and then we have some conclusions and recommendations for you.

This is the graphic that I want to spend the most time on. Over here on the Y axis, you have acres of land. This is what it would take, the number of acres it would take for a 100-megawatt facility to be sustainable. So if you look at the growth cycle of a yellow pine tree -- this is North Florida growth cycles. If you take a look at that, it takes about 20 years to grow one of those into maturity. That's where you get the most growth rate. And if you assume 90 wet tons per acre at harvest -- and remember, we're already pulling everything off of the land. We pull the tops. We don't leave that waste wood there. And if there's hardwoods there, we'll come back and chip that for energy today also.

So if you look, for a 100-megawatt facility, if you're looking at conventional technology today, a fluidized bed boiler and condensing turbine, 1500 PSI unit, you're basically looking at somewhere around 300,000 acres. Now, you're not cutting 300,000 acres a year. That's what it would take to have a forest that

would produce for that facility.

If you're looking at an IGCC plant, there's one in Varnamo, Sweden, that has run. It's smaller than what we would like to put in, but you would look at a lot less acreage here. And if you would put in community heating or some other way to use that energy, just, you know, having other forms of heating, other manufacturing cogeneration, you would be off of this curve. You would be very efficient.

And so what we're looking at and what we're encouraging is, whenever we go down this RPS, not only should we be specifying -- we need to be looking at efficiency, because what you're going to have is, you can come in and just slam in, looking back 20 years and saying, "This is the technology we're going to use." And what we're putting in is, we're putting in technology that's going to be here for 30 years.

Energy is something we've got to look at differently in the future, and I think we all are looking at that differently now with 4 and $5 gasoline. And so efficiency is the answer, and we have to deploy those technologies correctly.

One last point I'll make off of this graphic -- and I don't want to speak for South Florida. I'm not a native of that, but I'm a seventh generation North

Floridian, so I understand this part, and we farm. Whenever you take a look at 300,000 acres of land, if you're in North Florida, remember, about 30 to 40, and possibly 50 percent of our property is in wetlands, cypress trees, and Michelle will talk a little bit to that. So typically, whenever I say a sustainable forest for a 100-megawatt plant, you're probably looking at about half a million acres, really, because you're not going to go down in those cypress -- those cypress trees don't grow out every 20 years. Michelle will talk to that.

I think that's what I want to cover. But if you'll notice the heat rate, just pay attention to that. Efficiency really takes us down, and we've got to take a look at what we do with our RPS.

Second, importance of efficient technologies. Energy assets are 20- to 30-year assets, and whenever I'm speaking to this, I'm talking about what we do, converting of biomass. Integration to utilize all the energy will be very important for future generations. The decisions we start making today will have a lasting impact, and we must use our resources in a sustainable manner and the most efficient manner.

The last question I will ask you is -- you're dealing with electrical generation. We understand that.

But as we look at our fuel costs and trying to look at our liquid fuels, we have to make those sustainable also. And I would ask the question, there is technology out there that is available, how to take cellulose and move it into ethanol, which is liquid fuel. So as we write RPSs, we want to be careful, because there is actually another use for some of that wood also.

And what I want to do is turn this over to Michelle. She's going to talk about biomass. I'm much more in the conversion process, and she's the biomass expert.

MS. CURTIS: My name is Michelle Curtis. I'm a forester. I attended the University of Florida and have been practicing forestry in Florida and Georgia for thirty years now, so what I want to do is talk about the forest.

And as you prepare to define the RPS, you have to understand, well, what is my biomass resource, what is available for use.

Now, the data I'm going to share with you today is not Buckeye data. What you see on this chart and on your papers is United States Forest Service data, so it's accessible to everyone. And I've got two books here just to give you an example. These are the two pamphlets I took the information out of. The slides are

actually presented -- or prepared by the United States Forest Service. So I'm sharing this with you so you're aware that it's out there and encourage you to get the experts involved in understanding and making those decisions.

Okay. This next chart -- again, as I mentioned, all these charts are prepared by the U.S. Forest Service. Anything in red I've added, and I added that in red so you would know clearly that I'm adding something to a slide that was already generated.

But the U.S. Forest Service defined I think real clearly for us where is the wood in Florida. And as you can see, the wood is mostly in North Florida, and there's a little bit in South Florida, 76 to 100 percent forested land. So anything in the dark green lets you know that 76 to 100 percent of the land is in forest. The lighter colors are 51 to 75 percent. Our plant is located here, just for perspective.

The University of Florida also completed an economic impact study in 2003 to look at the impact of forestry on Florida. Our county, this county alone, Taylor County, had an economic impact on Florida of $1.9 billion annually. And so one of the things we want you to consider as you move forward is, you don't want to destroy the current businesses, the current

industries are that using wood. There's huge economic impact. And some of the new technologies, or some of just the power generating or pellet plant kind of technologies have very little employment compared to your current wood-using industries. So we want to encourage you to let's think about preserving what we have as well.

The next slide shows timberland area by ownership. And again in red, I've put my comment here, the key point to take away from these slides. The U.S. Forest Service looked at, well, who owns the land. And the point here is, the public, the government, federal and state, owns 27 percent of the forests in Florida. So as you think about, well, what is available for biomass use, well, 27 percent is owned by the government. And in talking with government leadership on these lands, it's not likely that a whole lot of that is going to be used for biomass production, so you have to realize that's not available for use.

The next slide talks about area by ownership. Okay. On the left is public lands, and it shows you the trend in public land ownership. So you see in 2005, the white part of the chart is natural timber, and that's primarily hardwood and cypress. The bottom part is planted pines. Okay? So what you see is most of the

government ownership is in natural timber or hardwood and cypress. And when you look at the privately owned, there is a lot of it, but basically, if you look at the total, 35 percent, approximately 35 percent of all natural timber is owned by the government.

Now, this slide says, okay, what is growing out there, how much is really growing, and this is in billions of cubic feet of fiber. And this is an estimate, so please understand, this isn't scientific, but it's an estimate of government-owned timber not available for use. So if you think about, well, how much wood is out there, you've taken out a chunk that's not most likely going to be available for biomass production.

The next slide talks about cypress, how are we doing on growing cypress. And it's a very busy chart, so I've tried to pull out the key points for you. This first bar says how much is my gross growth. Then you take out how much of the wood died naturally, how much then grows after that, and then how much did I cut, and how much is left in growing stock.

The key point on this one is in the 1980 to '88 period, you had 25 million cubic feet of cypress growing stock. '87 to '94, the harvest was so high, we overcut the cypress forest. It was not sustainable. So

that's a problem. We do not want to overcut our forest.

A change occurred, though, in 1995 to 2005, and we reduced the harvest of cypress by 33 percent. As a result of that, our cypress is coming back and our growing stock is coming back.

So one key point here, though, is less cypress is being grown in Florida in 2005 versus 1980. And as a result of the fact that we cut back on harvest and now we have cypress growing, if you increase your harvest of cypress for biomass production, well, then you might be into an overcut situation again. So we don't believe it is likely that cypress could be used for renewable energy production in Florida, although it is rebounding now based on a reduction in harvest level.

The next slide talks about hardwood. Okay. The same kind of things to look at. And remember, about a third or 35 percent of Florida's hardwood and cypress is owned by the government. And I said will not be used for renewable energy production, but yesterday we had an opportunity to meet with the Florida Division of Forestry staff, the director, assistant director, and their stop staffers, to review these charts, because -- first, they've already seen them. They're U.S. Forest Service data that was presented last year. But to be sure any conclusions that we would share with you today

would be -- that they would agree with. And they asked us to say most will not be used, because the Florida Division of Forestry does allow some harvest of timber from the property. So just consider most, but again, the State defines how much that most is, and we can't count on it. We don't think we can count on it.

The key point on this chart, if you look to the far right bars, the purple bars, they're getting less. That means with our normal harvest level of 107 million cubic feet of hardwood annually in the last, say, ten years, our reserves of hardwood are going down. That trend does not support sustainability of the resource.

So we're already depleting, you know, our hardwood resource. If you increase the harvest of hardwood, it will only speed up the fact that you don't have a sustainable resource. So we're saying we don't think hardwood is the answer. We don't think there's hardwood out there to support sustainability of lots of increased demand, or even the current level.

So that takes you down to, well, what about the pine? What's left in pine? And this is a real important chart for us to look at, so let's take a minute and absorb what it says. If you look back to the first set of bars, in 1980 to '86, we were actually

overcutting our pine forest. Okay? Well, what happened? Now we have excess pine growing right now, a snapshot in time. Okay. What happened is, our harvests have actually gone down or stayed about the same, 444, 434, 445. So why are we now having more pine? It's because we planted more acres for a short period of time.

Okay. So what you see is, we have an excess. And all this data was from 2005, because it takes time for the Feds and all to gather the data and then report it to the public. Okay. But since 2005, more new businesses have been established, pine-using businesses in Florida and businesses that are exporting wood to Europe to meet their Kyoto Protocol requirements. So those kinds of things have changed since this data was produced.

We want to encourage the State of Florida -- and I know it's not all certainly in your control, but you'll have a part of that. But Florida needs to ensure sustainability of its forests every time new biomass-using businesses are established and sited in Florida.

Now, the next two charts are the key if you walk away from anything and look at. Remember, the previous chart showed that we were starting to grow more

or having more pine growing, and it was getting bigger. Here's why, because there was a period of time -- this top line shows planted acres. For that period of time, we were planting more acres, so we have an excess. Pine tree planing in Florida has declined since 1980. If you look at that top line, we've been -- less and less trees per year have been planted.

Now, as we reviewed this with DOF yesterday, they wanted to be sure we understood this is the best data available. It's not probably the most accurate. I mean, it's not, because they take information from the nurseries in Florida -- that's state and private nurseries -- to say how many pine trees have been grown to be out planted. Some of those trees could have been exported outside of Florida, and there might have been some pines brought into Florida. So just recognize that on that number, but it's still I think a very -- they definitely agreed with the trend that pine planting has gone down in the last 20 years.

Now, this chart, this next chart is sort of the crux of it. It puts the detail on it to help you understand what we're facing in the future. Wood we are planting today -- or wood we are cutting now was planted in 1988. You see the spike. And the wood that it shows that we have extra wood now, it's this right here, this

big peak.

The level of clear-cut harvest in Florida is at about 175,000 acres or so, if you'll look on here. You can see in the last ten years, our level of replanting is less than what we've harvested. We are planting less than the number of clear-cut acres. Our sustainability of pine forest today is at risk. You cannot sustain a harvest level this high if you only have that many acres to offer up.

So what we're saying is, yes, for a few years we have some extra pine, but in a few years from now, if you think, we're harvesting '88 now, in less than ten years, we're going to be overcutting the forest, even with our current demand on the wood. So something has got to be done in the future to sustain the forests in Florida.

We definitely support using biomass. We use biomass for energy production today. We think it is right and good, but we need to recognize there is not an unlimited supply of wood to support biomass expansion in Florida.

So our recommendations and conclusions, first, any technologies of the new plants that are being established need to be the most efficient as possible so that every acre of biomass used gets the maximum amount

of megawatts generated. We don't need to be employing inefficient, old technologies that take too many tons of wood to make a megawatt of power.

Secondly, we have a concern that demand for wood and woody biomass may exceed growth. Right now it doesn't in the snapshot of 2005, but that chart says it will exceed at our current -- just the way things are currently, we believe our forest resources will be depleted. We must take action to make sure that doesn't happen.

And we think Florida should develop a statewide plan to ensure forest sustainability. Florida needs to ensure there's a reliable, sustainable supply of wood and woody biomass for the current as well as proposed demand prior to siting new plants. We believe that we need to have continuous monitoring to ensure total wood and woody biomass harvest for domestic and export markets does not exceed growth.

Now, today, the U.S. Forest Service is on a five-year schedule, and we believe we've got to have more frequent updates so that we know on an annual basis how much is being used versus how much is being grown so that we're not bringing in plants that get us into a situation where our forests are not sustainable.

Additionally to that, speaking of export

markets, I recently attended the World Bioenergy Conference in Sweden at the end of April, and what I learned is that the countries in Europe have basically tapped out their wood supply, and to meet their demand for their green energy plants, they've got to find wood elsewhere.

They have ten energy plants under construction right now, biomass energy plants that will use about 6 million tons annually, and they're seeking new pellet plants in other parts of the United States to service that demand. They did many presentations, and those presentations looked at wood availability, and they're targeting basically the Southeast U.S, because we have fast growing wood and they perceive that there's a lot of wood available, but they haven't looked at the numbers the U.S. Forest Service presented to us last year.

So we've just got to be aware as we plan for the future. We think it's right for us to grow in the green energy area, but our last bullet point here is key. We have to plant additional biomass plantations and crops. We really -- we've got to encourage that in Florida to support our need for renewable energy. It's right to renew, but we need to plant additional crops, additional trees to support the new demand that will

come online.

So with that, I would open it up to questions.

CHAIRMAN CARTER: Thank you. Commissioners? Commissioner Skop, you're recognized, sir.

COMMISSIONER SKOP: Thank you. Just a quick follow-up question. And thank you for the informative presentation on the forestry industry in Florida.

Just as a point of information on my part, when they actually cut, are they required to replant with saplings?

MS. CURTIS: No. We're in a free market here. In Sweden, they are. Now, we are not suggesting that Florida ought to demand those things, but we ought to have -- we ought to have things that encourage that.

And I want to go back to one of the slides, because there are two points on that chart of tree planting. We actually had -- yes, that's great. The government had incentive programs. This right here was what's called the Soil Bank Program. The government incentivized tree planting, and you see what happened. Also, this big run-up here on the chart was the Conservation Reserve Program. Those programs work. They really do spur the planting of new forests. And we want to displace the use of oil, but we need to have the trees to support that.

COMMISSIONER SKOP: And just as a quick follow-up -- and the reason I asked that question is, I've seen the numerous tree farms in the State of Florida, and I think that's a great innovative concept. But to your point about the availability of wood or demand exceeding supply on a forward-going basis, what about biomass generated from other things, like remnants of vegetation crops and such like that? Are you guys more amenable to that, or --

MS. CURTIS: Well, I think it -- we believe that is right. We need to plant more crops. In fact, our company is looking at all the different biomass crop options for the future, because we believe we're going to have to have some high production crops, because there's not enough wood to support that. So we think that is absolutely the right direction. We need planting of additional biomass crops.

COMMISSIONER SKOP: Thank you.

CHAIRMAN CARTER: Commissioner Argenziano.

COMMISSIONER ARGENZIANO: He can --

CHAIRMAN CARTER: Oh, okay. Go ahead.

MR. BETHEA: To follow up with that question, that's a great question, and actually, we have a group working on sustainability for our company. Michelle has been asked, "What do we do in the future, and how do we

do this?" And so she's out scouring -- that's why she's been to Europe and other places.

But remember, to get crops on, if you're talking about a herbaceous crop, number one, for North Florida, where you have -- it's going to take about five years for us to make that evolution to get something possibly if it's high growth. So there's a time lag here that we've got to pay attention to.

The other thing I meant to say in my slide, I keep hearing -- I go to a lot of these conferences and stuff, and everybody's talking about the waste wood that we're going to utilize. What I'm going to share with you, a 100-megawatt plant at the most efficient that we know how to do today, and that's probably going to be an IGCC plant, that's going to be 1 million tons of the biomass.

Everybody keeps talking about, well, we're just going to use yard scraps and all of this. We already take the whole tree, so we understand how much waste is out there, because we implemented this in 1980. So 1 million tons for a 100-megawatt plant, that's the most efficient, and it really goes up from there.

So those are some numbers I think you can write down and have, just ballpark figures. I'm sorry.

CHAIRMAN CARTER: Thank you. Commissioners,

anything further? Commissioner Argenziano.

COMMISSIONER ARGENZIANO: Thank you. I was going to speak to that point of the planting and the time it's going to take to get there, and then exactly what you're going to plant also, corn and now sugar cane too, but I think that's very important and critical, especially in North Florida.

And I think the other thing I wanted to ask you about and to elaborate a little bit more on, I think you had mentioned encourage the planting of more trees. And I think -- are you saying, in other words, government incentives to get started? Because actually, afterwards, I think the incentive would be the demand.

MS. CURTIS: You know, I think the problem with the lag in time on the trees, because you're talking a 20-year rotation, you're in trouble before people realize that -- before the prices go up that would incent people to grow more trees. So I personally am talking about -- we need some incentives of some sort for landowners to plant more trees.

The other thing I wanted to mention quickly is the level of clear-cut harvest. People sometimes misunderstand clear-cutting. Pine trees must have full sun to grow, so that is why clear-cutting is done. If you plant a tree in the shade underneath some big pine

trees, they won't grow. So I just want people to understand, it is a must. You have to actually cut the whole forest down and replant to have a new crop, just like a row crop of corn or what have you.

COMMISSIONER ARGENZIANO: Okay. Since Buckeye was in my district for a number of years and I toured Buckeye, I can say with comfort that you guys really know efficiency. I've seen you get the best efficiencies at the plant. And I'm looking forward to working with all of the entities on trying to figure out how we get to where we need to go, and I feel comfortable about that.

And if you'll just indulge me a minute, would you tell all the guys and ladies back at the plant I said "hi." And just so you know, I remember -- I think I was chair of Ag when that study came out, that impact study on the economics of Buckeye and how many people came from so many different counties -- it wasn't just Taylor County -- and worked at that plant. So just tell them I said "hi."

MS. CURTIS: Okay.

MR. BETHEA: Thank you.

CHAIRMAN CARTER: Commissioner Skop.

COMMISSIONER SKOP: Thank you, Mr. Chairman. Just as a follow-up, I think that the point that the

presenters made is also an excellent one to the extent that it does show that we are promoting renewables in Florida, although we need to make sure that there's to be adequate resources to protect our forestry industry. I think the corollary to that is that making these types of investments in Florida stimulates other industries in Florida, such as agriculture and forestry, and heightens awareness of what we need to do to not only facilitate and incentivize, but also to protect those natural resources.

CHAIRMAN CARTER: Thank you so kindly.

Mr. Futrell.

COMMISSIONER McMURRIAN: Yes. Eighth on the agenda is Mr. John Wilson with the Southern Alliance for Clean Energy.

MR. WILSON: Good morning, Commissioners. Thank you for the invitation to speak.

I represent the Southern Alliance for Clean Energy. My name is John D. Wilson, and I work out of our Asheville, North Carolina office, but I did grow up in Florida. And by way of background, I previously worked for the Florida Legislature doing policy research there for several years.

Our organization promotes responsible energy choices that create global warming solutions, and we

also want to encourage clean and healthy and safe communities throughout the Southeast.

I have just four brief topics I would like to address today. We're going to submit more extensive written comments. I thought I would focus on things that I think other presenters may not be touching on.

We've already heard several presentations that have talked about the various aspects of legislative intent that the Commission will need to balance when it implements this legislation. I wanted to point out that -- and I don't believe anyone else has specifically referenced this, that Section 377.601, which creates the -- or sets direction for the Energy and Climate Commission, also has relevant state policy.

And I'm not an attorney, so I don't know whether policy of the State of Florida trumps legislative intent or vice versa. But I think that what you're left with is an awful lot of different policy statements and intent that, if any one of them were taken to their extreme, would conflict with the others. And so what that gives you is either enormous latitude or enormous complexity, depending on your point of view, in implementing this legislation.

I want to highlight really just four aspects of the balancing that you will have to do. The first is

that when you're looking at greenhouse gas emission reductions, you're going to be looking at it on a life cycle analysis. And having spent a lot of time as the director of research for our organization on life cycle analyses, I can tell you there's no perfect data out there on this question. It's going to be a very subjective call as to how to interpret the various studies that have been done on this topic, particularly in the arena of biomass. And as you may be aware, there has been a lot of controversy about the life cycle impact of biofuels production, both in the U.S. policy and the European policy, so that's something that we're going to need to delve into very carefully, and I think the previous presentation really laid that out for you.

A second -- another aspect of the legislation is, clearly, the Legislature is looking to establish a long-term strategy that promotes rapid technology development. You can see this illustrated in the grant to Florida Atlantic University for 8.75 million to look at ocean energy, or you can look at the past three years, $42 million appropriated to renewable energy development projects. We clearly have an interest in not just sort of adding a little bit of renewable energy capacity to the system, but really changing the economy of Florida and the technologies that are being used to

generate electricity. And so I think that that is a mandate to go beyond just simply a cost-based approach to this issue.

Third, cost stabilization and minimization. While we do have this one direction to go in terms of technology development, there's this interest in sort of stabilizing and making sure that everything is done in a cost-effective manner, and we absolutely support that.

And then next, there's, of course, the interest in job and business development, and I think you see this emphasized in the focus on Florida production of electricity.

The next point I would like to make is the need to look at the RPS in a planning and forecasting framework. Really, we can't just simply look at the RPS in isolation from the other policy issues that are before you. We have the upcoming FEECA process that will be looking at the energy efficiency and demand-side renewables goals for the utilities in the state. And this really needs to be looked at together, and not in a formal legalistic manner, but we need to have the analysis that is supporting these two ongoing policy developments to be done in an integrated approach, for a number of reasons.

First of all, one of the important aspects of

a forward-looking energy policy is that it helps us reduce the risk, the cost risk to the public. Typically, most analyses I've seen of the cost of energy focus on sort of the levelized costs, and you'll see a comparison of the cost of wind to nuclear, you know, sort of 8 cents versus 12 cents, or whatever it might be on a per kilowatt-hour basis. But I would urge you to look at more comprehensive modeling analyses that also put explicit quantitative values on the different risk reduction opportunities that different resources promote.

The Northwest Power and Conservation Council actually does very extensive modeling on this and has shown that, for instance, when you compare different portfolios of energy strategies to each other, one might save a billion dollars in long-term costs versus another, but the risk premium of the more expensive policy is actually a savings of potentially 4 or $5 billion in terms of risk avoided. And the kind of risks that they model are the risk of higher energy prices that are expected in a baseline case or other kinds of risks.

So there are real huge dollar values at stake in terms of risk avoidance and, of course, this is something that we're very used to valuing in the

insurance industry, for instance. There's ways to put a dollar value on risk. So I would encourage you to go beyond sort of a base case analysis and look at those values as well.

The other reason that I would suggest going to sort of a planning and forecasting framework that integrates all of these issues is that you're able to understand how different renewable energy choices are going to affect different -- affect things outside of the renewable energy arena. The particular load shapes that are associated with renewable energy generation will have an effect on the cost-effectiveness of energy efficiency, will have an effect on the cost-effectiveness of the nuclear plant, et cetera, et cetera. These are all interrelated values, and you're going to need to put together a system approach that balances these all, and you can't do it sort of by creating isolated models and sort of guessing how they fit together.

And this alludes to a point, I think, that's really important. We had some discussion earlier today about the demand-side resources, distributed generation. And, of course, the FEECA process explicitly provides that we're going to have goals for utilities in terms of demand-side renewable resources, so that's another area

where we need to look at how these two policies integrate, because we don't want to have an ambitious goal under the RPS that assumes full build-out of rooftops for solar PV, for instance, and an additional goal that's imposed that counts the same things twice. So there could be double counting across these two proceedings if they're not coordinated at the analysis stage.

Finally, in terms of planning and forecasting framework, we've seen a lot of maps today that have just shown Florida. And, of course, the law does say that we're talking about production of electricity in Florida, but that's not necessarily where the resources will come from. There's nothing in the law that says that there can't be imports from other states, or even other countries, of biomass. And so we need to have a planning framework that takes that into consideration and looks at both directions, potentially, of resource flow into and out of the state and how that could affect things.

And finally, although it's probably not allowed to count towards the RPS, there is a potential for a very large development of offshore wind in the Georgia-South Carolina region, and it is certainly conceivable that that could be built into the State's

planning framework in terms of transmission down into Northeastern Florida. And so I would urge you to keep that potential resource in mind, even though it may not be legally eligible for the current -- under the current statute.

And this comes into the third point I would like to make, which is the definition of eligible resources. I think the statute lays out a very good framework for beginning this work, but there is some further work that's going to need to be done. First of all, I would urge you to look at resources, both the ones that are available from a commercially ready perspective in the near term, and to look at longer term resources that require R&D.

As I mentioned, we've got the state funding for ocean energy. We can't count on any specific amount of ocean energy being developed by 2020. But on the other hand, I think we have to sort of assume success at some level and count on that idea and that vision of the state becoming a reality. And I'll talk a little bit later about how I would suggest doing that.

Second, I think the area of biomass, as we just heard in the previous presentation, and also waste-to-energy, is an area where we're going to see a lot of complication. We have a direction in the

statutes to look at life cycle greenhouse gas emissions, and these are both technologies where life cycle emissions are a very complicated question, and so we're going to need to get into definition there.

And also, these are both technologies where there are potential environmental impacts that go beyond just simply the contribution to renewable resources or the greenhouse gas emissions, and so those are also directed by statute as things that needed to be considered. The economic, social, and environmental impacts I believe is the phrase in the statute. So those are issues that will need to be taken into account, and I'll suggest in just a moment how I think you might look at that.

Finally, I think that in addition to the question I raised earlier about the demand-side resources and how they would be included in the RPS, if at all, the other place that demand-side resources could be included is in building codes. We have the statutory delegation to pursue energy efficiency in building codes. We could see, for instance, solar hot water heater use becoming more of a requirement in the building codes than just simply an option. I'm not sure how that will play out. I wanted to raise that as a possibility.

Finally, I would like to briefly go over some concepts for how to structure an RPS. We favor an approach with tiers and carve-outs, but we favor -- we're not promoting that just simply sort of as an abstract notion, but tied to the points I made earlier that are in the statute.

First of all, in terms of the tiers, the main focus there would be on the greenhouse gas emission life cycle analysis and the environmental impacts of the different resources. So we would suggest three tiers, the top one being those that are zero emission from all perspectives. Any resources that count towards that category would count towards full compliance with whatever RPS you set. The second tier would be those with less than zero greenhouse gas emissions, so biomass or waste-to-energy, where there is some greenhouse gas emissions, would fall into that category. And then the third category would be those with significant environmental impacts, whether or not -- regardless of their greenhouse gas emission level.

And what we would suggest is that for Tiers 2 and 3, you set a maximum of, say, 15 percent of the total goal could be contributed from those categories. So that would allow full counting of those resources towards the RPS, but a limited amount of the

contribution.

We also think that there should be a carve-out for solar and wind to promote the rapid technology development, and we would suggest that that would be about -- that about 15 percent of the total goal would be appropriate.

I also think that we want to look at staging the goals. I think you should focus on the 2015 goal and the ramp-up to that point in terms of the actual identifiable potential resources that are in the state right now, things that are commercially ready to go, and then look towards 2020 as more of an aspirational goal that is intended to move forward the technology R&D at a rapid pace, and revisit that goal in 2014.

Finally, I think we've had some interesting remarks about, for instance, an alternative compliance mechanism. I think that would be an appropriate thing, particularly for smaller utilities that may want to make use of Public Service Commission services or some other state agency that could sort of collectively purchase and manage RECs on their behalf. I think the larger utilities probably do not need an alternative compliance mechanism. They're perfectly well suited to -- staffed to handle those kind of issues internally.

So I thank you for your interest in our

remarks, and I look forward to providing you with further materials later.

CHAIRMAN CARTER: Thank you very kindly. Thank you. Mr. Futrell.

MR. FUTRELL: Next on the agenda is Mr. Eric Draper with Audubon of Florida. He is number 9 on the agenda.

MR. DRAPER: Thank you. My name is Eric Draper. I'm deputy director of Audubon of Florida, a conservation organization and science-based organization and steward of wildlife in Florida for over 100 years. We thank you, Chairman Carter, for the opportunity to address the Public Service Commission today on the establishment of the renewable portfolio standard pursuant to the provisions of Section 42 of House Bill 7135 which was passed and signed into law this year. I had the opportunity to lobby the Legislature on that bill, and we're very proud of some of the content of it.

The law directs the Commission to adopt rules for an RPS requiring each provider of electricity to supply renewable energy directly, by procuring, or through renewable energy credits. And this goal should be cast in costs and capacity in 2020. I've attempted to direct my comments specifically to what Section 42 requires.

The Legislature, of course, did give itself the power to approve the rule, and I think that that should cast all of our considerations in a special light. The rule is, nevertheless, a wholesome assignment that should allow the Public Service Commission to act boldly to make renewable electricity a major part of Florida's energy future.

Policies in 7135 also create conditions for decreased electricity demand, and that's going to be an important point I'll make today, building codes, particularly energy efficiency and conservation programs, which should be factored into the PSC's analysis.

The RPS directive is timely as Florida's government and its citizens are all involved in efforts to reduce our dependency on fossil fuels and imported fuels, as well as to improve our economy and protect the state from the devastating impacts of global climate change.

There is considerable precedent in other states for RPS as a strategy to accomplish the goals I just mentioned. As of March 25th -- as of March, I think 25 states and the District of Columbia have implemented some type of renewable portfolio standards. But RPS is just one of the suite of measures that must

be undertaken to free us from reliance on expensive fossil and imported fuels, to reduce greenhouse gases, and to build a clean energy and low carbon economy.

Now, the Commission has requested this workshop focus on two specific areas, the requirements of 7135 and specific recommendations for elements of an RPS that should be addressed in the Commission's rule. Prior to addressing these areas, it's important to note some baseline assumptions that must influence policy thinking and subsequent rulemaking.

It's important to have an initial target for the RPS. In policy, as in archery, targets help refine our aim. A target can be moved or changed, but plays an important role in helping to test assumptions about the effort, and I think there's a lot of testing of assumptions that needs to go on right now. The Legislature did not preclude a target number or percentage or even suggest constraints related to percentages or targets.

Contrary to current assumptions, demand for retail delivery of electricity, driven largely by fuel costs, will decline. I know that statement is contrary to what has been said in here by almost everyone, but I'm going to make it again, and I'm going to attempt to try and reason my way through it. But I think that that

should at least be a consideration guiding some of your considerations as you're looking at an RPS. As a consequence of that decline, a proposed RPS expressed as a percentage of total retail sales will be more attainable than if you use the current projections of electrical demand growth in Florida.

Given current and projected fuel costs and new policies and increased energy efficiency, Audubon believes that decreases in energy demand will contribute to a decreased need to build out our fossil fuel based energy capacity and will contribute to ensuring that a 20 percent RPS standard in the year 2020 may be successful. The cost per kilowatt-hour from renewable sources will go down as technologies improve and capacity increases.

The intent language in 7135 finds that the State's, quote, energy security can be increased by lessening its dependence on foreign oil, that the impacts of global climate change can be reduced through the reduction of greenhouse gas emissions, and that the implementation of alternative energy technologies can be a source of new jobs and employment opportunities for Floridians.

We note that other states have set ambitious targets of 20 percent for RPS by 2020, and this target

should be considered by Florida. Establishing an RPS that supplies at least 20 percent of Florida's electricity by 2020 through safe, clean renewable energy helps meet the intent of 7135 and will serve to reduce greenhouse gas emissions and make an important contribution to stabilizing climate change, thereby positively contributing to major policy goals of the State of Florida and, of course, our Governor.

I should note -- I just got an e-mail while we were sitting here -- that Yale and the University of Miami, Yale College and the University of Miami released a poll this morning about climate change. It was a poll in Florida, and they found that 65 percent of Floridians support an RPS standard of 20 percent by 2020 and would pay more, as much as $100 more a year on their electric bill, according to the poll. I hope I got that information right. It came over an e-mail.

But I thought that was an interesting little piece of news. Somebody clearly must have known you were meeting today and released that news. Maybe one of the other interest groups here was going to break that themselves.

7135 gives priority to solar and wind sources. This should be reflected and strengthened in the rule through a tiered system that allows preference to solar.

Additionally, any renewable source that captures waste methane and converts it to fuel for electricity should be given preference.

We have to note here that from Audubon's point of view, wind is a weak energy source in Florida that has been shown to have significant impacts on wildlife in other places where wind energy has been used as a technology. We think that would be particularly significant in Florida, because wind would be located here along our Atlantic beaches, which happen to be major migratory flyways where million of birds move throughout the United States.

We would also suggest, particularly based on the information that has been provided today, that you put at a very low tier some of the biomass projections, notwithstanding existing activity that's coming from Florida Crystals. But we're very concerned as a wildlife organization that we would end up strip mining our forests to provide -- I know that's a provocative comment. I don't usually make those. But strip mining our forests to provide electricity is a short-term solution, and it doesn't make much sense for a beautiful state like Florida.

The law does provide and the rule should provide for including demand-side reduction or

efficiency. I want to say that again. The law does not provide and the rule should not provide for including demand-side reduction or efficiency as a part of the RPS.

A large designated percentage of the RPS should be reserved for solar energy. Of all renewable sources of electric power, solar is the most promising for Florida. Solar fuel is free, nonpolluting, and provides for distributed production. Solar could be granted additional incentives by allowing multipliers for renewable energy credits. Indeed, RECs could be limited to solar. That would be our recommendation, limit RECs to solar in order to give a strong, strong preference to that particular source.

Providing this share is consistent with the provisions of 7135, which states that the Commission may, quote, provide additional weight, end quote, to renewable energy such as solar photovoltaic. Additionally, 7135 begins to bring down the significant regulatory and financial barriers that have slowed the wide scale deployment of solar technology and hindered the growth of the solar market.

Interconnection and net metering policies were incorporated into 7135 and should contribute easily to diversifying Florida's solar mix and allowing renewable

energy to reach the grid from distributed sources.

The effectiveness of net metering and interconnecting the grid should stimulate the growth of solar power in Florida and will be bolstered by a robust RPS that reserves a specific share for solar. Including a solar share specifically to encourage the growth of Florida's solar market will save consumers money and contribute to cutting greenhouse gas pollution in a manner that's safe and secure.

I want to go back to demand. Forecasts of electricity demand and costs by utilities based upon assumptions that are changing rapidly and do not take into account new trends, such as the rising cost of oil and gas, and new policies for energy efficiency and renewable energy, including policies in 7135, all of which should be factored into electric supply capacity pricing, analysis, and forecasts done by the Public Service Commission in order to set the standard.

As oil prices continue to rise, it is likely that natural gas prices will follow suit. Even if oil prices remain at current high levels, or worse, they continue to rise, elementary economics tell us that we will see a decrease in energy consumption. Indeed, it has already begun. Oil consumption has decreased by 2 percent in the United States over this year, just this

year, a decrease of 400,000 billion barrels a day -- I'm sorry, barrels a day. Adjusted to include for ethanol consumption, the daily decrease is actually 530 billion barrels a day -- 530,000 barrels a day. I can't read my own numbers here.

Anyway, also, gasoline prices will continue to rise, projected to increase to $4.48 per gallon in 2009, corresponding to a further decrease in 2009 daily oil consumption. The reason I mention that is because I believe that, as we've seen, consumers reduce their consumption of gasoline as a factor of oil supply. The same thing will actually happen, I believe. I can't prove this yet, but I think that you ought to really look at it, that electricity usage will also go down.

Retail electricity prices will rise. They've risen in Florida. We've got testimony here today they've gone up 40 percent since 2000. I was actually stunned by that number. They will rise in conjunction with rising oil and natural gas prices. Florida will especially feel this effect because we're dependent upon importing fuels to produce our electricity.

And I'll skip over some of this. I guess the point that I'm trying to make is that the -- we should project into this question and all of your cost considerations that fuel prices are going to go up and

that there's going to be a corresponding reduction in demand. I wish that I had the research here to be able to present that to you and show you a projection, but you've relied some and you have to rely some on the projections that the regulated community is giving to you, and I think that you should search far and wide to look at what the actual consumption is going to be. And I think that some of that is going to be a phase-out of some of those fossil fuel facilities that actually produce some of that electricity.

So the question is, will renewables be cost-effective and have a place in the supply future. That's a question that you've got take up rather than rely just on the utility projections. I notice in your data request that -- well, I notice you've got a piece in here on a data request which related to 7135. I hope that as you collect that information on what appears to be a very short time frame that you will in fact make sure that you reach out to and stimulate the collection of data and the use of data that will help us to understand the costs and the consumption of the energy future, because I think that that is a fulcrum upon which a lot of the decisions about RPS, and particularly solar, will rest.

Thank you very much for listening to me.

CHAIRMAN CARTER: Thank you, Eric. Wait for a second. Commissioner Edgar.

COMMISSIONER EDGAR: Thank you, Mr. Chairman. Thank you, Eric.

I agree with many of the things that you've said, and I also hope that when you encourage us, which I agree, I think we all do, with trying to do some additional outreach and tap into a wide variety of data sources and analysis, that your organization will help us do that.

I wanted to come back for a moment to some of your comments about perhaps demand decreasing more than some of the projections have been over the past few years or even currently. And I recognize, as you pointed out, that the bill has some things in it to try to help further that in this state. I know I personally think that some of the building codes language and having energy efficiency requirements improved in our new buildings and retrofitting is, you know, a great, still untapped opportunity.

But even with that in mind, I would like you to elaborate a little bit as to why including additional -- I think we could separate it out. So why do you argue for not including demand-side or new efficiencies as part of an RPS? If you could just speak to that for

a few more minutes.

MR. DRAPER: One of the reasons is the reason that Mr. Wilson mentioned, which is that I think it's a confusing set of requirements that the Legislature has. They did not clearly in 7135 go as far as we had wanted them to in terms of encouraging efficiency and conservation. But nevertheless, I think that a lot of -- those things are going to happen under a separate regulatory process which you will help guide.

A lot of it will be consumer driven anyway. In the same way that you've seen consumers trade in their SUVs, or try to, for more fuel efficient automobiles, I think families like mine will wake up and they'll set the thermostat a little higher, they'll replace their light bulbs, and they'll engage in retrofitting their homes, putting more installation in the attic. So all of those consumer based activities will start kicking in, driven largely by looking at the check that they have to write for their bill, based largely on increased fuel costs. So that's one factor.

I think another factor is in fact the Legislature's encouragement for the new housing market under the building codes, for the retrofit and what you'll see in the government buildings, again, a 7135 concept. So the confluence of those activities will

drive a reduction.

Now, I wish that in the amount of time provided my organization could come up with some kind of way to calculate that for you. But I think that's going to happen on its own track, and you should let that and you should encourage it to happen on its own track. The RPS as a number I think should continue on its own track.

And I'll go back to something I actually thought about when I saw some of the testimony from other people on this issue, which is, I looked at the law. I looked at Section 42, and I said, "It doesn't look like the Legislature actually provided for using efficiency and demand management as a basis for your RPS." And knowing this Legislature and knowing that this rule is going to have to be approved by it, I think you've got to be very careful about the assumptions that you work into the RPS, because it would not take much for them to send us back for a do-over, however they -- I mean, they have the prerogative in terms of how they handle this particular rule.

I hope that answers the question, Commissioner.

COMMISSIONER EDGAR: Thank you.

CHAIRMAN CARTER: Commissioners, anything

further?

Thank you, Mr. Draper.

MR. DRAPER: Thank you.

CHAIRMAN CARTER: Mr. Futrell.

MR. FUTRELL: Next is Mike Branch with Smurfit-Stone Forest Resources, and he is tenth on the agenda.

MR. BRANCH: Mr. Chairman and Commission members, thank you for the opportunity to come. My name is Mike Branch, and I've lived in Florida all my life. I'm a forester from the University of Florida, and I've worked for Smurfit-Stone for 32 years here in Florida, so I'm one of those Floridians that's lived here and worked here all my life. Thank you for this opportunity.

I do work for Smurfit-Stone, and we believe that we're to a great degree part of the answers to the climate change, we believe in our bioenergy in the states that we do business. We have three pulp mills in Florida, which represents 23 percent of our company's pulp and paper production, and we employ about 1,200 men and women in these three mills with a payroll of over 103 million and over $5 million in property taxes.

Over 60 percent of our energy at our virgin mills in Fernandina Beach and Panama City is from the

form of bark, or generated by biomass in the form of bark and lignin and waste wood. And our mill in Jacksonville is a 100 percent recycle mill, and it has co-ops with the Cedar Bay Generating Station in Jacksonville for steam and energy.

What I'm going to say has been said by a few people already, so I certainly -- with Michelle and Clay, I appreciate their presentation, but I do want to reiterate one or two. It's going to be short.

And the first one is not, and I haven't heard many people talk about it, but my first is that we would urge you to create a base year in light of what Eric's saying. If it goes down, that would be good, but if we continue to grow and the energy continues to be used and created in Florida and our forests continue to deplete like we think it has in the past, we're going to be really in a place that woody biomass will just not be -- would not contribute to the RPS. And so we want to try to set that here and now so we wouldn't have to approach that.

The second is that what we do with the RPS pertaining to climate change, including biomass and cellulosic ethanol, must be done in a sustainable way, the same as what they've said. Sustainability is something that we have to reiterate. And to do that, we

just think that you need to know that data. We want to promote that as you go forward with all the different aspects of the RPS, if you can know that data, what Michelle showed, what the Division of Forestry has and we have, we need to know that data.

As a matter of fact, if you take the limbs and the tops, what we call woody biomass waste is less than 1 percent of what the Florida RPS would be. So it's a very small amount. It's 3 million tons, about 3 million tons, but if you consider that to the amount of energy the state produces and uses, a very small amount would be in the Florida renewable portfolio standard.

We also want to concur with her, with Michelle in talking about the U.S. Forest Service in her presentation. We want to concur with that, that we need to be careful. An RPS is going -- if its pushes and we don't have in any way any sideboards on it, then we can see our forests in Florida go away, and not just the trees go away, but all the aspects of sustainability.

Sustainability is not just the trees, but it is the wildlife, and it is our water and issues with threatened and endangered species. And it is a carbon sink, by the way, carbon sequestration and storage. And so we want to make sure that we see those qualities in this forest and we don't use them.

The other side of that too is that we feel like that if you look at the carbon cycle and you look at the young, vigorous growing trees, if you take those trees and put them into manufactured goods such as 2-by-4s that will actually store that carbon, it's a better idea than going out and cutting them down and burning them in an inefficient way. So we think that our forest is healthy. We want to keep it that way, and we think it's very efficient.

The last is, I want to talk to you about renewable resources. And again, as Michelle said, if we deplete our forest down to where it is not sustainable, then biomass would not be able to be used in your portfolio, because it's not going to be renewable. It's going to be a commodity, but it's not going to be renewable. So we have to make sure that we know that, that we don't cut out the forest, because then it -- the way it reads today, it would not be a renewable resource, because it's not growing up.

Agriculture, you can do that year to year. Forestry takes -- they were talking about if you were to plant some real high variety that will grow real fast for a crop, it could be five or ten years. But if you're going to grow a forest, it takes you 20 years to grow a forest compared to every day or every year

whenever you come to agriculture. So it's very important that we look, and if it's not sustainable, then certainly it's not renewable.

And last, I would urge you to adopt a sustainable rule to assure that any woody biomass used to satisfy the RPS mandate qualifies as a renewable woody biomass fuel. In fact, we believe that you and DEP have the authority to place these plants wherever they might go to make sure they're sustainable, that they can't come up beside two paper mills and other users of timber and just plop in because they're subsidized. They can beat us every day at a price. So we would think that you have that authority if you're permitting these plants, that you can look at suitable places, and especially sustainable places to place these plants.

Any questions?

CHAIRMAN CARTER: Thank you, Mike. Commissioners? Thank you very kindly.

Mr. Futrell.

MR. FUTRELL: Next is Ms. Vicki Gordon Kaufman, who is representing Wheelabrator Technologies.

MS. KAUFMAN: Good afternoon, Commissioners. I was going to say good morning, but it's good afternoon. I'm Vicki Gordon Kaufman. I'm with the

Anchors Smith Grimsley law firm here in Tallahassee, and I'm appearing on behalf of Wheelabrator Technologies, Inc. this afternoon. Wheelabrator appreciates the opportunity to appear before you today and to discuss the new important legislation that we've all come here to consider.

I'm not going to reiterate what many of the speakers before me have said. I think we all recognize that House Bill 7135 is a very important statement of legislative intent, policy, and directive. And we all know, not only from that legislation, but from our own lives, that it's time to make a renewed, no pun intended, concerted effort to encourage and incent renewable energy in Florida. We laud the Commission for its role and the Governor's input and direction on the bill, and Chairman Carter has already made many of those remarks in his opening statement.

Wheelabrator looks forward to being a participant in the process and in the study we understand the Commission is going to undertake to assess the potential for renewable energy in the state. And I wanted to point out that the Integrated Waste Services Association and its member companies, which include Wheelabrator, have previously submitted and participated with you in the four workshops that you've

had on the renewable portfolio standard up to this point.

I just want to give you some very brief information about Wheelabrator so you'll know who we are. Wheelabrator is a wholly owned subsidiary of Waste Management, Inc., and it operates 16 waste-to-energy plants throughout the United States. Wheelabrator built the first commercially successful waste-to-energy plant in the United States. In Florida specifically, Wheelabrator owns and operates two facilities in Broward, it built and operates the City of Tampa's facility, and it owns and operates a waste wood, tires, and landfill-gas-to-energy facility in Auburndale. In total, Wheelabrator provides over 200 megawatts of renewable energy currently and has the ability and the capacity to produce more renewable energy under the appropriate circumstances.

Ms. Peterson, I guess one of the first speakers this morning, walked you through 366 and talked to you about the intent. I'm not going to go there again, except to say that the law is clear that current renewable facilities need to be encouraged and promoted and new renewables need to be developed.

I think Chairman Carter in his opening remarks asked for some specific recommendations, so we're going

to focus our comments on the language that's in 366.92(3)(b)2. And in case you don't have that committed to memory, that is the section of the new law that requires this Commission to adopt compliance measures for its RPS program.

I think the Legislature recognized that even with everyone's best intentions and best efforts, which we have no doubt will be put forth, that the Commission needs adopt a compliance mechanism to ensure that whatever the RPS standard is that you set is met. So we're here to suggest to you today that it's possible to implement the RPS requirements in a manner that complies with the statute and, as the statute also requires, is not cost-prohibitive.

The way to do this -- and this has already been mentioned by a few speakers before me -- is to utilize your compliance authority through what's called an alternative compliance payment, which is abbreviated ACP, mechanism. This mechanism is already in use in a number of programs across the United States. It's a commonly used mechanism to ensure compliance with RPS standards, and it's used to encourage and incent the development of renewable energy.

The initial value of the ACP has to be high enough on a per megawatt-hour basis to ensure that the

utilities purchase from renewable resources and thus have the incentive to seek out renewable projects. We would suggest that in this rulemaking you set the market rate for the RECs through the ACP and that you ensure that that cost is adequate to incent renewable development.

Now, in order to fulfill the Legislature's directives that we've already talked about, it's critical, we think, that the amount of renewables or the ACP payments required to be purchased be sufficient to create the proper incentive. Clearly, this has to be in excess of the existing amount of renewables that we have in the state today.

Under the ACP mechanism, the way it generally works is that the utility would be required to purchase RECs from renewable producers until the supply is exhausted. Once the supply of Florida RECs is exhausted, the ACP process would be structured to allow the utility to make this alternative payment for each remaining megawatt that they need to purchase in order to satisfy your RPS standard. So the utility has to purchase RECs or make the ACP payment up to whatever the standard is that you all set in this rulemaking.

That has the effect of the ACP program setting the market price that's at or maybe a little bit below

the ACP, because obviously, only a prudent utility would purchase a REC priced at or below the ACP. This mechanism, which I said is common in RPS programs, will let you all achieve the goal of incenting new renewables, current renewables, and it would ensure that there's not an inadequate supply of renewable energy, since the utility would buy the RECs available, and if necessary, make that ACP payment.

As I said earlier, the ACP requirement should be in place to set the market price for the RECs, and so we would suggest to you that in this proceeding you set that ACP price, and we would look forward to working with you and your staff on that.

We think you can also ensure that, as the statute requires, the cost of renewable energy is not prohibitive by setting this price at the level -- at a level which the stakeholders in this proceeding hopefully would be able to agree. Of course, this consideration and the setting of the price has to be balanced by the requirements in 366.92 that we've already discussed. If you set the ACP too low, there's not going to be sufficient incentive for renewable development.

Now, the cost of the RPS program is also going to be affected by the megawatt-hours that you require

the utilities to purchase. And again, you're going to have to look at the same balance of cost and incentive when you're deciding on that.

One last point on this. We think it's important that you determine what is and is not cost-prohibitive, or we fear that there may be a risk that some of us, and perhaps the utilities, providers, whomever, will become engaged in sort of protracted administrative proceedings over what is and isn't cost-prohibitive rather than working toward the development of the resources that the state needs.

We don't have a specific recommendation at this time for the level of the ACP, but we do feel that -- and we'll work with you, and I'm sure others will, to set it. And we feel you need to look at it annually because, obviously, it's not a static price. And we think it might be helpful for you and the staff and others to look at the other states that have this mechanism, particularly, as I understand it, Massachusetts.

We will be glad to work with your staff and to provide further information on this aspect of the program when we have more information in hand that we can provide to you. And as I said, Wheelabrator looks forward to continuing to be a participant in this

process and helping the state to meet the renewable energy goals that we're all working toward.

Thank you for your time and attention.

CHAIRMAN CARTER: Thank you. Commissioners? Commissioner Argenziano.

COMMISSIONER ARGENZIANO: Yes. Thank you for the presentation. I know there's the new McKay Bay plant in Tampa that has been in use, waste burning for the city. Could you possibly provide, maybe not today, but can you provide to the Commission and staff -- when you say clean energy, I would like to know the emissions and what is actually coming out. I know there's particular scrubbers and everything, but I would like to know the numbers if you have them.

MS. KAUFMAN: Are you talking about on that particular plant or a typical --

COMMISSIONER ARGENZIANO: A typical plant, which I believe that is, I think.

MS. KAUFMAN: I will certainly see if we can collect that information for you.

COMMISSIONER ARGENZIANO: Thank you.

CHAIRMAN CARTER: Thank you. And Ms. Kaufman, just provide it to staff, and that way we'll have it available for the --

MS. KAUFMAN: I'll do so, Mr. Chairman.

CHAIRMAN CARTER: Thank you. Mr. Futrell.

MR. FUTRELL: Next is Mr. Rene Silva with Florida Power & Light.

CHAIRMAN CARTER: Mr. Silva.

MR. SILVA: Good afternoon, Commissioners. Thank you for giving me this opportunity to present a summary of FPL's views regarding a Florida RPS. My name is Rene Silva, director of resource planning at Florida Power & Light Company.

In order to best ensure an optimal design and implementation of a Florida RPS, we believe that there's need for more education, information, and analysis of the type that is being discussed here today and will be discussed in the future.

We believe that the primary objective of a Florida RPS should be to reduce emissions of greenhouse gases from the production of electricity with a focus on solar and wind generation, while increasing energy security and maintaining reliable electric service and reasonable electricity prices for the customers. Therefore, a Florida RPS should foremost value clean and renewable energy sources that have the greatest effect on the objective of reducing greenhouse gas emissions.

For that reason, we believe that clean energy sources, such as nuclear, wind, and solar, as well as

carbon reduction due to energy efficiency improvements, for example, the modernization of less efficient plants, should be recognized and play prominent roles in meeting a Florida RPS.

To encourage the development of and investment in clean and renewable energy sources, upfront and expedited prudence determinations and cost recovery approvals with administrative finality are essential.

In addition, electric customers should be informed clearly of their contribution to meet the Florida RPS.

The Florida Public Service Commission should set and periodically review the RPS targets to ensure they can be met without imposing unacceptable costs or adverse reliability effects on customers.

In order to prevent Florida from becoming economically disadvantaged by higher electricity costs, a Florida RPS should be adjusted and harmonized with any federal standard should one become law.

And finally, and in summary, the methods and incentives for complying with the Florida RPS need to be consistent with the objective to reduce emissions of greenhouse gases from the production of electricity with a focus on solar and wind, while increasing energy security and maintaining reliable electric service and

reasonable electricity prices for customers.

That concludes my summary. Thank you.

CHAIRMAN CARTER: Commissioner Skop.

COMMISSIONER SKOP: Thank you, Mr. Chairman. Good afternoon, Mr. Silva. How are you doing today?

MR. SILVA: Fine, Commissioner.

COMMISSIONER SKOP: With respect to -- I think in paragraph 3, you mentioned power reductions due to energy efficiency. Could you elaborate upon that a little bit more and how that would fall into the definition of renewable?

MR. SILVA: If, as we propose, one of the key objectives of an RPS is to reduce emissions of carbon dioxide, as has been stated here before, there should be a reference of what is being emitted at a certain point in time, and then actions, such as the repowering or modernization or conversion of existing generation that emits higher levels of CO_2 to lower levels, should properly be considered as contributing to that goal.

As a recent example, Commissioner, we have proposed the conversion of our Canaveral and Riviera units to essentially cut significantly the emission of CO_2, and that would be an example of what we mean.

COMMISSIONER SKOP: Thank you.

CHAIRMAN CARTER: Commissioners, anything

further? Thank you.

Mr. Futrell.

MR. FUTRELL: Next is Mr. Bill Ashburn with Tampa Electric Company.

CHAIRMAN CARTER: While Mr. Ashburn is coming, Commissioners, just for the record, we have comments filed by Ms. Holly Binns, the field director for Environment Florida. Those will be within our packet. She will not be presenting today, but they will be within our packet, not only available to the Commissioners, but also to the parties. Thank you.

Good morning, or good afternoon, isn't it?

MR. ASHBURN: It is afternoon. Good afternoon, Commissioners. I'm William Ashburn with Tampa Electric Company.

Tampa Electric shares in the goal of the Legislature and of this Commission to promote the development and protect the economic viability of renewable energy resources in Florida to the fullest extent those resources are available within the state, while also minimizing the costs of power supply for our customers.

We think that it is important that the RPS rule development process called for in HB 7135 that we've been talking about today and which you're starting

with this workshop should be conducted in a manner that is inclusive of all views, robust, and at the same time, realistic in setting goals for the development of the renewable energy resources that are available and affordable.

The Legislature in HB 7135 has recognized that the pursuit of renewable energy can and should be balanced with considerations of what is truly achievable, available, and cost-effective.

With regard to achievable and available, I would refer you to Section (3)(a) that requires that the PSC evaluate cost and the forecast capacity for each renewable energy generation method through 2020 in developing the rule. Such information should guide the Commission in developing the RPS obligations for the utilities.

And with regard to cost-effective, I would refer you to Section (3)(b)2 that Ms. Kaufman was talking about, which also requires off-ramps for complying with the RPS should compliance become cost-prohibitive.

During the workshop process last year, which we participated in, many issues associated with RPS were brought to the table and discussed. Some of those issues have been resolved by HB 7135, for example,

whether the renewable energy or RECs counted for the RPS could be produced from out-of-state resources, while others remain for this Commission to determine, such as the actual percentage goal for the RPS and over what period of time the utilities will have to achieve that percentage.

We think that if you keep all these considerations in mind as we move forward in the rule development process, you can foster a meaningful and effective renewable portfolio standard and at the same time ensure that the utilities subject to the RPS can continue providing safe, adequate, reliable, and affordable electric power to their customers.

Tampa Electric wants to commit to you that it will be an active participant in the development of this RPS rulemaking process, as we were last year during the workshop process that the Commission held on renewables. And I'm available to answer any questions if you have any.

CHAIRMAN CARTER: Thank you. Commissioners? Thank you very kindly.

Mr. Futrell, before you go, Commissioners, we've got a little hiccup on our technology system, and staff has asked for an opportunity to get our IT guys -- I guess it's ITT -- to look at that and revise that.

And we're pretty much close to taking a break.

Let's do this. Let's go ahead on and break for lunch, give our technology guys an opportunity to work on that system, because we do have -- the next presentation coming up will be on the system, and we want to make sure that we give an opportunity for everyone to be heard. So with that, we'll still come back at 1:15. So with that, we're on recess. I mean 2:15.

MR. FUTRELL: Mr. Chairman, if any members of the audience wish to speak that aren't on the agenda, please sign this.

CHAIRMAN CARTER: By the way, those of you here in the facility, any members of the audience that want to speak, if you would like to speak, please sign up. We have cards over here for you. Please sign up. We want to hear from you. Thank you.

(Recess from 12:50 to 2:20 p.m.)

CHAIRMAN CARTER: We are back on the record. And with that, Mr. Futrell, you're recognized, sir.

MR. FUTRELL: Yes, sir. Next on our agenda is Mr. Bob McGee with Gulf Power Company, and he is tab 14 your notebooks.

CHAIRMAN CARTER: Thank you.

MR. McGEE: Thank you, Mr. Chairman,

Commissioners, and staff for the opportunity to speak here this afternoon, and thank you for the opportunity to use the PowerPoint presentation. Thank you very much.

We would like to propose a framework for proceeding based on House Bill 7135 which consists five elements, in this order: First, determining objectives; second, clarifying the definition of renewable energy; third, completing an assessment of renewable resources; fourth, setting RPS goal levels and; fifth, finishing up with important details.

Step one in this framework is determining the overarching objectives. And, of course, that's very important. It reduces confusion and conflict later. In fact, staff said it very well in their summary of last year's RPS workshops: "First and foremost, the objectives of an RPS must be clearly identified, weighted, and prioritized." There are a lot of objectives out there. Which ones are most important are tough decisions to make, but it helps the process to the extent that we have clarity to understand that.

Gulf would suggest that one of those objectives as a top priority is CO_2 reduction. We've heard much about that today, lots of talk about greenhouse gas reduction. In fact, this goal is stated

in the energy section of House Bill 7135. The energy section of the State Comprehensive Plan says Florida shall reduce atmospheric carbon dioxide by promoting two things: One, an increased use of renewable energy resources, which this is certainly doing as an RPS, and secondly, by promoting low-carbon-emitting electric power plants.

Another objective Gulf would suggest as a top priority is something that's embedded in the RPS law itself. The Commission's rule shall include methods of managing the cost of compliance and shall provide for methods for which noncompliance shall be excused if the cost is prohibitive. So the essence of this is, number one, the law recognizes that an RPS is going to be more expensive, and number two, it encourages the Commission to establish something to manage the cost up front, and number three, to encourage sort of a safety valve if it gets out of hand later.

Next on the framework here is the definition. Clarifying the definition is really very, very important here. House Bill 7135 does not explicitly reference 366.91(2), subparagraph (a), which is the definition of biomass and includes MSW and landfill gas. Although it does reference subparagraph (d), it doesn't reference paragraph (a), and there may be some question about

whether that is actually included in the definition.

Next, the second big thing that we have noticed is that House Bill 7135 references two definitions of renewable energy. One is the renewable energy definition in 366.91, (d), and the other one, 377.803, which is really Florida renewable energy resources. That term is not actually used in the RPS legislation. It's used in the demand-side section. But it does allow in that particular section of the law thermal solar resources, but 366.91, (d) does not apparently allow for the thermal. So there's a question there about whether solar thermal and other thermal energy types, renewable thermal types would be included.

Let me mention here that based on the staff's recently released proposed scope of work for a study to assess the potential of Florida's renewable energy resources, it appears that this particular part of this framework that I'm suggesting here has been completed. As an example, 366.91(2)(d) is referenced as the definition in that memo to you all that will be considered in your July 15th internal affairs meeting. However, that does not include solar thermal, so that would preclude at that point -- if the assessment were going to be done, it would preclude the assessment of solar thermal, because the definition does not include

that.

Also, based on the presentation that Ms. Webb is about to give, 366.91(2)(a) is assumed there, because it's collecting data about MSW and landfill gas. Gulf does not oppose that implied definition. What Gulf is encouraging, though, is a more explicit declaration of that definition from the Commission. I think that would be helpful.

The next step in this framework, of course, is an assessment, completing a statewide assessment of renewable energy potential and cost. Of course, embedded in the RPS law is language to that effect, and staff's memo to that effect is moving very much in that direction.

Gulf suggests the Commission begin the assessment after the definition has been clarified. It's very important to get the definition before the assessment so the assessment covers all of what you want it to cover. And here is a proposed section of broad categories for renewable energy based on 366.91, (d).

In that assessment, Gulf suggests that several important attributes be considered. In this particular presentation, the items that are in red Gulf suggests would be considered and are not actually in the statute. The statute did not require them, but they would be

additional, current level of product or process maturity, for instance, is ocean energy production in a theoretical demonstration or commercially available status currently, projected year of commercial availability. And kilowatt-hours actually are not required in the statute, but Gulf suggests that would be important because the RPS is based on kilowatt-hours.

Lastly, the thing that we would add additionally to the statute to encourage is the CO_2 emissions in pounds per kilowatt-hour. Of course, that assumes that greenhouse gas reductions is an important objective of the RPS.

On RPS goal levels, step four of this framework, of course, would be done after the assessment was complete. And Gulf would encourage consideration of all economic impacts to RPS goals. We've heard some talk today about the goals -- I'm sorry, the jobs that would be brought to Florida as a result of renewable energy, and that's a good thing. But what we also need to consider is the result of higher electricity prices on the economy in the State of Florida, as well as the potential jobs that might be displaced, as was talked about from the pulp and paper industry earlier.

In terms of details, there are a lot of details to be worked out, and Gulf looks forward to

working with all parties in the coming months as these are working out.

Let me make a brief comment about one item that I personally spoke on last year in the RPS workshops, and that is the set-asides versus multipliers, and there was some discussion of that today. It is my opinion that Florida actually has a unique opportunity here to set a multiplier for solar or wind, if that's the desire of the Commission, to emphasize those, in a way that is effective, and be effective and be the first state in the United States to actually have an effective multiplier in place rather than using the set-aside methodology. It's much more flexible for the utilities. There are a lot of benefits to it. I won't go into those details right now. But I think the track record of other states on multipliers, as an earlier presenter mentioned, probably is the result of the fact that the multipliers are set too low, and you have an opportunity to fix that and do it well here.

So let me wrap it up by saying that this is just a high level framework that we propose, and we very much appreciate the opportunity to participate.

Any questions?

CHAIRMAN CARTER: Thank you. Commissioners,

as we're kind of getting together, I wanted to ask, when you were talking about the definitions section, were you talking about in that context it should have included solar thermal and geothermal, or did I just kind of pick that out of the air?

MR. McGEE: Well, Gulf Power, as you may know, has a very strong geothermal program, and we believe that if a solar thermal device were used, a geothermal device might also be able to count. There's a bit of difficulty with that, because a solar thermal unit can be counted on Btu output. Geothermal can't. It's more of an avoidance, more like a conservation method. So that may be better handled in the energy efficiency with FEECA, demand-side management side. If the Commission desired to include geothermal or solar thermal in the RPS, Gulf Power would very much support that.

Does that answer your question, sir?

CHAIRMAN CARTER: Thank you. Yes, it does. Commissioner Skop had asked some questions earlier about the set-aside and the multiplier. Commissioner, if it's okay, I'm just going to ask if he would speak to that. Do you mind?

MR. McGEE: Yes, sir. Just some more detail on it?

CHAIRMAN CARTER: Yes. You were saying that

in some states, the reason that it has not worked is that it had been set too low.

MR. McGEE: Yes, sir.

CHAIRMAN CARTER: Obviously, if we're looking at this and we're looking at things now, we want to look at something in terms of best practices, not worst practices.

MR. McGEE: Right. The multipliers that you see across the state for solar are around the range of 3, 1-1/2, something like that. And really, what you're trying to do is trying get the cost of solar down so it competes with other types of renewable energy. So if solar costs, let's say, 24 cents a kilowatt-hour, and you want to get it down to 8 cents a kilowatt-hour or 5 cents a kilowatt-hour so it competes with others effectively, you've got to divide that 24 cents by five or some number large enough to get the effective price of solar down to the effective price of other competing renewable energy types.

Let me sum it up by saying a multiplier for solar would need to be on the order of 5 or 4 rather than 3 or 1-1/2.

And I'll add to that that, as we talked about last year in the workshop, and the spreadsheets and the stuff is still there with the staff, as we proposed, it

would fade out over time. So as the solar industry projects their costs come down, this multiplier would fade out over time in accordance with that cost curve that has been projected by the solar industry.

CHAIRMAN CARTER: Thank you. Commissioners?

Mr. Futrell.

MR. McGEE: Thank you.

MR. FUTRELL: Thank you, Mr. Chairman. As the Chairman mentioned earlier, Holly Binns provided some written comments. She was unable to attend the workshop.

The next speaker that is here is Bob Niekum with Progress Energy Florida, and he's on tab 16.

MR. NIEKUM: Thank you, Commissioners, for giving us an opportunity to talk about the RPS.

Progress Energy Florida has been working on what we've called a balanced solution for the last few years, which has included building new power plants, including nuclear technology and advanced fossil technology. We have also been working to add to our energy efficiency programs and DSM programs, and we've tried to be more aggressive and creative in trying to add renewable energy to our portfolio. This RPS process is really kind of a continuation of a way to add to that renewable portfolio.

In looking at what the Florida Legislature has laid out before us in working on this RPS, we see that there really seems to be three fundamental issues that we're dealing with. One is how much can we do, how much will it cost, and what should really count in the goals.

In looking at what can be done, the inventory idea is really an excellent one. We just have to maintain an intellectual honesty of maybe it's not going to be what we want, but it is going to be what resources we have in this state and what will really work.

The technology issue is going to be a tough one. We don't want to just extrapolate out the technologies we have today, but we don't want to also be dreamers thinking that something new in technology is really going to save us.

Another in looking at what we can is, remember that RPS is just for the investor-owned utilities. The municipals and cooperatives are probably also going to be looking at programs that they have to do, and we just need to make sure that as all these utilities are competing for the same resources that exist in the state, we've just kept account of that so that we're not double counting what everybody can do because they're both looking at the same resource.

And lastly, and I'll just speak to this from

personal experience, it takes longer than you think. The delays, the technical difficulties you run into, even the best laid plans, and when everybody is pulling in the same direction, it just seems to be more difficult than it would appear.

In looking at what it costs, the evaluation of these costs are going to be difficult as well. We just need to be flexible in looking at them, and again, maintain intellectual honesty of what we think these things really are going to cost us. Different ways of looking at it, but the term was used before, a safety valve in the event that the costs do exceed what we really think they're going to be is some protection for the consumers of what this is ultimately going to be, going to cost them.

But again, taking into consideration there is an economic value in keeping this business in Florida, again, another tough calculation of what that benefit is. But at the same time, by keeping it in Florida, I think that's part of the overall cost of what we think this is going to cost us.

And finally, what do we count towards the goal. Again, it's looking at the resources that are available in Florida. Sometimes in Florida we look at things that maybe other states don't look at, but they

have a real significance here, like municipal solid waste. Exothermic reactions from some of our industrial processes may not be universally accepted as renewables, but they may be a good resource for this state, and we have to consider them.

As far as the preferences for wind and solar, if that's the choice, I would at least encourage you to incentivize the people who are most efficient and make it cost-competitive. Our experience seems to be there are some who are innovative and driven to get their costs down. Others are looking to be subsidized for the costs as they see it with no real as aggressiveness to go get those costs down and solve the engineering problems, solve the cost structure problems. And there's definitely a difference. They're not all the same. And the good ones are doing the right thing by trying to get their costs down, and there are some other people, for lack of a better word, that are just not as energetic at getting the job done.

And finally, we just need to look at it in the total context. We have, you know, the whole issue of other low carbon generation sources. How do they fit into the overall calculation at least has to be a consideration.

As a company, our goal is to support the

process and be a part of the process, and we're looking forward to making our contribution to it. Thank you. If there's any questions --

CHAIRMAN CARTER: Thank you. Commissioners, any questions?

Thank you. Mr. Futrell.

MR. FUTRELL: Thank you, Mr. Chairman. And, Commissioners, I apologize for any confusion. Mr. Niekum did not submit any comments prior to the workshop.

Next -- we're finished with the speakers who expressed a desire to appear before you today. Next we have a staff presentation from Ms. Karen Webb.

CHAIRMAN CARTER: Before you do that, Mr. Futrell, before Ms. Webb, are there any of the speakers that came that didn't get a chance to get their presentations in that want to speak?

MR. FUTRELL: There are a few folks from the public that would like to comment, so --

CHAIRMAN CARTER: I'm saying before we get to the public, are there any organizations that wanted to that didn't get their presentations in in time?

Okay. Hearing none, you may proceed.

MR. FUTRELL: Thank you. Ms. Karen Webb with the staff is going to provide some remarks on the data

requirements that are a part of this new statute.

MS. WEBB: Good afternoon, Commissioners. I'm Karen Webb with staff. I'm going to talk to you a little bit about the data requirements associated with the renewable portfolio standard as it is outlined in Section 366.92. As you are aware, the statutory amendment requires the Commission to evaluate the costs and the technical potential associated with renewable technologies going out through the year 2020. Particularly, we have to evaluate the installed capacity, current and forecast, and the levelized costs in cents per kilowatt-hour of both current and forecast.

We're going to need assistance in collecting the data that's required to meet this charge, and to that point, staff will be issuing within the next week a set of data forms requesting very detailed and specific information relating to the technical potential, the costs, and the environmental impacts associated with each of the renewable technologies as well as with the conventional technologies. So we want to emphasize that stakeholder participation is going to be crucial in determining and accurately assessing what Florida's renewable potential can be.

So we're going to discuss some of those items today, or I'm going to discuss some of those items today

and try to clear up an understanding of what the data forms represent, what the intent is behind them, and answer any questions that you might have.

Here is the overview of the types of data we'll be requesting. All five components are necessary for building that part of the RPS that requests a specific percentage by a certain year.

First of all, we're going to be giving a listing of renewable energy generation methods along with these data forms. It's a fairly comprehensive list that we acquired from the prior Florida Energy Commission. It lists out, as you'll see -- I'll give you a glimpse here in a moment -- several renewable technologies, as well as the different methods within those technologies.

We'll want to know what is currently installed and what is in the pipeline to be installed through the year 2020. We'll also be asking about the commercial availability, the whens and the how soons with each technology, performance characteristics, environmental characteristics, as well as the costs.

As you can see here, this slide and the next two slides, these are snapshots from that Florida Energy Commission compilation of technologies. It's fairly specific. As you can see here, it breaks down biomass

into direct combustion, conversion to liquid, conversion to gas. It separates out landfill gas and municipal solid waste. We feel that's important because it will provide us a more specific broad picture of Florida's renewable environment. And, of course, any other sources that the parties might feel they need to add would be welcome.

In evaluating the commercial -- I'm sorry.

CHAIRMAN CARTER: Excuse me. Would you put the forestry? Would you put that with the biomass?

MS. WEBB: Direct combustion, I believe, sir.

CHAIRMAN CARTER: Okay.

MS. WEBB: In evaluating the commercial availability of each technology, we'll be asking such things as when is the first commercial in-service date, how soon could that technology be implemented, what's the required lead time for permitting and construction, and what's the life cycle. As you can see, these are fairly basic questions that should be self-explanatory and should be readily available to the parties.

The forms will also be asking information on the performance characteristics of each of the technologies, items such as the estimated capacity, energy output, availability to operate during the year expressed in a percentage, contribution to summer and

winter peaks, and the fuel efficiency of each technology.

We'll also be asking for information on the environmental characteristics. And again, this will be on the renewable technologies and the conventional generating technologies. We'll ask for a quantification of the emissions of CO_2, SO_2, nitrous oxide, mercury, as well as the water use associated with each technology.

And finally, we'll be asking for cost information. We would like to see the total cost broken down by their components, capital costs, O&M costs, fuel costs, and separately in a separate column. We'll ask for those costs to be levelized over the life of the method and expressed in cents per kilowatt-hour.

Just to recap, staff is sending out this information within the next week. We want to stress the importance of participation by the parties. We've compiled a list over the last year or so of workshop attendees, interested parties, and anyone who has expressed an interest in receiving information from the PSC on renewable energy. And, of course, everybody who's in attendance today who signed the form at the back of the room will be included on that mail-out as well.

So we ask for specific and detailed

information, because that is absolutely necessary to draft the renewable portfolio standard. And to that end, I'll take any questions you might have.

CHAIRMAN CARTER: Thank you. Commissioners? Thank you so kindly.

Now, Mr. Futrell, I guess now we need to break into the public comment individuals.

MR. FUTRELL: Yes, sir. There are three individuals that have expressed a desire to speak.

CHAIRMAN CARTER: And there are no other organizations? I just wanted out of an abundance of caution -- if there's any organizations that wanted to speak that didn't get an opportunity to do so, we would love to hear from you.

Hearing none, we'll move now, Commissioners, into our public comments section. Mr. Futrell.

MR. FUTRELL: First up is Mr. Mike Twomey representing the AARP.

MR. TWOMEY: Good afternoon, Mr. Chairman and Commissioners. Mike Twomey appearing on behalf of AARP, which I'm proud to say now has more than 3 million members in the great State of Florida.

Mr. Draper mentioned to you that he had just received on his BlackBerry a University of Miami poll which said that 65 percent of those polled believed

there should be a 20 percent RPS and that they would be willing to pay up to $100 a year more to achieve that end.

And the first thing that struck me, Commissioners, when he said that was wondering whether the University of Miami polled the Miami-Dade school officials, who testified to you all a week ago Tuesday during the fuel adjustment hearings, the people that came up, as you'll recall, in force and said they didn't have the money in the budgets for the level of increases that were being requested by Florida Power & Light. And although no one came from the St. Pete area, one would assume that the same thing was true for the school boards in Progress's service territory as well.

And I think you -- in the end, I perceived that you felt their financial concerns and their pain when you went ahead for those two companies and spread out the recovery of three-quarters of a billion dollars for FP&L over 17 months and the roughly quarter of a billion dollars for Progress over 17 months as well, spread it out.

Now, I mention that because you recognized, I think, and we all do, that there are people at the margins that are really going to feel those increases, and a lot of us expect that fuel next year, in addition

to having the spread-out moneys from this year, the under-recoveries added to next year as well, we're likely to see additional increases in the cost of coal, oil, and especially natural gas that will further burden the customers of these electric companies.

In addition to that, of course, we're looking at early cost recovery for the nuclear plants, the possibility of base rate increases next year for a couple of those companies as well.

I mention that again because we can expect -- we've seen already that the people that you set rates for, their customers, we've see increases now, and we expect more next year on several fronts. People going to be hurting. Individuals and businesses are going to feel the pain.

Now, I haven't heard -- I've been here most of the day. I haven't heard anybody that has spoken to you suggest that establishing an RPS and employing it is going to be cost-free. I don't think anybody has said that. I don't believe anybody in this room thinks that's going to be the case.

Mr. Draper said the poll said, well, these people, these 65 percent are willing to pay up to $100 more per year. What about the other 35 percent? And our concern as an organization is that even if you

believe that setting rates and establishing government policy by a poll is a wise idea, which I might question, even if you did, I think you would want to say -- if people will take a $100 hit next year, I would say to you, don't make it 101, don't make it 120 or 200. There's a limit to how much people can pay.

That's the foundation for suggesting to you that, as AARP said before a couple of legislative committees during the last section, we want to see whatever the goals are -- and by and large, they're going to be set ultimately by the Legislature, since this is subject to ratification, your work and DEP and the new energy commission. Whatever the goals are, AARP would like to see them achieved in the least cost method possible that meets the goals.

Mr. McGee said a minute ago, and I think someone else suggested as well that amongst the different goals and intentions of the Legislature, probably we can assume that reducing greenhouse gases is the most critical. The whole business of preventing additional global warming is all keyed on greenhouse gas reductions. I think that's probably correct.

But if that's your goal, then I think what we're going to expect out of the legislation and this process is that you in conjunction with DEP are going to

have a hierarchy of methodologies, and they're going to have a cost per -- cents per kilowatt, as Ms. Webb said a minute ago. And as suggested by you, Commissioner Argenziano, we're going to also have worked in there how effective those different methodologies are in reducing greenhouse gas emissions. I mean, a given technology may meet the goal of having a renewable resource. We've already heard how wood is kind of off the table, woody biomass. But you may have something that provides a renewable source but is not as clean as others. And one would hope if you had two that had the same cost and one was dirtier than the other or one that was cleaner than the other that you would give preference to the one that's the cleanest.

The Legislature said and the statute says that you may give preference to solar or you may give preference to wind. Mr. Draper, in the interest of protecting the birds possibly, suggested that you minimize the business on wind. We don't know how successful that's going to be in the State of Florida in any event, but you're going to find out through this process, and you're going to put a cost on it.

I would say to you that you ought to look at not giving any advantage to solar either if it turns out that means taking solar out of the hierarchy of costs,

because in our view, doing so would violate the notion of least cost. Our goal, our hope is that your exercise here will establish the ordering of fruit, if you will, and our goal and request to you is to see that we take the lowest hanging fruit first so that you achieve the goals set out by the Legislature in terms of reducing greenhouse gas emissions and having alternative fuel sources and fuel security, but that, again, you do it with the least cost, least financial impact to the millions of customers served by these utilities.

And I thank you, and to the extent that we can help in the process going forward, we would enjoy doing that.

CHAIRMAN CARTER: Thank you, Mr. Twomey. We look forward to you participating with us.

Commissioners?

MR. TWOMEY: Thank you.

CHAIRMAN CARTER: By the way, I polled my neighbors, and none of them are in favor. In fact, every time I see my neighbors, as I'm sure most of my colleagues, they're asking about when you're going to reduce things.

Mr. Futrell.

MR. FUTRELL: Next, Mr. Chairman and Commissioners, is Mr. Roy Ratner with Atlas Solar

Innovations. And he has provided some materials that Mr. Clements is going to hand to you. And just so everyone knows, we will be posting these materials onto our website so that everyone will have access to them.

MR. RATNER: Good afternoon, gentlemen and ladies. Thank you for giving me this time to comment. My name is Roy Ratner. I'm director of operations for Atlas Solar Innovations, which is a subsidiary of All Atlas Roofing of South Florida. We're a member of all the solar power associations, USGBC. We design and integrate building integrated photovoltaics, and we also do solar thermal water heating and pool heating. Next month we also are breaking ground on our new headquarters, which will be one of the first LEED Platinum design buildings in South Florida.

The reason I decided to comment is, between WIREC, which was the Washington International Renewable Energies Conference we attended, and two weeks ago we were with Governor Crist at the Florida Solar Global Climate Change, we learned about a very effective renewable energy policy that we believe can make Florida a leader in clean renewable energy. In Europe, this policy is called feed-in tariffs, FITs for short, and it has been proven that this is the world's most effective renewable energy legislation. Here in North America,

it's being called renewable energy payments.

REPs are incentives for individuals and businesses to become producers of renewable energy. They direct utility companies to provide access to the grid for anyone or any group producing renewable energy, to buy all the renewable energy available at established prices per kilowatt-hour for a set period of time, usually 15 to 20 years. The prices vary according to the type of technology, the size of the system, and its location.

The increased cost of the utilities is paid for by adjustments to all their customers' electric bills. In Germany, this has meant an increase of around $3 a month for the average homeowners, about the cost of a loaf of bread.

A board is established that meets periodically to review the policy and to adjust the rates for new contracts.

Adopting a REPs policy in Florida will encourage our energy entrepreneurship, expand our green energy marketplace, create jobs, and stimulate our economy, all this while significantly reducing pollution and greenhouse gas emissions. We urge you to develop and pass legislation and investigate this policy. There is a website, allianceforrenewableenergy.org, that has a

lot of information on this.

I do have a little but more of a definition of a REP. It's simple. It really is simple. Producers of renewable energy are paid a premium rate for each kilowatt-hour of energy they feed into the grid.

Everyone who produces renewable energy is guaranteed that they can connect to the power grid and sell their energy to the utility company. There is no limit to the amount of renewable energy that can be sold to the utility companies.

The utility companies sign 15- to 20-year contracts with all their renewable energy producers. All contracts are transparent and open for inspection.

The contracts include long-term agreed-upon prices that the utility companies will pay for the energy they buy. The prices are set high enough to be an incentive to new producers and for existing producers to expand their production capacities. Prices vary according to the source of the energy, sun, wind, water, biomass, et cetera, and the size of the energy producing installation.

The utility companies can recoup their increased costs by paying higher prices for renewable energy by spreading these costs among their customers.

An independent review board is established by

the government that periodically sets prices and terms for new contracts.

REPs are incentives for homeowners, farmers, businesses, et cetera, to become producers of renewable energy or to increase their production of renewable energy. As such, they increase our overall production and use of renewable energy and decrease our consumption of burning of fossil fuels.

In a recent article in EnergyBiz magazine, the May-June issue, Lois Barber, who is the co-founder and executive director of EarthAction and an energy advisor to the World Future Council, wrote an article. I'm not going to read you the whole thing, but I am going to read you a few excerpts from it.

She mentions that in September, Michigan Representative Kathleen Law introduced House Bill 5218, the Michigan Renewable Energy Sources Act. It included all renewable energy sources without discrimination, hydro, wind, solar, geothermal, biomass, and biogas. It sets a 20-year contract and gives reasonable returns on investment. Proponents of this legislation point out that over time, any short-term increases will eventually turn into long-term savings as utilities switch from buying increasingly expensive fossil fuels to clean, free fuel like Florida's wind and sunshine. Savings

will also come from not having to deal with health and environmental damage stemming from coal and nuclear plants.

A REP law could help Florida meet its renewable portfolio standard goal currently being set in the state Legislature and produce lost jobs with hundreds of thousands of new ones in the renewable energy industry.

Following in 2008, following Michigan's lead, legislators in Illinois, Rhode Island, and Minnesota attachment introduced similar bills. California, while it doesn't have a statewide FIT law, is expanding its use of FIT policies in specific areas. Washington State already has a limited FIT law that pays up to 54 cents per kilowatt-hour for a seven-year period for electricity produced from solar technology manufactured in the state. To help turn the State's famous sunshine into energy --okay.

In addition to the burst of activity at the state level, Representative Jay Inslee is working on federal legislation that he unveiled in March 2008 at the Washington International Renewable Energy Conference. Islee's bill will give incentives to American consumers and businesses that generate electricity from renewable sources and will guarantee

producers of clean energy connection to the grid and predetermined rates for their power. His bill is expected to be introduced later this spring and summer.

It was co-sponsored -- and it also says that investors prefer feed-in tariffs over other policies because they create long-term market certainty and a stable investment environment. In a full-page ad in the issue of Politico that was distributed at WIREC, Goldman Sachs listed feed-in tariffs at the top of the list of how to power alternative energy. With 15- to 20-year contracts and set prices for the energy produced, investors are eager to loan money for renewable energy projects. Predictability is essential, whether it is a family deciding to invest in buying solar panels for their roof or a major bank deciding to invest in a megawatt installation. With market certainty, innovators and inventors will try out to compete in -- will turn out to complete in the market for renewable electricity.

That's all.

CHAIRMAN CARTER: Thank you very kindly. Commissioners.

Thank you. Mr. Futrell.

MR. FUTRELL: Next we have Mr. Joe Treshler with Covanta Energy.

MR. TRESHLER: Good afternoon, Commissioners. Thank you the opportunity to make comments. My name is Joseph Treshler. I'm vice president of business development for Covanta Energy based in Florida. I'm a 28-year resident of the Tampa Bay area.

Covanta Energy is a renewable energy company that operates four of Florida's waste-to-energy facilities, four of the 11 waste-to-energy facilities. Commissioner Argenziano mentioned the Tampa Bay facility, McKay Bay facility. That's another one of the 11 facilities. And like Wheelabrator, we're also members of IWSA, our business or trade group.

Together, Florida's 11 facilities, their waste-to-energy facilities, represent 518 megawatts of installed capacity at present. That's approximately 1 percent of the state's generated capacity. It also represents an offset of the release of about 3.7 million tons of new CO_2 equivalents that would have been released had other fossil fuel or traditional methods been used. Nationally, Covanta operates 34 energy-from-waste facilities and offsets the need for 15 million barrels of oil a year that would have been imported to generate that same energy, while also offsetting 15 million other tons of CO_2 equivalents.

The newly signed energy legislation reinforces

the role that energy-from-waste facilities currently play and the expanded role they can play going forward to meet our state's commitment to an efficient, reliable renewable energy future, while continuing to meet our original legislative mandate to protect the air, water, and land resources of the state that was issued by the Legislature back in the late '70s.

With over 20 years of operational experience, Florida's 11 energy-from-waste facilities have proven they can provide stable, environmentally sound, base load electric generation capacity under predictable cost structures.

The EPA has set very stringent standards for our industry in the Clean Air Act of 1999, which we have demonstrated as an industry we can achieve. This resulted in EPA actually recognizing our industry, that it produces 2,800 megawatts with less environmental impact than almost any other source of electricity.

The nonrecycled portion of our communities' waste streams is an indigenous resource. It's one of Florida's only indigenous fuels. And the collection or harvesting system is already in place in every community, in every municipality. Every county has the responsibility to collect that waste under the current state mandates. It's just a matter of providing the

market conditions necessary through the RPS to allow more Florida communities to choose the dual public purpose benefits that waste-to-energy can provide.

The door has been opened, based on the direction and latitude the Legislature has now provided via House Bill 7135 to recognize the added value, the fuel diversity, and dual public purpose renewable electricity generated from energy-from-waste facilities provides. The permitting requirements and the siting process are known and demonstrated to be achievable, and we believe that up to 1,600 megawatts of new renewable energy-from-waste power can easily be online in five to seven years in the state based on DEP's own records of what's being landfilled in the state after recycling efforts.

We fully support Governor Crist's 20 percent renewable energy goal and look forward to working with the Commission to make these new renewable megawatts a reality.

Thank you very much.

CHAIRMAN CARTER: Commissioners? Commissioner Argenziano.

COMMISSIONER ARGENZIANO: This may be the same question that I asked before when I mentioned the McKay plant, McKay Bay plant. Could you provide the emissions

that --

MR. TRESHLER: Yes. I talked to Vicki in between. IWSA does a compilation of all of the states' emission status, and I think you'll be pleasantly surprised. We're going to make sure that you get a compilation of what typical emissions are for all the facilities in the state, the 11.

COMMISSIONER ARGENZIANO: That would be great. Thank you.

CHAIRMAN CARTER: Thank you so kindly.

Mr. Futrell.

MR. FUTRELL: Mr. Chairman, those are the only three members of the public and other parties that have signed up.

CHAIRMAN CARTER: Let me just take a moment to see. Is there anyone here that wanted an opportunity to speak today that did not get an opportunity to speak, either from the public or from an organization, whichever? Anyone that wanted to speak today that did not get an opportunity to speak, we offer you this opportunity at this point in time.

Hearing none, Mr. Futrell.

MR. FUTRELL: Thank you, Mr. Chairman. I drafted a slide to give everyone a sense of the schedule we're facing. This schedule will allow the Commission

to --

CHAIRMAN CARTER: That's F in your --

MR. FUTRELL: Yes, tab F in your notebook. This schedule will allow the Commission to meet the requirement to submit a rule to the Legislature by February 1st, 2009. And I would like to go over for you some of the immediate milestones we're looking at.

As Ms. Webb mentioned earlier, we are developing data forms. We expect to finalize those forms Monday morning and issue those to everyone on our contacts list. We ask that anyone that would like to receive those forms to make sure they sign up on the form in the back of the room.

We expect the utilities to respond to that data request, either jointly or individually, and we would invite any other party here today or on that contacts list to provide a response to those data forms.

We expect to have the transcript from this workshop available on July 16th. We will post that to our website as soon as it's available. And we would ask that comments be provided, post-workshop comments to this workshop be provided by July 18th, next Friday. And again, those comments will also be posted to our website.

We ask that -- and we will include this in our

note, in our e-mail when we send out the data forms -- that we would like and expect the responses to those data forms be returned to the staff by July 21st.

And we have scheduled a meeting, and a notice will be going out shortly of a technical meeting to discuss the responses to those data forms. That will be held July 25th, a Friday, in Room 140 of the Easley Building. That's the internal affairs room. And Commissioners may participate if they wish in that meeting, but the focus of that will be to discuss the responses and to clarify the responses. We've got to begin dialogue of the data that the Commission is goingo to need, and this may very well be the first of several meetings to clarify the data that the Commission needs and the responses.

CHAIRMAN CARTER: Commissioner Argenziano.

COMMISSIONER ARGENZIANO: I'm sorry. Could you repeat the first meeting date?

MR. FUTRELL: Yes, ma'am. July 25th will be a staff technical meeting to discuss the data responses from staff's request, and the Commissioners may attend if they wish.

Our next milestone is going to be -- we'll be sending out a Commission notice of the workshop on August 20th. That notice will go out August 13th.

Included in that notice will be the agenda for that workshop, as well as a draft RPS rule. This will be noticed as a staff workshop, but Commissioners again may participate in that workshop if they wish. And again, following that will be again a tight turnaround on comments as well as the transcript.

For parties wishing to submit comments, responses to data requests, and any other information they want to provide the Commission, please submit your comments and responses to Ms. Cindy Miller of our legal staff and Judy Harlow of our technical staff. Please send it to both parties so that we'll make sure we have a record of your responses. And if you have any questions, you may also contact me, and that's our contact information up there on the screen.

That's all I have, Mr. Chairman.

CHAIRMAN CARTER: Thank you, Mr. Futrell.

Commissioners, before we break, I know that you were waiting patiently to allow people to speak and all like that, but before we adjourn, I want to give each one of you an opportunity to make whatever observations you deem necessary.

Let me start today to my right. I'll start with Commissioner Argenziano, then Commissioner Edgar, then I'll go to my left, Commissioner Skop, and then

Commissioner McMurrian. Commissioner Argenziano.

COMMISSIONER ARGENZIANO: I have no comments, other than I'm looking forward to working on getting the State's policy come to fruition and doing the best job we can and looking forward to good work from everybody along the way.

CHAIRMAN CARTER: Thank you. Commissioner Edgar.

COMMISSIONER EDGAR: Thank you, Mr. Chairman.

I note this is another important step in the multistep process that this Commission has been doing to data gather as we work towards an RPS. I appreciate all of the comments, but in particular, the comments about thinking through carefully and being realistic about time frames and about costs resonate a great deal with me. And I look forward to having many people participate in our process. Thank you.

CHAIRMAN CARTER: Thank you. Commissioner Skop.

COMMISSIONER SKOP: Thank you, Mr. Chair.

Are we -- this is my understanding, but correct me if I'm wrong, that the Commissioners are going to perhaps provide some input to staff with respect to RPS at this time.

CHAIRMAN CARTER: You can either do it now or

at the workshops. What staff has done, Commissioners, just so we all know, they've noticed the workshop so that we can participate if we wish. That way, obviously, if there's something that we thought of today that we didn't get a chance to get to them, we can submit that to staff and they'll make that part of the record.

COMMISSIONER SKOP: Okay. I guess I would just like to hit upon what was discussed today. I appreciate all of the participants and the presentations that were given. I think they were very informative and instructive and will factor prominently in staff's analysis and benchmarking on what we do on a forward-going basis.

I guess at least for me, I'm firmly committed to building renewables and facilitating economic development within the State of Florida, but doing so in a manner that's the most cost-effective for consumers. I think Mr. Twomey hit some of those points in his analysis between various emission-free renewables. Some are obviously cheaper than other alternatives, and to incentivize one over a more cost-effective alternative doesn't result in a least cost analysis.

I guess as we move forward in this endeavor, I think it should be an open, collaborative process. I

think each of my colleagues have expressed some excellent views as we've moved forward today. I guess I would like to just quickly share a few of my views, and they're just solely mine, perhaps with respect to the goals and objectives that we might want to consider as we move forward in developing the RPS.

I just think, having sat through a couple of the staff workshops previously and following the discussion, as well as some of the Commission workshops that we went through previously, I guess one of my concerns or preferences would be to emphasize a capacity based rather than an energy based RPS. I think that the rationale for that is clearly to support economic development and jobs in this state.

I guess a corollary to that is, from my perspective, and my perspective alone, purchasing out-of-state RECs is tantamount to like buying thin air. It really provides no economic or environmental benefits to our state. So to me, you know, it's more of a selfish nature: Keep the money in our state and use it for the benefit of our state, to do the right things to fulfill the legislative and executive policies of the State.

But moving a little bit further from there, I think that there has been some interesting discussion

today about set-asides, carve-outs, multipliers, and perhaps tiering. And I think there was some very good discussion today. I guess what I would ask our staff and I hope that the Commission will do is seek to balance the differences, both pro and con, between set-asides, carve-outs, the multipliers, and the tiering.

Certainly set-asides and carve-outs have worked in some instances, but some of the participants today have suggested that other states that have used multipliers, probably their lack of success is that the multiplier levels weren't appropriately set in terms of best practices, so in a sense, it might have been doomed to failure from the start.

But, you know, with respect to set-asides and carve-outs, I look at what has happened in New Jersey and California, and the price of those RECs is in some instances higher than the spot price of electricity in the free market. And so again, the cost-effective side, I think as Mr. Twomey has alluded to, and I think all of us share that concern, is a factor. So I am a little concerned about if we go that way with the set-aside and carve-out, what is that going to do to the overall pricing.

But also too, if there's a set-aside or a

carve-out that always favors one particular segment of an emission-free source and disadvantages other emission-free sources, that might not facilitate the development of fuel diversity amongst all emission-free sources.

But just in relation to that, multipliers I think, you know, essentially accomplish the same thing as carve-outs. They incentivize or could be used to incentivize migration to emission-free renewables in a more cost-effective manner and providing additional flexibility and options. And also, there's the tiering option that a lot of the participants have mentioned.

So I think that the -- I don't have any preformulated opinion. I'm trying to look at the pro and con. And I think as staff and the Commission moves forward, certainly that's going to be one of those delicate balancing acts as to what provides the best motivation and incentive to cause that migration towards developing all renewables. I mean, certainly biomass is a big part, but we have the 100 percent emission-free too. And certainly without some sort of incentive, then everyone is going to migrate towards the cheapest alternative, so I think it's important to have that balance.

I think just in closing too, there has been

some discussion about public benefits funds, a system benefits charge, alternate compliance payments. To me, anytime that you have a fund and it's not very expressly stated what the fund can be used for, there's an opportunity to come in and raid the fund for other things. But to me, a renewable energy charge, at least that plainly states the clear intent and purpose of what the money is for, so that should be an interesting discussion in itself.

But I just kind of wanted to share some of those views which I think adequately summarize the breadth of the discussion that we've had today, and I look forward to moving forward in the process with all the participants and staff and my colleagues and trying to develop the best possible RPS that will gain legislative ratification. So thank you.

CHAIRMAN CARTER: Thank you. Commissioner Argenziano.

COMMISSIONER ARGENZIANO: Yes, Mr. Chairman. Thank you. I'm not going to express any opinions today on anything right now, because I really need to wait, but what I wanted to make sure that I did is mention that the policymakers have in that bill told us what to do, and there are some areas that we have to be a little bit more flexible on, but there are certain mandates in

there, and I hope that staff, and I know that staff will stick to those mandates.

And also, if we cannot reinvent the wheel in some places, let's go to the other parts of the world where maybe they have utilized some of these initiatives and mechanisms that we heard today, and even if we haven't heard today, I hope that we look to some of those other countries that may be able teach us how to move forward quickly and what has worked best for them.

So with that, thank you, Mr. Chair.

CHAIRMAN CARTER: Thank you, Commissioner. Commissioner McMurrian.

COMMISSIONER McMURRIAN: Thank you, Chairman, and thanks to my colleagues for their input. And I, like Commissioner Argenziano, am probably going to hold off before I form too many opinions yet. But I have learned a great deal today, and I thank all the presenters for the information that you've given us and thank the staff for all the hard work that they've put in just getting us to this point. And looking ahead at the schedule, there's a lot of hard work to come, so I just want to thank them for that.

I do have one question of Mr. Futrell. Are any interested persons able to give input on this at any time during this process, or are these deadlines strict,

that you have to give input by July 18 as far as post-workshop comments?

MR. FUTRELL: That's just more -- sure, folks can give comments at any time. We were just trying to keep things moving along and keep things with some sort of a schedule where we can collect them all and then provide them to the other parties and start reviewing them, have time to review them as well. We want to have plenty of time to review their comments and take their comments into consideration as we draft the rule. But certainly folks can participate at any time in this process.

COMMISSIONER McMURRIAN: Well, thank you. And, Commissioners, the reason I asked that question is, I was just looking at that tight time frame, and since the transcripts don't come out until the 16th and the workshop comments are due the 18th -- I realize that there's really not enough days in the schedule.

But I guess in my opinion, I would like to see in the workshop comments -- I would like to see people respond to some of the ideas they heard from other presenters today. I think that could be most helpful, because I think we've heard a lot of good ideas, but we really didn't -- because it was all prepared presentations, we didn't get as much feedback from

presenters to other presenters, and I think that would be very helpful to us too.

And I realize that's a couple of days, and people probably took good notes like I did today and can comment on that, but I wanted to make sure there was time if they have additional things. And I suppose they could even in their data request responses add additional information if they needed to, so I just wanted to say that.

But again, I look forward to moving ahead on this, as my colleagues have stated, and thank you, everyone.

CHAIRMAN CARTER: Thank you, Commissioners. Before we break, I just kind of want to reiterate. The most significant thing, as Commissioner Argenziano says, is that the Legislature has told us exactly what to do, so we've got to make sure we get everything together based upon this schedule. The schedule is in stone.

The other thing is that we made available to both Commissioners and the public at large and the parties, all stakeholders, an opportunity to be heard, and that's why we have these. Mark will make sure that everyone gets another copy of the schedule if you do not have one.

Every point in here, we have an opportunity

for you to be heard, because we want full deliberation on this rule, because the Legislature wants us to give them the best possible thinking that we can get.

I think that we can look at some of this analysis of some best practices, not just here in the United States, but internationally as well, because we do want -- I notice that when the Governor had the Serve to Preserve last year, the first year, we had people from all over the world to participate. So I think that if we can take some great ideas and make them better, then we can continue to be that beacon on the hill in that idyllic paradise called Florida.

And with that, Commissioners and those participating, thank you for your participation. We are adjourned.

(Proceedings concluded at 3:17 p.m.)

CERTIFICATE OF REPORTER

STATE OF FLORIDA:

COUNTY OF LEON:

I, MARY ALLEN NEEL, Registered Professional Reporter, do hereby certify that the foregoing proceedings were taken before me at the time and place therein designated; that my shorthand notes were thereafter translated under my supervision; and the foregoing pages numbered 1 through 181 are a true and correct record of the aforesaid proceedings.

I FURTHER CERTIFY that I am not a relative, employee, attorney or counsel of any of the parties, nor relative or employee of such attorney or counsel, or financially interested in the foregoing action.

DATED THIS 16th day of July, 2008.

MARY ALLEN NEEL, RPR, FPR
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