## 1 BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION 2 3 In the Matter of: DOCKET NO.: UNDOCKETED 4 INVESTOR-OWNED UTILITY SOLAR 5 PILOT PROGRAMS. 6 7 8 9 10 11 12 13 14 15 PROCEEDINGS: STAFF WORKSHOP TAKEN AT THE 16 The Staff of the Florida INSTANCE OF: 17 Public Service Commission Thursday, March 3, 2011 18 DATE: 19 TIME: Commenced at 9:30 a.m. Concluded at 2:46 p.m. 20 PLACE: Betty Easley Conference Center 21 Hearing Room 148 4075 Esplanade Way 22 Tallahassee, Florida 23 REPORTED BY: LINDA BOLES, RPR, CRR JANE FAUROT, RPR 24 Official FPSC Reporters (850) 413-6734/(850) 413-6732 25

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## PROCEEDINGS

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MR. FUTRELL: Okay. Good morning. We're going to get started with our workshop, and I'd ask our attorney, Larry Harris, to read the notice, please.

MR. HARRIS: Pursuant to notice published February 11, 2011, this time and place has been set for an undocketed Staff workshop regarding the investor-owned utilities' solar programs.

MR. FUTRELL: Thank you, Larry. Before I turn things over to Ms. Harlow to kind of run the content to the meeting, I wanted to make a few housekeeping announcements. I'm Mark Futrell with the Staff. Welcome to the Commission and our workshop today.

A few things, we are, we have some handouts on the sides here, the agenda and kind of the questions that we put out to try to frame where we want to go with the workshop. We also have a sign-up sheet in the back, so if you'd please sign that so we can have a record of your attendance. We have set up a page on the Commission's website to post the documents that'll be, that have already been sent out and also further documents that we'll be receiving. We're anticipating, we'll have an announcement later about postworkshop comments to provide you an opportunity to provide that to us and we'll be posting those.

Our intent at this time is to put together a document summarizing the discussions here today, include with it the postworkshop comments that, if any of you file, put that package together, submit it to our Commissioners as a, as a record of the workshop and the discussions today. We'll also post that document onto the website.

We are recording this, this meeting. It's also being transcribed. We're also going out over the Web. So please, if you have comments or questions, come to a mike, identify yourself and the party you're representing. We may have -- one or more Commissioners may be tuning in over the Web possibly or maybe even in the building dialing in, so please keep that in mind.

And I will turn it over to Ms. Harlow to kind of get us started. We do want to open with brief, very brief comments from the utilities just to give us a status of where you are in rolling out the programs. I know because of a variety of issues we've kind of had a staggered approval process here and so we're under some different time frames, but we would like to get a sense of, since we're together, where things are as far as getting the programs up and offered to the public.

So, Ms. Harlow, if you'd continue the workshop. Thank you.

MS. HARLOW: Thank you, Mark. We'd like to get started today with a brief staff presentation, a little background on the FEECA statute, the revisions to the statute with regard to demand-side renewables. And also we'll go through the questions that we expect to get information on today. And I'd like to introduce our Staff member, Walter Clemence.

MR. CLEMENCE: Good morning, and welcome to the solar pilot program workshop. As Ms. Harlow said, I'm Walter Clemence from the Division of Regulatory Analysis, and I will give a brief overview of the FEECA amendments of 2008 and the agenda of the workshop. A copy of this presentation will be available, and I believe it may even be available now on our website.

known as FEECA, was enacted by the Florida Legislature in 1980 with emphasis on a few areas. One, growth rate of seasonal peak demand; reducing and controlling the growth rates of electricity consumption; increasing conservation of expensive resources; and in 2008 it was further amended to encourage the development of demand-side renewables. Due to the 2008 amendments, the Commission was tasked with adopting goals for increasing development of demand-side renewables.

Okay. The amendments in 2008 directed the

PSC to set goals for demand-side renewables, and as part of the DSM proceeding the Commission tasked the utilities with analyzing demand-side renewables. No measures were found to be cost-effective.

In 2009, while establishing the aggressive peak demand and energy conservation goals, the Commission directed the utilities to develop solar pilot programs with an emphasis on solar water heating and solar PV, and the programs would have an annual expenditure cap of 10 percent of their previous five years ECCR expenditures. Here are the amounts approved for each of the utilities for the solar pilot programs.

We are here today because while approving the DSM goals and the solar pilot programs the Commission noted several differences amongst the IOUs in the allocation of funds between PV and thermal and differences amongst the utilities in allocations for public and private distribution. The programs were approved, and in the approval the Commission had directed Staff to have a workshop to discuss some of these differences and to see how to address these into the future.

We are here today, we have gathered some questions and have some areas of discussion we'd like to have. There are, as mentioned earlier, copies at

1 2 3 by the Commission. 4 5 6 7 8 program standards from FPL. 9 10 discussion. 11 12 MS. HARLOW: 13 14 15

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the front of the room. And the bottom is just some general areas that we've seen, the previous programs that have come in here that have already been approved

The standards have been filed and accepted by Staff for Gulf, Progress, TECO and FPUC, and we are currently awaiting the filing of the solar pilot

Here is the agenda for today. I thank you very much for your attention and we look forward to the

Thank you for that update, Mr. Clemence. We appreciate it.

I'd like to add my two cents to Mark's today and, and say how much I appreciate your attendance, and I'm really looking forward to a good discussion today.

I understand that we're going to start with the utilities and kind of have a status update and some general remarks. But first I think it would help our court reporter if we went down the line at the microphone and each of you please identify yourself and who you're with.

MR. BEASLEY: I'm Jim Beasley for Tampa Electric Company.

MR. BRYANT: Howard Bryant, excuse me, Howard

1	Bryant with Tampa Electric Company.
2	MS. NOACK: Lonnie Noack with Gulf Power
3	Company.
4	MR. GRIFFIN: Steven Griffin, counsel for Gulf
5	Power.
6	MS. TIBBETTS: Arlene Tibbetts for Progress.
7	And I have three colleagues with me today: Christopher
8	Gillman, Lee Guthrie and Linda Kushner.
9	MR. GILLMAN: Christopher Gillman with
10	Progress.
11	MR. GALLAGHER: Bill Gallagher with the
12	Florida Solar Energy Industries Association.
13	MR. MAINGOT: Chris Maingot with the Florida
14	Solar Energy Industries Association.
15	MR. KERSHNER: Bruce Kershner, Executive
16	Director of the Florida Solar Energy Industries
17	Association.
18	MS. BROWNLESS: And Suzanne Brownless
19	appearing today on behalf of the Florida Solar Energy
50	Industries Association.
21	MR. GUYTON: Charlie Guyton appearing on
22	behalf of Florida Power & Light Company. There are also
23	two representatives of the company that are here, Oscar
24	Gans and Wayne
25	MR. BESLEY: Besley.

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1 MR. GUYTO

MR. GUYTON: Besley. Thank you.

MS. HARLOW: And as you can see, we have a slight shortage of microphones for everyone that I'm sure wants to speak today, so let's all be courteous to each other and, and be mindful that, that everyone needs a chance to speak and a mike so that our court reporter can, can catch every word.

And now I'd like to move to our utilities, please, as a starting point. We'd like to see where you are in implementation, what's your timing, perhaps what you've done to notify your customers, and have you been hearing very much from your customers on these programs, kind of a brief update. And it's my understanding that Howard Bryant from Tampa Electric has some opening remarks.

MR. BRYANT: Yes. Thank you very much.

Sometimes when you show up and they have a bunch of straws available and you draw the short one, you end up having to be the one that talks. And so good or bad, I drew the short straw.

But let me say on behalf of the utilities, we're happy to be here and we're happy to discuss the opportunities before us from the standpoint of the renewable programs that are going to operate on a pilot basis. We look forward to sharing with you what our

activities have been and what we plan to do on a going-forward basis.

All of us, I think you'll find, are at the early stages, if not really right on the precipice of initiating programs, particularly from the standpoint of Progress Energy. I think also from the standpoint of the questions that y'all provided to us early on a lot of our answers are going to be quite similar, and so to the, to the, to the extent that I can characterize our responses for all of us, I'll do so. But I would also ask for anybody that I misrepresent, if they would certainly speak and say, wait a minute, he's got it wrong for me, then they would certainly speak up. But, again, we look forward to providing you with the information at hand.

As I look at the questions, I noticed that several of them from Tampa Electric's perspective were discussed during the conference calls that we had as our standards were being approved. But then I think too, as I said earlier, many of these questions from the allocation perspective, from the monitoring perspective, things like that, I think we've got some similarities among us that I'll share with you as time goes along. So thank you.

MS. HARLOW: Howard, Mr. Bryant -- I can't

decide whether to be formal or informal today with everyone -- could you please just give us a very brief update on where TECO is.

MR. BRYANT: Sure. Yes. From Tampa

Electric's perspective, again, our standards are
approved. We are implementing the electronic needs
within our systems in order to facilitate the incentive
payments. We're looking toward very early in April, we
thought April 1st but it may be the 4th or 5th, kind of
in that range, in terms of when we will actually be
ready to go. Some testing needs to be done on the
systems and what not.

We have communicated and have been communicating with our contracting community, and in turn they have been calling us as well asking, you know, they're aware and so they're asking us. We've also had customers calling us and wanting to know when, things like that, and so we've indicated to them that probably by mid-March we should be able to have date certain and the community will know. And so we'll make that knowledge available to our customers for sure by delineating what the incentives are going to be and qualifications, things like that. We have information that will be placed on our website, and so that's the level of communication that we're making with our

customers and the contracting community.

MS. HARLOW: So at this point you haven't advertised the programs.

MR. BRYANT: No. And the reason we've not done that is we think the customer needs to have date certain as to when it can go and not go. And so if you advertise and yet the customer calls and says, well, when are you going to do this, and if we don't have a good solid answer, we're not convinced that's the best thing to do. And so they are contacting us. There's not an overrun, if you will, but we are telling them that it appears to be early April, and we will have date certain information to them and be made known across our service area when we do know that.

MS. HARLOW: And one final question. Have you, have you seen -- I know you're very early in the process, but have you seen any implementation concerns, and not to be negative, any implementation successes as you're, you're moving forward in the early stages?

MR. BRYANT: Not really. We're looking for the partnership to exist with the contracting community. That has to happen. We're looking for integrity to be a part of the process. And so to the extent we can communicate that with the contractors, and which we intend to do so and have a meeting with them, those

expectations will be given to them. But to date there's 1 not a setback, there's not an advancement, if you will. 2 It's going as you would expect it, and we're just 3 looking forward to early April to launch. 4 MS. HARLOW: I know I said it was the final 5 question, but just one more. Have you been working 6 7 with, I realize it's in the early stage, but have you 8 been working yet with the community service 9 organizations toward the low income programs? MR. BRYANT: Yes. As a matter of fact, we had 10 contact with them yesterday and inquiry from them. 11 12 so the two that are in our area, we are poised to begin working with them to the extent that our activities will 13 benefit those particular customers they're serving. 14 15 Yes. MS. HARLOW: And now I believe Mr. Guyton 16 would like to speak. 17 18

MR. GUYTON: What makes you think that?
(Laughter.)

I'm going to defer to Mr. Gans for an overview of where we are. We're a little bit behind the curve in terms of approval for the other utilities, and I think Walter has already noted that.

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MR. GANS: At this point we are working on finalizing the standards in order to file them now this

month, in March, and we're beginning our preparations for all of the system work that we're going to be needing in order to get the reservation system up. We think that's a critical piece of our implementation. And that's basically where we are right now. We're shooting for a, sometime in the summer, hopefully June time frame in order to be able to implement.

MS. HARLOW: Have you been meeting with any of the solar contractors?

MR. GANS: We have not.

MS. HARLOW: Okay.

MR. FUTRELL: Oscar, I've got a question for you. Have you had a chance to speak to anybody at the Governor's Energy Office about their experiences with their rebate programs, lessons learned that might help you as you start to develop and decide on the best practices for, for your program?

MR. GANS: Not directly as far as the way they administered it. We've gotten some reports from them in order to see what the level of activity was in our territory and we based it on that.

We did observe from the -- they've done two types of programs where they've had reservations. They did the -- well, where they had the incentives. The first one was the solar program, and then we also

looked at their experience with the, the appliance rebates. And so there was some lessons learned that we could see as far as the way they handled the reservation systems.

MS. HARLOW: Progress?

MR. GILLMAN: Good morning. Christopher Gillman for Progress.

For our status update we are, have approved eligibility standards, participation standards. We're prepared to launch on March 15th. We've made an announcement, a press release on that, that launch date. We have information available on our website at progress-energy.com/sunsense. We've conducted a handful of workshops with our solar vendors, had attendance of approximately 125 vendors, providing information on the application process and the materials needed to, to file an application. I think that's a good success story early on in the implementation. We're in the final stages of implementation.

You asked a little bit about maybe a challenge. Some of the challenges on getting it out on March 15th is not all of our IT processes will be ready to go, so we're doing some manual processing of applications. But I think we're prepared to do that.

So all of our programs will be available on March 15th.

MS. HARLOW: And are you doing that, the implementation in-house with the, the application process?

MR. GILLMAN: Yes. The applications will be received in-house, evaluated in-house and processed.

MS. HARLOW: Thank you. I do think that sounds like a success story with the meetings with the contractor. Very, very nice participation by the industry, and that bodes well for the program.

Would Gulf like to go next?

MS. NOACK: Yes. Lonnie Noack representing Gulf Power Company.

We are in a very similar situation to TECO.

We are current -- our program standards have been approved and we are currently in the process of developing our online application reservation process.

We have already gotten a mock-up of that, and so in the next month we'll probably be doing some testing of that. We're still on track for launching our programs during the second quarter. We actually anticipate a May launch date; early in May, first or second week of May we anticipate our incentives being available.

We've had several customers and contractors that we've been communicating with making sure that they

understand what the program standards are.

We have placed the general program standard requirements on our website so that it is out there.

We do have a notice that they will need to check back for the official launch date. We don't want to put a date out there until we're sure that we can meet that. But we have had quite a few inquiries and we're on track for a second quarter launch of the programs.

MR. FUTRELL: Lonnie, have you -- do you have -- can you give us a little more specificity as far as when you think you'll be able to target a launch date? Are we looking at June 30th, are we looking at May or --

MS. NOACK: We're looking at the first or second week of May to launch the programs.

MR. FUTRELL: That's helpful. Thank you.

MS. HARLOW: Have you had any initial discussions with community, excuse me, service organizations?

MS. NOACK: Yes, we have. And we've actually started looking and evaluating sites. We've, we've talked to Habitat and a couple of other different groups about potential sites and have actually gone out and looked at some potential suggestions for sites to implement the low income programs. So we have started

that process.

MS. HARLOW: Thank you. Can you give us any initial success stories or challenges you're seeing in implementation?

MS. NOACK: I guess the challenge right now is just making sure that the customers are aware of what the program standards are. I think we've had success by being able to get that information out on the website so customers can see that so they understand that it is a first-come, first-serve process, that the systems cannot be installed prior to the incentives being, being made available. So we've had some success in communicating that. And I think we've had some success communicating with contractors, making sure that they're aware of what those program standards are and what to expect with the program.

MS. HARLOW: I think we all share the concern that customers understand this is a first-come, first-serve program with limited funds.

MS. NOACK: Yes.

MS. HARLOW: I think that it's time to move on
to FPUC.

(No response.)

I don't think we have a representative of FPUC here today, but we will have an opportunity for written

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comments.

And that's a good time to remind everyone here that we will have a postworkshop comment period. So as we move through the day, if there's anything you feel that you want to provide in writing to us, just make a note to yourself.

So now I think it would be a good time to move toward the questions that Staff has developed. We found if we, if we provide a list early of questions for discussion for the workshop, it helps us to keep us all on the same page. And that helps Staff later as we're kind of analyzing the information that we got at the website so we can provide that to our Commissioners.

So I'd like to start with the topic of allocation of funds. This is the primary topic that our Commissioners requested information on, and so it would be good if we focused on this up-front. And we have several questions in this we'd like to get started with, but first we'd like to discuss the allocation of funds for private facilities versus public facilities. And we've noted that there are a number of programs for private customers and the bulk of the money goes toward private customers. But we're also seeing some funding of public facilities, and that is through, solely

through Solar for Schools. So if anyone would like to, to get started. I believe Mr. Bryant has hit his microphone.

## MR. BRYANT: Yes, he has.

From the standpoint of allocation, I think I would like to make a general comment that encompasses the process in which each of us chose to, to do the allocation, and that statement is this: Our allocation is not cut in stone. In other words, we may say that 10 percent will go to this particular endeavor and 30 percent may go to that particular endeavor. It's simply a projection. It's, in some cases it comes from a little bit of experience that we may have in the area such as with solar water heating in the case of Gulf Power, they have some experience there, and I think Progress is in the same category.

But it's not -- they're not cut in stone to the extent that we're going to stick on 30 percent as an example for a particular allocation and that's going to be it. Now if you don't have enough people that line up for that particular program, that does not mean that that allocation is going to stay at 30 percent and there would be unused funds. What it means is on a periodic basis the utilities are going to look at how the activity has been progressing. And so to the

extent that you have a long line in one particular program and no line in this particular program as an example, the funding is going to be shifted to where there's demand. The idea being proliferate the technology, be it solar thermal or PV, until the funds have basically been exhausted. That's the general statement on allocation.

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Now to the extent that you notice differences on the, on the front end as to where those allocations may have been or are being projected, simply because there's money being allocated to the school system through that particular endeavor does not mean that the public sector cannot participate in the monies available through commercial PV as an example. certainly can. We simply were looking for a broad casting of the net in terms of how to deploy the technologies, but also deploy the education surrounding the technology, and that's why we chose the school system in, in what I'll call partnership. We're certainly in an endeavor associated with the Solar Energy Center such that we could go to the emergency shelters through the program that they are, are providing, and then we could supplement that or increase it beyond the school systems that they're going to have their installations go for. Our money

would add additional installations and our monies would also provide the education to the students as well.

So you're, you're doing two things: You're increasing the, the availability of PV on emergency shelters, number one; and, number two, you're providing the educational opportunity of that technology to a broader base of students than what would otherwise have been done. That's why we chose it and that's why it looks like public is, is being allocated in one particular case. But, again, it does not mean that they're not available to participate over in the commercial sector.

So if you had a building within a particular city, the City of Tampa as an example, if they wanted to put PV on a particular facility, I would consider that a private -- or a public institution. And then to the extent funds were available, we would work with them toward doing that toward the maximum incentive that's, that is allowed.

MR. FUTRELL: Howard, I've got a question for you, just something to contemplate and maybe provide some response about whether it would be more effective as a thought of where the allocation of funds -- since the general body of ratepayers will be paying for these programs, rebates, their associated costs, would there

be a more effective use of those funds to direct it towards public facilities to help reduce their energy costs and therefore provide a benefit to the general citizenry that is paying for these projects? Can you speak to that? And, and in that, did you look at other means of providing funds to public facilities as opposed to just dovetailing with the Solar for Schools program?

MR. BRYANT: I think I'll address it from

Tampa Electric's perspective, and perhaps others can,

can, can augment or agree or disagree with what I say.

But from Tampa Electric's perspective, we saw the initiative that was given to us from a spending perspective to be one of, of casting it as broadly as we could and casting it into as much of the private sector as you could, getting more systems out there. If you think about what a public institution would do, they would logically have a larger PV system, and so it would challenge the funding early on to where there wouldn't be very much left. And so we wanted to proliferate it as broadly as possible and give it to the public sector. If you can give it to the -- I'm sorry -- the private sector.

If you can give it to the private sector and have more people take on the technology, then the possibility of the marketplace accepting it is perhaps,

I think, greater as opposed to just simply putting it again on a, on a public building. It's probably true what you're saying to the extent you do put it on a, on a public facility and it would help their energy costs. It would bring down the cost of that public institution in the case of a county building, for instance. But that was not in our thinking.

We were looking at a broad casting of the net and broad proliferation and going into the private sector to gain as much distribution as we could of the technology.

MR. FUTRELL: Anybody else have a -- would like to follow up with that answer?

MS. NOACK: Yes. Yeah. I'd like to reiterate several points.

First of all, with the allocation of funds, the way we did that, this is the utility's best projection of how to spend these funds. And I know for Gulf Power Company it's based on our experience with programs that we already have implemented or that we did our pilot program for 2009 for our solar thermal water heating. Our program standards and our incentive level is very similar to what we're offering now, so we based our participation on that. Our solar PV incentive levels, they're based on our experience with

net metering in conjunction with the state incentive program. And we used that as kind of the basis, as the launching pad for how to spend the expenditure cap or how to budget the expenditure cap that, that we were given by the Commission.

Another thing I wanted to point out is that for the public and private facilities, as Howard said, none of the public facilities are prohibited from applying for the incentives if they qualify and meet the program standards. They're not prohibited, so we're not limiting them. We have just added some additional programs to focus on things that we think are important, especially in markets that may be a little bit more resistant because of the initial high capital cost of the technology. So we're targeting the schools for the educational purposes, and then the low income because typically you wouldn't see these applications in a low income application because of the high original capital cost.

And then also when we're looking at whether or not we would put these things in, focus most of the dollars in public, the intent of having these pilot programs initially is because of the addition to 366.82 and the fact that they wanted to increase the deployment of these technologies. And since the

private sector tends to really drive that deployment, that's where we spent a majority of our focus on, on these incentive programs.

MS. HARLOW: Ms. Brownless.

MS. BROWNLESS: Is it the solar industry's turn as opposed to the IOUs? Are the IOUs --

MS. HARLOW: Sure. Sure. I'm hoping today we can just go back and forth, and, and just, just get my attention when you're ready.

MS. BROWNLESS: Thank you.

Our perspective on the allocation of funds between public and private is a bit different. First of all, we think that the purpose of these incentive funds is to maximize the number of solar installations, thereby supporting the development of the solar industry in Florida.

So there's two pieces to this puzzle. One piece is to encourage the development of the industry, and that means to encourage as many installations as possible. If you are putting large installations on high schools in Broward County or in Dade County where I grew up where there were, you know, like 10,000 people in our high school, that to us is sort of counter, counterintuitive. If you are doing that because you believe it is an education and marketing

tool, what we would respond to that is that we don't think the public needs convincing that solar PV is a technology that they want to embrace.

We would point to the fact that the funds
that were available under the Governor's Energy Rebate
Program for the two years that the funds were available
were immediately oversubscribed, and that
oversubscription and dealing with oversubscription is
an issue that you have correctly identified and are
trying to address in the IOUs' implementation.

So saying that we're going to focus or allocate significant funds, and in the case of Progress it's 31.7 percent of their allocated money, about \$2 million for schools, seems to us to be counterintuitive to what we're trying to do, which is to get the most distributed generation and the most solar facilities out there.

The other thing we want to say is that this is a redundant program. You already have funds available that are being administered, federal stimulus funds, through the Florida Energy Center, and why recreate a program that's already there and already meeting a need?

Also, with regard to these facilities, ratepayers pay the full cost. In other words, as I've

looked at the program standards for, that everybody has put out there for the public school program, the utilities buy the equipment, install the equipment, put in all the metering, allocate funds for education associated with the equipment, and at the end of, I think it's five years, allow the school to own the equipment. So it's a totally funded program as opposed to a matching program.

The other incentive programs for PV residential, PV commercial, solar thermal are matching programs. In other words, an individual person is given, given a certain amount of money and in that way you're stretching your dollars over a larger portion of people and again maximizing the number of installations that you're doing for maximum ratepayer benefit in our opinion.

Listening to what Howard and -- and I'm sorry, I didn't get the lady's name from Gulf Power -- MS. NOACK: Lonnie.

MS. BROWNLESS: -- have said about the ability to reallocate, we're a little concerned about that.

These programs were, a set dollar amount was allocated in the order approving these pilot programs. How would that type of reallocation be done and when would it be done and how, what would trigger a reallocation?

I'm sure that the Florida Energy Center has identified several hundred schools that serve as emergency shelters; I believe there's a boatload of those. So how would you tell, well, we're going to switch from schools to another public facility, to the civic center in Sarasota or, or whatever? And how would that be accomplished, who would make that call, and would they have to come back here to the PSC and to the Commissioners to get permission to do that? As I

MS. HARLOW: Suzanne, could I ask a quick question?

MS. BROWNLESS: Yeah.

MS. HARLOW: Is your primary concern with reallocation, aside from the administrative aspect of it of how would it happen, that more dollars would go toward public? Is that your primary concern? Or are you also concerned that there'd be reallocation from thermal to PV or vice versa if there was not enough demand for one of those rebates?

MS. BROWNLESS: I think we have a concern about reallocation, whether it's between PV or thermal or whether it's between programs. Because, frankly, what we believe, based upon previous experience, is that as soon as TECO says today is the day, we're starting

today, we believe the subscription for PV will be immediately satisfied. In part because of the good job that's being done reaching out to the contracting community and to the building community and telling them, you know, this program is going to be available; in part because it's a first-come, first-serve; in part because we think it's pent-up demand. So we think reallocation is going to be an issue that's almost immediately an issue; it's going to be instantly, instantly there.

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But our, our true, our bigger concern about the school program is that we don't think it's the most cost-effective use of the money if what, what your goal is, and we believe the Legis -- one of the Legislature's intents was the development of the industry so as to create more jobs. Because you're going to create the most jobs by having the most installations. If you have the most installations, you involve the most contractors, you involve the most electricians, you involve the most -- you put out enough facilities so that the infrastructure that supports that, the contracting community, the electrical contracting community, the maintenance community, is maximized. If you have large PV facilities on top of any kind of public utility or

public facility, you're not maximizing the number of distributed generation. So we, and we also think that having a maximum number of distributed generation is better overall for all the reasons that, that we heard about with regard to implementation of a smart grid.

So that's kind of our concern. If it were -if we had our way, we would like to see the Solar for
School programs either eliminated or drastically
reduced.

MS. HARLOW: So I may have under -misunderstood you. So if I'm mischaracterizing, please
let me know.

MS. BROWNLESS: Yes, ma'am.

MS. HARLOW: But my understanding was that you expressed there's not a particular need for the additional education efforts that would go along with those schools because there's already enough demand out there, enough knowledge of these systems, and it's the funding that's needed for people. Is that correct?

MS. BROWNLESS: That, I think we think that.

Now I think there is a place for education with regard to how a PV system works, how a solar thermal system works. There is certainly an aspect to the education associated with these systems that I think the IOUs are going to collect data from these systems. But my

understanding is they're going to collect data from the installation of the other programs as well, perhaps equivalent data.

So I think our idea is that based upon what's happened in the past, there is a lot of education about these systems. You don't have to convince people in Florida that using PV is a good thing. They're convinced.

As to the actual operation and maintenance of a PV system, installing them, let's say, at a junior college where you're going to have that in tandem with a work program that talks about how to train people to install PV, maintain PV, that's something we think that can be done a lot cheaper than is being advocated here. And it doesn't necessarily have to be done in connection with a very expensive PV solar installation.

MR. FUTRELL: Suzanne, could you speak to this idea that in these days of tight government budgets that providing means of government entities to reduce energy costs and therefore be able to reallocate their budgets to, to more pressing needs provides a benefit and that benefit should be recognized as far as providing, maybe divert, reallocating more funds to public institutions is to provide that benefit?

MS. BROWNLESS: Well, certainly who is going

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to be against minimizing costs that the public pays?

And, you know, you're taking -- you have two different public pots of money, if you will. I kind of consider rate, ratepayer money to be public money. It's coming from the same group of people who would otherwise fund electric bills, right, who would otherwise pay the taxes that support the institutions that buy the electricity from the IOU. So they're kind of, they're kind of the same people.

I think one thing that's not said is that if you pay to install, if you pay incentives to regular ratepayers to install these facilities, you are also benefiting the broader public because you are delaying the installation of capacity, you are deferring the purchase of more expensive fossil fuel. I mean, there's benefits that the general body of ratepayer gets as well.

So I don't think it's a question of ratepayers, taxpayers get no benefit if, if an incentive program is used versus they get much more benefit if a public facility is used. I think it's basically, when you get right down to it, it's where do you get the most bang for your incentive buck?

MR. FUTRELL: I'd like to hear from the utilities to speak to this allocation issue, this

I think Howard touched on it in the reallocation. beginning in some of his comments. I'd like to hear more about some of those concerns about how your, what your intention is so we can have some, some more clarity on that and transparency. But I would like to ask if, if, for whichever member or members of the IOUs that are here would answer, did you, when you were coming up with the programs, specifically the Solar for Schools, did you consider some other types of program design to reach out to the public sector, and did you consider this idea of forming matching programs where you used the program funds to allocate towards a portion of the cost of the system and then try to get the school or the county or whatever facility to have some skin in the game as well? MR. GILLMAN: This is Christopher Gillman from

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Progress.

I might just start with some of our, our beliefs in the design of, of the program. Our, our objective was to try and reach as many of our customers as possible, perhaps as young as possible, and we really believed in the education component that this program has a potential to achieve. Not only on renewable energy, on solar, but also on energy efficiency and other benefits that go beyond these programs through education.

That, you know, our program started with that belief of having an educational component. We also recognized, to your point on the potential of doing matching funds versus paying for the facilities, that the type of facilities we're going after, the type of customers we're going after didn't have a budget to participate. We wanted to certainly have, have participants that would adopt this type of a program. So we did recognize that there would be a need for, for higher funding per installation, for example. That's kind of the beginning predication to our design of, of the program.

To the question on, on allocation of funds, when you develop programs, you have to start with some kind of design criteria. We started with that design criteria and what fell out was the allocation of funding that we have for our portfolio. That's not to say that it's, it's right or wrong. It's what we established.

With these types of programs, we recognize them as pilot programs and want to learn as we deploy them of the benefits that we get from the programs, of the customer adoption, of the customer acceptance, and we would look to apply that newfound learning to potentially enhance the programs, reallocate funds or

what have you. That's kind of the starting point that we, we came from for the, for the development of this school program.

We also recognize that, that our program is, is higher funded from an allocation percentage than the other utilities. That's just by, by the initial design, and our criteria sets that were maybe different than the other utilities. Again, that's not to say it's right or wrong. We certainly look for the Commission to provide guidelines and direction that helps us establish if there is a, a direction that we want to go, and we'll support, of course, that, that direction.

But, again, we believe in an educational component that's not just about marketing, not just about selling solar arrays, but about educating on the benefits of energy efficiency and renewable energy and doing it at all levels of age. You know, not only the participants that will purchase today, but those children that will perhaps develop newfound technologies in the next decade.

MS. HARLOW: You mentioned that Progress does have a higher allocation toward this function and actually you've got almost double what any of the other utilities have.

As we're in such initial stages of these programs, they're not even off the ground yet. But what would you anticipate would have to happen for you to reduce that percentage or increase that percentage to that program?

MR. GILLMAN: Certainly one thing I'll mention is, is one of our design objectives was to have an installation, a participant in all the counties that we serve. We serve 32 counties. So that's one of the starting places for, for maybe how many schools we need. That, that was an initial design criteria.

As far as reducing funding allocation, there is flexibility that's designed within the program design. For example, the design is based on a projection of a number of schools annually; the size of the system array; the equipment, for example, a battery backup is an optional component. All those things can be adjusted and can support reduction of allocation.

MR. CLEMENCE: If you decided reallocation was necessary, how would that information be conveyed to both us here at the Commission and to the industry as a whole?

MR. GILLMAN: Well, I think first we would probably look for the guidance and direction from the, from the Commission, and then we would respond to that,

to that direction. You know, I think -- I don't think there's any intention of -- you know, our programs right now are, are ready for implementation. You know, we're launching on, on March 15th.

We, we're expecting to deliver the programs that we developed, so there's not really a plan to necessarily reallocate. But should we be given that direction, like I said, we can certainly adjust.

As far as the schools program, we will launch the application on March 15th. The results for that, that application should come back on April 22nd. Our plan is to have a first cut of potential participants that we would announce on May 13th, requesting additional information from those first cut participants. And then a final decision, I believe, I believe that comes back on May 27th, with a final deliverable of the selection of schools on June 24th. So there's some time between now and that final selection that we could make adjustments, if need be.

MR. FUTRELL: So, Christopher, if I'm hearing you correctly, you're saying right now you, if you, for example, get oversubscribed on PV, and as you get towards the end of the fiscal year, if you still have some excess money, you don't have a plan for addressing unsubscribed, unfulfilled applications for PV, is that

correct, or do you?

MR. GILLMAN: Well, our program is set up now -- you know, we have, of course, our, our Solar for Schools program, our low income that would be, you know, managed by us that we already have costs established. We have, of course, our two incentive programs for solar PV. We also have a solar thermal, residential solar thermal program that's based on historical performance on, on incentives. We're expecting that those projections would come true and that we would implement them accordingly. So our, our, our plan is to make the expenditures that we've, we've expressed.

MR. FUTRELL: Suzanne.

MS. BROWNLESS: Thank you. With regard to
Progress, I assume you've worked closely with the Solar
Energy Center to identify schools in your area that
qualify for the PV for Schools program; is that correct?

MR. GILLMAN: That's correct.

MS. BROWNLESS: Okay. How many schools had --did the Solar Energy Center have identified as qualifying for their program and their funding?

MR. GILLMAN: Well, there's approximately

100 emergency shelter schools in our service territory.

MS. BROWNLESS: Okay. And how many are going to receive funds from the Solar Energy Center?

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MR. GILLMAN: I believe there's a handful. I don't have that number right with me, but it's a, a few schools that, that are already planned for that.

MS. BROWNLESS: Okay. So do you -- have you already gone out to the school districts and identified schools that your program would serve in addition to those served by the Solar Energy Center?

MR. GILLMAN: We haven't gone out to the schools or done any kind of selection process, if that's your question. What we have done is, is identified what the market is, which is roughly 100 schools with, within the energy that serve as, as shelters. I should note that our, our program has a, a preferred allocation toward shelters, not a prescriptive requirement. So it's actually all public schools within our service territory that would be available to participate.

MS. BROWNLESS: Okay. How do your standards for participation in your solar school program compare to that of the Solar Energy Center? Are they comparable, are the incentives similar?

MR. GILLMAN: They're comparable that it was designed off of the, the E-Shelters program.

MS. BROWNLESS: Are they similar in specifications, installation, the size of installation, commitment of funds? In other words, is the Solar

Energy Center program going to pay for the complete installation of the facilities or are there going to be matching funds under the SEC program?

MR. GILLMAN: I'm not sure I'm, I'm interpreting your question correctly. If your, if your question is are our programs similar to the E-Shelters program, it is similar. Our, our program is not as prescriptive, it has a little more flexibility in the, in how, in the size of the array, the equipment that would be there. We also have our own application process and criteria.

MS. BROWNLESS: Okay. So it is more flexible in the sense that it gives, allows the installation of more capacity than the, the SEC program?

MR. GILLMAN: I don't believe so. I believe our program is designed with an up to 10kW installation, and I believe that is FSEC's implementation of the E-Shelters program is to be exactly 10kW with battery backup.

MS. BROWNLESS: Okay. Do you know how many schools have signed up for the SunSmart Program with FSEC?

MR. GILLMAN: I don't know how many schools signed up for it. I do know that FSEC has, has selected 90 schools to participate.

MS. BROWNLESS: Okay. 90 of the 100 in your service territory or 90, 90 all over the state?

MR. GILLMAN: 90 across the state.

MS. BROWNLESS: One thing that was mentioned by the investor-owned utilities that we think is very important is a standardization of the programs, particularly for the solar pilot program. Obviously you have the Solar Energy Center that has one set of standards that's being applied across the state. So what we would like to see is if the Solar for School program is going to be allowed as a pilot program, which obviously the Commission has approved, that there be the same criteria all across the state.

One thing I'm concerned about from listening to the testimony is that you'll have, if the IOUs have a more advantageous program, a better funded program, allow more funds to be allocated, then you basically will have the IOU program filled up first, and then the SEC program -- you'll have competition, and that's not, that's not the best use of the money. You know, we want to make sure you get the best use of the money, and having a head-to-head competition between two incentive programs doesn't strike me as being, as a policy matter, a really, a really good thing.

MR. FUTRELL: Let me step in and say that one

is to relitigate the programs that have been approved by 2 the Commission. 3 MS. BROWNLESS: Sure. 4 MR. FUTRELL: We're here just to gather some 5 6 additional information based on some things they noticed 7 in the programs they did approve. And so we're trying to gather that information and then provide that to them 8 for their information as they, as we move forward in 9 this process, and then the Commissioners can take that 10 and use it as they, as they see fit. 11 So I certainly understand where you're coming 12 13 from, Suzanne, but I think -- I'd just like to make sure everybody is clear about that. 14 MS. BROWNLESS: Sure. Yes, sir, I understand 15 16 it. 17 MR. FUTRELL: We're not trying to reopen the They are what they are. They've been 18 programs. 19 approved. 20 MS. BROWNLESS: Sure. 21 MR. FUTRELL: And so we're just trying to better understand is there some things we need to be 22 aware of going forward about these, about public versus 23 24 private programs? 25 MS. BROWNLESS: And I quess then we would just FLORIDA PUBLIC SERVICE COMMISSION

of the purposes that we're not here to try to do today

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want to make sure that we think there needs to be a standardization of these programs across the state.

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MR. FUTRELL: Thank you. If anybody else has -- I know Christopher responded, but if anyone else has a, would like to speak to this idea of were there some other program designs that were looked at, if you'd like to speak on that, that would be helpful. If, if, in addition to that, if you'd like to speak about again your intentions with reallocation between the programs as you move forward in the fiscal year once the programs are up and running, what your intentions on handling that if one program is oversubscribed, and as you move towards the end of the fiscal year, if there's excess funds available, what's your intention on moving that into areas that, where there's unfulfilled needs? anyone would like to take up those two questions, that would be helpful.

MS. NOACK: Yeah. It's our intention to look and evaluate these programs. Again, as we've established, these are pilot programs and this is our best projection of how to best allocate these dollars. So we are, we plan to look at how we've budgeted these dollars on an annual basis based on possible changes in market conditions, possible changes in the cost of the systems, looking at the incentive levels. It is our

intent that if we make any adjustments to that, that we would come before the Commission and we'd put that in our program standards, that if we made any changes based on the experience that we received in the first year of our pilot program, that we would come to the Commission and it would be up to the Commission on how to approve those changes.

The other thing that I wanted to mention is that when you're allocating these, to have a standard percentage allocation across the state I think would wind up coming, you'd wind up with very unreasonable type programs. If you look at the dollars allocated to each individual company, we've got very different budget amounts. Saying allocating 10 percent to Solar for Schools for each individual IOU, that's going to really impact the number of schools that you could actually touch.

If you look at Gulf Power's percentage, it says 16 percent. Well, that's only for one school per year. For us to be able to do one school per year, that's just the nature of, of the percentage in conjunction with the amount of budget dollars that we have to work with. So if you look at historically for all the other DSM programs, there hasn't been this requirement of this standardization from IOU or utility

to utility because each utility's marketplace is different, their customer base is different. They have different needs in their particular areas. And so each IOU as a collaborative, we have gotten together, there are a lot of consistencies among the programs and the types of offerings, the initial incentive levels, and so we've evaluated not only what's best for our marketplace, but we've also evaluated the allocation of these programs based on the amount of budget dollars that we have to work with.

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I think as we've been working MS. HARLOW: with the utilities on the standards, I think the Staff has expressed that one of our concerns with the reallocation is the purpose of the statute and the Commission's order is to encourage these facilities to be installed. And one concern would be that dollars were left on the table at the end of the year. And I understand that we really -- the solar industry has expressed they don't expect that. But let's say it happens and you have a line and your, for your solar thermal funds but you've used up long ago your PV funds. I think that there needs to be a process established and the utilities need to let us know if that's the case, and the money needs to be reallocated toward where you have the demand. And these are pilot programs. This is

a first pass at allocation of these monies. So I think as we move forward we'll learn more about where the customer demand really is.

MS. BROWNLESS: May I ask a question? Is it the Staff's position that if a reallocation took place, for example, if you had the solar school program that didn't get subscribed for whatever reason and there were funds there while the solar thermal and solar PV quickly got exhausted, is it your position that the IOU would come back to the Commission and ask for funds to be reallocated, or would you do that through the clause, or how do you think that would work?

MR. FUTRELL: Yeah. I don't think we have a real -- taken a position. We'd certainly like to get the opinions if folks could address that issue. I know that's not one of our explicit questions here, but I think that's becoming obviously a pretty critical one is to add that to the, to the list to respond to in postworkshop comments and give us your thoughts on how that should be handled. We've heard a couple of ideas here verbalized this morning and we'd like to see that. And that would be helpful to have it in writing so we can consider that and maybe have a dialogue about that.

Howard.

MR. BRYANT: Well, I was, I was going to

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respond from Tampa Electric's perspective, and it may or may not be true of the other utilities, but our process is one where on a quarterly basis we're going to look at what has happened. Now let me, let me assure Suzanne up front, the allocation that's gone toward the schools will not increase. If anything, it will decrease and here's the reason why.

Two-fold, you may not find a school that wants to participate in our service area. We have five counties. We know how many were identified as emergency shelter schools. And if they choose not to participate, that's going to be the case. We may find a substitute.

But if we find a substitute, the installation is going to be cheaper for this reason. The emergency shelter school program is one that requires battery backup. That's an additional cost. If we install a system on a nonemergency shelter school, it is not going to have battery backup. That's money that then is shifted from what we thought would go into the school program over to one of the private programs, be it PV or be it solar thermal. So that's our perspective.

Now on the reallocation, I think we will bog the process down and we will hinder funding being

available if we have to come up here on a regular basis and ask for that reallocation to take place. I think it's incumbent upon the utilities to look at their systems and, and to look at the, the number of people in line in a given case and recognize we've been charged with spending X number of dollars. And so to the extent we're going to accomplish that, you have to look at who's in line and who's not in line and you have to reallocate. And so from our perspective we're going to look on a quarterly basis and make that move.

Now if we are to inform you of that, we would certainly do that. But at the end of the year from a true-up perspective we're going to give an analysis of what has happened. And I think the others will in general give an analysis of what's happened in, in each given endeavor on an annual basis.

But the idea is to -- at least our

perspective -- the idea is to use the funds, and to

proliferate as many systems as possible, recognizing the

private sector is one where you can get -- I'll use the

expression biggest bang for the buck, because it's the

smaller number of systems which will use less money,

therefore more is available for participation. That's our

perspective. I'm trusting that that will be adequate as

we look at this pilot and gather information and then

begin to formulate a more consistent pattern as to what should happen on a going-forward basis.

MS. HARLOW: Does anyone else want to speak to that from the utilities, please?

MR. GILLMAN: This is Christopher from

Progress. I think I can agree with the majority of
those comments that Howard made. It is our intent to
use this funding towards solar programs and solar
installations. Our program design is based on our
estimates, our projections of how that spending is going
to occur. So we expect that to occur. Should it not in
any one program or another, we're going to evaluate the
availability of funds and look to potentially reallocate
it towards a more customer-accepted program, for
example.

In addition, Howard mentioned the cost of the schools programs. Those were all the same comments I was trying to make, as well, is that our program has flexibility. That flexibility is the potential to reduce the cost, not to increase it.

MS. HARLOW: Thank you.

Suzanne, did you have any comments?

MS. BROWNLESS: No, ma'am. Thank you.

MR. FUTRELL: If we could just move on to the rest of the questions in this section, but just go ahead

and let everybody know, we would like to hear what your intentions are with reallocation. And then if you have some advice or some thoughts on what things we should be aware of, that would be helpful. But if we could go back and finish up these questions, if you have any. If you have some prepared remarks, you'd like to address these further questions about -- I think we talked about standard percentage, but if you have some thoughts on other types of public facilities that would be good. If not, we will move on to the next section.

Nothing? Okay.

MS. HARLOW: Why don't we move forward and -- a lot of this I think we have touched on already, but just to make sure everyone gets their thoughts in on how to allocate the funds on thermal versus photovoltaic.

And -- let's see. We are noticing that most of the utilities have allocated more toward photovoltaic, and to come up with these figures we have included the Solar for Schools programs, and less toward thermal, and Power and Light is about equal on those two. And could we have someone from the utilities to kick us off to kind of address how you came up with your allocation of photovoltaic versus thermal, and also your process where you will determine if you need to reallocate during the middle of the year.

MR. BRYANT: You're looking at me, so I guess I have to, again, be the first one to speak, and that's okay.

There was no magic. And the fact that the PV is included -- I'm sorry, the solar PV is included in the number, I think that's a function of what Lonnie said earlier, the fact that you have a certain amount of dollars, and if you are going to do, in our case, and, in fact, in their case, if you are going to do one school per year, that's going to, kind of, set in stone what you are attempting to spend there, and it's going to make the allocation, you know, move toward whatever it happens to be in terms of the PV.

But, again, I want to go back to the earlier comment that no allocation is cut in stone. It will move, depending on the demand in a particular area. And so if you see that you have a greater demand in the solar thermal and smaller demand in the PV, then we would move the funds accordingly. So there is no magic.

We did not have any experience to go by in terms of what to do for PV versus what to do for solar thermal. Gulf and Progress are not in that same category. And I can't necessarily speak for FPL, I can't recall the background there, but it's just an

estimate. And our intent through the whole thing is to have flexibility to move the dollars so that you can expend what has been required, in our case \$1.5 million.

MS. HARLOW: Earlier you said that one of your intents was to get to the most number of customers, get the most systems installed, and your incentives toward thermal are much lower than toward PV. Did that come into your consideration?

MR. BRYANT: Yes. And the reason for that is you typically find your thermal installation being less expensive than your PV, and so the funding went accordingly. From a net metering perspective, we do know how many customers we have, and so do the rest of us. And we know generally the cost on each of those systems as we have dealt with those customers. And so you can see what the cost is, and you know what the cost is for solar thermal. And so if you are going to help the program along, then you are going to have to put a little bit more money, in our opinion, toward the PV in order to disperse it as opposed to the solar thermal.

MS. HARLOW: Anyone else?

MS. NOACK: This is Lonnie. Oh, I'm sorry.

Just one additional comment about the funding. You

can't just look at the dollars allocated, because if you

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look at the total number of customers that we're impacting for solar thermal versus PV, the total cost of an installed system is much lower for solar thermal than it is for PV.

We have allocated more dollars to PV for a couple of different reasons. First, based on our program experience, which I had talked about earlier and how we decided to allocate those funds, and especially based on the incentive level that we are offering, and then, also, because of the cost of the systems to install. We have enough funding in there for our residential program to incent 100 solar thermal customers, whereas for PV, using the same consistent base level and incentive level that the other IOUs are using for residential, we have enough funding in there to incent 45 customers. But that is also not only based on the incentive level, but it's based on our experience with our net metering program and the state's incentive program. So we have to look at more than just percentage allocation and the total dollars. You also have to look at the number of customers that are being affected in each particular area, as well.

MS. HARLOW: Mr. Gans.

MR. GANS: Thank you.

From FPL's perspective, what we tried to --

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what we attempted to do was we knew there were two technologies that were of interest, both thermal and PV. And looking at the state rebate information, we saw that PV has -- because of the size of the systems, could very quickly draw a lot of money. And what we wanted to do is make sure that at least at the beginning, that both technologies have sufficient funds to support the interest from our customers.

Now, we're going to reevaluate that over time, and if we see that one area, as has been said several times, as we see that we gain experience and we learn, and if there is one area that starts performing at a higher level, a higher demand, we may shift from one technology to the other. But at the beginning, we wanted to make sure that both technologies had adequate funds to support the interest of our customers.

MS. HARLOW: Thank you.

Does the solar industry want to speak to thermal versus PV?

MS. BROWNLESS: Yes, ma'am. We have a couple of comments. First of all, we think that it's important that commercial and industrial customers have a solar thermal program, and we would note that Florida Power and Light does not have a -- they do? I'm sorry, Progress does not have a commercial solar thermal

program. So we think it needs to be made available to commercial as well as residential.

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Another point we'd like to make, and I'm going to make this quickly, is that Progress, for example, has a combined solar thermal program with load management, which was previously always in its energy efficiency portfolio, and it has been moved now to the pilot program portfolio. That is the one program that I think did pass the cost-effectiveness test because of its combination with load management. So we would like to see that program moved back to the energy efficiency side of the equation, because from our point of view that does a couple of things: It is cost-effective; it does pass the test. The reason that these solar programs were pilot programs was because they were not cost-effective by any of the traditional tests. And that would free up more money to -- free up more of the allocated money to go toward encouraging programs that need to be incentivized.

And the other thing is that we basically agree with the utilities that, obviously, since thermal is cheaper than PV, if you have got the same pot of money, you're going to get more thermal units than PV units, so it really is a balancing process. We would just like to say that that is why the reallocation of

funds becomes such a serious issue, how one is going to do that, and we'd like to get a standard mechanism for reallocation across to all the IOUs.

MR. FUTRELL: Christopher, could you respond to one of the points that Suzanne made about commercial/industrial solar water heating program? Did you folks consider that? If you did, why didn't you include it? What do you see as the pros and cons of that program?

MR. GILLMAN: Certainly. We did consider it. We looked at the market for commercial solar water heating. What we saw in that market space were several renters that might be potential participants as well as a mix of alternative fuels. That really limited the potential participation.

We also looked at our existing solar water heating with energy-wise residential program, and looked to see if there was a potential to mirror that for commercial. There wasn't currently. So we didn't look at design of commercial for those factors. The design constraints seemed to limit the potential for that type a program.

I should note that, you know, solar water heating with energy-wise, we have identified energy-wise as actually a barrier to adoption.

Customer acceptance is sometimes precluded because you have the combination of a requirement for demand response and solar, and maybe a customer wants to participate in one or the other. That's one of the reasons why we looked to see it as a pilot, you know, to look at the potential for ways of addressing additional acceptance, additional adoption, additional mechanisms of program design, and perhaps in the future addressing some of the existing program's barriers, and making it available to developing commercial programs. So all of those things are possible in the future as a pilot program.

MS. HARLOW: Anybody else? And, once again, if you're out there and you want to speak, we have extra microphones or we can accommodate you.

MR. FUTRELL: I guess, Judy, I've got a few questions. I'm sorry, Bill, go ahead.

MR. GALLAGHER: Yes; thank you. Bill with FlaSEIA. Just a general comment about the importance of allocation. If we use the solar rebate program as kind of a model, when it was first laid out we did not know that the federal would relieve the cap on PV. Consequently, we were paying \$100,000 out of general revenue for commercial systems that really didn't need that incentive. We are kind of looking at the same

thing right now. We're sitting down trying to figure out how can we help the public sustain the industry, not only speaking from FlaSEIA, where I'm the current president right now, but I'm also a small business owner, a solar contractor for 36 years. The constant up and down has been traumatic. Most of the industry is seeing a minimum of 35 percent reduction. Some of the people are leaving the state.

We're trying to determine how can we put a package together to have some stability and help as many people. And I think that is why you are seeing the comments about the school program thing. In order to get as much money available for the consumer, you know, that's our interest. So that is just a general comment that this is a very good point of discussion. I appreciate it.

MS. HARLOW: Bill, you said you were a small business owner, and I assume many solar installers are.

Do most solar installers do both PV and solar water heater, or do they focus on one technology?

MR. GALLAGHER: Well, about four years ago it was principally solar thermal. Now more and more people are coming into the solar electric marketplace. It has not been sustainable for them, so they are leaving at a pretty rapid pace right out. Without a good policy,

they won't be there. Right now it's mostly thermal, but we can bring them back with a good policy.

MS. HARLOW: So if the installers focus on one technology, the reallocation issue would be even more important.

MR. GALLAGHER: Well, I think the industry needs a balance of both technologies to really -- to sustain it. Because obviously the PV with grid parity is going to be extremely effective, you know, maybe four or five years down the road. We are trying to find a bridge, you know, between now and then to sustain businesses.

And, you know, one thing we haven't talked about is job growth. You know, a system on a school uses a few people for a short period of time. And if you allocate that money to, you know, private facilities, rooftops, you're going to extend that a lot further and put a lot more people to work, and that's our interest.

MR. FUTRELL: I have a few questions kind of based on this idea of thermal versus PV, and the allocation of those two, and should the emphasis be on one over the other, or what that allocation should be.

In the Florida Energy Efficiency and Conservation ACT, FEECA, the legislature stated that it

is critical to utilize the most efficient and cost-effective demand-side renewable systems to protect the health, prosperity, and welfare of the citizens in the state.

Kind of from that general statement about efficiency, cost-effectiveness of systems, putting an emphasis on that, in the analysis that was done in the goal-setting process to look at PV and thermal systems, as Walter said earlier, the analysis was that none of those systems were cost-effective using the traditional tools. But was one technology more or less cost-effective than the other? Can anybody speak to that? What was some of the results? In other words, was one shown to be much less cost-effective than the other?

MR. BRYANT: Yes. Solar thermal has the greater potential of the two to be cost-effective. And I think one of the reasons for that, it has the slightly greater potential of providing capacity benefits at time of system peak. Now, granted the sun is not necessarily shining at 7:00 in the morning, and it's kind of off in the sunset, so to speak, at 5:00 or 6:00 in the afternoon. But to the extent you have an 80-gallon water heater that has been heated and has sustained its temperature, the propensity for that water heater to not

run at 7:00 in the morning is greater because of the volume, and the propensity to not run at 5:00 or 6:00 in the afternoon is greater because of the volume.

So you get slightly better demand at times of system peak from solar water heating, and therefore it has a slightly greater propensity to be cost-effective. And that would be -- that would be from the perspective of the RIM test or the TRC test.

MR. FUTRELL: Do you have a feel for -obviously folks use hot water differently
house-to-house, person-to-person. But, in general, is
there a point at which the number of members of a
household makes solar water heating become more
cost-effective, more of a reasonable pay-back period?

MR. BRYANT: From Tampa Electric's perspective, we have generally used the criterion that if there are three or four people in the family and you can sustain that family in that home for more than just one or two years, you've got the greater opportunity for that to pay itself back to that customer. Solar water heating in and of itself is not a bad idea, and in the right application it does work.

I have told this story many times. I grew up in the '50s, and we had solar water heating on our house. And we had hot water, and it worked. So it has

been around for awhile. The question is can the utility afford, from the standpoint of ratepayers using their money through the ECCR, can the utility afford to give an incentive to promote it, because it can give capacity and energy savings that occur such that it's better than building the avoided unit in cost-effectiveness. And to date that has not been proven.

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The principal driver for that is the cost of the equipment. As long as the cost of solar equipment remains at its current level, cost-effectiveness is not going to be achieved. Because the performance side, even though it can improve slightly, and it will, it's not going to improve enough such that the capacity benefit is going to outstrip the cost need of coming So the cost has to come down a significant amount, which I think is one of the primary purposes of the pilots is to see if infusion of utility dollars into the marketplace will, in fact, proliferate the technology, but at the same time bring the cost down. If the cost does not come down, the TRC test will never be cost-effective. And if the cost does not come down, the incentive that can be provided by the RIM test will not make the Participant test whole for the given customer.

So the greatest probability, then, for cost-effectiveness to occur is on the RIM side of the equation, not on the TRC. The RIM values that we had in the goals process were greater than the TRC values. That's where the success of these programs are going to be measured. Will the costs come down, the number one item, and then which cost-effectiveness test should we use on a going-forward basis to hopefully continue the proliferation of the equipment? And it has to be on the RIM side of the equation.

MR. FUTRELL: Well, given that at least at this point, you know, obviously we'll be collecting information going forward with these systems and the cost and the benefits that may accrue, but given this general statement in FEECA, should the Commission consider, given that solar water heating appears to have more benefits, or I should say it's more cost-effective compared to PV, should the Commission consider that that technology may help fulfill its requirement to meet FEECA more effectively than allocating the PV?

MR. BRYANT: I think it's going to be driven by what happens to the cost side of the equation. The greatest probability for cost to come down, I think, is on the PV side. And I think when we talk about grid parity in five years, which I'm skeptical that that will

happen in five years, but, nevertheless, as it comes down, that's the greatest opportunity there. So it's too early to tell as to whether you should set a directive, a policy, or an approach. I think, again, we work through the process over five years, and we determine what has happened in the marketplace to the prices, and how does that impact cost-effectiveness.

And to the extent we are going to monitor and get demand and energy savings from the work that we're going to do, if, in fact, technology increases and becomes more efficient, it will be measured.

MR. FUTRELL: Anybody else like to comment on that? Bill.

MR. GALLAGHER: Thank you.

Yes. Howard, thank you for your comments. I agree with most of them. I think the solar thermal part of it is cost-effective now.

You know, we have installed somewhere between 13 and 15,000 systems in the state, and we are seeing conservatively rate savings of 20 percent. The system cost somewhere around \$5,000, and after the federal credit it's down to 3,500, payoff at about five years, so there is no question, no doubt that these are -- they are very cost-effective systems. And that was a guess on the

grid parity, sorry.

MR. FUTRELL: I don't want to bog things down, but I do have a curiosity you raised. Is there any standard reporting system for solar water heating systems? I think with our net metering rule, we are getting a pretty good stream of data, transparent accurate data on PV systems and other renewable systems pursuant to that rule, but is there any kind of standard reporting on thermal systems that we could have access to?

MR. GALLAGHER: The OUC has those records. They have been doing it for sometime now. You know, they have a production meter that actually tells how much energy is being produced.

MR. MAINGOT: OUC is monitoring their thermal systems. They offer a thermal incentive. Not an upfront incentive, but they pay their customer for the renewable attribute. On a solar hot water system they pay them 3 cents a kilowatt hour, so they have installed in their solar thermal systems a Btu meter that converts to -- there is a converter in it that converts the kilowatt hours. And an average 80-gallon system for a family of anywhere from two to six people, you're looking at about 8 kilowatts a day, 7 or 8 kilowatt a day savings, something like that, kilowatt hours a day

savings.

MR. FUTRELL: But does FlaSEIA or FSEC, they don't collect -- do they collect data?

MR. MAINGOT: Yes, FSEC does collect data.
Yes, they do.

MR. FUTRELL: Okay. Thanks.

MS. HARLOW: Anyone else want to comment on thermal versus PV? Okay. I'm not seeing any takers. Let's move on and talk about low income. Of course, we all know that in use of utility funds from general body of ratepayers we have equity issues and the utilities have all come forward with low-income programs. And so can we start by discussing how you decided how much to allocate to those, how you're working with community service organizations, kind of just update on that.

Mr. Bryant.

MR. BRYANT: Okay. And this is probably going to be more specific to Tampa Electric than the others. Although we're all using agency providers in our service areas to help us, and you have heard mention Habitat For Humanity. From our perspective, we know who the providers are and we know how many, the number of -- the average number of homes that they build in the service area in a year, and so our intent then is to -- for instance, in Habitat's perspective, they build either

four or five, I forget the number, but on average they build about four or five per year in the area. And so to the extent that those homes are being built for a family of four or greater, typically they are, then we are going to put a solar water heating system on that particular home for new construction.

MR. FUTRELL: And all the costs of that system will be covered, correct?

MR. BRYANT: Yes, ma'am.

MS. HARLOW: Did you consider working with existing homes?

MR. BRYANT: We have not. We have not.

MS. HARLOW: Lonnie.

MS. NOACK: We started off budgeting for the solar PV and the solar thermal first, because that is where our experience had lied. So once we developed a budget for the solar PV, the solar thermal, we know we wanted to do a solar for schools program. We are targeting one school per year. And then to kind of look at what the administrative costs would be to be able to administer these programs, we kind of took what we had as far as the remaining dollars available and applied that to a low-income application. That's how we determined how much to apply to low income, but we focused initially on those initial programs because we

felt that is where you would get the biggest deployment.

However, we wanted to incorporate low income, because we felt like that was one potential market that could he benefit from energy efficiency and renewable type programs. But there is a significant barrier in those particular markets or that particular market because of the high cost of these systems. So we wanted to make sure we included that, but that is how we determined much to allocate or budget to that particular program.

And we are not limiting it just to new construction. We are evaluating existing low-income facilities, so we are not limiting it to new construction for Gulf Power's program.

MS. HARLOW: Progress.

MR. GILLMAN: Christopher Gillman with Progress. First of all, Howard, of course, mentioned that he was just speaking for TECO, but I think in general his comments were in line with ours. We have worked with the community groups in the past and have identified the market. We also looked at our percentage of low income throughout our DSM portfolio, and we looked to mirror that in our solar programs.

Regarding the existing homes, we looked at the potential for additional administration,

installation, and perhaps even liability issues, and wanted to limit it at least at this time to new construction.

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MS. HARLOW: Does Power and Light have any comments on low income?

MR. GUYTON: A few. This is Charlie Guyton. I think you need to put it in context a little bit, and I would harken back some to Mark's original observations. Most of these programs were not cost-effective under either RIM or TRC, so the only real prospect of them being cost-effective was for the participant. Not all of these measures are even cost-effective to the participant, so FPL has -- as it has looked at low income has looked at the measures that stand a chance of being cost-effective to the participant. That is on the solar water heating side. And the low income customers are eliqible to participate there because it makes -- it can make economic sense for them to do it.

We know that they are not going to benefit as nonparticipants from the results of the RIM test, and we also know that they are not going to benefit as a general body of ratepayers from the TRC results. So that's where the focus on FPL has been in terms of the low-income customers is that FPL chose to fund the

measures where the participants, the low-income participants may actually be able to derive some benefit to themselves. I think that's the general approach.

Oscar, correct me if I have misspoken here, but that is the thought that has gone into the low income.

MS. HARLOW: Anyone from the solar industry?

MR. GILBERT: Excuse me. Lee Gilbert. None of the programs in the public sector. All the monies went to schools, but there is low-income housing and projects that are out there that could also probably benefit from some of these programs, especially thermal. In some of the larger house housing projects that would probably be considered public funds rather than private funds, but nobody crossed that issue in any of the programs thus far.

MS. HARLOW: I think Power and Light wants to speak to that.

MR. GUYTON: I'd point out that those public institutions are eligible under FPL's programs. There is not a specific program targeted to them as there is schools, but there is an eligibility, and they would address it just like any other customer as to whether it makes economic sense for them to participate. They are

certainly not precluded, and they will be eligible.

MS. HARLOW: Suzanne, I wanted to give you an opportunity, if you wanted to speak to low income.

MS. BROWNLESS: Only to the extent that for low-income families, probably solar hot water is where the emphasis needs to be placed. That probably has more bang for the buck for them.

MS. HARLOW: You expressed a concern earlier about the school program that the utility dollars would be used to fund the entire system, and that's also the case with low income. Do you have that concern here?

MS. BROWNLESS: Well, thermal is a lot cheaper.

MS. HARLOW: Thank you.

Any other comments on low income? Once again, anyone back there in the crowd, if you want to jump forward just do so, let us know. Let's move on. And I think we've covered this a good bit, but just in case we have any additional thoughts on residential versus commercial/industrial. Anyone have any thoughts on the allocation there?

MR. GUYTON: FPL would just reiterate that allocation wasn't the starting point, it was the end result. I mean, the program design was the starting point in terms of what's the best design for programs

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and then the dollars fell out. It wasn't an allocation, it was the reflection of what we thought the appropriate design parameters were.

And to reiterate what Howard said earlier, they are all projections, and I think FPL certainly intends to respond to the market as what's accepted and what's not accepted. And its almost a misnomer to talk about this as an allocation. I mean, there will be a refocusing of program and expenditures. If it requires program modification, the Commission will be consulted. If it requires participation standard changes, the Commission will be consulted. If it doesn't, we would like to preserve the flexibility to be able to respond to the market in a meaningful and timely fashion.

MS. HARLOW: Thank you.

And I think Mark said earlier that we would really appreciate everybody's comments, post-workshop comments on how you think that reallocation should occur if -- using the term allocation loosely. Any thoughts from the solar industry on residential versus commercial/industrial?

MR. FUTRELL: If I could just follow up. And pardon me, Suzanne --

MS. BROWNLESS: Sure.

MR. FUTRELL: -- and follow up with Charlie.

You mentioned, you know, that the allocation wasn't something that drove the program design, but there were factors in the program design that led to the allocation. Can you kind of give us an idea of what some of those critical -- maybe you or Oscar can give us what were some of those critical program design elements that led you to design the program as you did that resulted in these kind of allocation breakdowns that we have seen.

MR. GANS: Yes. What we did is we looked at

-- starting with the basic economics to the consumer -looking at the paybacks of the different technologies,
and so we modeled what the expected participation rate
would be or what the adoption rate would be for
different types of technologies; so residential solar
thermal, residential PV, et cetera. And so we basically
let that growth curve determine where the dollars were.

So we had already been looking at it, making sure we had a thermal and a PV allocation as far as, you know, wanting to make sure we had those two covered. But then we looked at the incentive levels that we were planning on having and then looking at the effect of those incentive levels on the typical projected adoption.

MR. FUTRELL: So did the -- what drove that,

was it the number of installations that was kind of critical to you to see how many installations were driven or the kilowatt hour savings that would result from the dollars that would be spent?

MR. GANS: Actually we were focused on the installation, the projected number of installations based on the economics.

MR. FUTRELL: Okay. Thank you.

MS. BROWNLESS: I just have a question about how the cost-recovery clause works for FEECA. Are there quarterly reports, progress reports that are required to be filed in the cost-recovery docket that would track Howard's quarterly evaluation of the programs?

MR. FUTRELL: Well, I know right now there are annual filings that are made as part of the true-up process, and each program that the Commission has approved for which the utility receives cost recovery, they file schedules that document the costs.

MS. BROWNLESS: I know they do that.

MR. FUTRELL: And in the back of those schedules there's a program summary page for each program where they state -- give you a quick briefing on where they are with the program, the dollars that have been spent, things like that. And so that's done annually currently.

1 Now, if you think we should do something a 2 little more frequent --MS. BROWNLESS: I was just wondering if it was 3 currently being done quarterly. 4 MR. FUTRELL: Yes, that is how it is currently 5 6 being done. It's annually. 7 MS. BROWNLESS: Okay. Thank you. 8 MS. HARLOW: Suzanne, did you have any 9 thoughts on residential versus commerical/industrial? No? Thank you. 10 11 The next topic we would like to discuss is program monitoring and verification. These are new 12 13 We're moving into new areas here for utility programs. 14 funding, and we'd like to discuss what kind of data we 15 need to track the programs; how often should we get the data; how do we tell if the programs are a success; how 16 17 do we tell if the programs are meeting the requirements of the revisions to the FEECA statute? And I'd like to 18 19 just start by saying how should the results of the programs be monitored, tracked, and verified, and can 20 21 we get an update from the utilities on what types of data they plan to collect and how? 22 MR. BRYANT: Again, thanks for looking at me, 23 Judy. (Laughter.) 24 25 I think you will generally find the utilities

tracking a half a dozen key items that are components to cost-effectiveness: Summer demand/winter demand reduction; annual energy reduction, cost of equipment, the key driver. We currently know what those items are today for our respective service areas, particularly the cost, and so the biggest monitoring effort is going to be what's happening to the cost. Is it actually coming down like the vision is for the pilot program.

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Now, to go beyond that and get specific in terms of how often should that be tracked or monitored and the number of sample points and things of that nature, this is probably going to be specific to Tampa We don't believe that it's necessary to do end use monitoring on solar water heating. The Solar Energy Center has done that for years, and we can simply piggyback on their data. The one key determiner happens to be the number of people in the home. will dictate the consumption of hot water, therefore, it will dictate the consumption, or the lack thereof, of kilowatt hours through the meter, because it is being provided by the sun. And so we will monitor that, and that will tell us what is going on from the number of folks in the household. That's solar water heating.

We will certainly know how many are paid. We

will certainly know if we have reallocated funds during the course of the year, and all of that will be a part of what we supply in the true-up filing that Mark was alluding to earlier.

From the PV perspective, our vision is to monitor on a sample basis. And the reason we believe you can monitor on a sample basis and, therefore, expand the population of participants is because the output of solar technology is somewhat linear from the standpoint of a 10 kW system and a 5 kW system. So you can kind of recognize it's going to be twice as much or half as much, depending on which way you want to go there.

And so we will do end use monitoring no different than we do on our other DSM programs. The reason we want to do sampling is because it minimizes the cost. You have the efficiency of the linear application of demand and energy savings, and so we think that will help us, again, do the collection of the demand and energy information for cost-effectiveness.

Cost, again, will be collected; the size of the systems, things of that nature, and, again, reported on an annual basis in the FEECA report, or in the -- well, certainly the FEECA report, but also in

the true-up filing where the expenditures will be identified. If there has been a reallocation, the reason for that will be stated, you know, that type of stuff. So our perspective is that you will find in the true-up filing the data that's necessary to do the evaluation of the program on an ongoing basis.

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Now, that brings to mind the question of, well, when are you going to do cost-effectiveness? I'm not convinced we should do it at the end of the first year, and I'm not convinced we should do it at the end of the second year. I think you do it at the end of the process to determine if there has been a change from where we were when the goals were set and the expenditure levels were set. That gives time for two things to happen; costs to go down, and, number two, demand and energy savings to increase because of the technology increase. And you can actually perhaps see a trend as you collect that data over time, which would suggest maybe we should know -- and I said maybe -- we should identify what types of solar PV or PV systems are being installed.

There are different kinds of technologies that convert the sun into energy. Solar thermal is kind of solar thermal, but it's just another piece of what we want to track in terms of identification. When

you get to the end of the race in five years or four years, depending on when the goals setting process is going to happen again, then we can say here is what we have done. We have spent X number of dollars. It has gone across these technologies. It has gone across these end use segments. Here is our demand and energy savings. Here is our avoided unit at that particular point in time, and here is the cost-effectiveness that we now see. And did, in fact, the experiment of market infusion of dollars reduce the price so that we can help its cost-effectiveness.

I kind of see that as what we want to do on an overall basis on a marketing -- I'm sorry, on a monitoring perspective of these particular programs.

MS. HARLOW: I have a couple of questions. First of all, so your intent for providing data to us is through your annual true-up filings as well as through any FEECA data requests, and then it sounds to me as if you're intending to provide us with a follow-up report at the end of the pilot programs.

MR. BRYANT: It could be a follow-up report or it could be the culmination at the last true-up filing that now summarizes all that we have learned. It would depend on what the need is. But you would have probably two avenues. One we see in place to be used,

but then to the extent more data may be found necessary, then we could work toward a broader perspective or a broader evaluation.

MS. HARLOW: And on the sampling for the PV systems, could you walk us through the equipment for that, who is paying for the equipment, would those dollars be applied toward the dollars that have been allocated toward the programs?

MR. BRYANT: The equipment is simply another meter that tells us the output. A pulse meter, if you will, that gives us demand and energy coming from the PV array. And if you're going to sample no different than you do in our other DSM programs, around 10 to 15 percent, then the cost is going to be minimal, and we have built that cost into the overall administrative estimate that we have provided here.

MS. HARLOW: I think this question is important enough that we should go through each utility and then open it up to other parties. Power and Light.

MR. GANS: In our case we are thinking of a similar sampling plan that we do with our other DSM programs for M&V. We want to look at, you know, looking at the energy and demand impacts obviously. We're going to look at the billing impacts to customers, how the bills actually -- how much of it results in their bill

going down. We are also going to do some actual end use monitoring on sampling to see what the actual output of these systems are. And then probably -- just as importantly as everything, is we are going to monitor the cost of the systems by capturing system cost information throughout the period of time to see if there is any movement in the cost.

One area that we are very interested in is on our solar thermal for business program. While there is probably more information on the solar water heating for residential applications, for example, we believe that on the solar thermal that we have not been able to find any major studies done on this. So for those we're going to take particular attention and make sure that if those customers start putting those systems in, we want to get a good sampling of different types of buildings and different types of applications. So that one will be probably a little bit higher monitoring than others because it's new.

MS. HARLOW: Gulf.

MS. NOACK: Gulf plans to track various customer and system information throughout the entire process that we'll capture in a tracking database, and we will do some engineering estimates and calculations of what that equates to as far as energy and demand

savings. Because we feel as far as additional monitoring goes that there is quite a bit of information already available on the performance of solar thermal as well as solar PV. We have even done some projects internally. We feel like we have enough data that we know what types of data to collect to get good calculations and estimates on how those systems are performing. So we will be tracking those, and, of course, we plan to provide that information to the Commission during our annual reporting process under the FEECA docket and any subsequent requests in association with that particular docket.

In addition, we're not adding additional monitoring because it would take away from the available -- it would increase administrative costs for the program, and it would take away from the available incentives that we could apply to the other programs.

MS. HARLOW: Progress.

would agree with Howard and our colleagues from Gulf and FPL as well, for the most part. But, we will be -- on the PV for Schools, we'll be metering the installations there. Otherwise, we will be relying on -- as we said, we have a lot of good industry knowledge. We will be relying on that information to keep administrative costs

low, as well as our metering analysis, billing, information that we have on demographics as Howard mentioned. Occupancy is very important in solar water heating; and, again, we would look to include that information for greater efficiency in the annual reporting that we do.

MS. HARLOW: Let's look to the industry. Do you have any concerns about the use of existing data that the utilities are suggesting?

MR. GALLAGHER: I think FSEC is probably the best resource for the existing data. They have been tracking it for 25 years. Just a comment on the solar water heating portion of it; it's really hard to determine it by the number of people in the family, because it is all based on water usage. You could have a family of two where the lady takes baths every day and they could be using the amount of hot water of a family of five. So it's probably not the best gauge, but FSEC would probably be the best source.

MS. HARLOW: I heard some consistency that the intent of the utilities at this time is to present annual data. I wanted to know if there were concerns with that.

MS. BROWNLESS: And I apologize for my lack of knowledge of how the FEECA clause calculations are done.

That's an annual docket; that's a continuing docket every year. So during the course of the year, the filings are made in March or April -- is that when the initial filings are made, or how does that work?

MR. FUTRELL: I believe the first true-up filings are made generally in May, I believe, and then the projected filings for the upcoming year are made usually in September. You can correct me if I have stated it --

MS. BROWNLESS: And then the docket is in October?

MR. FUTRELL: And then the hearing is in November.

MS. BROWNLESS: November. Okay. If, as appears to be the case, the utilities are going to be constantly monitoring these programs so that they can figure out if any reallocation needs to be done, obviously they're going to know instantly through their sign-up systems if they have got oversubscriptions, where they have got oversubscriptions, how fast they get oversubscriptions, what's the amount that has been subscribed in the period of time, and I know that there is data requests that are -- once the filing is made in May, I'm sure there's instantly a review of the data by the staff and data requests are made; is that correct?

So the true-up goes into effect January 1 each year, right? That's when the factors get put into place.

MR. FUTRELL: (Indicating yes.)

MS. BROWNLESS: I think because these are new programs, maybe what we'd like to see is -- because I think the utilities will be preparing their own quarterly reports anyway. For purposes of their own monitoring and reallocation, perhaps a brief quarterly report that just enumerates the data that they are already going to be collecting, energy demand savings, the number of installations, the costs that they have been able to collect, I think that would help, particularly in the first year, because it is such a new program. Maybe not so much for Progress' solar thermal and demand-side, because they have been doing that a long time, but for everybody else.

So I think that's what we would be looking for, which I assume also could be achieved through staff data requests in the FEECA docket. So it kind of comes out to, you know, six of one and half a dozen of another, but I think we'd like to see a standard reporting for everybody, that's our issue, so that all the IOUs, if they had to file a quarterly -- and we are not talking a whole lot of data, just kind of a snapshot. And that would give the Commission an

opportunity to find out if they thought reallocations needed to be made, or kind of track the funding.

MR. FUTRELL: Let me pose a question to the utilities. In addition to the information provided in the conservation cost-recovery docket, there's also -- the Commission rules require what is called a FEECA report, which is essentially an annual report that comes in usually in March, I believe, that provides information on conservation program participation, comparison to what the anticipated participation was, the goal achievements compared to what the goals were for that year, and it's an annual filing. Were the utilities intending to include information in that report on the solar pilot programs, or have you thought that through at this point? And I'm not going to look to Howard directly.

MR. BRYANT: Everybody else is, so I'll still talk. Our intent was to utilize the true-up mechanism as the comprehensive mechanism to provide what's happening. To the extent that you look at the March 1 FEECA report, that more is geared toward activity. And when you look at what we have been required to do, it's an expenditure cap. It's not a participation level target, it's an expenditure cap. And so I would view the March 1 report as perhaps, though I have not thought

through it, but I would view it as perhaps an opportunity to identify participation, but identify also did we spend the cap or not. So it's more of an activity driven thing. The true-up is activity and dollars spent, and I think is probably the better mechanism to look toward us having sort of the comprehensive review.

You talk about making a report on a quarterly basis. That's cumbersome, bottom line. Number two, it's use for the first year is not that significant, because when you launch the program there may well be 60 to 90 days before you find certain participants even being able to install the equipment. And each of us has a mechanism in place such that after 90 days, or it could be different for a different utility, I think we are in the 90-day range, but if a subscription has not been secured by way of an installation, then that money goes back into the pot for someone else.

So I think we wait until a year goes by and then we make the analysis on what we have learned. I'm not sure there is a lot to learn three months down the road or six-months down the road. I'm just not sure.

MS. BROWNLESS: So, Howard, may I just ask, for the first year, for this FEECA docket coming in September, would you be looking to provide data in

September for this year?

MR. BRYANT: You have, you have two opportunities to provide information. The first is when the projection is filed, and that's typically filed around early September. That's when you're projecting the following year. But in that particular filing you also historically talk about what's happened previously. So you have information that has actually inception to date and, as well, annual information there from a participation perspective and dollars. And so that'll look forward but it'll also look back.

When you get to the true-up filing, which for the 2011 period will be filed sometime in late April or early May, that'll have 12 months worth of action activity and dollars spent for 2011. So those would be the two opportunities to be viewing things. And so from that perspective you're going to get, frankly, two opportunities roughly six months apart to see what's been going on with this particular, with these, with these, with these, with these, with these, with

MS. BROWNLESS: So for this year the original, the initial filing would be in September of this year for, in September of 2010, and that would have been for the short period of time that the programs would have been in place. And then you'll have a projection for

next year; correct?

MR. BRYANT: It would be September 2011. And that will be to the extent we can provide information what has been happening in the current year.

MS. BROWNLESS: Right.

MR. BRYANT: And then it would have the projection for the full 2011.

MS. BROWNLESS: For the coming year, for 2012; right?

MR. BRYANT: Yes. Uh-huh.

MS. BROWNLESS: Thank you.

MR. FUTRELL: Mr. Trapp.

MR. TRAPP: Hi. I'm Bob Trapp, Staff.

I just wanted to make everyone aware that reporting is not just to the Commission, but we also have responsibilities to report to the Legislature.

And we received an announcement today that next year's session for 2012 is going to start early, in January, and I would suggest that Staff is going to want the data to be able to report to the Legislature in January of 2012. So whatever is decided, please take that into consideration.

MR. GALLAGHER: Thank you. Yeah. I, I would like to know if the utilities plan on posting the status of the program online. I think most of our concerns are

if, if these programs were to run out of money in four to six months, what occurs at that point? How do we know going on -- let's suppose somebody puts in for the program and they're not accepted. Do they go first in line to next year? Do they have to reapply? You know, our main concern is, is this starting and stopping of the industry. Because if a person knows that I'm going to have a certain incentive, I'll have to wait until January to get it -- I think you can see our concerns. I'd just like to know how they plan to keep industry informed.

MR. BRYANT: The -- I think the thing that

MR. BRYANT: The -- I think the thing that will help you the best is to perhaps understand the reservation process and then the communication process. I think all of us, and if I'm wrong, somebody correct me, but I think all of us are putting our information online.

And, number two, prior to the installation of any technology occurring, we want to have a representative in the field that knows it's going to go in, it's going to be installed.

One of the reasons is the fact that if you install either of these technologies and there's extreme shading, you're not going to get your savings. And so we want to be on the front end of this.

So the customer will know before they even apply whether or not -- and I say apply, before they, before they start the installation, the customer is going to know that we need to be in the field and say it's a go or it's a no-go so that they have an understanding of whether they're going to get their money or not.

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At the same time that they put their name into the reservation process, on the Web, on the website it's going to tell whether there's funding available in the first place. And if there's no longer any funding available for solar water heating as an example, they will be put into, I'll call it a waiting list, I forget what our fancy name is, but it's, it's a waiting list, but they're going to be put in a waiting list, interested parties, so that if funding does become available in that particular endeavor they're, they're wanting to install, then we will notify them. And we'll notify everyone in that, in that pool of interested parties for, for instance, solar water heating. So when more money comes available, everybody at one time, at one instant is going to learn this money is available by date certain, get in line, in so many words, so that you can have your shot at the money. But, again, we're going to be on the front end

of knowing whether or not that person qualifies or not.

MS. HARLOW: Will the information on the website that's available to the industry and your customers just say, yes, no, there is funding, or will it have a counter that counts down the funding, how much is left?

MR. BRYANT: I wasn't getting hungry by chewing my fingers. I was searching for an answer.

There is no countdown. It's either a it is available or it's not available.

MS. NOACK: May I go ahead -- may I address this question?

Our program is, is very similar but slightly different in the fact that we will have the amount of available funds for each of the programs. We will have that available on our website. And we are not going to have a waiting list. It's just going to be on a first-come, first-serve. Customers will not even be able to apply if there aren't any incentives available for a particular program. So there is no expectation on the part of the customer, you know, similar to what happened with the state program where customers just continued to apply and apply and apply, and then they, they were thinking that they were going to get the incentive but the funds had actually run out. So we

are going to make sure that we have notification on the website that funds are available.

And then final payment of those funds will be determined, once a customer gets a reservation, then final payment of those funds will be determined based on them meeting the rest of the program eligibility requirements. So we'll know in advance, the customer will know and contractors will know in advance how much funds are available for each individual program.

MR. GILLMAN: It's Christopher with Progress.

Again, our programs work similarly but some slight differences. First and foremost, our program is going to launch on March 15th with some annual tracking. So initially we'll have a, our funds available. Whether or not we have a countdown later would be determined. But initially we won't have a means of doing a counter, so we'll just do yes or no.

As far as a, a waiting list, we'll accept applications and we will actually process those applications, we'll provide a reservation number similar to the other utilities, but the actual installation will be on the payment of the incentive.

So there is the potential that funds would become available even after the, quote, expiration of, of allocations of funds and the initial process. If

that were to happen, our list of, of applicants, approved applicants would, would go down the list on a first-come, first-serve basis.

Regarding the next year's application, that process would start over. So on an annual basis we would have a potential waiting list, but not year over year.

MR. FUTRELL: Christopher, I'm sorry, but I didn't quite hear that correctly. It sounded like you're going to be able -- customers will be able to get on a waiting list whether there's -- if funds run out.

And will people just be, you know, continuing to stack up and stack up and stack up? Because that's -- just clarify that with me, if you could, because we're very concerned about trying to avoid the problems that the Energy Office faced and the customers faced and the industry faced. And if you could clarify that for me.

MR. GILLMAN: Absolutely. I apologize for not being clear initially. You know, our initial process is going to be manual. So it's going to be hard to cut off applications until we know that the funds are, are, are fully subscribed. We expect that it will potentially be oversubscribed and that will generate somewhat of a waiting list of, of potential applicants that are, that

don't have availability of funding.

So those, those individuals on that waiting list, if we did not -- if an approved application was not installed, then funds would be made available to the person down the waiting list. However, it's not our intention to maintain a waiting list for, throughout the program. That would just be in a case of, of the design of the, the specific year and mostly because of our manual tracking process.

The beginning part of 2012 installations, we'll begin accepting applications in October for the following year, and that would be a first-come, first-serve basis at that time.

MR. FUTRELL: But are you going to notify customers whenever that, the cap has been reached and tell them that no further applications will be accepted similar to Gulf, or are you going to continue to allow the applications to flow through?

MR. GILLMAN: No. What we would do is we would, we'll, we'll respond to each one of our applicants and to let them know if they have a reservation number or whether or not the funds have been expired, and so they'll know instantly on that during the year.

Should funds become available, then we would

contact the customer that's in order to let them know that funds have become available. So if they would like to proceed with their, their application, they can do so.

MR. FUTRELL: But are you going to publicize to customers in general when that cap has been reached, that, to --

MR. GILLMAN: Yes. That would be made online, and also individual applications would no longer be accepted.

MS. BROWNLESS: Well, I'm a little confused.

You're going to -- you will know when your funds have been fully allocated, you'll know when you've accepted enough applications to clearly exhaust the funds in each program; is that correct? And at that time are you then going to accept more applications and put them on a waiting list and give priority to the people on that waiting list in the, in the order that they were placed on that waiting list should funds become available in that year? Is that what you're saying?

MR. GILLMAN: No. I'll try to be a little bit more clear in that our application process is going to be manual and it's going to require us to take a few days to go through that processing.

Now during that time period there's certainly

the potential to receive more applications. And so as we receive those applications, we'll want to process them. Once we can identify that our funds are, are exhausted, we will notify that there's no more funds available and stop accepting applications.

MS. BROWNLESS: Okay. So you're going to have a waiting list only to accommodate the short period of time to manually process the applications?

MR. GILLMAN: That's correct.

MS. BROWNLESS: Okay. And if you get through the application process and for whatever reason the person doesn't actually install the facility that they've applied for, what are you going to do then, and funds do subsequently become available, what are you going to do?

MR. GILLMAN: We expect to have -- again, some of those applications that we've processed that were not made available for a reservation number because the funds were exhausted, and we would go down that list to let, inform the customers that now funds are available.

MS. BROWNLESS: Okay. Then this is what I'm confused about. I can understand cutting off accepting any applications when you believe all the funds have been expended. That makes sense to me. I can understand Howard's system, which is where you keep a

list and then you figure out that you have extra money and then you notify everybody and let them do first-come, first-serve.

But I guess I don't understand how you're going to have a waiting list that gets -- I don't understand how your waiting list is going to get turned on and turned off. Either you accept a waiting list and then as funds become available you let people have access to the funds in the order that they're on the list, or you do as Howard is saying, you have a waiting list and then you have a point in time at which you notify everybody that funds are going to be available.

I mean, it seems like if you're going to have a waiting list and you're going to give them priority, you have to continue to keep the waiting list, you have to continue to keep it. Or how are you going to tell when you're going to cut it off when you have your, all the funds expended because people have gone through the complete process and had the application actually installed? Do you understand why I'm confused?

MR. GILLMAN: Again, I think the, the process required -- there's going to be some overlap. There's going to be a need for us to process the applications as we receive.

In addition, there's information on the

application that's valuable information on the type of system perhaps being installed, the cost of those systems. That's valuable information as well. We hope to gather that information associated with these pilot programs.

The, the term of a waiting list I think is perhaps being, being overused. It's not the intent to have a waiting list. The intent is to process applications in the order that they're received.

During the time that we accept applications, we want to process all those applications. If there's an application that's received and processed before we recognize that funds are exhausted, we want to maintain that availability.

MR. FUTRELL: Bill.

MR. GALLAGHER: Again, just as, as a, as a small business owner just trying to put, put this in perspective, we have a sales staff that are, they're unaware at this point that the funds are exhausted. They go out and a consumer purchases a solar system. We do the site survey, the whole thing, submit it, only to find out the money has been expended. Now the customer goes, "Now what? This is June. Now what do I do?" "Well, sorry, we'll have to get back together in January." And you can kind of see the dilemma that it

puts us in.

There, there has to be a tracking mechanism so that we know before we go out. Because my understanding is there's not going to be any marketing of solar, it's going to be left up to the solar contractor. So how can we effectively market a program if we really don't even know if there's funds there?

MR. FUTRELL: Well, I think, given how

Christopher described how the program is going to get up
and running, it's going to be kind of a manual basis
initially. It's going to be really incumbent to stay on
top of those applications as they come in. And as soon
as you've reached that cap, it's very important,
personally speaking, to make sure it's posted on the
website, publicized to make sure everything is
transparent.

And I understand when you get a more mechanized system up and running, that might make it easier. But I just think it's even more critical initially to get the information out there to the, to the customers and to the industry.

MR. GILLMAN: Excellent point. And that's why we will use the website to, to convey that information that the funds are exhausted for, for the individual programs.

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MS. HARLOW: So your intent is the same as TECO's and Gulf's are my understanding of it, that your website will just say funds are available or funds are exhausted.

MR. GILLMAN: Initially, yes.

MS. HARLOW: There's no counter to say, you know, we still have \$2 million or --

MR. GILLMAN: I believe Gulf responded that theirs would be a counter. TECO explained that it would be just a yes or no of availability. I think initially ours will be yes or no without the counter as well.

MS. HARLOW: Sorry for mischaracterizing.

Could we have Power & Light speak to this issue?

MR. GANS: Yeah. Our, our plan right now is to have a -- I guess the term that you're using is a counter. So we want to show the available dollars that are available by program so that way we can inform the industry, they can plan accordingly. And when, and then when the dollars are exhausted, we will then put some notification to say check whenever this date is to see if there's more dollars available. And then when the dollars are exhausted, our plan is to at that point stop receiving any further applications.

MS. HARLOW: Anyone else?

MR. MAINGOT: Yeah. We heard Progress say

that they would be accepting applications for the next year in October. What do the other utilities, when are their application deadlines? If there's money available through the year, when are they, when are they going to be accepting for the -- and Progress said that they would, you would have to reapply. If you applied this year and you were not one of the people that got accepted, you'd have to reapply the following year. Is that going to be the same for the other utilities, and when do they plan to accept the applications for the next year?

MR. FUTRELL: I think from looking at the standards we've seen to this point, it seems to be a fairly consistent October to September period, but I'll let them confirm that and follow up with that other question you had.

MR. BRYANT: No, that's true, Mark. Giving the customer 90 days to install whatever system they're selecting, we felt like the end of the, the year should occur in September. And then in October you would begin to take reservations for the following year.

MR. GANS: We're going to use the same, we're going to use the same model, October through September.

MS. NOACK: And that's consistent with Gulf's approach as well. However, I will say that the actual

incentives will not be paid until the funding actually becomes available starting January. But we'll go ahead and start taking the reservations for those funds

October 1st.

MS. HARLOW: And we're starting the programs in midstream. How do you expect to handle that this year? Just on the day that the program starts, say it's March 15th, that would be the day you start taking reservations, and then October 1st would start for the next year's funding?

MR. BRYANT: This is one item I, I agree with Suzanne on. I think there's going to be a run on money. And so even though we're starting midstream, I don't think there's going to be a problem exhausting the funds for this given year, I don't think.

So I would see us for 2011 again stopping the situation in September, and in October we would begin collecting reservations for 2012.

MR. FUTRELL: Help me understand. If the, the year, the fiscal year begins October 1st, a customer makes an application, gets the system up and running, let's say fairly quickly within 20 to 30 days, why couldn't the customer go ahead and start, get the rebate check cut at that point? I mean, all these funds are subject to, you know, cost recovery, whether it be a

conservation rebate.

MR. BRYANT: Right.

MR. FUTRELL: I don't see the -- explain to me the difference.

MR. BRYANT: Sure. Sure. If you have an expenditure cap, in our case the \$1.5 million, and you've reached it in September, you're not going to spend any more money until January 1st or January 2nd. And so to the extent that customer makes the reservation in October and is able to get it installed in 20, 30 days, as long as the, the steps for qualification have been met, then you would, you would spend your first dollar come January 2nd of 2012 because that's when they fit into the expenditure opportunity.

MS. BROWNLESS: If I'm following what you're saying, so all the money is going to track the FEECA funding process, and so it starts from January to January.

MR. BRYANT: Right. Yes.

MS. BROWNLESS: And so whoever you sign up, you start signing up October 1st and then get that in the mail, but the first money can't be released until January. So should you have anyone who signs up in January, then obviously their money would be released quickly; right?

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MR. BRYANT: Right.

MS. BROWNLESS: Got it. Thank you.

MR. GILBERT: I hear this as being a cap, but in reality it's an allocation. And what if you did have a big run? Couldn't you come before the Commission and ask for a larger allocation?

MR. BRYANT: You could certainly come and ask for a larger allocation, but I would make two statements to that question.

Number one, the order was a cap, and, number two, it's still not cost-effective. And so to the extent we spend beyond the cap, we're spending more and more noncost-effective dollars, which I hate to use the ugly word, but it's a subsidy.

> MS. HARLOW: Yes.

MR. GALLAGHER: This is just a personal question, everyone else probably knows this but me, but since we're going to lose about a year and a half of this program, what happens? Does this continue for five years starting from the date of institution, or did we lose the, the waiting period?

MR. FUTRELL: Well, yeah. I think because of the delay in rolling out the programs based upon the time it took to get the goals established and all that, we have lost some time. We're going to look at this.

I'm sure the Commission, whenever it begins its next goal setting proceeding, this will be looked at at that point.

The Commission has to set goals by December of 2014, so there's going to be some, at that point we'll have to, the Commission will have to address whether or not to continue these programs, whether there's another way to meet the standard in the statute or not. So it appears we have programs in place through 2014. But, again, the Commission can decide. It has authority to establish goals at any point within a five-year window. So they could decide to initiate a goal setting in the interim. I have no indication they would want to do that, but that possibility exists.

MR. GALLAGHER: Mark, does -- and I'm sorry.

I'm confused a little bit. But does that mean that,

that the year and a half that we weren't able to take

advantage of the program just doesn't exist and now

we're down to three and a half years?

MR. FUTRELL: Right. Yeah. The programs essentially were effective when the Commission approved them. And then once we get the standards approved and then the program is up and running, that's kind of the schedule we're on.

MR. GALLAGHER: Can that money that was

allocated be reallocated into the three-and-a-half-year period?

MR. FUTRELL: I don't believe that's come up.

That certainly -- if you folks would like to raise that
as an issue in conservation cost recovery, that
possibility exists. But I don't believe that's come up
at this point.

MR. GALLAGHER: Okay. Thank you, Mark.

MR. FUTRELL: Okay. If we could -- I know we're getting close to the noon hour. If we could finish up this little section of questions about program success, we've got this one question about what criteria should the Commission use to determine success. And you may have some prepared remarks, that would be fine. But if you could also address the notion of the job creation benefits that could, could stem from these programs. And do you intend to try to measure job creation benefits? If so, how would you -- how do you intend to do that? There's some other things we could look at for measuring job creation.

MR. BRYANT: In terms of program success, I think that was the first question you had, we, we may have covered some comments that address that particular issue. And when you look at the question there, it says the criteria that should be, that the Commission should

use in determining whether the pilot programs have met the intent of the statute, I think I'm going to go back to two items that were part of the goal setting process.

One is the idea that we have an expenditure that needs to be made. That was the goal that was established because of the non-cost-effectiveness. And so did we spend the money, number one? But, number two, did the cost of the equipment come down? And if it did come down, then we can do cost-effectiveness and prove its sustainability for a longer term period in, in our DSM portfolio.

I -- to me that's how you measure the success: What happened to the cost of the equipment, and then did it come down enough to make it cost-effective? We can debate which test we want to use later, but again I make no bones about it, the RIM test is the one that gives it the greatest opportunity for cost-effectiveness if the price comes down.

In terms of job creation, we have not thought about that a great deal. That's one I'd have to think on.

MR. FUTRELL: I believe in a recent senate committee meeting they asked the Governor's Energy Office, Energy and Climate Commission staff about job creation. I believe Alexander Mack, who's their, one of

their program administrators, he mentioned that there was some data that they report to the Department of Energy as part of their grant reporting process about job creation. That might be something that, you know, I'm going to look into just to find out more to educate myself.

But if, if anybody else has any thoughts about how, even from the industry how to measure job creation benefits from this, from this program, we'd like to hear it.

MS. BROWNLESS: I think in addition to what Howard has said about was the money spent and did the cost come down, we'd like to see the job creation numbers, and we'd also like to see the number of installations of the various technology.

MS. HARLOW: Yes.

MR. GALLAGHER: Yeah. I would just like to say that job creation never leaves our mind in the industry. It is key. The layoffs are emblematic of that.

I personally do not look at this as a subsidy. I look at it as a method of job creation. You know, there's a lot of other subsidies for other industries and other energy related. This is a, this is a drop in the bucket that we can put thousands of

1 people to work with a mechanism such as this. substantially -- and this is no fault of anyone -- this 2 is substantially underfunded because of the demand. 3 People want the technologies. It is cost-effective 4 specifically for domestic hot water. There's no 5 question about that. PV prices are coming down. 6 7 Domestic hot water prices, it's unlikely they will 8 because we're driven by, we're driven by materials. We've got glass, we've got aluminum, we've got stuff 9 that just is not coming down, copper. Copper is 10 skyrocketing. So the domestic hot water price isn't 11 12 going to come down but it's still cost-effective. PV is dropping very quickly. But job creation is what, 13 14 is what we do. Thank you. MS. HARLOW: So earlier Howard said that he 15

MS. HARLOW: So earlier Howard said that he saw more opportunity for a cost decrease in PV rather than thermal. You're seeing the same thing.

MR. GALLAGHER: I'm sorry. Did you say a cost
increase?

MS. HARLOW: Cost decrease.

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MR. GALLAGHER: Oh, I'm sorry. Yeah, a decrease. Well, you know, yeah, solar electric PV is coming down substantially, and I think part of what's driving it is to a large degree the rebate program.

Look at the success of that. Look at the amount of PV

that was implemented. The more that's implemented, the lower the price.

But the, the raw materials and the labor will probably not allow the price of solar thermal to come down. It's just economics. Everything is going the other direction. But there's still -- I mean, you're only talking about a four to \$5,000 investment for, you know, a 20 percent return.

MS. HARLOW: Anyone else want to speak to how we judge the success of the programs?

MR. GUYTON: Judy, one other observation about job creation, I think the utilities are uniquely positioned to provide energy savings and to monitor the market and the customer response, and should be aware of whether or not the costs of these systems are declining. Those are all things that they're positioned to be able to measure.

I'm not sure that the utilities are particularly well positioned to measure job creation when they're not doing the hiring of the jobs. I, I don't mean to suggest that that wouldn't be valuable information for the Commission and policymakers to have. I'm just not sure that the utilities are in a position to accurately measure that for the policymakers.

And it's as much a personal observation as anything else. I just, I'm not sure that data is going to be readily available for them if they have to model it. It's a cost, but they're not the employers of record.

MS. HARLOW: If the utilities provide us with data on number of systems and type of technology, is there data readily available from the industry, from the Solar Center that would tell us time of installation, number of workers, those kind of things?

MS. BROWNLESS: Yes, that data is available.

MS. HARLOW: Any other utilities with thoughts on how we judge the success of the programs and whether they meet the requirements of the statute? Gulf.

MS. NOACK: I would just concur with what

Howard had to say about, about what we're looking at as

far as the success of this program.

The other thing too I would add to that is the fact that, you know, the original driver for even implementing these programs initially, you have to go back to the FEECA statute. It's for the deployment of these systems. So another component of success is going to look at what are the number of systems that have been installed since we, we put these programs in place? And then I think to look, measure or monitor

the success of these programs goes actually beyond the pilot period.

Once these pilot programs end, we'll evaluate at that time what to do going forward. But, but where's the marketplace? Once these subsidies are gone, did it allow the market to create a foundation where it can actually sustain itself? And I think that is something else that needs to be considered as well.

MS. GUTHRIE: I agree with the colleagues.

And I think what we're trying to measure is did we increase and encourage the implementation of these systems? And I think we will collect that data: What types of systems did we install, how many participants in each of those?

MS. HARLOW: Does Progress have any thoughts?

So I think, to Charlie's point, I think we're well positioned to provide that data as to job creations. I think, as we mentioned, there are other systems in place that can track that. But our job will be what types of systems, how many, did we expend the dollars that we budgeted?

MS. HARLOW: At the same time we're looking at our, the pilot programs here we could have changes in tax incentives. So that'll be something that needs to be considered as we look at the end of the programs.

Did the solar industry have any response to the utilities' thoughts?

MS. BROWNLESS: Well, with regard to the job creation, I think they make a valid point there and the industry can provide that information.

With regard to the number of installations, of course they're the people who would know how many installations were made, what were the types, what were the sizes, what was the participation level of all programs?

I think the comment about the sustainability of the market after the incentive, that is the point. That's why the, you know, that was the directive of the Legislature. It is the industry's belief that having a consistent funding mechanism and a consistent amount of incentive available every year will stabilize and incent the market. So I think that can be either proven or disproven based upon the number of installations you have. What happened before you had the incentive versus what happens now, and does the price of the equipment come down?

As has been mentioned, and I think has historically proven true, solar thermal technology has been out there a long time. That is not groundbreaking technology. It's the PV that is, the cost of which is

radically decreasing and the efficiencies of which are increasing based upon engineering advancement. So I, I agree with all those criteria.

MR. FUTRELL: Okay. If there's no other comments, I think this is a good natural break point.

We -- thanks for hanging in there with us without a break. I think we've been able to get through quite a bit of the agenda and we've got a little bit left.

Hopefully we can get through at a reasonable hour. So let's go ahead and break for lunch, come back about 1:15. And then we've got a few more items to go and I think we should be able to get done in a reasonable -- thank you very much for hanging in there with us.

(Lunch recess.)

MS. HARLOW: If we could get everyone to be seated, please. Let's get started.

We are going to keep moving through our topics here, and the next topic that we wanted to discuss is program design. I know we could be able to move through this relatively quickly, because we have covered some of these issues earlier. But let's go ahead and get some greater detail on this and see if we have any comments on that from everyone.

This came up a good bit this morning, but to what extent do you believe that the program should be

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consistent across the utilities. And, if so, how would we accomplish that? And, again, we see Howard stepping up to the plate.

MR. BRYANT: It was that strong glance that was, you know, indicating that I needed to hit the button here.

I think I would couch my comments by first saying there seems to be a fairly good consistency among the programs. You might find the incentive level being slightly different, and that's even going to be on rare cases, but I think there is a lot of consistency there. Now, to the extent it should be the same, I would probably suggest it shouldn't necessarily be the same. Each utility may have its own information in terms of what -- as an example, what solar water heating may cost in their particular area. And so for us, as an example, if a thousand dollars is what we think is appropriate, for another utility it may need to be 800, or another one may be 1,200. So I think there's conditions locally within each utility's service territory that would dictate nuances of differences, but I think by and large they are somewhat That's just my first thought in terms of the the same. consistency.

But perhaps, also, we can liken it to what we

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are doing in the DSM arena. As an example, I think you will find each of the utilities has an insulation program or an HVAC program, but the extent of similarity may stop when you get to the incentive level. And obviously that's driven by cost-effectiveness, or the avoided unit. So having an insulation program, incenting it to be installed, absolutely wise. Having solar programs because we have been asked to have expenditures and therefore put effort toward thermal and PV, nothing wrong there, but we may not want to have them all be cookie cutter across every area because of perhaps market differences that could exist, and frankly do exist in the different service areas. My initial thought.

MS. HARLOW: Have you been working together on program design, or perhaps the same members of the solar industry working with each utility?

MR. BRYANT: To the extent that we have been working together among ourselves, we have. Not so much to be absolutely identical, but to just understand something that someone else may know that we don't know. So it's the sum of the parts are greater than the individual, and so the knowledge has increased because of that, but still we have retained nuances of differences among the various utilities.

MS. HARLOW: Uh-huh. And do you intend, as you learn more in these pilot programs, to share that information if you have concerns?

MR. BRYANT: I think so. I mean, the communication, I don't see it as being something that would stop.

MS. HARLOW: Do we have any other thoughts on program consistency or perhaps from the solar industry an industry perspective?

MS. BROWNLESS: Our perspective is we'd like to see as much uniformity as possible. Make sure that everybody is offering, as Howard suggests, a solar thermal program, a solar PV program, that type of thing. And we would also like to see rebate levels as uniform as possible.

I recognize that each individual utility has a different service territory and slightly different characteristics, but with regard to the incentive levels, I really don't think there is a justification for having a wild difference in incentive levels. And, frankly, when you look at the programs standards that have been proposed, there doesn't appear to be a wild variety of difference in the incentive levels being offered.

MS. HARLOW: Anyone else?

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MS. NOACK: I would just like to add one more comment to that, and that has to do with the built-in flexibility that we have built into these programs. And we have built in flexibility to reevaluate those incentive levels also based on market conditions, but I don't think that it should necessarily be set at a particular level. We started off very consistently as a starting point, because that is our best projection of what will incent customers to install these systems. But if you look even at the contractor base in central and south Florida versus the number of contractors that we have in the panhandle, there is more competition down in central and south Florida. Prices, the average prices of the systems are a little bit lower in south Florida than it is in the panhandle of Pensacola and northwest Florida. So I'd like to say that not only should there be flexibility in the programs and how we are offering them, but there should also be flexibility in the incentive levels to match what's occurring and happening in the respective marketplaces of each individual utility.

MS. HARLOW: And are you intending to track those price or cost differences in the systems across regions or territory?

MS. NOACK: Yes. We are going to be tracking

the costs of the systems. I'm sure that is consistent amongst the other utilities, as well. And we have very good open communication amongst the individual IOUs, and I think that collaborative effort that we have had thus far has led us to some very good basic program designs that you see a lot of consistency from the types of programs being offered and incentive levels, and we'll continue to share that information and adjust the programs as necessary to make the most robust programs that we can.

MR. GUYTON: Judy, one other observation, or a couple of other observations. There is quite a bit of uniformity at the present stage, not identity, and that may be good. I mean, somebody -- you're talking about the best way to move a market and incent a market. And if you have a variety of alternatives that you are testing, then you have a variety of responses that you can measure one relative to the other. So uniformity may be undesirable, in that sense, because you may have some other different approaches that you ought to test.

I think the other thing, to comment on what Lonnie was talking about, incentive levels have started out much the same, but there is some flexibility there. We have talked about some anticipation of oversubscription and exhaustion of those funds, and I

think it's helpful to have a maximum incentive and be in a position to reduce that incentive if the market demand is so great that it becomes apparent that you don't need that maximum incentive. Those dollars go farther then. So I think that flexibility being built into it is desirable, too.

MS. HARLOW: So you are seeing, perhaps, an opportunity to lower the incentive as the cost of the systems goes about down, and perhaps spread the dollars among more participants?

MR. GUYTON: That is one possible consequence that could arise if you have, you know, an immediate response to -- an immediate demand that is kind of unprecedented. Obviously once the dollars are gone, they're gone. But if you realize early on that your maximum incentive is not necessary to move the market, you do have the flexibility to offer a reduced incentive.

MR. FUTRELL: A follow up, Charlie, if I could.

I think even in some of the orders approving the programs, it speaks to this notion of a flexible incentive level, and I think in some cases it speaks to up to a certain level. For example, two dollars per kW for PV, up to two dollars per kW. Have you thought

about, or has any of the other utilities thought about what's the process for if it -- the time comes when you see a need to possibly lower that incentive? Have you thought about notifying the Commission, and then also notifying the industry and customers for the program about how that would work? And have you thought about how often do you foresee the need to kind of evaluate that? Is it kind of an annual thing? Is it more frequent than that?

MR. GUYTON: I am going to tread where I probably shouldn't; I'm going to say something, and my client can correct me if I'm wrong. Typically, the way this is done in DSM is that you get a program approval for a maximum incentive. And then in your program standards you set the targeted incentives, which may or may not be equal to the maximum incentives. Such that if you were going to change that from whatever is set forth in the program standard, you would have to make a program standards change.

Now, that's kind of a typical approach that we have seen in DSM for a lot of years now. I assume that that is fairly typical of what is envisioned here.

MS. NOACK: May I comment on that? It's Lonnie.

MS. HARLOW: Sure.

MS. NOACK: We actually modified our program standards to include if, in fact, in our annual evaluation of our programs, if we feel that there is a need to reduce the incentive that we would -- before we actually made that adjustment, we would notify Commission staff. So we actually put that in our actual program standards that if we felt a necessary change to the incentive was warranted, that we would notify Commission staff in that annual review.

MS. HARLOW: Anyone else on standardization?
Yes, Bill.

MR. GALLAGHER: We are fairly familiar with Progress' standards, and thanks so much for the meetings that you guys have had. Not so much with FPL as far as what the caps are. In other words, if it's \$5 million for PV, is there a certain cap? Does that mean commercial up to 25 kW? I haven't seen those standards, so it's hard to pinpoint exactly how many systems that will support.

MR. GUYTON: We haven't filed them yet, that's why you haven't seen them yet. We are a little bit behind the curve of the rest of the utilities in terms of where our program approval is, and we haven't submitted the standards. We just had the programs approved, but that will be evident when we file the

standards.

MR. GALLAGHER: Okay. Thank you, sir. That is really a critical component of how long the money will last. If you incentivize commercial systems to a large degree, which, you know, personally we don't feel they need because of the accelerated depreciation and the 30 percent tax credit, it will eat up a substantial amount of money and we are really anxious to see those numbers. That will help us a lot.

MS. HARLOW: Also, I would just like to briefly say that as the staff has been looking at the standards, we have had a number of conference calls on these, and we have done that as an open process, and the meetings were noticed and we have had participation from the solar industry, and we appreciate that very much.

MS. BROWNLESS: Judy, you might tell folks who might be listening how to access the information on the website.

MS. HARLOW: Thank you; that's an excellent suggestion. For today's workshop we have a tab on the website that will have the notice of the workshop. It will have any post-workshop comments we get and any documents that the Commission staff develops as a result of the information. And perhaps Larry would like to speak to how people could get on a list if they want to

be notified of any future calls.

MR. HARRIS: She looked at me, and unlike
Howard, I do not have an answer for that question. I
hadn't thought about it. That's something I've heard
him say. I am modeling off to you.

You referred to a tab. Basically, if you go to our webpage, across the top bar there is one that, I think, says agendas and hearings. If you click that and scroll down, sort of a drop down list towards the bottom it will say -- I think it says workshops, or staff workshops. And if you click that, it goes into essentially a very large list of what I will call undocketed matters, and they go back a couple of years. And we have things that really we want to get -- you know, and this is general information, but it applies specifically to this -- things that we want to make available publicly, but there is really no way to put them out there because they are nondocketed.

The very top one at this point will be -- for this workshop, and it will have the information, you know, it will say the solar pilot projects workshop, and under that are links to PDF documents. You have heard us refer to post-workshop comments. What our intent will be is somebody will receive them, either me, or Mark, or Judy, and we will take those and get

those to our computer people who will then put them on the website so they are all there in one place.

And looking at that drop-down list, it appears that we have stuff going back a couple years, so it appears that we have the ability to retain these materials on the website in that location for a period of time. Specifically, a mailing list, I would anticipate that we don't, I don't believe, have an automated way of doing that because it is undocketed. So what I would think is one of us, either me, or Judy, or someone would essentially have a list in our office. You know, people would e-mail us and say, hey, can you put me on the list for receiving notice of when these things come in. And that would be a manual process where whoever got them would turn around then and send out to everybody else who was on that list kind of thing.

The easiest thing to do for all of you who have done this before, and I know that most of the practitioners are familiar with this, reply to all, because the lists, you know, get longer and longer, and people will forward it to each other and it starts adding onto these things. And so I would encourage all of you as you send in e-mails to us or to each other to click reply to all. Generally you will pick up if not

everybody, at least a large portion of the people who have sort of indicated interest by being on that e-mail list. It makes it easier for someone like me to look at it and say, oh, I see, you know, Charlie Guyton isn't on there, so I know I will forward this to him kind of a thing.

So I would anticipate -- we do have sign-up lists in the back, and I would encourage everyone -- I think this was mentioned earlier by Mark -- I would encourage everyone to sign up on the sign-up list, if you were here today, and give us your e-mail address. We will give you -- you know, our e-mail addresses are fairly easy, you know, my name would be LHarris. And I think it is up to eight characters, so you have to sort of truncate it for people who have longer names, but its first initial and then, you know, JHarlow@psc.state.fl.us. And so you can e-mail us, and we can add you to whatever list we have, kind of a thing. And that's the best answer I have to something I haven't really thought about.

MR. TRAPP: Hey, Larry.

MR. HARRIS: Yes.

MR. TRAPP: This is Bob Trapp over here. The proper response is call Larry.

MR. HARRIS: The proper response is call

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Larry. I have been instructed by Mr. Trapp that I will be the contact person. So call me, and I can give you my e-mail address, which is LHarris@psc.state.fl.us.

And my office phone line is 413-6856. I think we might have an easy way of doing that. I think on the website there is, like, a contact someone at PSC, and you could say direct this to Larry Harris. You can call our General Counsel's Office line, which is 6199, and say I want to talk to Larry Harris. Or just call anybody you know here and say, hey, connect me to Larry Harris or send him this message, and they will do that, to those of you who know Judy's line or Mark's line.

MS. HARLOW: We will be happy to do that.

MR. HARRIS: And unfortunately, you know, we do have a new phone system here that has the ability within the phone message to send a message to a new user, and people know how to do that. And so sometimes you will get this little white flashing on your phone, and you will pick it up and it will be voicemail that went to somebody else's voicemail that they have sent to you. So we will get it. Unfortunately, I can't hide.

MR. FUTRELL: Let me just follow that with a comment about the standards that will be coming from FPL and how to access that. The other utilities have been filing that information in their conservation plan

approval dockets, and I would ask when Charlie gets ready to do he would continue to file that, the standards in that docket, as well. FPL's docket is 100155-EG, and that will be a point where parties outside the building can access that information and access the notices to any conference calls that may take place to discuss their standards will be noticed and put into that docket file.

And there is a process, if you go to our Commission website, that if you would like to get information on a particular docket, you can contact our Clerk's Office. And for folks not familiar with our process, that's an easy way to keep up with particularly FPL's program standards and details and what they intend to offer to the customers.

MR. HARRIS: Following up on that, for docketed matters, those of you know it is very easy. The clerks do domain a list of interested persons or people who want to receive notice of things in dockets, so for the 155 docket, FPL, it's easy to contact the Clerk's Office and say I want to receive notice of filings or meetings. I was commenting specifically on undocketed matters. We don't have a way to do that, because everything in the world that is not docketed would have this same list.

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Yes, Mark is right, for the FPL standards, you would be able to contact the clerk and say please add me to the interested persons list for Docket 100155, and you would go on the list. And that has worked well. Most of you all, I think, in the room have done this before, at least with some of the other companies.

> Thanks. MS. HARLOW: Let's see.

Let's move on with the questions. think we have covered rebate levels and whether those should be uniform. And let's turn to eligibility. We have all discussed wanting to get these funds out to the maximum number of systems that we can, given the limited dollars. But there is also the issue of the energy produced or avoided by these systems, and should the utilities or perhaps the solar installers be determining some kind of eligibility criteria for how to use these limited funds. I'm trying not to look at you.

MR. BRYANT: And the answer is yes. think one item to focus on here in terms of your first question there about a screening criteria would be that of shading as is relates to PV or solar thermal. more shading you have, the less efficient the system. And I think, if I'm not mistaken, and the industry

experts can help me here, but I think the shading has more of a detrimental effect on PV than it does on solar thermal. So if our focus is to reduce cost, improve system performance as best as possible such that we want to achieve cost-effectiveness at the end of this pilot period, then we need to be screening at this stage so that we can maximize system performance to give the best opportunity for cost-effectiveness to occur down the road when we do our final analysis. So there needs to be screening.

Now, to the extent of what that screening level should be, I think the industry probably has some standards out there, and I'm going to talk about Tampa Electric now and not the other utilities. But from our perspective on what the screening should be, we have taken a bold step, and we said we don't think any shading could be -- if there's shading, then it should not qualify.

Now, we are going to utilize the Solar Energy Center to help us to determine what that shading means. What piece of equipment should we use? Where should we use it, you know, how do we walk up to a home as an auditor, and how do we determine whether there is shading or not. And so that's going to be facilitated for us in a couple of weeks, and so then we should be

able to walk away from there with knowledge of the industry expert in terms of how to determine what the shading is or is not, or can or cannot be. But, you know, what is the characteristic of the home to help us on the shading issue. So it is important, and that is where we are headed from the shading perspective.

MR. HARRIS: Howard, for my information, you are down there, you intend to do this, I think that is a great idea. You get a customers who is dead set that wants solar because he saw it on TV and he thinks it is the greatest thing ever and he really wants it, and he has got a beautiful lot with live oaks and stuff. And you all come up and say, you know, dude, you've got one percent light on your house, which is a great thing for your energy conservation because you are shaded and whatnot, it is not so good for solar. And he says I want my -- whatever the rebate limit is -- because I really want to get this. And you say, well, it's really not going to work really well for you. No, I saw this on TV, and I care about the environment, and I want you to give it to me.

Is your company prepared to deal, and if so, how would you anticipate this would work for the customer being unhappy with the answer we are not going to give you the rebate, and then he is calling you or

whoever saying I'm being discriminated against, I want to do this. How would your company work through that process, do you think?

MR. BRYANT: Because you were gracious enough to give us your phone number awhile ago -- (Laughter.)

MR. HARRIS: There you go. That's what I was afraid of. Great.

MR. BRYANT: No, I'm just kidding obviously. The one thing that we are going to count on is a contracting community that is in agreement with us as we work through those case-by-case basis where shading could be an issue. And we are of the opinion that the contracting community as well is not going to want to be on the hook, if you will, for a nonperforming system. And so we are going to utilize the contractor at the job site with the customer who we originally have gone out and said there is too much shading. And to the extent they can identify their contractor, if we can meet then and parlay that into good information being given to them, that's what we want to do.

Now, to the extent we get that good information, we can then begin to quantify what the savings potential will be. And when you look at their savings potential versus what they are paying, hopefully as my mom used to say, they will come to

their senses. But that's our desire. Now, that's perfect. And as I shared with you on our conference call a month or so ago, you know, we're going to be documenting that information, because the next stop along the food chain is to call you folks. You know, these turkeys won't give us the money. Come on, help us out.

And so to the extent we can quantify that stuff and provide you with factual information we would anticipate your support of what our decision is based on the facts that we have presented at that time, if it rises to that level of occasion.

MR. HARRIS: So the key I heard you just say was that you would be not only including the installer, but documenting these discussions along so that you would have something that could be -- that would be objective. You know, here is the efforts we made, and here is what we have done, and be able to provide that fairly easily.

MR. BRYANT: Right. And to the extent that we -- from the standpoint of the training that we are looking for here from the Solar Energy Center, to the extent that we have that kind of background as to why a decision has been made, you are now interjecting into the situation another expert, if you will, in the

evaluation process. And so you are using what they have 1 2 taught you in order to make your decision. 3 MR. HARRIS: Right. 4 MS. HARLOW: And you're using your regular audit staff as the initial contact with the customer? 5 6 MR. BRYANT: Yes. 7 MS. HARLOW: And would all of your auditors be trained in this, or would you have a specialized group? 8 MR. BRYANT: 9 Yes. 10 MS. HARLOW: All? 11 MR. BRYANT: All; yes, ma'am.

thought that through?

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MR. FUTRELL: Howard, can you help us at this point, is there going to be a certain percentage of the day that is going to be where there is going to be some obstruction, if you will, of the sun that you will tolerate? Is it a zero tolerance policy; is it the extreme of what Larry described with oak trees, but what if it is a single pine tree where there may be some shading for a few -- 20 or 30 minutes a day? Have you

MR. BRYANT: Yes. And as we have thought it through, we recognize there's going to be arguments no matter how you get there. And so our standard is no shading. And that is where we are going to, you know, leave the launching pad. Although this may not be the

best reason, I believe this is going to be the case, though. I think we are going to be able to say no shading and not jeopardize participation, because, again, in deference to Ms. Brownless, there's going to be a significant number of people wanting these technologies. And so I don't see that our shading requirement, as we have stated today, is going to hinder participation. It will do -- it is not going to hinder it, number one. Number two, it's going to provide the greatest performance opportunity for that system, absent any shade whatsoever.

MR. GALLAGHER: If I could address that. The industry uses an item called a solar pathfinder. And Howard is correct that it is much more critical with solar electric than it is with solar thermal. It's a bit unreasonable to deny a consumer a rebate because of a single palm tree for domestic hot water, because the decreased performance will barely be measurable. Okay.

What the solar pathfinder allows us to do with solar electric systems is we are actually able to get on the roof, determine where the shade is at any time of the year, put it in a software program to produce a percentage of performance. And, you know, my recommendation would to be use something like this as a guide for the utility folks so that it's done in a fair

way.

Additionally, from a solar electric standpoint, there now exists a mechanism called a microinverter. And a microinverter, if shade from that palm tree were to hit the solar panel, it's only going to shut down the one module. So this is much different technology than even three or four years ago. So I would hope that the industry and utilities will work together to find a fair way for the consumer. You know, we certainly don't want someone to sell a product out in the shade, okay? We want to eliminate those people from the industry. We have as big a concern as you do, but we don't want to punish consumers that really want to benefit from the program.

MS. HARLOW: And how do you communicate with a customer when you go to their home or their business and feel like it's not an optimal site for that expense? Do you show them what you think the production would be, the reduced production?

MR. GALLAGHER: We certainly do. We actually get up on the roof and we take these calculations based on different areas of the roof, and we go back and we put it in a software program. We present the homeowner with an outline of what they can expect. You know, during the month of December and January, because the

sun is lower in the sky you are going to have diminished performance. So your total benefit is going to be somewhere around 75 percent instead 100 percent, and at that point the consumer can make a determination. It will also tell them what their savings will be based on current utility costs. So the technology and through the software, we are give this homeowner a very concise estimate of their savings.

MR. HARRIS: Is this device and software that all installers would have or --

MR. GALLAGHER: Well, all installers should have, if they are in the solar electric business. It's really not so important in solar thermal, it's just a different technology. We are talking about heating a body of water. You can have shade throughout the day with a domestic hot water system, okay? With PV it is much more critical, but I would recommend everyone to have one, yes.

MR. HARRIS: All right. So what happens to the installers who don't have that?

MR. GALLAGHER: They need to go to the store. They go to the hey dude website and buy one of these things. They're not that expensive. In fact, it wouldn't be bad to have a requirement for people to have one, in my opinion, because it is really necessary.

MR. HARRIS: Sir.

MR. MAINGOT: I have another issue, as well.

Not every -- and the solar industry, itself, is the perfect orientation for a solar system. Not everybody's roof faces south, so if you have a east or west facing roof, there they are still applicable for a solar system to be installed. You are not going to get a full day's sun on an east or west roof, but they will do 80 percent of what a south roof does.

so the people like that should not be penalized because their house doesn't face the ideal way and they don't get the full day's sun. They may lose like two hours in the morning or a couple of hours in the afternoon because of the orientation. So we put a lot of systems -- Bill will tell you we put a lot of systems in east and west and sometimes even a north roof with pool heating. So, you know, and we can have as little as four or five hours of sun on a thermal system and it will still operate properly, it just needs to be sized slightly bigger than if it was on a south roof.

So shade is an important consideration, but to insist that you have full sun, I think, is -- you are going to penalize a ton of people by insisting they have a full day's sun. So that's just one thing to

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MR. HARRIS: Let me ask you a follow-up question to that. You just said you are penalizing But if it is true that we are anticipating blowing through these -- you know, half the morning was talking about how are we going to deal with oversubscription that's going to happen in, you know, a month or two, if that is the case and we really think these things are going to be oversubscribed, and the money is going to go very, very quickly, doesn't it make some level of sense to try to pick the people who are 100 percent unshaded so that the scarce resources can go to the places where they would be the best for the grid and the best for the system? And then as the technology matures, as the market develops, you know, and you get this 100 percent full sun places, in the first couple of years, you can start backing down the economics. Does that makes sense from a policy standpoint?

MR. MAINGOT: It does, but in reality to find a true south-facing roof, you know, it's not -- you know, one out of four people may have a true south-facing roof. It just depends on what side of the street you are on or, you know, if you can put it there. So a lot of people -- there is very negligible, like I say, in a lot of cases 10 or 15 percent difference in

production throughout the year in what the system would do if it was put on a west roof as opposed to a south roof. So, you know, you're going to tell those people, no, you can't have solar because we decided that, you know, you don't face the optimal direction. We would lose probably 50 percent of our customers or more, because, you know, how many people do you have on a south roof? I mean, it's optimal, but it's not a consideration that, you know, that we look at with 100 percent and say, oh, it has to be there. I mean, we do a lot of stuff on other roofs, a lot. The majority are put on other roofs.

MR. FUTRELL: I would just follow up -- excuse me, Larry -- that noticing what Tampa Electric's program standards mention not only south facing, but east and west facing roofs would be eligible, as I understand it. So they specifically point that out in their standards. And if we could hear from the other utilities on this issue, just to hear where they stand on it as far as this idea of establishing criteria that could preclude a customer from participating.

Oscar.

MR. GANS: Our approach is we're hoping to help the customer make an informed decision. And so what we are looking at is for the PV systems we are

going to require a copy of the PV watts calculation from NREL, the National Renewable Energy Lab. That has a very good way of modeling what the performance of a system would be in specific geographic areas. And you put in the amount of shading that would be occurring, the orientation and other factors regarding the system itself. It will give the customer a very good estimate of what the performance of that system should be in a year.

So then that customer can then plug in that type of information into the -- similar to what the gentleman explained from his software. It would give the customer an idea of, you know, you are not going to save a hundred -- you know, this is not something where you are going to make money on this deal, or they are going to make money on this deal, but they will have the facts.

And so our approach is let's make sure the customer understands, because unfortunately there is some misunderstanding by some customers that we have had experience with where they thought they are putting in these systems, and they are going to be selling a ton of electricity back to the utility. This helps the customer make a realistic estimate of what this thing will do, and then they can make that personal choice.

And so that is the approach we're taking; give them the facts, they will make the decision, and if they want to participate we'll play with them.

MR. FUTRELL: So, just to confirm, if the customer still insists on putting in the system, you'll approve the application?

MR. GANS: At this point we want to utilize the fact that this is a pilot program. And so we want to get all those different factors and then get enough data so that we can say what is the right threshold where customers really are not making that, you know, making good economic decisions, or where we can guide the customer.

MR. GILLMAN: This is Christopher with Progress. I think I can summarize my answer by almost saying ditto. Oscar explained our standards, as well. However, I would just add when we look at screening, we are looking at a minimum performance eligibility criteria that's established by FSEC certification. And for PV, for example, that's a thousand kilowatt hours per year. That is going through using the equipment that was mentioned by Bill, and using the software that Oscar mentioned, the PV watt. So it designs to the common customer, but it provides that real information so the customer can make an informed decision.

MR. MAINGOT: As I say, that is a good standard because an average one kilowatt of PV can produce 14 or 15 kilowatt hours a year if there is no shade. So to put a minimum of, you know, it has to do at least a thousand kilowatts a year is a good average to be put in there.

And if I could make one more comment. I think the industry is more concerned -- shading is an issue, but we are also concerned with system design, because we see a lot of inefficient systems being sold by competitors. You know, it's not the norm, but there are some inefficient systems out there. So like with hot water, Progress is -- you know, there is an energy factor number for hot water, that the system has to meet a certain energy factor or standard, and these are all standards put out by FSEC.

So, I mean, FSEC is a good place to go look for system standardization and system design, because, you know, one thing we don't want to see is ineffective systems be -- or ineffective designs be put out there, because we are going to end up with a bad name. You know, the industry, even though it may not be your company doing it, the industry ends up with a bad name. So we definitely don't want to see that, either.

MS. HARLOW: I think we're missing Gulf.

MS. NOACK: You know, I'll just wrap up kind of the comments for the utilities. And there's bits and pieces of everything that applies to Gulf, but I think that our standards that we have put out there, they provide actually some sort of basic criteria for performance as well as safety for our customers by requiring a UL&I EEE certifications for the equipment, FSEC certification for the equipment, inspections, passing inspections by the local building code authorities.

So we are putting requirements out there that are standard requirements that all customers should meet, and then other information about the performance of the system such as direction, angle, shading. We are not making that necessarily a requirement to participate in the program, but we are making sure that the customer has that information, and we are going to be requiring from the contractors things that they should be doing. Copy of a shading analysis, a copy of an energy calculations, the same as FPL is doing from PV Watts. So the customer has that full information to make the decision as to whether or not they are doing it for economics, whether or not they are doing it because they feel they have an environmental responsibility. There may be a number of different

reasons. And so what we are trying to do is make sure we establish the foundational requirements for having good installations, and then allowing the customer to make that decision whether or not it is an economic choice for them to install those systems.

But I will say, though, however, with the solar thermal for low income and the solar PV for schools, since we are fully incenting the full cost, we will ensure that optimum installations are done for those particular locations, since we are making the full cost available to those customers.

MS. HARLOW: Any other thoughts?
Suzanne.

MS. BROWNLESS: One thing that we thought of was that the standards could provide that licensed contractors be used and that those contractors have adequate insurance because, you know, that's a way to ensure that all of the information that Bill and Chris have been talking about actually gets to the person that's buying the solar equipment, and that the people who are talking to them do, in fact, have the software necessary to evaluate the programs.

MS. HARLOW: Yes, Bill.

MR. GALLAGHER: Yes. Along those lines, we would love to see an approved contractor list where

contractors are fully vetted to qualify for these programs. We have had a lot of people recently come into the industry with the hope of making a quick buck, and sometimes they are not following the rules. We would highly endorse that. And Chris' model with the solar pathfinder, having to submit that to qualify is a huge benefit for the consumer, because, like I say, it may be at 75 or 85 percent, but they could sign off on this and give it to the utility company, and the utility company goes, okay, we are good to go, this is their house; they know just what is going on. So I appreciate that, and I applaud them for doing that.

MS. HARLOW: I think these are all good points, and I think we have gone beyond eligibility. So in your post-workshop comments, we would be happy to see thoughts on eligibility, but also we discussed how to ensure that the systems are designed properly, and we also discussed how to make sure we have an informed consumer so that they don't have unmet expectations. And I think that's a key issue in this. So any further thoughts you have on that, we'd appreciate looking at those.

Let's move on to administrative and marketing costs. We have got some variance across the utilities and how much they expect to spend on administrative and

marketing costs. And, of course, this will be something we will have more information on as we see the programs implemented. But I wondered if we had any thoughts on the appropriate level of expenses that should go toward administration? And I see Suzanne has a thought, I believe.

repeat what we have been saying consistently, which is that the administrative and marketing costs range from a high of 19.3 percent for FPL to Progress' 9.8 percent. We think that the necessity for marketing of solar rebate programs is pretty limited. The contractors are going to get the word out. And in the past, there hasn't been a problem with people finding out about the programs, or knowing about the incentive programs, or signing up for them. So that we would like to limit the administrative and marketing costs to 10 percent. That's consistent with what Progress and TECO have proposed, and we think that's fair.

You mentioned in your comments, here should the administrative costs be included within the incentive cap or recovered through the entire DSM portfolio. And our position would be it should be recovered through the entire DSM portfolio.

Particularly as we mentioned before with regard to

Progress, their solar load control program was previously administered through the DSM portfolio. And it just strikes us that the incremental cost of these solar pilot programs are basically an IT program so that you can administer the subscription list and personnel necessary to run that program and perhaps some costs associated with holding workshops to let the contractor community know, and possibly personnel costs, FTEs. I don't know what the equivalent is for utilities, for people to run the IT website and notify people. So it just strikes us that the administrative portion of these programs is not substantially different than what they have already been doing since 1980 for the DSM programs.

We do have one other issue, and I don't know whether this is a program design issue, but I'll just throw it out here, which is that each of the utilities has an allocation between the different programs. What we are concerned about is that one person, one business will come in and they will say we're going to put PV on our Wal-Mart, and you have got \$1.8 million, FPL, for that program in the first year, and thank you very much, we'll take all that. So that we'd like to see some further refining so that one business cannot take the whole chunk, or, conversely, one solar contractor,

as a hypothetical, might be out there right now and he is saying, you know, this program is coming up, give me your stuff, give me your stuff, give me your stuff, bundling all of his things up into one request, and then the first day he is there, puts it on there, and there is nobody else.

Because the whole idea that we are trying to get to here is effect as many homes as possible, as many people as possible, as many installers as possible as an incentive to the entire industry. So I don't know where that fits, but that's a design concern that we have.

MR. FUTRELL: I guess I'd like to hear some responses, but as I understand, much of the programs are set to where there is not only -- in the case of PV, there is a per kW rebate, there is also, in most cases, a total dollar limit per customer. And that appears to take care of part of your problem. I'd like to hear some feedback on that.

As far as this notion of bundling, that's a very interesting concept, and maybe they have some thoughts on that. I'm not sure, maybe they may have some better answers than I. That seems to be a free market issue. I can understand your concern about that, but I'd like to hear, if that has crossed their

minds.

MR. BRYANT: Let me address both of those questions. From the standpoint of not having a run on the bank from one particular individual or one particular sector, I can speak for Tampa Electric; I'm not familiar with the other utilities. But we have limited the commercial amount of money available to be smaller, less than the residential piece for sure. In addition to the other maximum pieces that you mentioned, Mark, for instance, \$20,000 on a PV system, so there is limitations that have been built in there.

There has also been limitations built in, for instance, on new construction versus existing construction, because you don't want the new construction folks to hog the money, if you will. So we have provided a 20 percent barrier or -- well, barrier, I mean, that's all it can be. A cap, if you will, in that particular case. So we have made the provisions that we think are necessary, at least out of the chute, to, again, maximize money to as many folks as possible, with an eye being toward the residential marketplace.

From the standpoint of the administrative costs and should they be a part of the program or not, I think we will all agree that they should be. It is

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no different than how we manage the administrative costs of other programs. When you regular DSM contained within that particular program is an element of administrative cost. Now, within that cost could be inspection; it could be check processing; it could be customer interaction; it could be back office. There is just back-office detail. It's not as simple as we simply have a website, and then you walk away and at the end of the year you come back and gather some data and it's done. That's not going to happen.

So there's going to be field visits; there's going to be, in our case, audits being done in order to qualify; there's going to be the monitoring and evaluating, an evaluation that takes place after the fact, so you've got 10 to 15 percent of the inspection that is going to be inspected from that perspective. So there are administrative costs exactly identical to other DSM programs that, in fact, should be a part of the overall expenditure.

Now, our experience, wherever it's at, there it is, 10 percent. Our experience, across all of our programs, is it is kind of in that neighborhood. And so we would anticipate from experience that that is what would serve us well here. I guess if it's not up there it's on this sheet. There it is. At any rate.

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So we think that is a fair number. And, in fact, we do believe it should be a part of the overall cost of the program, and we anticipate managing it downward to the extent that we can collect the data, administer the program, things of that nature. our perspective. Because at the end of the day, again, you come back to cost-effectiveness, and should we do this on a long-term basis. Have the costs come down; have the efficiencies improved; and what's happening, and the best -- and are you doing it in the same consistent manner that you do all other programs, which has, as their components, administration and marketing expense.

But I do agree marketing is not going to be a big piece of the puzzle here. The contracting community will do that. No different than our heating/cooling program. We really didn't have to do a lot of marketing. Once the contracting community got it, they got it, and away they went. So those are our thoughts.

MR. FUTRELL: And, Howard, I guess one of the things that prompted that question about moving around the administrative and marketing cost is there is in conservation a category that is used by most utilities called common expenses.

MR. BRYANT: Yes.

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MR. FUTRELL: And that's what kind of intrigued me about, you know, are there some expenses that are general in nature applying to all programs.

MR. BRYANT: Yes.

MR. FUTRELL: And would these programs also fall into that such that some of their expenses could fall under that common expense category, thereby lessening those costs. The drain, if you will, on the overall cap the Commission established.

MR. BRYANT: Right. Let me help there just a little bit. Again, from our perspective, common expenses and that category that we use is to capture those costs that absolutely cannot be targeted to a given program. So, for instance, my salary or the component thereof. I don't work on insulation. I don't work on -- I don't do that, and so my money and expenses and whatnot go into the common category.

On the other hand, when you work at the department level that's responsible for the deployment of the program or the facilitation of the program, you know exactly what they are doing and you are tracking it, because we have got computer systems in order to account for time spent, those types of things. know exactly what they are doing, and you can allocate to insulation, to heat pumps, to standby generator, to whatever the case might be. So that's how we use the common.

Now, when you think about administrative expenses for this program or these programs, again, it's going to be very targeted. It's not going to be such that you can't determine where those monies were spent or the resources were allocated in order to facilitate the program. You are going to know that it was done to do an inspection. You are going to know that it was done to process checks. You are going to know what your back-office operation is specific to these programs. And that is why we would, again, put it in the bucket of these programs, and not in that common bucket which is too nebulous to make a determination as to where they should go.

MR. GUYTON: Mark, I would follow up on that a little bit, too. I think it's important to understand that using -- picking on Howard, some of his salary associated with these programs is already being picked up in common expense, so that element is already being shared. It's the administrative cost of the individual programs that need to be recovered. And I'd respectfully submit that as you recognize that those costs have to be recognized in the cost-effectiveness

test, if you don't include them, you don't have the right data necessary at the end of your pilot to judge cost-effectiveness. It has to be part of that cost.

MR. FUTRELL: In analyzing the cost-effectiveness role of the other conservation programs, is there an allocation from the common expense category to all those other programs, do you know?

MR. GUYTON: I do not know the current practice.

MR. BRYANT: I can address that, Mark.

From our perspective the answer is no, because, again, the reason you don't allocate -- if you could allocate, you would have them there in the first place. So if you can allocate, then you put them in common and, therefore, they don't roll into it. There is just that overhead kind of A&G expense, if you will, that does not -- you just can't tell what it is, and so you leave it in common, and it just becomes the cost of doing the clause, if you will.

MS. HARLOW: What about audit costs? Most of the standards we have looked at are requiring an audit as the first step in the customer receiving a rebate, and you already are required to have an audit program, and I'm hopeful that you are doing a full audit when you take the time and the gas and the expense to go out to

the customer's house. How will you allocate those expenses?

MR. BRYANT: There is a full audit being required, and those dollars will be allocated to the audit because that is the function of what's going on. But the audit, every audit that's done is required to have an evaluation of solar energy. Now, to the extent that you are able to capture 15 minutes to use a solar pathfinder, that would likely be an allocation that goes to the program, but it's contained within the 10 percent number that we have got put forth. So we have minimized it as much as we can. Still looking at what's the primary function going on, doing an audit; where should it be allocated to the audit; but to the extent now we are going to qualify for incentive dollars, do we have a special requirement there, yes, would do; then we will allocate accordingly on a very small basis.

MS. HARLOW: Do we have some consistency on that across the utilities?

MS. NOACK: Well, let me kind of start by prefacing this with -- the question was what level of administrative, or what level of utility spending on administrative and marketing costs is appropriate in these programs? And the answer to that question is whatever is needed to effectively and efficiently manage

these programs. When we are talking about marketing costs, well we are not planning on doing marketing for these particular programs. We are planning to make sure that we have the information out there for customers and for contractors, but we are not going to be doing marketing. So the administrative costs that we are talking about are those costs that we need to capture and recover to actually manage and administer these programs.

And you can't look at a standard percentage like we had talked about earlier across the board, because you are talking about very different caps to begin with. And whether you have got 5,000 customers or a thousand customers, there are some basic costs, say, with the IT or your online application that you are going to have a minimum expenditure for, and it's reasonable to say that you are going to have a higher -- that is going to look like a higher percentage of the total budget, say, for us than it would be FPL or TECO. So if don't think establishing a standard percentage is the right way to look at it, either.

The other thing is when you look at the intent of having the cap initially, you know, the Commission's intent of having the cap was to make sure

that they could meet the intent of the Florida Statute by increasing the deployment of these systems without adding undue rate increase pressure on the ratepayers. And so it does not make sense to take that and pull that out of this cap and add it to other DSM components. We need to capture what is the full impact of managing and offering these programs, and what will that do to the cost-effectiveness of these particular programs.

The other thing too is with the IT we do anticipate from Gulf's perspective that our initial IT costs are going to be more, but those, those costs are going to come down over a period of time, which will, in our annual evaluation we'll be able to determine where to reallocate or rebudget those programs or rebudget those particular dollars to some of the other, other programs. So I just don't think you can look at it as a standard percentage. I think we have to look at the intent and what we're actually doing with those administrative dollars.

MS. HARLOW: Progress.

MR. GILLMAN: I think there have been several good points made. I'll piggyback on a couple of them.

We mentioned the audit. It's also a requirement of our program. The auditor that would be

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going to the, the potential solar participant's home or business would be doing an audit and their, those costs would be associated with the audit, not the seller. So in some cases, as Howard mentioned, the common expenses or the other programs that are maybe supporting the solar program are being captured outside of this program. But solar expenditures, administration of those solar programs should be captured under the program itself.

Regarding administration, you know, our goal is of course to keep the administration costs as low as possible, and so we need to be cognizant of what drives administration up such as, as measurement and verification, customer adoption. Is customer adoption going as, as perhaps described this morning where there's pent-up demand? If it is, great. Obviously there would be no additional cost towards that. If there's not, then there needs to be dollars from an administration standpoint to drive adoption. So the projection is, we feel is appropriate. But, again, it is a projection based on, on our program design.

MS. HARLOW: Are you saying the opportunity for some administrative costs to go down over time such as the IT costs?

MR. GILLMAN: Absolutely. There's the

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potential. You know, our, our projection is based on historical understanding of DSM programs and what we expect to be the requirement to administer the solar programs, but certainly there's the potential as we evaluate the pilots going forward to see where administration costs are coming in and they could be lower. Sure.

MS. HARLOW: Let's go back real quickly to the marketing of the programs. I know we've got a pretty consistent feeling here that, that we'll be oversubscribed like the Energy Office was. Was the advertising for that program handled primarily through industry contacts? Yes? And --

MS. BROWNLESS: My understanding, Judy, is they didn't do any advertising per se, that it was all handled by the industry.

MS. HARLOW: Thank you.

MR. GANS: Judy.

MS. HARLOW: Oscar.

MR. GANS: In FPL's case, very similar to what has been already expressed, our intent is to manage the administrative costs as low as possible. The costs that are included in that 21 percent, depending on how the math is being done, ultimately reflects IT systems measurement and valid -- measurement and verification,

but there's also a research and demonstration program included in that nonincentive cost.

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So what we did was we focused on the need for education at the school level and also educating so that we can get some of these contractors that may be, that have licenses that may be applied to solar, specifically the plumbers and electricians that may not have been involved with the solar industries per se because they may have been involved more in new construction, et cetera, that maybe have some seminars around the state where we can help educate them so that they can get more involved in this industry. education we thought was a big component of what we were trying to do as opposed to just pure marketing. Marketing, as has been said, is going to be primarily driven by the people that are going to be selling. But our costs, we're really looking at M&V, as we talked about earlier, really focused on the business, solar water heating so that we could really get a good understanding of what that looks like, educational expenses.

However, at the end we're, like the goal of every one of the utilities is manage that down, react to the market conditions and, if needed, we inject dollars to stimulate the market. But where there is,

where we see that market is already established, we back off and spend the dollars in other areas.

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MS. HARLOW: All right. Okay. Anything else?

MR. GALLAGHER: I have a question for you.

Are you hiring new personnel to implement this program, these portions?

In FPL's case, yes, we are. MR. GANS: we're looking at the incremental headcount as far as what that, what our resources are going to be needed throughout the organization because right now we see this incremental work that's going to be done. So we do anticipate there's going to be some impact. And we're looking at our staffing levels, looking at our resources, seeing how we best can implement these programs, but ultimately it comes down to efficiency, making sure we're not adding just for the sake of adding. So we're looking at specific functions and seeing where the -- if we have the appropriate personnel and we can shift people, we'll use that if it's appropriate. If not, we'll add additional people to the, to our organization.

MS. HARLOW: Yes.

MR. GALLAGHER: I just wanted to address the the, on the marketing administrative costs. There may be a duplication of effort here in the educational

process. The Banner Center, many universities now are taking on the responsibility of training solar practitioners, and of course the biggest barrier right now are there are no jobs. So they have the curriculum set up, they have everything in place to hire and educate everyone, but there aren't any jobs. So I would suggest maybe take a look at the, at the \$3 million figure and say, okay, we're not going to do any marketing and maybe we could cut back a little on the education because it's being duplicated. Put a little bit more money, you know, in the, toward the consumer might make a little sense.

MS. HARLOW: That's a good point.

Power & Light, do you intend to, before you begin your R&D efforts, perhaps as part of that, look at what is out there now and how can we increment (phonetic) that?

MR. GANS: And the answer is yes. We are, we are aware of the different centers. Really what we're looking at is possibly working with those centers so that they can increase the amount of people that they can touch, maybe draw more people in. So we're -- we don't have a firm plan as how that's going to work, but we are aware of their work and that's primarily who we want to work through. Make sure that there's enough

regional places so that contractors throughout our territory can access the, the training that they want.

MS. HARLOW: Well, let's move on then to the topic of renewable energy credits. As, as part of our discussions with the utilities and, and the solar industry on the utility program standards, the issue was raised about who should own the renewable energy credits from these systems when they received a rebate from ratepayer funding. And as you know, the Commission has an existing rule now on interconnection and net metering for PV systems, and it requires the ownership of those credits to go to the customer. So we wanted to provide an opportunity for anyone to address this issue, if, if they have thoughts on this, and we think this is the appropriate forum for that. So anyone want to go first? And it's Howard.

MR. BRYANT: We're consistent with the interconnection rule. We're not, Tampa Electric is not pursuing the ownership of the RECs. It's in the, it's in the hands of the owner.

MS. HARLOW: Gulf.

MS. NOACK: Yeah. Given the fact that Gulf
Power's general body of customers is subs, they're
subsidizing these particular systems and are actually
enabling the market to move forward, it's Gulf's opinion

or belief that the RECs actually should belong to Gulf on behalf of those general body of customers.

However, due to the fact that Gulf wanted to expedite the implementation of these programs and given the fact that there is no state or federal mandate for these credits at this particular time, we're not pursuing that through, through these initial pilots.

However, we do want to make the statement that that does not indicate that we're relinquishing our rights in the future to possibly pursue those or that we waive any opportunity to pursue those in the, in the future if in fact there is a state or federal mandate regarding renewables.

Now for the system, systems where, you know, we have full ownership, I think it might be a little bit more clear on the ownership of, of those renewable energy credits for the systems that the utility will own. But, again, as I stated before, we're not pursuing the ownership of those RECs at this particular time.

MS. HARLOW: Progress.

MR. GILLMAN: Yeah. I think if I just stay in this order, maybe I can keep saying ditto with, with Gulf. We're very much in line with those comments. We do feel that the REC ownership should be a benefit

towards the ratepayer who is subsidizing the ownership of the, of the solar.

We also see that that's a protection of the REC for not only the ratepayer, but for the State of Florida. There are voluntary markets out there for RECs, and there's the potential that a, a, an owner, whoever is titled to the REC, could, if it was not in the case of the ratepayers, general body of ratepayers, that it could be sold in those markets and then therefore Florida would not be able to continue to lay claim to that environmental benefit.

MS. HARLOW: Do we have thoughts from Power & Light?

MR. GANS: At this time our position is that we are not looking for ownership of the RECs associated with the programs, but, like the others, we retain the right to reevaluate that in the future.

MS. HARLOW: Solar people.

MS. BROWNLESS: We believe obviously that the RECs ought to stay with the owner. And as to the question of benefit to the ratepayer, if the -- in most of these incentive instances the owner would have put up the substantial bulk of the money for the facility that's being installed, and so it seems that the attribute ought to stay with him.

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MR. FUTRELL: I don't want to delay things much longer but I do have -- I am curious, I'd like to see if there's any, anybody wants to take a stab at Lonnie's question -- I think, Lonnie, you raised it first about the idea that if, if there were a system, you would be open to raising this issue of if ratepayers are subsidizing these systems, that the REC should go back to the, to the utility, and thus the ratepayers can benefit. Yet the ratepayers are only subsidizing a portion of the cost of the system, yet you seem to be taking the position they should take the whole REC. there been some thought about because the customer in these instances are putting up a substantial portion of the cost of the system that there should be some kind of sharing? Have you heard any discussion about that or do you have any thoughts about that?

MS. NOACK: Yeah. We've talked about that, but depending on what drives the utility for pursuing those, we would evaluate at that particular time how we would pursue those RECs. Since we're not pursuing it with the current programs, you know, we haven't taken that to the next, to the next step. So we'll evaluate that as, as the need comes up and depending on what the market and regulatory environment dictates.

MR. CLEMENCE: What are those drivers?

MS. NOACK: Well, say, for example, we have a mandate in the State of Florida for renewable energy credits, that would require the utility to go out and begin pursuing renewable investments. And so at that particular time we would want to, to look at if we're going to incent customers to install these things and our customers are actually subsidizing that, to be able to capture those on the benefit of the ratepayers.

Otherwise, we have to go out and find alternative means for, for acquiring those particular renewable energy credits. And you have to look at the fact that with those customers even having installed the system, if we didn't have this type of subsidy available to those customers either.

And then also looking at the value of the RECs. How much is that REC worth versus how much of the incentive are we paying? Not just the fact that the customer is paying for a large portion of the system -- if the value of a REC is \$100 and the system is producing X number of kilowatt hours, what is the value of those RECs in that regulatory or even in a voluntary market? The amount that our customers are subsidizing could very well be above and beyond what even the value of those RECs are. So I think you have to look at a number of factors, not just who is paying

what percentage of those particular systems.

MS. HARLOW: I think we can at this point move on to our last topic of the day, and I'm seeing some cheering from the audience. We wanted to just briefly kind of change tack here and talk a little bit about utility ownership on the demand side and whether there are existing regulatory models or perhaps new models that, that we've not approached in Florida that might encourage capital investment by the utility on the demand side and just see if there were any thoughts on that. I'm getting blank stares, but Progress is willing to go first.

MR. GILLMAN: Well, I figured I was going to give time for Howard to jump in there, but since he didn't do so, I'll step up to the plate this time.

You know, there are models out there, other models out there. One of the ones that we've looked at is a rooftop leasing type model that's a model that's done by some California utilities, also by Duke Energy where the, the asset is owned by the utility and the rooftop is leased, like a land lease. There, of course, are barriers to any type of, of capital investment, and in this particular case ownership on the, on the customer's side of the meter.

You know, the first barrier to capital

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investment is just the competition for capital. If you get past that hurdle, then another critical hurdle is the liability and legal risk of owning assets on, on customer property.

So there are several hurdles there, but there are models out there that, that we've looked at in the past and we'll continue to look for.

MR. FUTRELL: Have you looked at the Lakeland project where they own the solar hot water heating program, system and charge customers a flat monthly fee for, I believe it's 20 years, and essentially the customer is paying for solar hot water at an equivalent rate to the, to the electric rate they would have paid if they had traditional strip heating?

MR. GILLMAN: We have. In fact, if you go back to our development of our solar water heating with the EnergyWise program that we established in 2007, we evaluated that type of model back then.

One of the issues there is there's M&V and additional costs associated with, with basically metering the Btus and equivalent kilowatt hours. So there, there are models like that. Again, we, we continue to look at them, but to date we haven't looked at many that we find favorable.

MR. FUTRELL: Is there anything unique about a

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municipal that may be better situated to make a move towards that kind of a program versus an investor-owned utility? Is there any just structural differences that make it easier for a muni or --

MR. GILLMAN: There probably are. That's probably a better question for them than for I, but I imagine there are some, some policy advantages.

MS. HARLOW: Anyone else want to take a stab at this? TECO.

MR. BRYANT: Sure. There's a difference for the investor-owned utilities versus the municipals. If the investor-owned -- well, for the investor-owned utility to own the generating resource that is on the customer's property, now whether that power is delivered in front of the meter or behind the meter, to me it's going to require legislation to do that for this reason.

The technologies that we're talking about here are far beyond our avoided cost. And so least-cost planning would suggest that it would be another generating asset in our fleet, but it's not the most cost-effective generating asset in our fleet. So it's going to take legislation in order to do that.

The thing that's going to encourage the utility to want to do that is the opportunity, once that hurdle of legislation is passed, is going to be

the opportunity to have a return or we're not going to want to invest in it. So there again it becomes an asset in our fleet and can we have a return? And, if so, then we would begin to move down that, that avenue.

Unfortunately for solar as an example, it is only going to be an as-available resource. It's not going to give capacity benefits. And so there again that's a hindrance that it has for us to want to fully embrace it as a generating asset in, in, in our portfolio of, of, of generation.

So it's going to take, as I said, legislation for the utility, they're going to have to have a return. Those are, those are the things that I see immediately.

And if you do let the energy come on to the system behind the meter, then you're going to have to have additional metering requirements there because now you are providing a situation where that particular customer is getting the energy and so you're going to have to do some netting of what's going on in fairness to other ratepayers. So there's hurdles there.

The Southern Cal Edison example is on the rooftops of giant warehouses and, and it works. And I think their goal is to have some 250 megawatts of that over, I think it's a five-year period. But if I'm not

mistaken, that power is coming back on to the grid in front of the meter. So they're only, they're only utilizing the space on the customer's roof. But, again, even if you do that, again it goes back to it's above avoided cost and we're not allowed to do that at, in today's regulatory environment.

MR. FUTRELL: Howard, if you could earn -- if Tampa Electric could earn 50 basis points above the top, above the top end of your range, would that be a pretty good incentive?

MR. BRYANT: I'd have to ask our accounting people to take a look at that, Mark.

MR. FUTRELL: Okay. Thank you.

MS. HARLOW: Anyone else?

MS. NOACK: I would just like to add just one additional comment, and that's to the second question: Are there any existing models? We do kind of have a model like that already in the proposed programs from the standpoint that the utilities are providing the option of owning the school-based systems for a period of time. So I think what that allows us to do is it allows us to gain some experience from owning systems on the customer side. It reduces some of the risk because we're not looking at owning something on several hundred customers; we're working with large single, individual

customers. And from the standpoint that we're able to earn a return through the clause and capitalize those costs over a period of years, so we're minimizing the immediate impact of providing that subsidy to that customer through, through, through the clause as well by being able to, to capitalize that over the period of five years and, and earn a return. So there is kind of -- we do have a model in our current proposed programs for the utility-owned customer side of generation.

MR. FUTRELL: I have a follow-up question. I should have asked this in the program design section, so I apologize. But something I noticed in looking at a program JEA has where they have an offer to customers where they will restore existing solar water heating systems to working order. Now they define what that means, but they provide a rebate to help get an older system -- as we've heard for many years, solar water heating has been around in the state for decades. Is that something that anybody considered or does that sound like something to, the Commission could consider, you know, the next time it takes these kind of programs under advisement? Has that come up in any discussions?

MR. BRYANT: I, I don't recall us having discussed that. Not that it's a bad idea. I would

assume if you had to start -- I would assume if you wanted to start down that path, you'd have to put some requirements on the age of the system you're restoring because you, you know, you can't put new wine in old wine skin, that type of thing.

So I, I would think there, there would need to be some significant parameters put around that endeavor if we were to walk down that street.

MS. HARLOW: Suzanne.

MS. BROWNLESS: Howard, I'd just like to ask a follow-up question with regard to the implementation of utility-owned PV or solar thermal on customers' property.

Are you suggesting that you'd have to have an incentive above the midpoint of the ROE to do it or simply be allowed to recover the cost of the installation plus your midpoint rate of return?

MR. BRYANT: Assuming that it was allowed for us to do that, you would simply want it to be part of your assets that would earn the normal return that all of your generating assets would be earning.

MS. BROWNLESS: Thank you, Howard.

MR. BRYANT: Yeah.

MS. HARLOW: Yes, Bill.

MR. GALLAGHER: Yeah. I'd just like to make a

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comment from the, from the industry's standpoint about the lease systems that we're seeing.

I just, it's hard for me to, as a consumer to justify doing a lease like that because in many cases a lease payment is more than the savings. They give up the possibility of the tax credit, they don't have ownership, it'll never pay for itself. It's a long-term commitment and they just don't have ownership. So I don't understand the model. I know that there's, you know, some companies that are, that are, that are doing that. I don't, I don't particularly think that it's, that it's good for the industry, nor does it drive employment opportunities if one company capitalizes on thousands of consumer-owned, I mean, you know, utility -- it doesn't necessarily have to be a utility, but one customer-owned system.

MS. HARLOW: Would there also be property tax increases associated with that?

MS. BROWNLESS: (Nods affirmatively.)

MS. HARLOW: And do you know who's picking those up in a lease situation?

MS. BROWNLESS: I don't know who's picking them up in a lease situation, but I do know now that one of the issues on the table that our industry is seeking to remedy is an increased property tax assessment based

upon the installation of PV or solar thermal. So that's a problem that we're experiencing right now and seeking to mitigate.

MS. HARLOW: Before we close, I just wanted to ask if anyone has any closing remarks, anything that you think you'd like to speak to? And, and if you don't want to do that now, we'll have the opportunity for written comments.

(No response.)

That means we covered everything. So just briefly to talk about where we are, we covered the topics that the Staff was interested in discussing today, but we would also like to have the opportunity for postwritten comments in case there's anything you think you'd like to provide more detail on after further thought.

We will have a written transcript. We will post it to the Commission's website under the tab that is associated with this workshop. If you have trouble finding that, please give one of us a call. We'll be happy to walk you through that. And the transcript date is expected on March 10th. And at this point we would like to see written comments by March 18th.

MR. HARRIS: If you care to file them.
They're not required.

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MS. HARLOW: Right. It's not required homework. And since Larry so graciously gave you all his contact information earlier, I'd appreciate it if you would send the comments to Larry.

MR. HARRIS: Yeah. And, you know, as we talked about, you can send them to me, lharris@PSC.state.fl.us. I suppose if you want to mail them, you're welcome to mail them too. You know, our address is on the website.

If you let me know, you know, if you e-mail them and you know each other's e-mail addresses, it helps to just, you know, carbon copy other people, say here are our comments. If you don't want to do that and you let me know to turn around and send it out to people, I'll do that. And as I get comments from people, what I'll be doing is I have a little file folder in my e-mail thing for this workshop, and as I get the e-mails from people, you know, they're all in there and I'll go through and try to make sure that as I send them out I'm copying everybody who I know to. Some of your companies may not get -- you know, if you've got six people from TECO, I might only send it to Howard and Jim or something as opposed to listing all six on there or what not. But I'll try to make sure as much as I can that everybody is covered.

e-mail and you happen to be looking at it and you see that I haven't included somebody you think should get it, go ahead and forward it, you know, on my behalf kind of a thing just, you know, among each other or what not. And I know Suzanne was very helpful earlier in this process with sending stuff that she got from me on to people. And so I would ask all of you, if you see somebody's name that you know of that's not on there, go ahead and send it on, so.

MR. GUYTON: Judy, one -- Charlie. One observation is that a couple of times during the discussion today you asked for comments on additional issues that transcended and went beyond your list of issues. It would be helpful in terms of actually getting comments if those could be separately listed so that we make sure we don't overlook something in going through the transcript.

MS. HARLOW: Sure. I can only think of two things off the top of my head, but I'll look back through the transcript.

MS. BROWNLESS: And maybe you could put those on the website so we can make sure we --

MS. HARLOW: We'll do that. I think one of them was to, anything that comes to mind about ensuring

that the customer gets what they expect. And I think we discussed a good bit with the solar industry and utilities as well about at the time the system goes in, letting the customer know what type of output is expected based on the system conditions.

And one further thing, I know Mark mentioned this earlier, but not to dwell on it, but just to say it one more time, we are at a point where we have Commission orders on these programs. The programs have been approved. We've -- the Staff has looked at the standards for four out of five. One more is coming in. So keep in mind as you're doing your, your comments, if you choose to, that we, the programs have been approved. But we are in a pilot situation and this is a learning experience, and so keep the Commission's orders in mind as you're making any comments.

And we'd like to thank everybody for coming, and we appreciate all your input and sorry it was kind of a long day, and I hope to see you again soon.

(Workshop concluded at 2:46 p.m.)

1	STATE OF FLORIDA )
2	: CERTIFICATE OF REPORTERS COUNTY OF LEON )
3	
4	WE, LINDA BOLES, RPR, CRR, and JANE FAUROT, RPR,
5	Official Commission Reporters, do hereby certify that the foregoing proceeding was heard at the time and place
6	herein stated.
7	IT IS FURTHER CERTIFIED that we stenographically reported the said proceedings; that the same has been
8	transcribed under our direct supervision; and that this transcript constitutes a true transcription of our notes
9	of said proceedings.
10	WE FURTHER CERTIFY that we are not a relative, employee, attorney or counsel of any of the parties, nor
11	are we a relative or employee of any of the parties' attorneys or counsel connected with the action, nor are we
12	financially interested in the action. $\mathcal{A}\mathcal{H}$
13	DATED THIS day of March, 2011.
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