BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. UNDOCKETED

In the Matter of

ENERGY EFFICIENCY AND DEMAND SIDE MANAGEMENT OPPORTUNITIES AND ACCOMPLISHMENTS.

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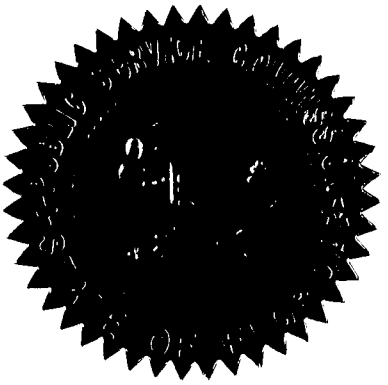

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PROCEEDINGS:	WORKSHOP
BEFORE:	CHAIRMAN LISA POLAK EDGAR COMMISSIONER MATTHEW M. CARTER, II COMMISSIONER KATRINA J. McMURRIAN COMMISSIONER NANCY ARGENZIANO COMMISSIONER NATHAN A. SKOP
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REPORTED BY:	JANE FAUROT, RPR Official Commission Reporter (850)413-6732

P R O C E E D I N G S

CHAIRMAN EDGAR: Good morning.

COMMISSIONER CARTER: Good morning.

CHAIRMAN EDGAR: I call this workshop to order, and we will begin by asking our staff to read the notice.

MS. BENNETT: Good morning, Chairman. This undocketed Energy Efficiency Initiative Workshop was noticed for this date, time, and place in the Florida Administrative Weekly as well as by separate agency notice mailed to interested persons.

CHAIRMAN EDGAR: Thank you.

Commissioners, as you are aware, the purpose of this workshop is to discuss ways that this Commission can consider encouraging additional energy efficiency and conservation.

As we are all aware, the state of Florida, this Commission, and all interested parties have done many, many things over the past years to reduce energy consumption and to defer new power plants and other measures. We know that we have a good record in comparison to other states. We also know that this Commission in the past two to three years has taken a number of steps under our current statutory authority to encourage further development and use of renewables.

One of the things that I'm hoping for that we can do today is have some discussion amongst ourselves with our staff and with the stakeholders that will be speaking with us, so

that we can, perhaps, talk about any, you know, concerns we may have, special areas of interest, if there are, hopefully at the end, maybe some things that we can give some direction to our staff as to areas for them to work on and pursue and bring back to us maybe at a later workshop.

I know that forums that I have been in in the past few months there has been a great deal of discussion about, for instance, the RIM test, and about avoided cost, and participant tests, and I have purposefully asked our staff to give us some discussion on some of that, and I am hopeful that that will engender, again, some questions and discussion amongst us. I am very interested in where personally each of you are and your thought processes on some of those issues that impact a number of the things that we will be doing over the next few years.

A couple of housekeeping measures. We do have a sign-up sheet in the back of the room. I think we have two sign-up sheets, actually. One, we are very interested and we want full participation in our discussions and deliberations and so we try to keep a list of people who are participating, and so we have a sign-up sheet for those of you that are here with us today. Please do sign up. And then there is also, I believe, a second sign-up sheet for those that would like to speak this afternoon during the open stakeholder participation time on the agenda, and we will use that list and go in that order then to call names when we reach that point.

Also, I'd like to point out that there is a slight change in the order of speakers on the agenda for today from the one that had been distributed some weeks ago, and that was just to accommodate some travel plans. But the current agenda that we will used today is also, I believe, available in the back of the room.

Also, I would mention that, as I'm sure almost everyone is aware, that by 2009 this Commission is required to go through the conservation goal-setting process again, or to update it, and I'm hopeful that this is kind of a very early beginning step, also, to have some discussion as we will move into that process with our staff, also, probably next year in a more formal manner.

And so, with that, Commissioners, before we ask Tom Ballinger of our staff to be our first speaker, do we have any other opening comments or things that you would like to go ahead and get out for further discussion today?

Commissioners, anything? No? You're ready to jump right in.

Okay. Then I will ask Mr. Ballinger of our staff to come forward, and I know that he is going to speak to us a little bit about some of the history of some of the things that we have done. I also am hopeful, again, that we will have some discussion, so feel free to ask questions or share your thoughts with us. And I am hopeful that in some of our

discussion today that we can talk about what the role of this Commission can be and will be over the next few years as we continue to work on these issues.

So, Mr. Ballinger.

MR. BALLINGER: Thank you.

Good morning, Commissioners. My name is Tom Ballinger with your Commission staff.

I'm going to talk to you a little bit about why energy efficiency is so important in the planning process; give you a brief summary of applicable statutes that the Commission must follow; give you another brief history of what the PSC and utilities have done in regards to energy efficiency and conservation; and then finally wrap it up with our goal-setting process, some time lines and what you have to look forward to in the next couple of years.

Let me start here at the beginning with planning. There is really several components to peak load. You have got new customers coming every day, you have got increased -- house sizes have increased over the years, you have got an increase in appliance saturation, and then take away from that some demand-side management. That is the load that the utilities must serve. They don't have a choice. They have a statutory obligation to serve all who come to their service territory.

Some brief stats here about our current situation. We have got about 1,000 people a day coming to Florida. Growth

is still going in Florida, which is a good thing. But we see, also, since 1986 the average house size has increased about 30 percent. That means more air conditioning to cool, more appliances, also, are going in. And since 1986 we have seen a blossoming, as I'm sure you are aware, of new appliances, VCRs, microwaves, DVDs, computers, and some are approaching 90-something percent. So Americans like their energy appliances, it adds to our quality of life, but the utilities must serve this. You will see later that utilities have been able to temper this growth somewhat with energy efficiency.

The basic theme of this or what we believe is what utilities need to continue to do is educate consumers, provide input to other agencies for building code and appliance efficiency standards -- that may be a topic of a future workshop -- and continue to explore new energy efficiency and DSM measures.

A brief summary of statutes that the Commission must operate under. It is known as the Florida Energy Efficiency and Conservation Act, or FEECA, which most of you probably are aware of, enacted in 1980. And really I would like to highlight on the third and fourth bullets here of what it requires. And the statute requires the PSC to set goals for the utilities, numeric goals, and then the other key of that is once those goals are set, utilities propose programs that we approve.

Now, the Commission under FEECA cannot require a specific program unless a utility is failing to meet its goals, and that is a key component. So we set goals first, then the utilities design programs to meet those goals, and those megawatt and kilowatt hour savings.

FEECA was first amended in 1989, and has set a size threshold which covered then approximately 94 percent of the sales in Florida. It was again amended in 1996 and increased the sales threshold to now where we only have seven utilities subject to FEECA, the five investor-owned utilities, and the two largest municipal utilities, which comprises about 86 percent of total sales in Florida. So FEECA covers the majority of sales that we have in Florida. Not everybody, but the majority.

FEECA also requires that goals are revised every five years, and you will see later in my presentation that we are starting --

CHAIRMAN EDGAR: Hang on, Tom. I think there is a question.

MR. BALLINGER: Sure.

COMMISSIONER CARTER: The utilities that are subject to FEECA, it seems to be everyone except the co-ops. Is that --

MR. BALLINGER: This one here?

COMMISSIONER CARTER: Yes. You have got FPL,

Progress, TECO, Gulf, FPUC, JEA, OUC.

MR. BALLINGER: Yes, sir.

COMMISSIONER CARTER: What about the -- I think I was asking about the co-ops.

MR. BALLINGER: Their sales thresholds are below the 2,000 gigawatt hours in that year.

COMMISSIONER CARTER: I guess the munis would be underneath that, as well.

MR. BALLINGER: Well, there is only the two munies here, OUC and JEA are above that threshold.

COMMISSIONER CARTER: Thank you.

MR. BALLINGER: Uh-huh.

What I was getting at here was goals must be revised every five years, and a little later on I am going to give you some time lines of when we need to start the goal-setting process and approximately how long it takes. FEECA also covers for energy conservation cost-recovery which you have on an annual basis.

This slide shows a general representation of what we have got as far as savings, and you'll see those dashed lines up at the top, and those are really representing what the load would be if the utility conservation programs were not in place. So you can see that the load would be much higher going forward without these components.

The back line, if you will, from 2005 back is actual

numbers. So conservation was probably included, in some years it may not have been, because the utilities had enough reserves to serve the load and may not have needed it. So that is why -- it doesn't look like we started conversation in 2005, we have been having it since 1980, it's just the way the data falls out. This graph has been around. It's a little confusing, and we have tried to explain this several times, and I thought I would do it one more time here. Maybe we will get it straight, or we are going to get rid of the graph. I think that's the way to do that.

Here is a brief summary of basically what we have achieved to date, and it is a pretty good story. Since 1980, the cumulative effect of utility DSM has been a little over 5,000 megawatts both summer and winter. That is several large power plants. The number on the right, the annual energy is a unique number. It is really the cumulative effect of every DSM program since 1980, but it's only the annual amount of energy in that one year. Because if you totaled all the energy it is kind of a -- you would have a huge number.

What this tells you is if you stop adding incremental DSM you would continue with that energy savings going forward. And to kind of put it in perspective, I did a quick calculation and that equates to about enough energy to serve 440,000 residential customers. So the cumulative effects of that have displaced the energy of approximately that many customers.

You will see on the next slide utility spending in DSM. It hit a peak in about '94/'96 of about $270 million a year. It has leveled out lately at about 220 or 230 a year, but it stayed pretty consistent. We saw a slight drop in the early 2000s, avoided costs actually were dropping. Natural gas prices were low, if you can remember that. And, henceforth, the amount of DSM slowed down.

CHAIRMAN EDGAR: Commissioner.

COMMISSIONER CARTER: I don't want to beat a dead horse to sleep, is there any way for us to see what the munis and the co-ops were doing? I mean, they do some DSM, as well, right? Is there any way for us to see that?

MR. BALLINGER: They are not required to report to us. The only time we would see be a municipal, let's say, like Tallahassee, for example, is if they came in for a need determination for a power plant, and then we are required to look at what conservation have you done to mitigate the need, and we would look then at what DSM they are doing.

COMMISSIONER CARTER: Madam Chair.

The reason I was asking is that this is a good story, but it's incomplete in the context of where we are looking at our investor-owns and the two municipal-owns that are in the context here, but there are a lot of co-ops and munies out there. So I just wanted to kind of see the complete picture of all of DSM efforts.

MR. BALLINGER: That's a good question, and I don't know -- we can request that data from them. Again, you're looking at covering the remaining 14 percent, roughly, of sales of the total picture.

COMMISSIONER CARTER: And that 14 percent is sparsely populated, rural, different areas like that, and there may be a different -- Madam Chair -- it may be a different flavor, but there may be also some unique characteristics of that as well as we go forward. I mean, going back to the 1,000 people a day coming to Florida, they have got to go someplace.

MR. BALLINGER: Uh-huh.

COMMISSIONER CARTER: And, Madam Chairman, maybe we could --

MR. BALLINGER: I see Ms. Hershel coming to the table, maybe she can help.

MS. HERSHEL: Everyone was looking at me, so I thought I would --

CHAIRMAN EDGAR: Come on up.

MS. HERSHEL: If you remember, Seminole did come in for a need determination this past year, so you do have their members' conservation programs in that docket. It should be available.

COMMISSIONER ARGENZIANO: Madam Chair.

CHAIRMAN EDGAR: Yes, Commissioner Argenziano.

COMMISSIONER ARGENZIANO: We keep bringing up the

1,000 people a day. That's been a number that has been around for awhile. And I understood that just a few months ago there was, I guess, a report or an indication that that 1,000 has slowed down. Actually there is a number exiting the state of Florida right now, and I wonder if you have that new information.

MR. BALLINGER: I haven't seen it yet. The last ten-year site plans that were filed in April of '07, this year, continue to show this type of growth. That information coming out probably will be reflected in the 2008. We may start seeing a trend. I agree with you, it can't go on forever.

COMMISSIONER ARGENZIANO: Well, there are a lot of contributing factors to that exiting, but -- thank you.

MR. BALLINGER: Did I answer your question, Commissioner?

COMMISSIONER CARTER: Yes.

MR. BALLINGER: That $230 million a year is just a rough estimate of what the charge is that is charged to residential ratepayers of the four IOUs for what they are expending on DSM. And you can see it is not a huge part of the total bill.

And this is really the final slide, and my real reason for being here this morning is to tell you a little bit about the goals process. And I kind of hate to say this, but I have been around for all three of these goals processes, and

that's kind of shocking. The first one was a nightmare, I will say that up front. It lasted, you can see, seven days of hearings. It was the first time we did this. It was a brutal very litigious affair. It drug on. It took 19 months, you can see, from start to finish. That was the proceeding where the Commission made the proclamation the first time of RIM versus TRC. That was really the focus of that whole process is what should we do.

The 2000 process, it took a little longer. We learned from the first one. We started doing some workshops earlier on. We figured maybe we could head this thing off at the pass. And sure enough we did. We got a stipulation of the parties and got goals approved, and it was a lot of work on the front end that did that one. Even though it took a little longer totally, it didn't have to go to a hearing, it got stipulated, and we moved forward.

The 2005 process we learned even more, and it took 11 months, but not only did we set goals, we also approved programs of the utilities at the same time. If you remember earlier, I said first the Commissioner sets goals, then the utilities propose programs. We did the whole nine yards in this one hearing in 11 months, so, we got efficient. I don't expect that's going to happen the next time we set goals, so we may be coming back into a cycle again.

Our next goals are slated to be reset again in 2010,

and staff is anticipating starting some workshop process again in 2008 to possibly look at getting a full inventory of what is out there, what is the technical potential of DSM. Have there been some new gadgets, some new types of measures, some new programs, new ideas.

That's what we did in 1995. We did a full inventory of technical potential regardless of cost-effectiveness test. We just said what can we do; how many megawatts can we save; how many megawatt hours? We anticipating a similar process again for the 2010 goal-setting process.

And that was my final slide. I will answer any questions you have, and I will be here the rest of today, as well.

CHAIRMAN EDGAR: Tom, can you -- and I realize this is very early and that many will be involved, but can you talk to us a little bit more about that inventory? How would we do that, and about how long, and would that be something that would be available early in the process, do you think?

MR. BALLINGER: That would probably be available early 2009 to get the process going. That is kind of your starting point. And then from there you start looking at, all right, of this how do I get the goals, how do I get the megawatt hours. So it slowly whittles down.

CHAIRMAN EDGAR: So how does our staff envision them going, that maybe the next step or successive step in that

process of them looking at the cost/benefit economic analysis? You said, and I agree with first the inventory separate from that to try to get it all out there and all on the table, and I realize that we are hopeful that there are new technologies and new ideas that are the potential for additional use in the state since perhaps the last time that you all went through this process, but that at some point we do need to do that cost/benefit analysis. How do you envision that generally?

MR. BALLINGER: What we did in '95 is we developed two portfolios, if you will, a RIM-based portfolio, Rate Impact Measure, and a TRC-based portfolio. Those are the two cost-effectiveness tests that people have at odds with. So you develop a megawatt and megawatt-hour potential under each cost-effectiveness scenario.

What the Commission found in '95 is that the increase in megawatt and megawatt hour savings under the TRC portfolio was negligible compared to the RIM. In other words, there was only a slight increase and that to raise rates of using the TRC value was not warranted at that time. And they chose, then, to use a RIM-based value to set the goals. So I envision that same type of process, laying the two side-by-side based on their screening analysis, and then seeing is it worth the impact of what you do.

CHAIRMAN EDGAR: And, of course, there will be lots of opportunity for public input and stakeholder input as we

work through all of that information at the time.

Commissioners, Tom will be available to us all day. Any other thoughts or questions for him right now?

MR. BALLINGER: And even if not after today, you know where I live, so --

CHAIRMAN EDGAR: Yes. (Laughter.)

Commissioner.

COMMISSIONER CARTER: I suppose I could wait until the other comment, but one of the things I had a question about DSM is in terms of getting public buy-in. This may or may not be down your power alley, and in the context of the effectiveness of DSM is the possibilities that should it be, one, mandatory in terms of customers participating, should it be voluntary, or should there be some kind of hybrid where it is part mandatory, part voluntary. Do you know what I'm saying to you? Because I think that from my discussion with both staff and others, and from listening to the presentations on this area, it seems that there is a tremendous potential, but for whatever reason the bottom line gets to the customer, and when the customer -- it is the customer's decision on whether or not they participate. And that may be an unfair question. It is just an observation in terms of getting there. I mean, do you understand what I'm --

MR. BALLINGER: I think so, and I think our current system is a hybrid of that, some voluntary, some mandatory.

For example, the mandatory is in the building code. If we raise the efficiency standards of houses or whatever they are, it's mandatory. If you go to build a house, it has got to meet certain specifications. You don't have a choice. The same with appliance efficiency standards. That's kind of a mandatory.

When you get to utility programs that are voluntary, the key there is to take the customer, give them a financial incentive to go above and beyond the minimum standards. For example, attic insulation in a house. An incentive is only provided if it goes above and beyond the current building code. So you want to let a market approach go above what the minimum standards are. So our current overall system is kind of a blend of mandatory and voluntary.

COMMISSIONER CARTER: Madam Chair.

Is there, in your opinion, and it may be unfair to ask you this, is that is there something, in essence, some low hanging fruit out there that we could use that would maybe get customers to take it to the next level to say, okay, well, the incentive to -- or is there a disincentive? Is the incentive significant enough to where they would want to add that extra layer of insulation, or to add a green -- voluntarily have a green building, per se, or different kind of construction?

Maybe have some prefab -- one of the things that I have read about is that in order to promote better efficiencies

in the construction process, they prefab certain sections of the house and all like that.

MR. BALLINGER: It's not an unfair question, first off. That is a perfectly fair question. I think there are some things. There has been debates about one way to get people to buy into it more is raise the price of electricity, and that will get people's minds in the mode of energy efficiency. And we are starting to see that now. As fuel prices have risen, there has been more energy audits requested of customers, things of this nature.

I think you will see later on in some presentations of saturation levels, it is about 50 percent of utility customers have requested energy audits. So people are pretty aware of it. They see it in the newspaper a lot and things of that nature. Definitely the education of consumers can help, and utilities are doing it, and they are doing it in schools, and things of this nature. So it's a cultural change that will come about. The biggest one being when the price of electricity goes up, people start recognizing it when they see their bill. They go, oh, my, what can I do to save.

The other part is if you start raising the incentives too much, under the cost-effectiveness test you have to understand that incentive is paid by all other customers. So is there a commensurate benefit to those other customers of doing that. And that's the RIM versus TRC kind of debate that

you will hear as we go through this process.

COMMISSIONER CARTER: My concern, and this is not -- I'm not debating you or disputing what you are saying. My concern is that if you raised the price of electricity, they are still using more.

MR. BALLINGER: They may or may not.

COMMISSIONER CARTER: So the perspective would be to not use more, you know.

COMMISSIONER ARGENZIANO: I can tell you that in the past several years, as I left -- was in the legislative process, and even now I went home for Thanksgiving and I heard from my two adjoining neighbors that they don't like their electric bills anymore. And I think customer demand is going to be what is going to promote not just incentives, incentives are great, but I think customer demand is really going to promote a development of more efficient homes and construction. Some of them even in Citrus County last week were unveiled, some new homes that had great energy efficiencies in them.

I think the people have realized that the cost of energy has gone up, and I think if it is there and available to them, and those people who are looking for new homes today are asking, you know, are actually looking into those builders who are promoting saying here is a more energy-efficient home for you. Because it gets to a point, I guess, where the customer says I can't afford electric anymore. And they are really -- I

think that will help go a great deal.

As he mentioned, I think that is really going to push the industry to give the public what they need. And I think that balance of incentives and the customer saying I would like to see a home that is more energy efficient is going to really propel that and move it a lot quicker. I hope so.

COMMISSIONER CARTER: I do, too. Madam Chair, I do, too. Because I think that if people were to realize -- and I think there was an article in the paper today about a house that was built green, is that if the story is told and people can see that not only will they save short-term, but over the life-cycle of the building they will save on that. So I think this is a very important workshop, and whatever we need to do get the word out, we really need to continue to do that.

COMMISSIONER ARGENZIANO: If I may.

I think what I have heard over the years and especially recently, even when it comes to our water cases that we go around and talk to people, there is only a certain amount they can conserve with the way things are right now. My neighbor, an older woman living next door alone, basically turns her water heater on once a week now. And there is no lawn sprinkling, there is none of that stuff, and I think her bill was still pretty high. No air conditioning, thank God, right now. So I think that is the tone out there.

Unless you are just super wealthy and you don't care

about just throwing away your money, I think most people out there are looking for, and taking advantage of some of our companies, you know, the energy efficiencies that the companies have been promoting, the ads on television or in their bills.

I have heard from a lot of people saying that, you know, they found out that they have this program, or whatever, and they are opting to go that way. So people are trying to save wherever they can, and I think it is looking pretty good. But there is only a certain amount you can conserve, and after that it takes the new designs of homes and different mechanisms. So, hopefully that is moving forward quicker than we think. I hope.

CHAIRMAN EDGAR: Commissioner Skop.

COMMISSIONER SKOP: Thank you, Madam Chair.

Just one quick question for Tom. With respect to demand-side management activities, is staff monitoring what utilities in other states may be doing with respect to time-of-use metering, or some DSM measures that may be quasi-voluntary related to time-of-use? In other words, I think PG&E was doing some sort of program getting towards that, but I don't know if you guys are following it.

MR. BALLINGER: Yes, we are. And you will hear from Mr. Masiello later this morning about some realtime pricing and how they are developing that. The new technologies of the smart meters, if you will, where it's priced as responsive

demand-side management.

COMMISSIONER SKOP: Thank you.

CHAIRMAN EDGAR: And, also, our first speaker this afternoon, I think, will probably delve into some of that type of thing and will be a good source for question and answer and discussion, as well.

Any other comments? Okay. Thank you, Tom. And I think that is a great lead in for our next speaker, Mark Futrell of our staff, and I know that he's going to speak to us about a variety of things, but, in particular, some of the tests that we have been discussing here these last few minutes, and that frequently come up in discussion of these items. And, again, I'm hopeful that we can have some discussion that can help us and help the staff know kind of where we want to go.

One of the things that -- there is so much going on in this state and across the country, and, of course, internationally, as well, on this issue, but one of the things I'm trying to think through is for this agency, what can we do. And with our current statutory authority, with, you know, statutory changes that may be considered, but what is our role, and what can we do, and what can we add to the discussion, as well. So I think that this next piece is an important part of that.

And with that, Mark, please.

MR. FUTRELL: Thank you, Chairman Edgar. And, good

morning, Commissioners. I'm Mark Futrell with the Commission staff.

I want to provide some comments to you this morning on the background and the need for and the development of the cost-effectiveness test used to analysis demand-side management programs. I also want to walk you through a description of the components of the test and compare and contrast the tests and the perspectives that they are intending to measure, the effects of DSM on different perspectives.

First, some background. Recognizing, as you well know, that utilities have a portfolio of options that they may serve load with. There's supply-side resources, generation, purchased power, a combination of the two, and also available to them are demand-side resources. There's energy efficiency programs where incentives are typically paid for the installation of higher efficiency equipment over what codes require and also to improve the building efficiency, such as insulation additions or window change-outs. Also, load management programs are offered by several of the utilities. This is where the utility pays an incentive to the customer to control the load of certain appliances in the home or business to help manage peak demand periods.

Recognize that each option that is chosen by the utility has cost implications for the ratepayers. Whether they be supply-side or demand-side, there are cost implications. In

analyzing supply-side resources, all the known costs associated with each potential option are identified and compiled and then the impact of these individual options are measured on the total system cost of the utility. This leads us into how do we analyze demand-side management programs, how do we judge the costs of these programs and their implications on the ratepayers.

Now, as Tom mentioned to you earlier, the Florida Energy Efficiency Conservation Act, or FEECA, which guides and gives the legislatures policy on conservation and how this Commission is to implement that, requires that the DSM programs that are offered by utilities and approved by this Commission must be cost-effective, but the statute does not define what that term is.

Now, beginning in the early 1980s, as utilities had begun doing demand-side management programs and offering information on energy savings through the '70s, and then in the late '70s or early '80s our policies across the state to recognize the utilities as the agent for delivering many of the demand-side management programs and opportunities to help customers with their bills, and also to control the growth of electric demand. So during this time there was an effort done by parties in this state as well as around the country to determine how do we look at demand-side management. How do we judge whether a program makes sense.

And it was recognized that in doing this you need to look at the programs from various perspectives. Those include the program participants. If you, for example, participate in a program you're going to be looking at it from what makes sense to you as an individual. Will you get, for the investment you have to make, get paid back and will your bill actually go down as a result of participating? There's a way to analyze the program from that perspective, the participant's perspective.

Also the nonparticipants have to be considered. Those that don't participate, but yet pay for the cost of the program. Are there benefits accruing to the nonparticipants as a result of the program? So there is a perspective there.

Also there is the perspective from all ratepayers as a whole to determine if it's economically efficient for all ratepayers to invest in this program. Are there benefits accruing to the ratepayers as a whole?

And, finally, the utility. Does it make sense for the utility to make this investment? Are there benefits that they will see as far as the deferral of capacity?

California did a lot of work in developing these tests, and the California standard practice manual is something that's cited in this area as kind of groundbreaking that established a common format for analyzing programs, compiling the costs and benefits, and setting a standard format for doing

these analysis.

Now, the Commission established rules in the early 1980s on analyzing programs. Our current rule is 25-17.008, which recognizes our manual on cost-effectiveness analysis, and that manual lays out all the data and the inputs to these tests in the format and how that information is to be presented to the Commission. The rule has a minimum filing requirement in that when a utility presents a program or some analysis of DSM to the Commission it must file the results of the three tests listed here, the participant test, the Rate Impact Measure test, or RIM, and the total resource cost test. That is what the rule requires. It doesn't specify which rule the Commission is to rely upon, it simply says if it has anything to do with conservation, give us the results of these tests and the Commission will consider the results of those three tests in its decision-making. It doesn't prejudge which test is to be used, it simply says give us this information and the Commission will decide which test to rely upon.

And when we're going through the tests, I want to give something that is maybe a little more real, an understandable example as we walk through and refer to some of these. Some of this stuff gets a little esoteric at times. Something that most utilities offer to their customers is a heat pump change-out program, and in most cases it is designed to remove strip heat, which is prevalent in a lot of older

homes in Florida, where there's not a lot of heating demand, so they put in strip heat that may kick on for those cold mornings during the winter. And the idea is to pull the strip heat out and put a more efficient heat pump in. The customer receives an incentive to put that equipment in to offset their upfront costs for making that installation. So we will use that in mind to walk through some of these benefits and costs.

The benefits of such a program would be the reduction of demand. In other words, compared to a strip heat installation, this high efficiency heat pump, again, that is higher than what the current code is. There is a current code of an efficiency level, and the idea for the utility program is to incent the installation of a heat pump that is at a higher efficiency to gain even more efficiency over the code. That's the purpose of the program, to go above code and to push the market towards higher efficiency.

So in installing this you are going to result in kilowatt reductions. In other words, especially at the time of peak, the heat pump is going to put less of a demand on the system than the strip heat would. So demand on the system will go down and that results in the deferral of capacity that the utility would otherwise have to build.

There is also an effect of a reduction in kilowatt hours where that translates into fuel cost savings. In other words, the total kilowatt hours required to run the heat pump

would be less than the strip heat. And that would result in reductions in the bill to the customer and also reduction overall fuel cost to the system and then that would be passed on to the other ratepayers.

Again, identifying here there is reduced bills to the participants, they are going to see their monthly bill go down as a result of this change-out, and they are also going to receive incentives from the utility. These are going to be paid for through the other customers, but it's going to help offset their upfront cost of making that installation of the high-efficiency heat pump.

Now, on the costs, there will be the heat pump itself that the participant will have to bear, there is also program costs that is associated with the utility implementing the program. There is administration, there is personnel to promote the program, to go out and help the customer with notifying them of the program, working them through what it requires to do the installation. Also marketing costs and any equipment costs the utility may have to put in.

Finally, the cost is reduced utility revenues as a result of the program. Because there is reduced kilowatt hour consumption that will translate into reduced revenues to the utility, and that is a cost identified.

Now, the first test I want to walk you through is the participant test. That one is fairly obvious. Especially if

you consider it from your own perspective, that is the idea of this test. Again, the perspective of the participating customer. What are costs, the benefits and the costs of the program, and does it make sense for a program to be offered. First, the benefits, again, are the reduction in customer bills as a result of putting in in this example this high-efficiency heat pump. It will result in a certain level of kilowatt hour reduction to their bills. There is also a benefit to the customer of the incentive paid by the utility that comes from all the other ratepayers. Those are the primary benefits that are calculated.

The costs are the out-of-pocket expenses. The cost in our example of the heat pump that the customer will have to bear, and also any maintenance costs that he or she will have to incur over the life of that particular installation.

In the test as approved by the manual and used by the utilities and used by utilities all across the country, all of these costs are usually analyzed over a 20 to 30-year period, and the costs are totalled up and then present valued back, and it's simply the benefit causes a ratio of the present value of the benefits compared to the costs.

And, again, the participant test is trying to answer the question will the customer be better off by participating in the program. And essentially in our example is investing in the heat pump, will it result in savings greater than the cost

of participating by making that installation. Now, this test does ignore -- because it's focused, again, on the perspective of the participants, it does ignore the impact on the utility, excuse me, the nonparticipants, and all ratepayers participating or not participating in the program.

And obviously if the program fails the participant test and it doesn't make sense for the participant to make that heat pump installation, the costs of that installation overwhelm the benefits of lower bills and the incentives in that instance, so it wouldn't make sense for the participant to do that program. However, if it passes the participant test, then a closer look is taken.

Sometimes a utility may use this as a screen. For example, if the payback is less than a two-year period, there are arguments out there that with such a short payback, it may make sense for the customer to go ahead and do this anyway. It is such a short time that, for example, there are so many things out there today that we see, compact fluorescents and other installations that are readily available, it makes sense for customers to do these things on their own and not have a program developed paid for by all ratepayers. So sometimes in some cases this screen is used to say that a program with such a low payback, short payback, the customer ought to be doing it anyway.

Now I'll move on to the Rate Impact Measure test, or

the RIM test. The costs here are the avoided supply costs, again, the capital and O&M. And before I get back into this, let me remind you that the perspective of the Rate Impact Measure test, the RIM, is the nonparticipating customers. Those customers that don't make that heat pump installation, but are paying for the incentives, the program costs to help that customer that is participating put that heat pump in. The perspective here is how does that program affect the costs and benefits from their perspective, those that don't participate.

So getting back into this, we look at the avoided supply costs resulting from the demand reduction in the program, the generation, transmission, distribution, the ability to defer these supply costs has a benefit. Also we look at the net fuel impact. If the program results in overall energy savings, there could very well be a fuel savings, and that will result in a benefit.

Now, looking on the cost side, there are program costs, again, with the implementation of the program, the equipment that may have to be purchased, administration of the program. Also the program incentives are a direct cost that's measured in this program. In other words, you're taking the dollars from the other ratepayers, transferring them to the participating customer, so that is recognized as a cost.

Finally, decreased revenues, or typically you may hear lost revenues are recognized as a cost in this test. And

that would recognize those reduced kilowatt hours translating into revenues that the utility does not realize as a result of the program. And, again, all of these costs and benefits are totalled up over a 20 to 25-year period, and then present valued back, and the ratio benefits to costs are compared to each other.

And again, on this test, the RIM test, the question we are trying to answer is to determine the impact of the program on utility revenues and rates, and what is the effect on the nonparticipating customer. It's important to remember that a program that passes RIM may cause rates to go up, but not as high as they otherwise would. Also, conversely, it's possible that if a program that passes RIM could cause rates to go down, then they will go down lower than they otherwise would. So it's a measure of the total impact on rates in either direction. If it passes RIM, it's going to go, it's going to help keep rates lower than they otherwise would or go even lower than they otherwise would.

Finally, the next point is that programs that pass RIM eliminate any DSM cross-subsidies as participants and nonparticipants benefit. The idea here being that especially in the idea of the incentive, other program costs, all ratepayers are funding those costs. And the RIM test assures that both participants and nonparticipants benefit, so that while there is a transfer from the nonparticipant to the

participants, and that's a cost to them, the nonparticipants, there's a benefit to them of the capacity deferral. In other words, the utility does not have to build power plants as they otherwise would. So there's a benefit to them and this test recognizes that and assures that it limits the cross-subsidies that may occur.

Finally, programs with relatively higher kilowatt-hour reductions will result in higher revenue loss. That's a given. And the impact of that is that it reduces the potential for a program to be cost-effective under RIM. There is also the effect of the program incentives are recognized as a cost in the RIM test, and those costs have an effect, as well.

I'd like to move you on to the Total Resource Cost Test, or TRC. You'll notice here that the benefits of the TRC test are fairly identical to RIM. The view of the TRC test is of all utility ratepayers is the viewpoint we are taking with them, ratepayers as a whole, and we are not differentiating between participants and nonparticipants. We are looking at the rate -- at all ratepayers as a whole. So you will see the benefits are identical in the RIM test. There is the avoided supply costs and any net fuel impacts.

The difference, as you will see here, is the program costs are included as well as the participants' costs, their out-of-pocket expenses. What's excluded is the revenue losses

and the incentives. Those are viewed as a transfer within from one group to another, from the nonparticipants to the participants. That's seen as a transfer. So when looking at it from all ratepayers, it is just a transfer of money within that group. There is no net cost to making that transfer, so it is not recognized as a cost in the TRC test. Because the money is simply changing hands, so that's not recognized as a cost when you are looking at the overall impact on all ratepayers. That's an important point, and it's an important distinction between the two tests.

Again, the TRC test measures the overall efficiency of the program from the perspective of all ratepayers in society. The measures of the net costs are based on the total program costs including, as you saw, the participants and the utility's costs. And, again, as I mentioned, the incentives and the revenue losses are not included. They are treated as transfer payments. And programs that have higher kilowatt hour reductions are more likely to be cost-effective under TRC compared to under the RIM test.

Now, to make this a little more obvious and to restate some of the things I mentioned earlier, the RIM and TRC calculate benefits identically. However, the treatment of costs differ greatly. And this kind of lays out visually for you to see that the benefits are pretty much identical, the avoided supply costs. However, the costs that are identified

and evaluated differ greatly as incentives and the lost revenues are not included in the TRC test.

Now, an example -- we have heard a lot of talk about programs that may fail RIM, but pass TRC. We have heard a lot of talk of that, are there programs out there. I do have an example to talk to you a little bit about from the last goals process that Tom described back in 2004/2005. There are a few programs that were identified in that exercise that failed the RIM test but passed TRC. And an example is a residential freezer program that would change out a low efficiency older freezer with a higher efficiency freezer. And the results of that showed that it barely failed RIM, but it passed TRC.

And a lot of the causes of that are associated with the revenue losses. That freezer is going to be running 24/7, all day long, and result in a lot of kilowatt hour reduction. That will transfer, again, into higher revenue losses. However, it's going to have a -- because of the energy savings, it shows up as being cost-effective under TRC because there is significant overall savings of the program, both demand and energy. However, because of the higher reduction in energy needs, it fails RIM. So that's an example of a type of program that is out there that would pass RIM, but fail TRC.

CHAIRMAN EDGAR: Does it take into account that many of the less efficient freezers would be put in the garage and continue running?

MR. FUTRELL: Correct. And they are typically a lot older, right.

I will just summarize for you. The investor-owned utilities must file pursuant to our rule on the three tests, the participant, the TRC, and the RIM. The forums where these tests are filed are typically in the DSM goal-setting process, the time described. Also when we look at the overall plans and the programs, during program modifications which the Commission has seen quite a bit of the last couple of years, costs and benefits for programs have changed quite a bit because of changing fuel costs and avoided costs have changed, and so we have seen a lot of modifications. That's a forum where the tests are seen. And also as part of our ongoing monitoring of cost-effectiveness. The staff typically requests updated cost-effectiveness tests just as part of its overall cost-recovery clause efforts to make sure that what's out there is cost-effective.

Now, as Tom mentioned back in '94 or '95 in the first goal setting, the Commission made an explicit determination in setting those goals about relying on RIM or TRC. Historically, the Commission's focus has been on ensuring that electric service to customers is reliable and at the lowest possible cost. And, therefore, the Commission historically has relied on the RIM test to ensure that programs approved for cost-recovery benefit all customers.

That concludes my remarks. I'll certainly entertain any questions that I could help you with.

CHAIRMAN EDGAR: Commissioner McMurrian.

COMMISSIONER McMURRIAN: Thank you.

Mr. Futrell, I think you hit on the point that I wanted to ask more about, but I will go ahead and sort of mention it and see if you have got anything to add. But I think you pointed out how we do allow for some items that don't pass RIM, but pass TRC to be included. And I think in one of the previous briefings I had with you and Bob you mentioned that one of the goals orders that it specifically laid that out. I think we are often viewed as a must-pass-RIM state, but it seems like we have some exceptions to that written in our orders and maybe you can elaborate on that for us.

MR. FUTRELL: Sure. Thank you.

In the '95 goal setting process where we identified that we were relying on the set goals based on those programs and measures that passed the RIM test, we included in the order that utilities may come in and request approval for programs that fail RIM but pass TRC, and that we would consider that. And also encourage the use of incentives and entertain the idea of an incentive to encourage utilities to pursue these kinds of programs. Also identified in that order was the idea of recovery of lost revenues, that we were open to considering that, as well. So the Commission put out there in the order

that while they did rely on RIM in setting goals, they recognized that there may be opportunities and put some incentives out there, and put the word out to the utilities that we were open to entertaining other ideas.

CHAIRMAN EDGAR: Commissioners, any other thoughts or questions for Mark at this time? Thank you.

MR. FUTRELL: Thank you very much, Commissioners.

CHAIRMAN EDGAR: That was very, very helpful.

And our next speaker from Progress Energy is John Masiello, who is going to talk to us, of course, about some of the programs at Progress, but also I think cover some of the programs that the other utilities have been doing, as well. And also talk to us a little bit about what we call for short, lessons learned, which I know will be very helpful as we move into the next steps of our consideration. So, John, always a pleasure.

MR. MASIELLO: Good morning. Thank you. My name is John Masiello. I'm the Director of Demand-side Management and Alternative Energy Strategies at Progress Energy. And I want to thank the Chairman and the Commission for this opportunity to represent our investor-owned utilities this morning. I also want to thank my esteemed colleagues, Dennis Brandt from FPL who is represented by Leo Herrera today, John Floyd, and Howard Bryant.

We're going to review our programs and measures.

What we have done recently in '06/'07 program expansion, our demand-side management research and development activities, our innovative programs that we are currently involved in. We will get into awareness and education, and then we will get into finally on some lessons learned.

As you heard Tom say, we have been engaged in demand-side management since the 1980s. In fact, as many of the states throughout the country got out of demand-side management in the '90s, Florida continued on and continued on aggressively. It's an important part of our integrated resource planning to meet our growing demand for electricity going forward. In fact, if you look at it, Florida ranks second amongst states in demand response and energy efficiency.

We have collectively 19 programs and over 100 opportunities, 110 opportunities for rebates. It all starts with an energy audit. An energy audit is where we meet with our customers in a variety of forums from on-site, on-line, phone assisted, mail, paid. You name it, we have it.

The goal for the audit is to educate and motivate our customers to implement conservation measures. As you heard Tom say earlier, as well, we have about a 48 percent saturation on audits already. It also helps eliminate free riders. We know there are some customers that are going to do these measures regardless of or need for education, and as a result there is no need to provide them an incentive to do something they are

already going to do. So one of the benefits of the audit is we identify the fact that a measure might have already been installed.

But what it also does is it helps the customer with that mystery box. I can tell you on a daily basis we get calls from our customers. They look to us as that energy resource, and they have gotten a call for somebody who has invented some new thing that if you put on their lights you can save 50 percent of your energy bill. As you know, that's not possible.

But, fortunately, we are in a position to get out there and help them. We are able to go out there and show them exactly what it is that they can do, what it would cost and what it would save. And we do that for all measures. I think it is critical to note that it is not just those measures that we have incentives for; it's for lighting, it's for the dishwasher, it's for the washing machine, it's for everything in the home. And then, as well, we have incentives for programs, for measures, as well.

In addition to that, when we make a recommendation and a measure is installed, we go out and do final inspections. We do 10 percent inspections for quality control. So we want to make certain our customers are, in fact, getting what they are paying for, and that the job is, in fact, done properly.

Demand-side management takes two forms, and we know

you know this already. It can go down the path of demand response where we control certain peak appliances at peak time, or we can go down the path of energy efficiency, that's the rebate or incentives on attic insulation, duct repair, and all those good things.

This is a complement of the measures that we currently have in residential. And if you look at them, I think you will find they're fairly extensive. In fact, they are as innovative as they get today. If you look at some of these here, I'll highlight -- obviously you are familiar with high-efficiency heat pumps, but it also includes geothermal heat pumps. Also HVAC commissioning. I think we hear later on from somebody talking about how that is an important measure. Well, Florida already has HVAC commissioning. I think we'll hear later on about ECM fan motors. We have it. Spray-in wall insulation, replacement windows. You really cover the gamut of measures and we have incentives for all of them.

We might hear later on about getting into ENERGY STAR® new construction. We have ENERGY STAR® new construction. In fact, if our builders were to participate in our new construction programs -- now, some have different versions of these, so they all vary a bit amongst our utilities, but we do have them. And, in fact, a contractor participating in an ENERGY STAR® program can receive incentives of over $2,000. And also the process that he needs to go through in terms of

certifying that home is also completely handled by the utility, as well.

For low income families we have a variety of programs where we work with weatherization agencies. We do them on our own, and in some cases we even have programs where we go into the neighborhoods and we canvas homes and go door-to-door installing measures at no cost to the customers.

Commercial, the same programs, but here, again, programs that key in on things that are specific to commercial. Thermal energy storage, just to highlight a few, ECM fans, rooftop unit recommissioning, a great benefit. Package AC steam cleaning. You know, that little air conditioning unit you see in that motel room or hotel room, that coil under there gets extremely dirty, gets full of mold. We developed a program where we actually will steam clean that for that package thermal unit and it resulted in a very good savings and very beneficial to the property managers.

New construction, the same activity as well in new construction. And in addition to that --

CHAIRMAN EDGAR: Commissioner Carter has a question.

COMMISSIONER CARTER: Mr. Masiello, good to see you.

MR. MASIELLO: Good to see you, too.

COMMISSIONER CARTER: On the steam cleaning, you do that -- does the utility do it at their expense or as a service to the motel/hotel?

MR. MASIELLO: It's a service where we pay a sizable portion of the cost to do it, so it is an incentive-based measure.

COMMISSIONER CARTER: The reason I was asking that is that obviously tourism is a mega industry here in Florida, and that seemed like a good way to use it in a commercial establishment like that.

MR. MASIELLO: Good point. In fact, interestingly enough, this was something that was just piloted last year. As a result of that pilot we saw a significant benefit, and as a result it moved on to be in a program. So that's typically the process, and you will see that process throughout.

And just one last point. In commercial, there is innovation incentive. An innovation incentive is that catch-all. It's the ability to develop a customized program for a business where we might not have a measure because they do something specific. And if we can develop a way to make that specific measure more cost efficient or more efficient to operate, then we will actually have incentives and help them to do that.

In our direct load control programs we have from residential load management, we have peak pricing programs in place already with programmable thermostats. And many of those peak pricing programs are also saving energy. They are just not load reduction, they are saving energy. And of late, we

also have integrated solar with our load management program. As we recently heard about the builder in Citrus County, that builder has installed solar water heating on all of his homes now in Citrus County, so we are very anxious and very proud for that to go along.

In commercial, similar activities from load management to standby generation, interruptible, curtailable, realtime pricing. So if you look at the end uses in a home, 60 percent of the usage, that's the heating, cooling, and hot water, we have 70 rebates for, so there is something for everybody to get that energy bill down. And for those that we don't have rebates for, we certainly recommend in the audit. That was that example I gave you earlier where we would instruct customers to make certain that they are cleaning that coil under that refrigerator, which unfortunately doesn't get done all that often. That they need to make sure they do a full load of clothes. We leave them with a refrigerator thermometer so that they can turn around and actually set that refrigerator at the right temperature. There is a bunch of ways that we impact them. Obviously, we don't count those benefits in our total goals, but those are things that we know are getting done.

So getting back earlier where we were talking about how Florida continued with DSM, I think this is a good example that we are showing you just that. This red line sort of the

represents the nation, and you can see the nation really dropped down in the '98 time frame or so. But if you look at Florida represented in that green curve, Florida maintained throughout all of those years. In fact, the U.S. dropped by 53 percent in 2003, where in both 1998 and 2003, Florida was 19 percent of the total nationwide. So Florida never dropped out of demand-side management, many states did. Florida kept going, and that is a testimony to this Commission for pursuing these demand-side management programs.

So, what do we do? In 2004, we filed, as you heard Tom say, we filed our goals docket and we received approval of 944 megawatts. That was the collected effort of all the investor-owned utilities. And then unprecedented in 2006 and '07, utilities came back. They came back because there was increases in generation, increases in generation costs to build. There was increases in fuel, there were increases in transmission, associated transmission, and as a result we went back in, took a look at potential measures, ran our analysis, and came up with another 803 megawatts on top of it. That's almost a doubling of what we had in '04. That is unprecedented, that's a major increase.

In fact, if you would look at that, through 2014 which would be the end of that plan, that's a total of 1,747 megawatts. That's 174 megawatts a year. I don't know many other places anywhere in the country that's doing that

much in a year.

Likewise, commercial. The same story, 945 megawatts was filed in 2004, and then unprecedented in the '06/'07 time frame, another 878 megawatts were added to that. That's a 93 percent increase. Looking at that annually, that is over 180 megawatts a year, summer megawatts from our programs. And then in terms of energy, our plan had over one million megawatt hours and that was increased by another 527,000 megawatt hours, a 48 percent increase.

On saturation, you probably heard this a couple of times now, but we have hit 48 percent of our population with an energy audit. Our load management customers, that's that load control program we talk about, we have about a 16 percent penetration with over 1.1 million customers. We have provided building envelope rebates to 1.4 million customers, and our HVAC rebates at 1.3. And I would note that these numbers are extremely conservative because, unfortunately, we have data in some cases that only go back to '93 or '95, so we know these numbers are much greater.

CHAIRMAN EDGAR: Commissioner Carter.

COMMISSIONER CARTER: Thank you, Madam Chairman.

On the 48 percent of customers, is that a constant or is that increasing any? That's a great number, by the way. I don't want to miscategorize it or anything like that. It's a great number. But have we reached full saturation, or

is there --

MR. MASIELLO: Are you asking on the energy audit?

COMMISSIONER CARTER: Yes.

MR. MASIELLO: No. I would tell you no, we haven't, and I'm going to show you later on some of the unique things we are doing. In fact, of late, to help motivate our customers to request this audit, because we know how important it is, we now provide them with a little energy kit for requesting the audit. And in that kit they get a couple of compact fluorescent lights, they get some weatherization material, they get snug-plugs for the outlets, a variety of things to keep that motivation, to keep that request. It's a marketing tool that we have to build that interest. And, no, I would say we haven't hit penetration there.

COMMISSIONER CARTER: Thank you.

MR. MASIELLO: If you look at where are we with -- what is the percent of customers Florida Utilities have, and Florida has 6.5 percent of the customers throughout the country, but we save 17 percent of the total megawatts through our energy efficiency and direct load control programs. I mean, it sounds like a lot, but to truly understand the impact of that you would have to look at then what is the average kW for our customers versus the rest of the nation. And the nation is at 7, and Florida is at 5.7. So we have something lower than the average, but yet we have saved a significant

amount of the nation's megawatts. And we do it very cost-effectively.

If you look at the chart on the right, it's costing Florida about $9.50 to get a megawatt hour of energy efficiency, where it's costing the nation $21.03 to get the energy efficiency. So I think it's critical not to judge how much is being spent on energy efficiency, but it is more important to look at what are you accomplishing with energy efficiency. If we were to spend at the rate the rest of the nation is to achieve what we achieved in 2006, it would have cost our customers another $293 million more to get the same thing. So we have been getting more bang for our bunk in our conservation programs.

Yes.

COMMISSIONER ARGENZIANO: Back to the slide before, just a question. I noticed that 25 percent of the customers who act on the audit do not submit the paperwork for the rebates. Now, either it is horrendous paperwork, or the rebates are so small, or the customer just doesn't really care. And I was wondering what you found, why that is.

MR. MASIELLO: That is such a good point. And I have been wanting to take a look at, you know, like the Home Depots of the world and the rest of these retailers, because they tell me that number is extremely high, and they are significant rebates. People just don't bother, unfortunately, for some

reason. People in some cases don't fill out the rebates. In fact, I would tell you that merchandisers actually count on it in some cases when they provide rebates. They understand there is going to be a fair percentage of them that don't fill them out and go forward with them.

CHAIRMAN EDGAR: That doesn't answer kind of the question in the question, perhaps, about how big is the paperwork?

MR. MASIELLO: Well, I think you will see later on in our slides that we talk about it's important to keep it simple. And I can tell you that we have done quite a bit to keep the paperwork simple. In this example, I would have to tell you it is my opinion it's not the paperwork that stops them, it's just complacency. Because we recognize we have to keep it simple to get the participation. There wouldn't be any value in it for us to go out and do an audit, to do all of this work, and then not have them fill out the paperwork and do the job. It's just the nature of customers.

In terms of research, all four investor-owned utilities have a variety of things that are going on and they continue to go on. And, quite frankly, I can spend the rest of the morning on just these. And I won't bore you with them, but I can tell you there is so much. This is just an example from TECO. TECO has got a capstone microturbine that is actually running on landfill gas. It's one of the first of its kind

around. They're doing work with PV to actually have a storm shelter that has got a battery backup system so that if there is a need for residents to go to the storm shelter there is the potential to have some backup from PV.

And it goes on to membrane energy recovery ventilation systems. The ability to extract some of that energy when you are exhausting and putting it back into the air so you are not losing it all from exhaust using membrane technology from the heat pump industry -- I'm sorry, from the fuel cell industry -- to a variety of desiccant-type moisture removal, thermal energy storage.

Gulf has done a great job with geothermal. There is so much that is going on and so beneficial in geothermal. Especially in their climate where outdoor condensing units can really take a beating from that salt area. And geothermal units actually don't require an outdoor unit, it's all contained inside. To work they are doing with Eglin, work that they are doing with semi-conditioned attic, where you actually put the insulation on the roof and actually make the roof or that attic a semi-conditioned space. Very interesting. It has been proven to show that there is good energy savings there.

Progress Energy. Now this one you are going to have to stop me on, but we have got a bunch of things going on from hydrogen fueling stations to hydrogen vehicles. We are just getting into plug-in hybrid vehicles, and the key on this one

is we are going to be looking at it as a DSM program because these vehicles have batteries in them. These extended batteries can be used to plug into the grid during peak time and we can discharge the battery during peak and charge the battery during off-peak. So you can imagine we can all be driving around some little part of the distribution system at some point.

Small scale wind. We're looking at a small scale wind project, recognizing that perhaps the large scale wind might not be as cost-effective. We're going to be trying a small scale wind project where we hope to put less than 10 kW systems scattered throughout our service territory to look at its potential. And then the list goes on. Vanadium Redox Battery using solar PV. We recognize that solar doesn't always shine when we need it. It is not there in that winter morning, especially when Progress peaks. But if I can somehow or another store that energy, Vanadium Redox Battery, rapid charge, rapid discharge holds some potential for us to do that. We are going to be looking at that. And then there is a series of more.

FPL has a bunch of things going on, as well, and obviously these are the things that go on to become programs. The SmartCool HVAC/Refrigeration. And I thought through this, and I said what is the best way to describe it? And to me the best way to describe this is sort of like it's not getting all

of your AC systems to sing together. If you are in a plant and they are all singing together, it creates a greater peak. If you can get them to maybe not sing together, meaning not run together, perhaps you can spread that peak out a little bit and save some peak demand. An interesting study. It would be interesting to see how that works out.

The residential thermostat load control pilots, business water heating, also working on residential solar water heating and PV. Several of us are looking at the potential of making a DSM program, and we have one now using our load management, but also perhaps a program just solely with solar water heating. So that's coming on-line, as well. And then Smart Network. We are all looking at Smart Network. Smart Network is where we have these intelligent grids, and with the intelligent grid we are able to communicate back and forth to our customers. And we can bring realtime pricing to them. We can have the customer have a home area network in their home, and that home area network provides an interface, and that interface is where the customer can go in and communicate with their appliances and automate their appliances' response to that price signal. So it's out-of-sight/out-of-mind, what you will need to be, but yet they will be able to lower their energy bill and reduce peak demand.

At some point those appliances will have smart chips in them, and we will be able to communicate with them via an IP

address. That's the next generation, and that's what we are all looking at now.

Innovative programs. Those are just research. These are some programs. Some of what I have talked about is already in play. The GoodCents program from Gulf does just that. You have an interactive energy management system where you have the customer's ability to automate their appliances' response to that price signal. You can see the numbers that they have already. That program is also saving energy. As well as their geothermal work, geothermal heating and cooling, which has done very well and it has been very successful.

TECO has now the thermostat program where they have a smart thermostat and a customer can go in and set up that thermostat so it responds to a price signal and automate control on certain appliances. And as you can see, they are getting some good savings there, not only in demand, but also in energy. And they just launched a Commercial Demand Response Program. There is sort of a niche market in commercial where there is a potential to help a certain commercial segment reduce their peak during our peak time, and we can do that through automated control, through energy management systems, raising set points on cooling and dimming the lights during certain periods of time.

Progress had its Neighborhood Energy Saver recently. That's the one I told you earlier where we can go into the

neighborhoods and actually install conservation measures at no cost. As well as our renewable energy saver program, we are proud of that because we have been able to integrate it with DSM. We integrated it with our load management program. Customers want to do it. But, unfortunately, it is difficult to spend the money. What this program does is it gives them that money up front that they would normally be receiving as an incentive for being in our program. So it's just changing the way they get their incentive, and it gives them $450 up front so they can help purchase that renewable solar thermal system. Couple that with a state incentive of 500 and federal tax credits of almost $2,000, it becomes attractive.

And some additional innovative programs from FPL. FPL is working on a Residential Thermostat Load Control Pilot, similar to what we heard from both Gulf and TECO. And also a Business Custom Incentive Program, and this is very interesting as to the number of innovative measures that they have been able to fund as a result of this program. Stuff that we don't have listed here, but it's quite unique as to the potential and what they can do under this program.

So awareness and education. We have, over the years, developed perhaps the most efficient approach to getting in front of our customers; from bill inserts that we actually stick in that energy bill, which is not always the best place, to direct mail, to home and business expos. You know, I have

to tell you, it's getting tiring. On weekends I'm going to these expos to go see my folks, and all the utilities are in the same position. Our folks are out their every evening, every weekend selling conservation. If you have been to a home expo, I would be surprised if you haven't seen us. If you have been to a community event, I would be very surprised if you haven't seen them. They are right in there with the window contractors, they are in there with the roofing contractors, they are in there with the person who's trying to sell the hot tub. They are out there doing their job.

We also have workshops. Workshops for people who are looking to buy homes, which we call it Buy Green, and workshops for builders so that they can sell green. We call that our Build Green workshops. We hope to push and pull that market. And student education, this is a favorite of mine because I can talk about this one all day, but there is so much going on from the play that we do at schools, to the curriculum that is being done, which will help FCAT scores. And that curriculum also will include the students to eventually go home and do an energy audit with their parents. And in some cases some of the utilities are actually having the students do it on-line, or on the telephone, so that they can get it done one way or the other, but it is really making a change. To our SunSmart school program --

CHAIRMAN EDGAR: Commissioner Carter.

COMMISSIONER CARTER: I just wanted to ask you how is that going with the students? I know that years ago our daughters came home with the six-pack plastics and saying, oh, daddy is going to kill the birds and all. So we started recycling and things like that. So how is that going with the kids going home with their parents on the energy audits and all?

MR. MASIELLO: I tell you it has been very effective. To see the kind of change that it is making, because this is going to require a cultural change, and if you are going to do it you need do it through the students, because the students are the ones that carry that message home. And what we are seeing is just fascinating, it is absolutely fascinating. We would invite you to come down and see this. We have a summit coming up on December 6th, the YES. It's called the Youth Energy Summit, where we are working with several schools, the University of Central Florida and Florida Solar Energy Center. And that is where the students will come together with their activities and what they have done over the last several months. And you will be absolutely fascinated to see what is being done. It's amazing.

To the SunSmart School Program where over 28 schools have been done by invested -- through the utilities throughout their service territories. And as you know, the SunSmart School provides curriculum where students can go on-line and

see the performance of the PV system. The school gets the energy benefit, the students get the educational benefit, and they can do mathematical computations on its cost-effectiveness and efficiency.

To achieve these aggressive goals we had we have to come up with aggressive campaigns, and like the GEICO, or is it the gecko? The gecko. Like the gecko is to GEICO, you have to break through the clutter. Our customers receive over 30,000 messages a day, and somehow you have got to get through that. We came out with the fellow you see in the left-hand corner, that's our "Save the Watts" guy. He has an interesting tag on, "It's your wallet. It's your world." That tag line was developed from our research. We recognize customers will tell us, yes, you know, we're interested about the environment. Truly they are, and we need to respond to that. But they also want to know what is in it for them. What am I going to save. Hence, the "It's your wallet. It's your world."

So far -- the campaign was designed to reach 95 percent of our targeted population 35 times in four months. So you have got to keep it out there. You have got to keep it in front of them. It's costly, unfortunately, but it's the only way you can do it. And if you would look at that, you can see the results have already demonstrated that we have increase in web sites of 450 percent, a 76 percent net increase in on-line audits, and our EnergyWise installs have gone up to

193 percent. So we need to be aggressive, we need to change the culture of our customer to start implementing these measures.

Next I have some audio and video to show you and also some of the collateral material. The collateral material that we use, what you are going to see is just a fraction of it, but this is so important that we design it specifically for these programs to educate. And here we go. And, again, it's just a fraction of what's out there.

(Video shown.)

MR. MASIELLO: And that is just an example. Obviously there's many, many more. But the Save the Watts campaign recently was presented nationwide on Shotwell (phonetic) as an example, and, in fact, won an award and is example for other utilities to learn from. And it was quite successful, and we continue with that effort.

CHAIRMAN EDGAR: Commissioner Argenziano.

COMMISSIONER ARGENZIANO: I love the Save the Watts guy, but he can't walk, can he?

MR. MASIELLO: He walks kind of like a penguin, and you'll see him walking around soon, because we have got one coming up that is going to go to our various events.

COMMISSIONER ARGENZIANO: Then you guys have got to give him some flexibility in that suit.

MR. MASIELLO: There will be a little bit. But

hopefully you will remember him, and that's the point, to keep it top of mind.

And lessons learned. So what didn't work over the years? Increased incentives don't necessarily guarantee an increase in participation. We have at times increased incentives to see if we could stimulate participation, and our finding is that for the most part the incentive increase would have to be significant to make a change.

Goal setting must be done keeping in mind the market potential and not a top-down approach. It is so important that as we set goals that we know exactly what the potential is, what the customer market is like before we begin our goal process. Keeping it simple. I think we said that earlier, was the question because we didn't -- maybe there were too many hoops there. And we recognized that, and that can only come from experience. And having the experience these utilities have had, I can tell you we know you need to keep it simple if you are going to get participation.

Advertising. One size does not fit all. Commercial customers, you don't send them a bill stuffer, you don't send them a direct mail piece. You need a one-on-one. You need to be with their vendors. You need to be at their trade shows. A very different market. A very different segment and the way we deal with that segment.

Gateway Communications. The point on this one is

back in '98 we piloted Gateway Communications two-way pilot using time-of-use. Unfortunately, it failed. It failed because the technology wasn't there. And that's why it is so critical to make certain that the technology is truly there and it's capable before you go forward. Because if the technology isn't there, unfortunately we can do more to hurt something than to help.

And residential paid audits. We all offer residential paid audits, and interesting enough, customers don't want to pay for an audit. Probably because we have it free, as well; but the reality is the paid audit goes a step above, it gets much more detailed, but yet it is not something they look to do.

COMMISSIONER ARGENZIANO: What's the cost of the paid audit?

MR. MASIELLO: We have versions of it, but one is called an energy rating, and that rating can go upward to over $200.

COMMISSIONER ARGENZIANO: Okay.

MR. MASIELLO: And then load control programs can grow too large where they become a great percent of that reserve margin. And if they grow too large, unfortunately you use it more frequently. And when you use it more frequently, then customers want off the program. So it's important that you have the right balance. And we believe there is a balance,

but you need to watch as to growing that too far and affecting that balance.

And then impacts on building codes. This is where Tom had mentioned earlier that, you know, there are some things that are mandated. This is an example of a mandate. SEER 10 was implemented in the early '90s, that's the energy efficiency of an air conditioning system, and that stood for several years. As you can see, starting in '93 or so we started plotting it in terms of number of customers that took advantage of incentives to put a more efficient unit in over the 10. As you can see, that number constantly grew.

But then in 2006, that number, that efficiency rating was changed to a 13 SEER. And as a result now we also had to raise our baseline so that we don't incent unless it is over 13, so a 14 or 15 SEER. And what we have seen is a 50 percent drop in that activity. So, truly, coaching has had big impacts on our ability to implement our goals.

And then what worked well. Our duct sealing program, our duct seal. We created this industry in Florida. And because of it our customers are benefitting, and because of it a good part of the nation has followed. Duct leakage accounts for about a third of the energy lost in our customer's home, and it's an invisible leak. If it was a water leak you would fix it immediately. You would have stains all over the place, but it is sizable, and it's a tremendous energy savings. We

not only developed the proper methods of sealing, but we also trained contractors with specialized equipment to find those leaks.

Our load control program. We have 1.2 million customers on that. We save 16 percent of the total U.S. peak. We are at somewhere around 8.9 percent, I think it is, of the total load overall. California is somewhere around 7.7 percent. Florida placed two utilities in the top ten of the nation in megawatts of energy efficiency and demand response. We have developed multiple channels, and those channels have been extremely beneficial to us. Our account managers, our representatives work with the customers, we work with participating contracts. It was good, when I mentioned about going to home shows, to see contractors selling our programs, as well. And that's the kind of activity that we want to make that grow.

And, fortunately, we are on track to achieve the 5,332 summer megawatts and 5,655 winter megawatts Tom mentioned in his presentation. And that's roughly equivalent of 14 400-megawatt power plants. So it's a substantial effort.

And that's all I have.

CHAIRMAN EDGAR: Thank you. Let's see if we have a couple of questions. Before we do, I have to give a quick plug that I think we kind of did for the Green Lodging Program that DEP supervises, which I know is a wonderful energy saving

program, as well. And I think every one of us probably have participated in some of the activities that are going on at schools across the state, and that they are just so wonderful, and so much fun, and also so rewarding. And, unfortunately, on one of the events that you suggested we have a Commission conflict, we have a consumer meeting scheduled for that day, but I know that sounds like a wonderful event, as well.

MR. MASIELLO: Sorry you couldn't make it.

CHAIRMAN EDGAR: Commissioners, questions?

Commissioner Carter.

COMMISSIONER CARTER: Thank you. I just wanted to commend Florida Utilities for their outstanding work. I really wish somehow or another there was some kind of forum where you guys could do some best practices and show with your colleagues around the country, because if we are saving -- the significance of the entire nation that Florida is contributing to, I mean, we have got some good things going on here, and maybe, you know, the rest of the nation should maybe take an interest in what we are doing here.

The other thing is that it's a great job, and, of course, we don't want to rest on our laurels. We want to put our pedal to the metal and take it to another level, so to speak. So I do appreciate this, and I think that the -- I may have to check into this duct-and-seal thing myself. You know, I didn't realize that --

MR. MASIELLO: We'll sign you up before we go.

COMMISSIONER CARTER: But I did want to say that, Madam Chairman, when we have got something going good, we should commend our companies when they go the extra mile. But also, too, we may want to share these best practices with our colleagues around the country. But, additionally, in addition to doing a good job, I want us to continue to do a good job and take it to another level.

Thank you.

CHAIRMAN EDGAR: Commissioners, any questions about the programs you have heard about or the lessons learned, which was very helpful? Okay. Thank you so much.

MR. MASIELLO: Thank you.

CHAIRMAN EDGAR: And our next speaker, Doctor Paul Sotkiewicz, with PURC at the University of Florida. Commissioners, I know I have been hearing a lot, I'm sure each of us have about the possibilities with revenue decoupling. Not a new idea, but certainly an idea that is getting probably some renewed attention. And so Paul is going to kind of walk us through that and some related items.

Thank you, Paul.

MR. SOTKIEWICZ: Thank you for that generous introduction, Madam Chair. And, Commissioners, thank you for the invitation to come and speak to you today.

As was just mentioned, I want to talk about revenue

decoupling, and I really want to talk more about implementation measures and thinking outside the box a little bit with different ways of thinking about revenue decoupling and what the consequences may be for that. But what I want to do to begin with is to kind of step back and to think about how we set rates for both electric utilities and/or natural gas utilities, as well, and thinking about why we set rates the way we do.

And then get into sort of -- and I don't mean to belabor the point, but the reasons why we are engaging in energy efficiency and demand-side management programs very quickly, just to set the stage to think about the interaction between these types of programs and the implication of using volumetric charges to recover costs for the utilities in general here in the state of Florida.

And then following that I will get into defining what revenue decoupling is and is not. I think there is a lot of misconceptions as to what revenue decoupling actually is and what it is not, and what it includes, and then spend the rest of my presentation talking about implementation issues.

Two different ways to implement revenue decoupling from the perspective of rate design, and then thinking about the advantages and disadvantages of those different implementation options. And I have listed some of the items I will get into from earning stability to risk, shifting risk

between consumers and the utilities, to economic efficiency. After all, I am an economist my trade, and I would be remiss if I didn't at least mention that in a couple of my slides. And then get into some concluding thoughts based on some of the things I have seen with the recent report that has came out from the National Action Plan for Energy Efficiency.

So if we think about just stepping back and traditional cost-recovery, or rate design for utilities, traditionally we have used volumetric charges, or per kilowatt or per therm charges, depending on if we are talking about electricity or natural gas. Now, oftentimes these charges are combined with small fixed charges, demand charges, potentially for commercial or industrial customers, or customer charges to maybe cover metering and billing costs. But the important part here is that the vast majority of the costs that are being recovered from most utilities around the United States are being recovered through volumetric charges.

There are also some implications for costs, the ability for the utilities to recover their costs and for their potential profitability. All things being equal, if demand turns out to be greater than forecast, utilities can recover all of their fixes costs, and, in fact, can increase their profitability under traditional regulation, rate of return regulation designs. However, under volumetric charges, if demand turns out to be less than forecast, let's say something

happens, we completely missed our demand forecasts, or we had a disaster where people are without power, people couldn't consume. If demand turns out to be less than forecast, then the utilities are going to be unable to recover their fixed costs of doing business, the cost of infrastructure, transmission, distribution, generating assets. And consequently they will be unable to earn their allowed return, all other things being equal.

So when we think about getting it, as we will talk about later, the issue of rate design and the financial incentives for utilities are going to be important in thinking about how we can implement some of these energy efficiency programs from the rate design perspective.

Now, the rationale for volumetric charges. I think most of us would probably agree that volumetric charges are fairly simple. Customers understand volumetric charges. They understand that if they consume a certain number of kilowatt hours it's going to cost them a certain amount of money. If they don't consume, they don't get charged. I think everybody understands that. But it also leads to a misunderstanding about how utility service is provided, and I'll talk about that in a little bit, because it has some implications for the rate design and for revenue decoupling.

Some commissions around the U.S. have also seen volumetric charges as a way in which to cross-subsidize certain

groups of customers. So presumably large volume customers, let's say at the residential level, presumably wealthier customers, could then cross-subsidize small use customers, presumably poorer customers, on the recovery of fixed costs. And with slightly different rate designs that use volumetric charges such as an inclining block tariff structure that effect becomes even stronger. But it is a way of implementing a fairness or social policy, if you wish, in the form of rate design. So that's another rationale for seeing the volumetric design.

In terms of energy efficiency, and I will be very quick about this, because it has been discussed by Mark Futrell in his presentation, energy efficiency programs, as I see it, are designed to reduce the usage over all time periods. So we are talking about reducing kilowatt hours rather than kilowatt peak savings that has also been mentioned here this morning. So the energy efficiency savings not only could include the fuel costs, but the cost of emissions and the cost for new utility plant. Maybe base load generation, maybe there will be some cost savings for transmission and distribution in there, and so forth.

But I want to emphasize here that as we are looking toward climate change policy here in the state of Florida with the Governor's recent executive orders, that in that context the emissions savings could be quite substantial going forward

in addition to the fuel cost savings. And I'm going to contrast that with the peak cost savings here.

Obviously any programs that are implemented, as has already been mentioned, should be cost-effective and they should also make financial sense for both the consumers and the utilities alike. I think that goes without saying.

Now, demand-side management programs, as I view it, are primarily designed to reduce peak usage. As John Masiello just mentioned at the conclusion of his presentation, we are on pace to save almost between 56 and 5700 megawatts of capacity. You know, 14 400-megawatt plants, which is quite substantial. And, of course, there is going to be an associated energy savings that go along with it, but I think the primary rationale has often been for DSM to reduce that peak so you don't have to build that next generating plant and you don't have to use expensive fuel to run that peaking generating unit.

Of course, with DSM programs, if customers are smart, and many of them are, they may, say, use their kilowatt hours at a different time of day, maybe off-peak. So there is some shifting of kilowatt hours over time while still preserving that peak kilowatt savings, and there still will likely be savings of kilowatt hours. But the rationales are slightly different, and I just want to bring that everybody's attention, because there are some different impacts when we talk about the interaction of energy efficiency in DSM programs with

volumetric charges that are being used to recover utility costs.

Clearly, you know, from a consumer point of view, energy efficiency reduces kilowatt hours, it is going to reduce customer bills. Customers want to see their bills reduced if at all possible. However, because of the way costs are being recovered here, there is the potential that energy efficiency programs will put the utility in a financial bind in terms of its fixed cost-recovery. Because, again, if demand is less than forecast and it turns out to be from energy efficiency, it could be something else, it makes it much more difficult for the utility to recover its fixed cost of infrastructure.

It also runs counter to the incentive for utilities to want to increase their throughput, to increase their sales. Financially that will increase their profits potentially, but also there may be a reason that a commission may want to increase throughput for reliability reasons, to make sure that everybody has energy when they want it.

DSM, on the other hand, at reducing peak usage or just kilowatts of capacity can also reduce customer bills, but the effect on overall kilowatt hour usage is not going to be as great as it would be for an energy efficiency program. And that has implications for the various cost/benefit tests that Mark Futrell talked about. If we think about energy efficiency programs, the implication is because those programs primarily

reduce kilowatt hours, there's going to be a greater impact on utility revenues. Those programs are probably less likely to pass the RIM test.

On the other hand, with DSM programs, since they reduce peak kilowatt hours, they are more likely than energy efficiency programs to pass the RIM test, because there's going to be a smaller impact on utility revenues with that particular test. Clearly, there are going to be energy efficiency programs which pass TRC, but don't pass RIM in this case. But that's why I wanted to bring this up is that rate design does have an implication for what will pass various cost/benefit tests in this context.

So in terms of revenue decoupling, to try to be as textbook as possible about this, revenue decoupling simply is severing the loop between utility profits and sales. And I use in parenthesis the utility could be a local distribution company for gas, or any of the service providers that we have in electric, whether they be investor-owned, cooperatively-owned, or municipally-owned. Also implied in that is the separation of the collection of required revenues that recover fixed costs for utility infrastructure from sales by the utility.

And the last point I think is extremely important here. This gets us into what revenue decoupling is and what it isn't. Revenue decoupling doesn't discriminate between the

reasons why demand has been reduced or demand increases. Whether it's weather related, whether it's related to economic growth, or an economic downturn, as some people claim that we are heading for these days, or energy efficiency. It doesn't matter what those reasons are. The sales profit, sales cost recovery link is broken, period, not discerning between the reasons.

Now, implicitly what revenue decoupling does is it imposes a revenue cap on the utility for the provision of the fixed infrastructure services. I want to emphasize that the revenue cap that is implied here is for fixed cost. It has nothing to do with the variable costs for producing the fuel to produce electricity or for the commodity natural gas costs.

Now, that revenue cap can be implemented in two different ways. One is to simply cap total revenue for the fixed costs of the utility, which assumes that there probably are not going to be great changes in the customer base, which means there probably won't be large changes in the amount of infrastructure that's going to be installed by the utility. That is great for a low growth state, probably not so great for a state like Florida.

On the other hand, you can actually cap revenue per customer, which acknowledges the changes in customer base in a high-growth state such as Florida. And so because there's going to have to be infrastructure investment as utilities add

new customers, and that is going to change the overall required revenue, but it caps the revenue per customer for those fixed costs.

Now, what is revenue decoupling not? That's a very awkward way of saying it, but revenue decoupling is not simply allowing for what some people call the lost margin recovery or the reduced revenues due to energy efficiency programs alone. I'm going to let that sink in for a second. The big thing that people have talked about with energy efficiency is that, gee, it reduces utility revenues. Maybe if we just get rid of that incentive, we're fine. But if it's only about energy efficiency, there still may be incentives for the utility to want to increase its throughput. If the economy is growing, throughput may be increasing beyond what is forecast. And the utility has a financial incentive to still increase its throughput, even though it knows it's going to recover the lost revenues from energy efficiency.

It is also not simply weather normalization. As we see in natural gas utilities where in many instances commissions will normalize rates to what would be considered normal weather. Under colder than normal circumstances, the utility is allowed to sell more, under warmer than normal circumstances it sells less, and revenue adjustments are made according to that. Both of these types of mechanism are only partial decoupling mechanisms.

As I mentioned before, revenue decoupling doesn't discriminate between the reasons why actual demand, whether it be more or less, deviates from forecast demand. These mechanisms do. And they are very difficult to implement, as well, because there is always going to be a contentious issue about measurement. How does one really measure the difference in demand versus forecast from energy efficiency? That's a very difficult thing to measure on a yearly basis. It's also the same with weather normalization. So, getting away from that, revenue decoupling avoids some of those problem areas.

Now, what are some of the rationales for revenue decoupling? I've already mentioned this, but I'm going to be very specific. Under volumetric charges or volumetric rate design it removes the utility's financial incentive to increase sales to not only ensure the recovery of fixed infrastructure costs, but to also increase its profitability. Stated another way, those proponents of energy efficiency and demand-side management would say it removes the disincentive to promote energy efficiency conservation of demand response programs.

Well, essentially what happens under revenue decoupling is that the RIM test and the utility cost test become equivalent under revenue decoupling. It simply takes away the lost revenue cost that occurs under the RIM test, and that results in the utility cost test for evaluating energy efficiency and demand-side management programs. And it's but

one quite small step away from the total resource cost test where the total resource costs test also adds in participant costs, and then the incentives that are paid to participants are canceled out with those that are paid by the utility to the participants.

So it's one step away from TRC, but it's not equivalent. It doesn't result in equivalency with TRC, but it gets us closer. Also, it helps from the utility perspective in putting supply and demand-side options on more equal footing under the utility cost test. But the one thing that can't be emphasized enough about revenue decoupling is that revenue decoupling in and of itself does not guarantee, does not provide an incentive for anybody to engage in energy efficiency or demand-side management programs. It is not a sufficient condition. It does remove the incentive to increase throughput, yes. But it doesn't make anybody want to engage in energy efficiency.

Programs such as the ones that John Masiello was describing and our utilities in the state are undertaking, I mean, those kinds of programs still must be in place to encourage energy efficiency. That's a very important point. Decoupling revenue doesn't mean we have solved the problem, not by any stretch of the imagination.

Now, in terms of the financial incentives, I have talked about some of these already, and just stated a little

bit differently from the utility perspective, many utilities with declining sales per customer, such as we are observing with natural gas distribution companies, they've become very quick to embrace revenue decoupling because it makes it easier for them to recover their fixed cost of infrastructure. And you'll see at the end of my presentation, if you look at the implementations of revenue decoupling around the United States, there are far more implementations in natural gas than there are in electricity. So we see the incentives on that side.

However, utilities with increasing sales per customer generally have a financial incentive to avoid revenue decoupling, because it takes away the ability for the utility to earn higher returns. But I say that with the following caveat, that's as long as the infrastructure cost per customer don't outpace the revenues that are being collected per customer. So that comes with a caveat. But those are some of the financial incentives.

Now, as a quick aside in thinking about how utilities provide service, I think this is important in thinking about the rate design, and it's important conceptually thinking about how revenue decoupling might be implemented. Energy services, regardless of whether we are talking about natural gas or electricity, people often think of these as just being one service. Well, I flip on a -- customers, I flip on a light switch; I get electricity. Or I need heat; I've got a gas

heater; I turn it on; I have service. Most people don't think about the infrastructure that's required to give them the option to turn on the light switch and have electricity, or the option to turn on their heater and have natural gas come to the heater and provide that service. So there's really an infrastructure service that is being provided by the utilities regardless of how many kilowatt hours or therms that are consumed by customers. And those customers by having the option to consume are causing costs to be expended by the utilities. So there's really -- one service is that option to consume. And then, of course, there is the option itself, or the commodity, which is the therms of gas or the kilowatt hours of electricity. It's important in thinking about the rate design as we'll see in a second.

So if we think about revenue decoupling, there are really two ways through the rate design revenue decoupling could be implemented. One is to continue on with the traditional volumetric charges and use a tracker mechanism where any adjustments for revenue that's over or undercollected, whatever the situation may be, to cover those fixed costs an account is kept and those revenues will be trued up at the end of, let's say, a year. That means that we're going to have hearings over this. Probably not much different than hearings for the fuel adjustment clause that we currently have in the state of Florida.

There's an administrative burden to that. There's an administrative burden to both the utilities for that and to the Commission, state commissions for that. But, if it's carried out as many people envision it will, you know, recover the costs of infrastructure as well as recovering the commodity costs and keeping the volumetric charges takes the view that energy is viewed as providing one service, that there is not an option in a commodity that goes with this.

However, implementing, recognizing that there is an option, and there is a commodity service, may lead one to think about using a two-part tariff, or more specifically a straight fixed variable tariff design. Under such a tariff design, all of the fixed costs of infrastructure will be recovered through a fixed charge on customer bills every month, and then the commodity costs, the costs of kilowatt hours or therms of gas would be recovered through a variable charge.

Administratively, this eliminates the need for hearings or a tracking mechanism. Because if all the fixed costs of infrastructure are being recovered through a fixed charge, there's nothing to true-up at the end of the year. It's just a customer charge per month. And it also more closely tracks with the idea that really utilities are providing two services, both the option to consume through building infrastructure and then providing the commodity in kilowatt hours or therms.

Unfortunately, at least from my perspective, two-part tariffs or straight fixed variable tariff design has been viewed as being quite different from revenue decoupling. If you read some of the recent work that has been done on this, if you look at the National Action Plan for Energy Efficiency which came out last year, the two-part tariff or the straight fixed variable tariff is considered an alternative to decoupling, that it's actually not decoupling in and of itself.

This same view has been expressed by others. Ken Costello, who has done a very nice study on revenue decoupling for natural gas utilities from NRRI, has also expressed this. And so it gets us to the same place. A straight fixed variable tariff design implicitly decouples the recovery of fixed costs from sales.

So, why isn't it viewed as decoupling as we know it? I think part of the problem is that we have become wedded in recovering costs through volumetric charges. I think the other thing is that many commissions that have contemplated this already worry about how customers will react to a different change in how they are charged for the service. That they might see this huge fixed charge and wonder why. They may not understand it very well, and there could be a political backlash to such a shift in rate design.

So if we think about the advantages and disadvantages of revenue decoupling, I think the big issue is that

implementation is everything. How does one implement revenue decoupling will determine what some of these advantages and disadvantages will be. But that perspective is going to depended on conceptually how one believes service is provided. Is it simply one bundled service, or do we really have two services? Whatever a commission decides on, that's going to decide on the way costs may be recovered, whether it be through volumetric rate design or a straight fixed variable rate design, and may be dependent on how the revenue cap is designed.

The thinking I have here, and this may be a bit esoteric, is that normally we think here in the United States of cost of service regulation, or rate of return regulation, whereas price caps or revenue caps as implemented in other parts of the world, in particular in the U.K., in western Europe, and in Latin America, this is really an incentive mechanism which provides an incentive for utilities to reduce their costs and potentially increase their profitability through reducing their infrastructure costs or their O&M costs on infrastructure. But that's probably a bit far afield from where we want to go here in the United States at least initially with respect to energy efficiency.

Now, in terms of earning stability. One of the things that has come up in various hearings around the country is this issue about utility earning stability. Well, some have

said that it almost guarantees that the utility will earn its return. That's not really true. What has been guaranteed is that there is revenue stability in the form of recovering revenue to cover infrastructure costs. But this doesn't mean that the utility doesn't have an incentive to control its other costs. It still must control its other costs in order to achieve its target return, so that incentive doesn't change at all.

Now, all other things being equal, if the utilities are good at keeping their costs down, then, yes, it should provide some earning stability. And some commentators have bought that, well, if that's true, then maybe we should think about a different return on equity. That's going to be for each state commission to think about on a case-by-case basis. But if we think about volumetric charges with a tracking mechanism, because of the administrative burden and because of the possibility of contentious hearings.

And, let's face it, any time that hearings open up there's going to be parties who want to try to open up the door from the utility perspective to try to take away more money if they can from the utility, and so utilities might be a bit hesitant to want to deal with revenue decoupling under a volumetric tariff, all things being considered. Because there are, indeed, deferrals if the energy efficiency program is done very well, or maybe there are other things that have happened.

They may not be able to recover their revenue, which could threaten the return on equity.

The example I have in mind is the state of Maine in the early '90s, which tried to implement revenue decoupling. And in Maine, it turned out in the early '90s also the economy kind of went south on them. So, consequently, the electric utilities in the state of Maine were not able to recover all their revenues to cover fixed costs. There was a deferral account put in place. When it came time to true it up, the Commission could not raise rates. It just wasn't politically feasible for them to do so. It put the utility at risk in that case. And, consequently, Maine abandoned the idea of revenue decoupling after that.

Under a two-part tariff, however, because there are no need for hearings to true-up revenues, there is no deferrals that necessarily need to be put at risk from the perspective of the utility, there should be very little variation in the return on equity consequently from this perspective. And, again, it then opens the question about should there be a lower allowed return on equity if you had the straight fixed variable rate design. Again, that's going to be a decision that's going to be made by each individual state commission that would go forward, might go forward with decoupling.

Another issue that has come up is this idea of shifting, and I put in quotes own purpose, business risk from

the utility to consumers. The idea itself really assumes a world where utilities provide but one bundled service, that there are not two services here. But the question then comes up what risk is really being shifted from the utility to the consumer?

Well, maybe there's weather, whether it is a warmer than normal or cooler than normal winter or summer. Economic conditions. The issue that came up in Maine where they implemented revenue decoupling and then the economy went into a recession. Are there drivers behind the option to consume for the infrastructure to be put in place? I would hazard a guess, no. But the true issue is can anybody control the weather? Can anybody control the economy? Is that risk controllable? Can it be mitigated by either party? Probably not in the case of utility services.

But, in either case, the utility still bears risk for the cost of network infrastructure, not only building it, but also maintaining it. And if those costs go up, the utility still bears that risk. And so one of the issues with the shifting of business risk, again, I believe is probably not as big a deal as some might make it out to be.

How about rate stability and bill stability for customers? Certainly under a volumetric rate design with a tracking mechanism, this could lead to greater rate bill volatility. It just adds another piece of the puzzle to maybe

a fuel adjustment clause, something else that has to be trued up at the end of the year. So rates could fluctuate even more on a yearly basis to customers, which now makes it even more important for utilities and commissions to think about the accuracy of load forecasts in order to offset that possibility of greater instability in the bills from year to year.

Under a two-part tariff or straight fixed variable tariff design, there's reduced volatility in the charges -- I should have said changes rather than charges -- in the rates and bills, because the only volatility will be in the commodity charge rather than in the cost of infrastructure. And also demand forecasts don't become really so crucial for the recovery of fixed costs from the point of view of the utility.

The idea of cross-subsidies that I mentioned earlier with volumetric charges. Under a volumetric charge with a tracker, this implicit cross-subsidy from high volume users to low volume users remains in place, which may be the stated policy. However, under a straight fixed variable, the thinking has been that it doesn't preserve that cross-subsidy from high volume users to low volume users. But whether it requires -- if a commission would want to maintain that cross-subsidy for whatever reason, cross-subsidies could be implemented through the fixed charge itself rather than through the volumetric charge. And, in any case, a cross-subsidy through a fixed charge would probably be more economically efficient in any

case. And, of course, we've talked about the cross-subsidies from participants to nonparticipants in many of these energy efficiency programs that could occur except under the RIM test, which Mark Futrell had mentioned in his presentation.

Economic efficiency. Volumetric charges inherently, because of the nature of utility service with large fixed costs, volumetric charges are not going to be economically efficient. Start throwing in the possibility of having a tracker for either overcollections or undercollections of revenue to recover those fixed costs, and there's the possibility that volumetric charges may become even more economically inefficient. And there may be a counter-intuitive result that if the energy efficiency programs work so well to reduce demand, that now everybody's price per kilowatt hour or price per therm goes up rather than down. So I consumed less, I did good in my energy efficiency and my price per unit is going up? That's a very counter-intuitive result, and consumers would have a very difficult time understanding that. Not to mention with the inefficiencies will fall primarily on those consumers.

Two-part tariffs or straight fixed variable are economically efficient tariffs. They send the right price signal for the commodity that is being consumed, whether it's gas or electricity. And, in fact, if we think about separating out collecting the cost of fixed infrastructure and fixed

charges and just the cost per kilowatt hour or cost per therm in electricity or gas charges, it may make it easier and even more rational to implement realtime pricing or time-of-use pricing signals to customers because what's really driving the changes in those time-of-use prices, for the most part, not in total, is the cost of the commodity, the cost of fuel that's used to generate electricity, for example. And that would be more in line with a straight fixed variable rate design.

Moreover, in a straight fixed variable design if the demand response programs or energy efficiency programs are successful, users are going to see the commodity charge drop as they cut back on usage. It's just a very simple supply and demand story, which is very intuitive. That's the kind of result that customers would expect to see. And, again, I have talked about the cross-subsidies. They can be implemented through those fixed charges without any problems with efficiency.

What about so-called environmental performance? If we think about energy efficiency and demand response as having a large environmental component, what happens? Under a volumetric charge, because if it's the case that the price increases with the success of energy efficiency in demand response programs, it becomes self-reinforcing. Energy efficiency reduces demand, reduces revenues to recover fixed cost, the price per unit goes up; the price per unit goes up,

people want to save more. Environmental groups and proponents of energy efficiency like this, and it will help reduce emissions going forward.

Under a two-part tariff, because there's a separation now of infrastructure cost from commodity costs, this may not be considered desirable environmentally because the commodity costs are now going to be lower from the perspective of environmental proponents and energy efficiency proponents. But there is something that people forget about, and that is there is an income effect from fixed charges.

If a large fixed charge is put on customer bills, customers are going to feel that as if it were a reduction in their income each month, and that's going to effect their demand for energy, as we know that if we don't have as much income, we don't like to spend as much. So there is going to be an offsetting factor from this so-called income effect from increasing the fixed charge on customers, and that along with energy efficiency programs could very easily reduce consumption from the baseline consumption that we're referring to. So it is not easily intuitive, but the environmental performance may not be as bad under a straight fixed variable tariff as some people may claim.

Some other effects of revenue decoupling on utilities that have been thrown out there just for completeness. One is that revenue decoupling would undermine the cost cutting

incentives of multiyear settlements, something that we are quite familiar with here in the state of Florida over the past 20 years or so, for utilities to reduce their costs during those multiyear settlements to retain those cost savings as earnings. The other thing that has been thrown out in some discussions of revenue decoupling is that it would limit the cash flow to utilities to carry out needed investment going forward, which would, in turn, undermine system reliability.

I think in terms of the first conjecture about reducing the utilities' incentives to cut costs, that doesn't bear out at all because the utility is still at risk for keeping its costs down even under a per customer revenue cap. And so I think that goes by the wayside.

In terms of needed investment, we could take a page from what goes on, again, in Latin America, in the U.K., and western Europe in their implementations of price cap type mechanisms where they look at multiyear price caps and they build in forecasts for investment and account for the need for that new investment up front. And so that can also be handled in that way to ensure system reliability going forward.

Some other effects on the regulatory paradigm to think about in terms of revenue decoupling is how are we going to think about this? Are we going to be captured by the same old way of looking at the world with volumetric charges, or are we going to -- can we now think outside the box a little bit.

Some people say that revenue decoupling reduces the incentives to reform our rate designs. I think quite the opposite because we have other options available to us as I'm talking about here in this presentation. And, of course, the advantages and drawbacks are going to depend on how we are implementing revenue decoupling. Are there going to be situations where utilities and customers both benefit, other situations where nobody benefits, potentially, from revenue decoupling. Those are questions that ought to be asked before going forward.

So, just recapping some of the things that I have talked about. In terms of the volumetric charge implementation, there are some advantages. If the hearings and administrative burden are minimal, and it's pretty well assured that utilities can recover any differences between required revenue and what has been collected, and I'm thinking more about deferrals in this particular instance, then there is the possibility that the utility will have more stable revenues.

Certainly from the environmental standpoint, consumption should decrease with energy efficiency and DSM programs. I think that is a no-brainer. It does preserve the cross-subsidies that some commissions have wanted to keep in place, and it keeps the status quo rate design in place. It doesn't change anything. And the rate design, of course, is easy to understand for customers. That part doesn't change.

But there are some downsides. There's going to be

increased price and bill volatility for customers potentially on a year-to-year basis. It moves us farther away from economic efficiency and pricing. It could result -- energy efficiency could result in counter-intuitively increased prices for the bundled service, all other things being equal. Of course, there is the administrative drawback and the potential for contentious hearings. Deferrals may be put in jeopardy from a utility perspective. No innovation in rate design and no recognition that infrastructure really could be a separate service.

Under a straight fixed variable implementation there is no need, I should have said, for these hearings. There is no need for a true-up hearing, because fixed costs will be covered completely through fixed charges. That eliminates that administrative burden and the possibility that deferrals from the point of view of the utility may not be recovered. It reduces customer bill volatility and rate volatility. That fixed charge should be fairly constant. The only thing that's going to change will be the commodity charge.

As energy efficiency become more entrenched, customers should see a reduction in the price per kilowatt hour because they are reducing their fuel costs or reducing the cost of gas in the gas market.

There's a recognition, clearly, that two services are provided and it is a much more innovative rate design that has

been rarely implemented in the energy industry, at least at the retail level.

The drawbacks. The belief that cross-subsidies from large users to small users are lost. Even though it can be dealt with, it is not immediately apparent that it can be dealt with easily. There is also the concern environmentally that because customers are going to see an unbundled service in terms of how it's being charged, the commodity cost is lower, they will consume more because they see a lower cost without really thinking about the income effect that I mentioned. So that is a potential drawback of straight fixed variable. And certainly customers are going to have a harder time understanding this rate design. It's something that is pretty alien to most folks.

Now, in terms of the implementation, as I mentioned earlier, only five states have implemented electricity decoupling, and there are nine other states that are actually contemplating this. In gas, as I mentioned, there are 15 states that have implemented revenue decoupling and seven other states are looking at revenue decoupling.

In terms of the straight fixed variable rate design, it's worthy to note that it has been implemented at the retail level in natural gas, not in electricity, in Georgia, Oklahoma, Missouri, and North Dakota. In fact, Georgia has had straight fixed variable rate design in gas since they implemented retail

competition for commodity gas about a decade ago. So we are seeing some movement toward some of these innovative rate designs. It has been slow and it has been mostly in the gas industry.

But just some concluding thoughts, and amazingly I was able to run through this presentation in short order. Maybe it's because nobody asked questions. Everybody is getting hungry. I had that unenviable position. Plus I don't have all the nice bells and whistles that John had in his presentation. Nice black and white.

So if we think about a report that was just released as part of the National Action Plan for Energy Efficiency this last month, what we will call aligning utility incentives with investment in energy efficiency. There are four policy objectives that were mentioned in that report in the executive summary, and I think it's good to kind of list those. One is the idea of balancing risk and reward between utilities and customers. Stable customer rates and bills, which I have mentioned. Stability of utility revenues, which I have also mentioned. And then the administrative simplicity of managing regulatory costs.

And so we think about these in terms of implementation. The idea of risk and reward, that's going to really depend on everybody's perception of what risk and reward are and the different implementations, because everybody will

probably have a slightly different point of view on how to view that. But if we think about stability of customer rates and bills, certainly a straight fixed variable tariff design will accomplish that far better than a volumetric rate design.

In terms of stability of utility revenues, either implementation should, in theory, accomplish that. But under a volumetric rate design with a tracker, it introduces potential risk in terms of the recovery of those costs, either over or underrecovery of those costs if we are going to look at it on both sides. Whereas with a two-part tariff, that's not an issue. That does really help ensure much better the stability of revenues in terms of recovering the fixed infrastructure costs.

And, of course, in terms of administrative simplicity, a straight fixed variable rate design would do better if fixed costs can all be recovered through fixed charges. There may be other policy considerations. I have discussed a few of them in here, but those are some of the implementation issues that I believe need to be contemplated in moving forward and thinking about revenue decoupling to help bring forward potentially more energy efficiency programs and more savings here in the state. Thank you.

CHAIRMAN EDGAR: Commissioner.

COMMISSIONER CARTER: Paul, Commissioner Skop probably likes the tie that you are wearing today.

MR. SOTKIEWICZ: I couldn't resist after sitting in the stands on Saturday. I apologize.

COMMISSIONER CARTER: Gee, thanks, we appreciate that.

By the way, I just wanted to ask you about revenue decoupling implementation, a slide that you used on that. You mentioned, I think you said Maine was where they had it, and then -- and I was looking on your chart here about the states that have approved it, and I don't see Maine. What happened on that situation? Can you elaborate on what happened in that situation?

MR. SOTKIEWICZ: Maine approved revenue decoupling in the early '90s, and at the time that they implemented revenue decoupling, as it turned out that was the recession that hit during the early '90s, '91 and '92. And consequently what happened, even though the demand that actually was seen by the utility was reduced not because of energy efficiency, but because of the economic downturn, it wasn't able to recover all of its fixed costs. According to the revenue decoupling mechanism in place, the differences between the revenue they needed to recover and what they actually did recover didn't match up. In fact, they didn't recover enough. So there was a deferral account set aside. Rather than when it came time to true that account up to make sure that the utility could recover all of its costs, it became such a political issue to

raise electricity rates to reflect that deferral that it never happened, or it didn't happen very quickly. And so the idea of revenue decoupling was then abandoned in Maine. That's why you don't see it on there. They abandoned it because it turned out to be very difficult to deal with the issue of deferrals when revenue, when sales did not meet the forecast, and then there was that deferral account that had to be recovered. So that's what ended up happening in Maine on that. Am I making myself clear?

COMMISSIONER CARTER: Yes, I understand you perfectly. And, Madam Chairman, with permission to follow up, is that based upon the situation in Maine, and you say five states have approved it or implemented it, has any of those five states, or either of the ones where the proposals are pending, have they gone after the model that was used in Maine?

MR. SOTKIEWICZ: For the most part the revenue decoupling mechanisms that are in place follow the implementation where most of the costs are recovered through volumetric charges and there is some sort of tracking mechanism to true-up revenues. Now, currently, we're in the opposite situation. As a general rule, sales are generally greater than what have been forecast, so the account goes in the other direction. Usually it's the utility that's over-collecting and then there is a rebate that goes back to customers. That is a much easier situation to deal with. California has had revenue

decoupling for many years. That part has not been an issue. It's the situation that comes up when there turns out to be not enough revenue to recover costs and the prices have to go up. So that's why the situation has been a little bit different. And maybe one of our speakers this afternoon from EPA could get into some of that more.

COMMISSIONER CARTER: Just an observation.

MR. SOTKIEWICZ: Sure.

COMMISSIONER CARTER: From my perspective is that I appreciate you being an economist, because the economy ebbs and flows. You know, there's recession and there's times of great opportunities and expansion. And the fact of the matter is the regulatory compact is such to where down the road if you can't recover the necessary operational costs, then the business is left with one or two opportunities, you know, either borrow more money or go out of business. And that has a deleterious impact on the customers.

And I was just kind of trying to put it in my own frame, and I was really intrigued by what happened in Maine and also intrigued about this perspective in the context of decoupling and the beneficial aspects of it is that I'm still having trouble trying to understand why -- well, not necessarily why. I understand why. Because of the political perspective, they didn't want to make that decision. But why even go there, then, you know.

MR. SOTKIEWICZ: And that's a good question, I mean, if there wasn't the will to do that. And the same question could be asked, by the way, in Maryland or in Illinois where after years where rates were frozen, all of a sudden the bill came due and then there was no political will to raise it. And this had nothing to do with revenue decoupling at all, but it's the same situation.

COMMISSIONER CARTER: Thank you.

CHAIRMAN EDGAR: Thank you.

Commissioner McMurrian.

COMMISSIONER McMURRIAN: Thank you, Chairman. I have a few.

Thank you, Mr. Sotkiewicz. You said that no state has implemented the two-part tariff system for electric that you've talked about, right?

MR. SOTKIEWICZ: That's correct.

COMMISSIONER McMURRIAN: But you did say that they did implement it with respect to gas in several states, including Georgia. And I remember some of the problems they had in Georgia with their changes in their gas rates. But were any of those problems associated or could be associated with the implementation of that two-part tariff system?

MR. SOTKIEWICZ: I think, if I understand correctly, the problems that you are talking about in Georgia are related to how they tried to implement retail competition with the

issue where bills couldn't be collected for the commodity gas, or people were getting, in effect -- like we had problems with in the telecommunications industry, people were, in effect, getting slammed and having their providers changed on them without their knowledge.

Those were the biggest problems. It really wasn't dealing with the straight fixed variable tariff. It was about the implementation of the real retail competitive mechanism rather than the tariff design in Georgia.

COMMISSIONER McMURRIAN: Do you know if there was any consumer feedback about that change and how the two-part tariff system, or was it that no one paid attention to that because of all the problems in moving to retail competition?

MR. SOTKIEWICZ: My understanding is that there wasn't a whole lot of hue and cry about it at the time. And now, I mean, the recent implementations that I have mentioned, in fact, North Dakota and Missouri are very recent implementations of this design, and it hasn't been -- the hue and outcry hasn't been as great as I might have expected in their situations. But, of course, there are going to be people who are going to bring up some of the issues that I have on here that say, well, we are not familiar with this, why am I paying a large fixed charge if I'm not consuming, and so forth. I mean, that does come up, but it hasn't been as contentious as I thought it might be.

COMMISSIONER McMURRIAN: Do you know if there have been any studies or research done on consumer reaction? I know we have talked about that, and those questions and some of the things you said earlier that were concerned about whether a customer would understand that difference in rate design, and what kind of reaction they would have. But has there been any kind of -- I think it would be hard to do, but has there been any kind of research done on that?

MR. SOTKIEWICZ: The short answer is no. But if I could get funding as a university researcher to do that, I would be happy to do so.

COMMISSIONER McMURRIAN: He didn't give me that question. One more, Chairman, I think.

As the two-part tariff has been discussed in other states, do you know if there has been any particular feedback from the consumer representatives, whether it's industrial consumer representatives or residential, where they have spoken out on the issue? Because I know they have been vocal on revenue decoupling, per se, but I'm not as familiar with the two-part tariff.

MR. SOTKIEWICZ: Talking about the two-part tariff part of it, I'm not familiar with any particular group. The feedback I am getting are from talking to regulatory staff or commissioners and kind of their perception of things in those states.

COMMISSIONER McMURRIAN: Thank you.

That's all I have.

CHAIRMAN EDGAR: Commissioner Skop.

COMMISSIONER SKOP: Thank you, Madam Chair.

Again, I want to thank you for your very informative presentation, and I think it raises a lot of points to consider, and I certainly look forward to working with staff and perhaps your group to better understand some of the subtleties and the impacts.

I think perhaps an even better question, though, is where do the other stakeholders fall into this revenue decoupling methodology in terms of what would be their preferences or how they would be impacted. It seems to me, based on the presentation, that one of the reasons for implementing revenue decoupling is to incentivize the investor-owned utilities to proceed with more demand-side management activities such that any reduced savings don't impact the earnings.

But then there are some other slides in here that, again, I haven't had the opportunity to fully review and comprehend, but, you know, I think win/win solutions are good, and I know that one of the slides, I think, referenced that in certain scenarios when demand is greater than forecast, there is the upside earning potential, if you will, that I think might go away in terms of whatever system would be implemented

in terms of revenue caps or some of the other things. So I look forward to probably working with you and staff a little bit more to understand some of the subtleties and finer points of the presentation as well as input from the stakeholders.

Thank you.

CHAIRMAN EDGAR: Commissioners, any other comments at this time? No.

Paul.

MR. SOTKIEWICZ: Madam Chair, if I may make one observation with Commissioner Skop's comments. I think one of the issues that comes up, and I think you stated it in the sense that you are trying to bring the incentives for the utilities to engage in energy efficiency demand-side management programs, I think it's important to emphasize that there are mechanisms to provide those incentives, but revenue decoupling isn't an incentive to encourage energy efficiency. It simply takes away the incentive to want to sell more, and so it's not a direct incentive on introducing energy efficiency.

There are other mechanisms that commissions have at their disposal in order to provide those incentives, but revenue decoupling just attacks a different part of the problem, I think. I think it's real important. It is a subtle difference, but I think it is quite important.

CHAIRMAN EDGAR: Paul, thank you so much. Lots of good information. And as you have mentioned, a number of tools

that are available and have been utilized by commissions in other states, and this commission, as well. But, of course, as we are trying to look forward, I think this is a good healthy discussion, and I know I'm glad to have all of us to be able to kind of have it together and hear the same thing at the same time.

So, Paul, thank you very much.

MR. SOTKIEWICZ: Thank you, Madam Chair.

CHAIRMAN EDGAR: We are actually amazingly close to kind of on time, per the agenda that we had distributed. So with that in mind, and according to the agenda, we will be breaking for lunch here in a minute.

As I mentioned, we do have a sign-up sheet. We will have another very, very informative speaker when we come back from lunch, and then we will move into the open forum of our agenda. And I encourage, please, everybody to take advantage of that opportunity. Sign up if you would like to join in the discussion, or share some information, or a perspective with us this afternoon. Please sign up on the sheet.

And with that, I think that we will go ahead and break for lunch. It will give us a few extra minutes. And, Commissioners, how about we come back at 1:30, and then we will have our next speaker and go into open forum. Thank you. We are on lunch break.

(Lunch recess. Transcript continues with Volume 2.)

STATE OF FLORIDA)

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COUNTY OF LEON)

I, JANE FAUROT, RPR, Chief, Hearing Reporter Services Section, FPSC Division of Commission Clerk, do hereby certify that the foregoing proceeding was heard at the time and place herein stated.

IT IS FURTHER CERTIFIED that I stenographically reported the said proceedings; that the same has been transcribed under my direct supervision; and that this transcript constitutes a true transcription of my notes of said proceedings.

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

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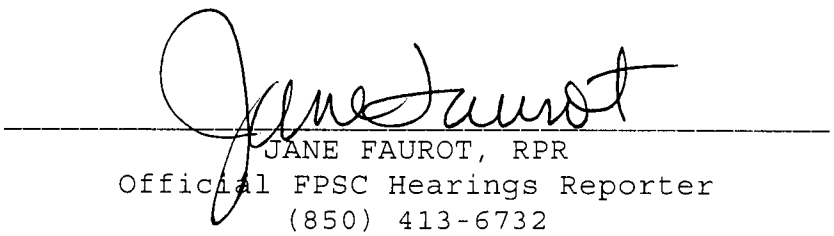

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