BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

In the Matter of:

COMMISSION REVIEW OF NUMERIC CONSERVATION GOALS (FLORIDA POWER & LIGHT COMPANY).	DOCKET NO. 080407-EG
COMMISSION REVIEW OF NUMERIC CONSERVATION GOALS (PROGRESS ENERGY FLORIDA, INC.).	DOCKET NO. 080408-EG
COMMISSION REVIEW OF NUMERIC CONSERVATION GOALS (TAMPA ELECTRIC COMPANY).	DOCKET NO. 080409-EG
COMMISSION REVIEW OF NUMERIC CONSERVATION GOALS (GULF POWER COMPANY).	DOCKET NO. 080410-EG
COMMISSION REVIEW OF NUMERIC CONSERVATION GOALS (FLORIDA PUBLIC UTILITIES COMPANY).	DOCKET NO. 080411-EG
COMMISSION REVIEW OF NUMERIC CONSERVATION GOALS (ORLANDO UTILITIES COMMISSION).	DOCKET NO. 080412-EG
COMMISSION REVIEW OF NUMERIC CONSERVATION GOALS (JEA).	DOCKET NO. 080413-EG

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VOLUME 4

Pages 679 through 946

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PROCEEDINGS:	HEARING
COMMISSIONERS PARTICIPATING:	CHAIRMAN MATTHEW M. CARTER, II COMMISSIONER LISA POLAK EDGAR COMMISSIONER KATRINA J. McMURRIAN COMMISSIONER NANCY ARGENZIANO COMMISSIONER NATHAN A. SKOP
DATE:	Tuesday, August 11, 2009
TIME:	Commenced at 9:30 a.m. Adjourned at 6:51 p.m.
PLACE:	Betty Easley Conference Center Room 148 4075 Esplanade Way Tallahassee, Florida
REPORTED BY:	JANE FAUROT, RPR Official FPSC Reporter (850) 413-6732
PARTICIPATING:	(As heretofore noted.)

I N D E X

WITNESSES

WITNESSES (Continued):

EXHIBITS

NUMBER:		ID.	ADMTD.
162	FSC Interrogatories	694	
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P R O C E E D I N G S

(Transcript follows in sequence from Volume 3.)

CHAIRMAN CARTER: We are back on the record, and before we go forward, a moment of privilege.

Commissioner Edgar, you're recognized.

COMMISSIONER EDGAR: Thank you, Mr. Chairman.

Very briefly, I think that many of us may by now be aware, but I would like to mention and recognize a dear friend, Wade Hopping, who passed away earlier today. Many of us, I know, probably knew and had the opportunity to work with Wade over the years. He had an incredible record of accomplish, a wonderful legal mind, but I will most remember him for his graciousness and his kindness and his desire and ability and willingness to share his knowledge and his time.

Very briefly, although Wade had been on the Florida Supreme Court back when I was merely five years old, amazingly enough, about 20 years later when I was serving as a very young cabinet aide, he spent a lot of time, and spent a lot of time with me talking and educating me about the intricacies of the Power Plant Siting Act, I remember specifically. And some years later on items with the law with water rights and the Administrative Procedures Act and private property

rights. And I particularly also remember working with him through one of the study commissions on private property rights, which I know was an issue that was very near and dear to. So a champion for administrative law and environmental regulation, a friend and a colleague, and I would just ask if we could take a moment of silence in honor of him and out of respect for his family and friends.

Thank you, Mr. Chairman.

CHAIRMAN CARTER: Thank you, Commissioner.

We sometimes get so tied up in what we do, we sometime forget about the pioneers that made it possible for us to be where we are today. So thank you for that. It's a great opportunity to recognize people that have had an impact on our lives and on the process. So we have -- one of our giants has been called to greater work.

And with that, let's proceed.

Mr. Jacobs, you're recognized.

MR. JACOBS: Thank you, Mr. Chairman.

CONTINUED CROSS EXAMINATION

BY MR. JACOBS:

Q. Mr. Floyd.

A. Yes.

Q. We are back, hopefully, refreshed. I will try

and wrap things up pretty quickly. Two points. We were discussing earlier the success that Gulf has had in promoting some measures that really are not passing your -- your cost-effectiveness test. Do you agree that your program is probably achieving greater success and reception because -- and penetration than would be received without those -- those particular measures?

A. You mentioned measures that were not passing our cost-effectiveness test. Could you be more specific?

Q. CFLs.

A. The CFLs?

Q. Yes.

A. I believe those measures were screened out as part of the two-year payback.

Q. And so because of that they are not -- they are not a part of your cost-effectiveness test, is that correct?

A. Well, they are not part of our achievable potential that we are proposing as goals here. Those measures are being promoted through our audit programs and other educational and awareness efforts as I referred to earlier.

Q. Okay. I'll accept that. Let me restate my question. Do you agree that -- that your programs that

include those particular measures are achieving greater levels of penetration than would otherwise be achieved through market forces, natural market forces?

A. I don't have any empirical evidence to support this, but it would seem reasonable to me that the educational efforts that Gulf is conducting through, again, the audit program, energy education pilot program, through our home show efforts, that by using those programs to create increased awareness and to educate our customers that we are facilitating greater adoption of those measures than would otherwise be achieved, absent any efforts on our parts.

Q. And, likewise, you are not -- you're not required -- I believe you testified that you are not required to promote such a measure that fails this two-year screening, is that correct, because it is falling out of your evaluation process? It will not become a part of your goals, and you are not required to promote that program as part of your goals, is that correct?

MR. GUYTON: Objection, asked and answered.

CHAIRMAN CARTER: Just rephrase, Mr. Jacobs.

BY MR. JACOBS:

Q. For a measure that is screened out due to your two-year payback, there would not be any anticipated

requirement for Gulf to further promote that goal -- that measure, is that correct?

A. I'm not sure I completely understand what you mean by requirement to promote that measure. Again, you know, absent those measures being a part of the proposed goals that Gulf had brought forth before this Commission, you know, we are, in fact, you know, promoting those measures through our educational and awareness efforts. It's just that they are not being a part of the proposed numeric conservation goals.

Q. And we agree that it's also not a part of your achievable potential, correct?

A. That's correct.

Q. As a hypothetical, if such a measure were included in your goal -- strike that. Just one moment.

If it is the case that such a measure were included in your goals, that would be an accountability measure for this Commission to monitor and measure the progress of such a measure, wouldn't -- would it not?

A. Which measures are we referring to?

Q. Okay. We'll backtrack. We were discussing -- we talking the CFL measure that was excluded because of the two-year payback, and we agree that you are incorporating some way, form, or fashion in your DSM efforts. And my question is this, if such a measure

were, indeed, had it not been screened out and were a part of your goals, that would be the appropriate opportunity for the Commission to look at that and hold it as an accountability measure to your commitment to such a program, would it not?

A. I'm not sure I completely follow that. And, you know, Gulf is --

Q. Strike that. Let me ask it another way.

A. Okay.

Q. Is there any other manner by which the Commission could review your progress and promotion of this measure, other than it being a part of your goals?

A. Well, one I could think of would be to, you know, ensure that promotion of these kinds of measures would be part of our audit program. You know, I don't recall if -- if there's a specific requirement that those kind of measures be included as part of our audits, but it would seem reasonable that if the objective of the audit is to help customers identify ways to reduce their bills, then these kinds of measure very much fit that kind of criteria, and would be and are being, you know, promoted through that means currently.

Q. So in that instance there would be a Commission review of the scope and content of your

audits, outside of the scope of -- of review of your conservation goals?

A. It could be, yes, I suppose.

Q. One final line of questioning. Are you aware of an effort or any efforts by Gulf that focus on measures to -- to serve the low-income community?

A. Gulf offers all of its programs to low-income customers, just like any other customer group would be eligible to participate in the programs. You know, the audit programs are made available to low-income customers. We provide quite a bit of, you know, service in that area. Gulf also, specific to low income, works with our low-income agencies in ensuring that those audits and that those -- that educational material is reaching that customer group through, you know, through our affiliations with them. We have also worked with the construction industry that serves some of the low-income community. Specifically, Gulf recently has entered into a partnership with the local Habitat for Humanity organization to ensure and to facilitate ENERGY STAR® home certifications for their construction projects, and those are -- those are things obviously targeted at helping the low-income community be able to participate in energy saving opportunities that are out there.

Q. Thank you. However, as a direct construct of the administration of your DSM programs, is there a specific effort or programming or staff that is charged with implementing those programs for the low-income community?

A. No, not specific to low income. They are made available to all customers.

MR. JACOBS: Thank you. Just one moment. I think we are about done.

BY MR. JACOBS:

Q. Do you have any estimate or any study that determines what the participation rate would be for low-income groups who participate in your programs?

A. No, I do not.

Q. Okay.

MR. JACOBS: Thank you very much, Mr. Floyd.

THE WITNESS: Thank you.

CHAIRMAN CARTER: Thank you, Mr. Jacobs.

Ms. Brownless.

CROSS-EXAMINATION

BY MS. BROWNLESS:

Q. Good afternoon, sir. How are you this afternoon?

A. I'm good; thank you.

Q. I handed out a package of materials, and I

hope you have them there, and we will just go from the top to the bottom.

A. Okay.

Q. Can you look at the first two documents that are labeled Gulf Power's responses to Florida Solar Coalition's First Set of Interrogatories, Numbers 1 through 7, and then the second document, 8 through 14, and verify that that is a true and correct copy of the answers provided by you in response?

A. Yes, it appears to be.

Q. Okay. And would the answers that -- if you were asked the same questions today, would your answers be the same as that provided?

A. Yes.

MS. BROWNLESS: We would like this marked as Exhibit 161, I believe, sir?

CHAIRMAN CARTER: 162. Remember we voided 161.

MS. BROWNLESS: Oh, we're just skipping it, because I thought we decided that 161 we were going to take judicial notice of the statute.

CHAIRMAN CARTER: We voided that slot for judicial economy and cleanliness of the record.

MS. BROWNLESS: So we are on 162?

CHAIRMAN CARTER: We want you to have a

pristine record, so as you are getting ready to do your --

MS. BROWNLESS: Thank you so much.

CHAIRMAN CARTER: So this would be Composite 162, Commissioners for your records, which the --

MS. BROWNLESS: Florida Solar --

CHAIRMAN CARTER: You have been doing so well today. Give us a shot.

MS. BROWNLESS: FSC Interrogatories.

CHAIRMAN CARTER: FSC Interrogatories. Thank you.

MS. BROWNLESS: You're welcome.

(Exhibit 162 marked for identification.)

CHAIRMAN CARTER: You may proceed.

BY MS. BROWNLESS:

Q. And at our deposition -- at your deposition, Staff's Interrogatory Number 101 was discussed. Do you remember that?

A. Yes.

Q. And I've got it right here, if that will help you.

A. Thank you.

Q. And does Staff Interrogatory Number 101, which has been included, I believe, in their Exhibit Number 22 basically contain the same information as on my

Interrogatory Number 8?

A. Yes, it does.

Q. I provided you with a couple of charts. One is the famous Figure 1 from the cost-effectiveness test manual, is that right?

A. Okay. Yes.

Q. And the second is Dr. Sim's Exhibit Number 3, and that's this one, sir?

A. I don't think I have that one.

Q. I could give you this one.

A. Thank you.

MS. BROWNLESS: If I can find Dr. Sim's testimony.

BY MS. BROWNLESS:

Q. And at your deposition we discussed how Gulf Power conducted its RIM test, NTRC test, the tests that are reflected on Interrogatory Number 8, do you remember that?

A. Yes.

Q. Okay. And were the measure costs used for the solar technologies measure cost developed by Itron, or did Gulf modify them?

A. The measure cost in savings, both, that were used in calculating these cost-effectiveness results were provided by Itron.

Q. Okay. So you made no modifications to those?

A. That's correct.

Q. And when you say cost savings, you mean the kWhs associated with that measure?

A. Yes, that's correct.

Q. Now with regard to the equipment costs and O&M costs used in the Participant test, did you subtract the federal tax credit in determining the cost to the participant?

A. I do not recall, but I believe that we did not deduct the federal tax credit. We just took the cost inputs directly from Itron as they provided, just like we did for every other measure and input those for our screening.

Q. Okay. So is it fair to say that you did also not deduct any state rebate incentive money that might be available?

A. Yes.

Q. How did you determine the amount of incentive to be used in the numerator of the Participant test and the denominator of the rate impact test?

A. We determined the amount of incentive based on first looking at the Rate Impact Measure, the enhanced Rate Impact Measure with consideration of the carbon impact. And if that measure had a passing score, then

we would start applying incentive dollars from that measure down to the point that the RIM score would fall below a passing level. And if at that point the amount of incentive dollars that were available with that measure was sufficient to pass the Participant test, then we would determine that that measure could have a passing participant score.

If the amount of incentive dollars available in the RIM test was not sufficient to produce a passing Participant test score without the RIM score falling below one, then we would conclude that there was not sufficient incentive available with that measure to produce both a passing RIM score and a passing Participant test score. And at that point the measure would have screened out, because of the requirement that the measure pass both the Participant test and the other test.

Q. So the scores that are reflected on exhibit number -- Interrogatory Number 8 are the result of those calculations, correct?

A. Well, the scores that are reflected here reflect the results at the point that the measures are screened out. So, for example, in the first measure, the solar water heating measure, the RIM test value was .56, the TRC value was .05 and the participant value was

.04. So in that case the measure didn't pass RIM or TRC from the beginning, so there was no incentive calculation made, because it was clear there was no opportunity to add incentive dollars to the RIM test.

Q. And so you would only be figuring out what the incentive was if the RIM score without the incentive was 1.01 or more?

A. That's correct. Only if the RIM score was passing to begin with would we then consider how much incentives were available to be added for the participant.

Q. Okay. Thank you. I believe that you -- oh, let me ask one more question. You have Dr. Sim's Exhibit Number 3 there, correct?

A. Okay.

Q. Okay. And with regard to the treatment of greenhouse gases, did you include NOx, SOx, and CO2 in your calculations of the net system fuel impacts like Dr. Sim did? Is that where your emissions, C02 emissions was taken into account?

A. I'm not familiar with Dr. Sim's exhibit here. I haven't seen this before. Someone has actually written something in the table here. I'm not sure if this is -- this belongs.

Q. Well, I apologize for that.

Looking at the net system fuel impacts as a benefit, that, as I understand it, was calculated in three steps: The fuel avoided in the avoided unit, the fuel that the money associated with having to run other units if that avoided unit were not there, and then a reduction in the kilowatt hours served. Does that sound about right to you?

A. I'm not specifically familiar with how Dr. Sim performed that calculation. I will say that in Gulf's evaluation, the CO2 impact as well as the other NOx and SO2 were incorporated in our evaluation as a fuel impact.

Q. Okay. As an addition to the cost of fuel?

A. Right.

Q. And you have in Interrogatory Number 10 provided your own benefits and costs chart, is that right?

A. Yes.

Q. Okay. And that is, to the best of your ability, what you believe is reflected in the Figure Number 1 from the DSM manual, right?

A. Yes, I believe it's consistent with that.

Q. Did you specifically analyze any PV measures or solar thermal measures that were greater than one megawatt?

A. No, we did not.

MS. BROWNLESS: I lost my question sheet here. I'm sorry, I apologize.

CHAIRMAN CARTER: Take your time. Ordinarily I'd just take this opportunity to blame Mr. Jacobs, but I'm going to cut him some slack today. (Laughter.)

MR. JACOBS: I appreciate it.

MS. BROWNLESS: I found it. Thank you.

BY MS. BROWNLESS:

Q. Gulf Power has a solar water heating pilot program, is that correct?

A. Yes, that's correct.

Q. And that pilot program was approved by Order Number PSC 08-0802-PAA-EG, is that right?

A. Subject to check, yes.

Q. And I believe I provided a copy of that order to you in the materials.

A. Oh, yes. Here it is.

Q. Okay. Thank you. Is the bottom line on this pilot program that it's a one-year program starting in December of 2008?

A. Yes. It was approved in December of 2008 for one year.

Q. And I believe you told me at deposition it started in January of 2009?

A. Right. I think the official effective date of the order was around December 28th of 2008, and just as a practical matter we officially launched the pilot program January 1st.

Q. Okay. And it gives a thousand dollar rebate, is that correct?

A. Yes, that's correct.

Q. Okay. You must install new technology?

A. That's correct.

Q. Okay. And you have to pass an inspection before you get the money?

A. Yes.

Q. Looking on Page 5 of that order, you were allocated $517,000 for that program, is that right?

A. Yes.

Q. Okay. How much of this money have you spent so far?

A. I don't have a year-to-date expenditure.

Q. Okay. I believe you told me at deposition that you believed at the time of your deposition 40 installations had been approved, is that right?

A. Yes, that's correct, approximately 40.

Q. Okay. Do you know how many people have signed up but not had their unit inspected and approved?

A. No, I do not know.

Q. Okay. You projected 75 people. Do you believe you will meet that projection?

A. Well, we estimated 75 just for the purposes of establishing a budget. And based on having approximately 40 rebates having been awarded at this point, 75 seems like a reasonable expectation.

Q. Okay. Do you know if the customers who have actually installed the system and gotten your rebate have received any money from the state, from the state program?

A. No, I do not know if they have.

Q. So you don't know whether any customers have actually broken even in terms of the Participant test?

A. That's correct, I don't know. It wasn't a requirement of our pilot program that the customer, you know, apply for a state rebate or any other kind of incentives that might be available to them.

Q. Okay. And looking on Page 4 of the order, in the first full paragraph there, your pilot program had a Participant's test result of 1.27, right?

A. Yes.

Q. If there was a lower incentive, then there would be a lower Participant test score, correct?

A. Yes, that is correct.

Q. Okay. In this order you were required to

conduct surveys, looking at the top of Page 5?

A. Yes, that's correct.

Q. And have you done so?

A. We are in the process of doing that now. We have elected to survey, basically, in two waves. Currently we're surveying customers who have adopted the solar water heating measure through, I guess, June, maybe, of this year, and then we'll survey participants for the second half of the year later in the year. So that way we are able to get kind of two samples of our participants.

Q. Do you anticipate that you will have the results of the, or the benefits of the survey results in time to develop your DSM programs?

A. Well, I don't think we'll have all of the results, you know, for the full year pilot in order for us to incorporate that in -- well, it's possible that that could happen, just depending on how soon we can get these results and the time that we have to actually file for our DSM programs. I just don't recall exactly that timing, sitting here, when we actually have to make the filing.

Q. I believe it's 90 days from the date your goals are set?

A. Okay. So that would put us in late December.

Then I would say it's possible that we would have the results in order to include that as -- or include the results of that as part of our planned filing, yes.

Q. Okay. And that's basically what was contemplated on Page 5 of the order when it said Gulf shall use the data collected to perform a cost-effectiveness analysis using actual data so we can -- we, meaning the Commission -- can revisit continuation of this program in 2010 when Gulf files its DSM program to meet its new goals?

A. Yes.

Q. At this time, did any of the solar measures analyzed in Interrogatory Number 8 pass the RIM test?

A. Yes.

Q. Did they pass both the RIM and TRC test?

A. No.

Q. Okay. So are there any solar water heating or solar PV programs currently -- were any of those measures included in developing the goals?

A. No. None of those measures were included in the cost-effective achievable potential results.

Q. Okay. And to the extent that there is a difference between the rate impact test in -- discussed with regard to the pilot program, and the numbers found in the interrogatories, that is due to what? Why is

there a difference between the numbers in here with regard to the rate impact test, the TRC test and the Participant test, and the numbers reported for solar hot water in the interrogatories?

A. Okay. I think those were the same thing, the interrogatories and then what you just referred to.

Q. Well, the difference between the numbers in the order --

A. Okay. In the order and the interrogatory.

Q. Right, and the interrogatory.

A. Okay. Sure I'll explain that.

Q. Sure.

A. And I think, as I indicated earlier, the measure cost and savings inputs that were used in evaluation of measures for the technical -- or for the achievable potential study were based on the information that Itron provided to us. Those measure costs and savings were a part of this pool of measures, some of which had overlapping benefits, and so there was -- the individual measure costs and benefits would reflect any adjustments for overlapping benefits that would have been present. And I believe that solar water heating was a measure that had some overlapping benefits with other measures that were evaluated.

So for the interrogatory response, we used the

results of the information that Itron provided really to be consistent with the way that we evaluated every other measure in the study. We used the inputs that our consultant provided to us for that. And then, as I explained, once we did the RIM and the TRC screening, if there was -- if the measure did not pass RIM, then there was no incentive available to apply to the Participant test to move it up at all. So that's what you see reflected in the results and the interrogatory response.

In the order related to the solar thermal water heating pilot that Gulf is currently conducting, the values that were used to evaluate the measure in this pilot were estimates, projections that we had going into the pilot. That was one of the reasons that we had proposed the pilot, was to try and gain some confidence around the measure cost and the measure savings associated with solar thermal water heating.

In this case in order to make it a palatable measure to the customer, we established the incentive level to ensure that the Participant test would pass, which, of course, we would not expect any customer to adopt a measure that did not pass the Participant test. So in this case, we set an incentive that ensured that the measure would pass the Participant's test. And as you can see from the preliminary results of the RIM and

TRC screening that were associated with the pilot, those values were below the passing level. So that is the reason for the differences in -- in the two sets of numbers that we're looking at here.

Q. Is it correct that you used $5,500 as the cost for the pilot program on Page 5?

A. Yes, that was an estimate of the measure costs.

Q. If you would accept, subject to check, that Itron's number for equivalent small residential water heaters is $3,800. If that number had been used, would the measure have become more cost-effective in your pilot program?

A. It would have become more cost-effective from the participant's perspective, yes.

Q. And it would also potentially have decreased the level of incentive needed. So it might have become more cost-effective in RIM as well, right?

A. Yes.

Q. Do you agree that legislative changes in 2008 added greater emphasis to the cost and benefits to program participants?

A. I'm sorry. Could you maybe ask that a different way?

Q. I provided you with a line and strike version

of 366.82. Do you have that there?

A. I'm trying to -- okay.

Q. Okay. Do you believe that legislative changes in 2008, meaning House Bill 7135, added greater emphasis to cost and benefits to program participants, put greater emphasis on them.

A. No, I don't believe that any changes put greater emphasis on program participants. I believe that that emphasis has been there all along. That a measure should pass the Participant test in order for it to be considered in a utility goal portfolio.

Q. Okay. Do you believe that the legislative changes in 2008 added greater emphasis to the general body of ratepayers, to benefits for the general body of ratepayers?

A. Not necessarily. I do agree that the legislative changes established some additional language that the Commission should consider in setting goals. But it is my understanding that the Commission has always considered the three primary cost-effectiveness tests of RIM, TRC, and Participant's tests in evaluating programs. I do not see any change in that. I see, you know, continued reference to participant benefits, continued reference to utility incentives. And so I see those things continuing to be shown as

considerations for the Commission to take in goal setting.

Q. Okay. Do you believe that legislative changes in 2008 resulted in consideration of utilities' costs, such as lost revenues being de-emphasized?

A. No, I don't see that the consideration for lost revenues is necessarily de-emphasized in the legislative change.

Q. Okay. Do you believe that the amended statute emphasizes the promotion of renewable energy sources and defines demand-side renewable energy systems as including thermal energy, which is solar hot water, such as solar thermal water heating systems?

A. I do agree that there is a language added in the statute specific to demand-side -- to encouraging the promotion of demand-side renewable energy systems.

Q. Okay. If you could take a minute to look at the section of House Bill 7135 that I provided?

A. Okay.

Q. Okay. Looking at the first Page, 366.81, am I correct that demand-side renewable energy systems, that specific language has been added into the section? It looks like about four times.

A. Well, I'm just reading that it is underlined here, which I'm assuming is showing that it is --

Q. Looking at the bottom where it says coding; words stricken are deletions, words underlined are additions?

A. Yes.

Q. Okay. And on the second page, Page 85, that -- at Line 2352, the statute has added, encouraging further development of demand-side renewable energy systems, that's an addition? Line 2352.

A. Yes. There is another underline in here that I'm not sure if it's covering the typed underline or not, but I do see where demand-side renewable systems are underlined.

Q. Okay. And in Section 366.82 on Page 86, Line 2374 through 2378, demand-side renewable energy systems are defined?

A. Yes.

Q. Okay. And then, again, we see the addition of demand-side renewable energy systems in Line 2381?

A. Yes.

Q. And language in 2386 that indicates that one of the goals that the Commission will adopt in these FEECA proceedings are to encourage development of demand-side renewable energy resources?

A. Yes. And I would say that the petition of the solar thermal water heating pilot by Gulf Power last

year was, in part, associated with recognizing this additional emphasis, and an attempt on Gulf's part to gain, you know, through a pilot program, to gain more experience of this technology in our service area as a means to consider how we could address this, you know, going forward as a part of our conservation program.

Also, Gulf has worked with other -- other customers, a billboard company is a good example, working with them to develop PV opportunities and to evaluate different types of PV installations. And, also, wind installations, that is something that Gulf is doing that I think is consistent with the emphasis here in evaluating and promoting these technologies. Part of that process is gaining experience with them to help customers make educated and informed choices about -- you know, about the cost-effectiveness and the overall benefits of these kind of things.

Q. I think I put in your package an excerpt from Mr. Spellman's testimony, is that correct?

A. I'm not sure. What did it look like?

Q. It's Page 76. It looks like this.

A. Okay. Thank you.

Q. And that indicates that Mr. Spellman has recommended that Gulf Power set aside or expend approximately $900,000 a year for the next five years

for solar technology programs?

A. Yes.

Q. Now, do you agree that if this were done it would give effect to the language of Section 366.81 that we just went through?

A. Well, I would not necessarily connect spending, you know, a targeted level of dollars with necessarily increasing the emphasis on demand-side renewables. I would -- you know, I would rather say that that can be done in a thoughtful and cost-effective way. In terms of cost-effective, I mean in a prudent way by getting experience, taking some of the kinds of steps that the company is taking without establishing some threshold of dollar expenditures and necessarily making a connection between dollars spent and emphasis on a technology.

Q. Okay. So you don't see any relationship between Gulf's pilot program spending $517,000 on your solar water heater program and developing solar water heating in Gulf's service territory?

A. Yes, I do see a connection between that. I just don't see a connection between establishing a certain dollar spending, as Mr. Spellman has proposed, and that necessarily translating into benefits that Gulf's customer base would realize through, you know,

gaining valuable information about demand-side renewables.

Q. Well, do you believe that if Gulf were to enact the 900,000 -- to be required to expend the $900,000 as Mr. Spellman has indicated here in the form of rebates and incentives to develop this type of technology that the technology would, in fact, be encouraged?

A. I would say that if Gulf was required to spend $900,000, that would clearly demonstrate an influx of dollars into an area which may or may not be cost-effective for customers to undertake.

Q. We are not talking about cost-effective. We are merely saying if $900,000 were made available, do you believe that additional solar technologies, both thermal and PV, would be developed in Gulf's area?

A. I would -- you know, I can't say for certain what would occur with spending the $900,000. But I would agree that, you know, that would tend to facilitate more opportunity.

Q. Okay. At this time are you supporting Mr. Spellman's recommendation in this regard?

A. No, I'm not. As I said earlier, I would not support establishing an arbitrary level of spending on a technology that is not determined to be cost-effective

based on the way that we have evaluated it. Rather, I would recommend that Gulf be, you know, continue to pursue the kinds of selective opportunities for demonstrating these technologies and looking for ways to cost-effectively promote them within our customer base.

Q. Okay. And effectively is it your testimony that the $517,000 that you have in your pilot program is doing that?

A. It is my testimony that the pilot program that we have proposed was intended to give us the opportunity to evaluate this technology and to gain, you know, valuable information to determine its ultimate cost-effectiveness and opportunity to become a part of our DSM plan going forward.

Q. Okay. Does Gulf intend to combine any programs in order to make them cost-effective. For example, we have heard testimony from Mr. Masiello about how Progress combines load management programs with solar programs, and the combination becomes cost-effective. Does Gulf have any plans to do that?

A. Gulf has not considered combining a noncost-effective measure with a cost-effective measure. You know, in order to produce something that overall would be cost-effective, Gulf has not done that to this point. Gulf's position on that has always been that we

should promote the measures that provide the most benefit to our customers, and so that they should, you know, each individually stand alone on their own and be cost-effective. We might combine measures in a program design. We might package measures that would fit well together in terms of delivering a program to our customers, but, again, the objective would be to maximize the benefits that those measures would provide to the customer base in doing that. And considering combining a noncost-effective measure would -- would essentially dilute those benefits that were otherwise being realized by Gulf's customers. And that is why we have not considered that.

Q. Does Gulf Power at this time have any specific plans to implement the directive of the Legislature to encourage the development of demand-side solar technologies?

A. I'm sorry. Could ask you that again?

Q. Does Gulf Power have any current plans to implement the legislative -- Legislature's directive to encourage the development of demand-side solar technologies?

A. Yes. And I would say we're doing that now through our pilot program and through the other initiatives that I mentioned earlier.

MS. BROWNLESS: That's all I have, sir. Thank you.

THE WITNESS: Thanks.

CHAIRMAN CARTER: Thank you, Ms. Brownless. Staff, you are recognized.

MR. SAYLER: Thank you, Mr. Chairman.

CROSS-EXAMINATION

BY MR. SAYLER:

Q. How are you doing, Mr. Floyd.

A. Good.

Q. We are passing out a demonstrative exhibit --

MS. BROWNLESS: Oh.

Q. -- that is the Ten-Year Site Plan.

MR. SAYLER: One moment, Mr. Chairman. I believe Ms. Brownless had one more question, potentially.

MS. BROWNLESS: Yes. Honestly, it's just one more question, I forgot.

CHAIRMAN CARTER: For you, Ms. Brownless, the sky is the limit.

MS. BROWNLESS: Thank you, sir.

CHAIRMAN CARTER: But you have got one question.

CONTINUED CROSS-EXAMINATION

BY MS. BROWNLESS:

Q. I handed out a sheet to you that is the FERC From 14, for the fourth quarter of 2008. Do you have that?

A. Yes, I do have that.

Q. Okay. If you look on Line 10, total sales to ultimate consumers?

A. Okay.

Q. Okay. Can you read the number in Column B?

A. One zero eight zero six 0 one seven two zero.

Q. Thank you. And, of course, Mr. Floyd, you are not an attorney and so any opinions you would be giving us today would be based upon your utility expertise, correct?

A. Yes.

MS. BROWNLESS: Thank you.

CHAIRMAN CARTER: Are you cool?

MS. BROWNLESS: Yes, sir.

CHAIRMAN CARTER: Okay. Staff, you may proceed.

MR. SAYLER: Thank you Mr. Chairman.

CONTINUED CROSS-EXAMINATION

BY MR. SAYLER:

Q. Mr. Floyd, are you familiar with Gulf's Ten-Year Site Plan?

A. Yes.

Q. We handed out a demonstrative exhibit that illustrates a few schedules from that site plan. Do you have that before you?

A. Yes, I do.

Q. It is the one with the green sheet. When Gulf files its Ten-Year Site Plans, does it usually include demand-side management programs in their Ten-Year Site Plan?

A. Yes.

Q. All right. And would you agree that this handout contains Schedules 1 through 3 -- excuse me, 3.1 through 3.3 of Gulf's Ten-Year Site Plan that was filed in 2009?

A. Yes.

Q. And that Columns 6 through 9 on Schedules 3.1 and 3.2 indicates Gulf's projected demand savings from its DSM programs, is that correct?

A. Yes.

Q. All right. Similarly, Gulf also projects energy savings from DSM on Schedule 3.3 in Columns 3 and 4, is that correct?

A. Yes.

Q. All right. And so these conservation values listed in the 2009 Ten-Year Site Plan are based upon Gulf's existing DSM programs, is that correct?

A. Yes.

Q. Thank you.

Also earlier in the proceeding, we handed out Exhibit 138, entitled Comparison of Carbon Costs. It has a yellow cover sheet. Do you have that available?

A. Yes, I do.

Q. All right. And earlier did you state that Gulf includes estimated carbon costs in its proposed goals this docket?

A. Yes.

Q. All right. And have you had a chance to review the handout -- excuse me, Exhibit 138, which lists carbon costs for Gulf?

A. Yes, I see it here.

Q. All right. And do the carbon costs represented on the chart handed out accurately represent the costs assumed by Gulf for this proceeding?

A. Yes.

Q. All right. And during your deposition you also indicated that Gulf's estimated costs were produced internally, is that correct?

A. Yes.

Q. All right.

MR. SAYLER: Mr. Chairman, at the appropriate time following the conclusion of this witness' testimony

we would move Exhibit 138 into the record.

CHAIRMAN CARTER: Just so everyone will remember, we started up front on 138. We just wanted to have all the companies to be able to respond to it before we admitted it. So after this witness, we will proceed with admitting Exhibit 138. And as you know, this is for the four companies with the carbon costs, et cetera, okay. You may proceed.

MR. SAYLER: Thank you, Mr. Chairman.

BY MR. SAYLER:

Q. Mr. Floyd, you mentioned earlier that customers participating in a demand response program received a device similar to a programmable thermostat. Do you remember that line of questioning earlier?

A. Yes.

Q. All right. Is that something like a demand response device? Do you have a name for that?

A. It's not a demand response device. It's an energy management system that would look similar to a programmable thermostat. It's installed in a customer's home, and it is how the customer would program their heating and cooling equipment, water heating equipment and other appliances, sometimes a pool pump, to operate in conjunction with the RSVP rate which comprises Gulf's Energy Select program.

Q. All right. And so this particular device is currently approved as part of the demand-side management program for Gulf, is that correct?

A. Yes.

Q. And that was Energy Select, is that correct?

A. Yes, the program has been named Good Cents Select in the past; it is currently marketed under the name Energy Select. So I apologize if there is -- if I have used the names -- if I have used both names, that's is the explanation.

Q. Okay. Thank you. So Energy Cents Select and Good Cents Select are interchangeable, is that correct?

A. Yes.

Q. All right. Does this particular device or system come preprogrammed to achieve maximum energy efficiency. For example, is it preset to shut off various customer devices at a particular signal from Gulf?

A. I believe it does have some default settings, but at least for the HVAC equipment those settings are merely thermostat setting adjustments. It does not physically turn off the HVAC equipment. It merely resets the temperature, you know, during the peak time, for example, it would reset the temperature such that effectively the system would shut off. It does control

the water heater, if it is an electric water heater, and it also controls one additional appliance, again, sometimes a pool pump, and it does physically disable those devices, depending on how it's programmed.

Q. All right. And for those default programming, is that something that is set by Gulf or at the factory?

A. I'm really not sure where that is set initially.

Q. All right. If those default settings are potentially capable of being set to achieve increased demand savings for this program, would that be something that Gulf would consider doing?

A. Well, Gulf has designed the program to achieve the maximum demand savings, you know, during the peak period. Effectively that would -- that would result when a customer would have their equipment programmed to respond by having their temperature adjust so their air conditioner, for example, would turn off during the peak time and have their water heater turn off. And, again, if there is a pool pump connected, have it turn off also. So the design of the system is to achieve those type of responses during a critical peak period.

Q. Thank you. Just one follow-up on that. When the system is installed in the customer's house, is it already preset or preprogrammed by Gulf in order to

achieve those maximum demand savings or is that something that the customer has to do?

A. There are settings, default settings of the device that would turn off the water heater, turn off a pool pump and reset the thermostat for the critical peak price. So those are set as a default.

Q. Okay. And are these set at the maximum demand savings?

A. They are set at the point that would effectively result in the maximum demand savings, which will occur when all of those three major end uses are turned off.

Q. All right. Thank you. Mr. Floyd, earlier today in response to a question from NRDC/SACE, you stated that Gulf has not been successful in meeting its goals -- its demand-side management goals since 1994, is that correct?

A. There have been a number of years since 1994 that Gulf has not met its goals, that's correct.

Q. All right. And since 1994 has Gulf had to construct any new generating capacity or purchase energy in order to meet its peak demand?

A. Gulf has added one new generating plant in 2001.

Q. And, in your opinion, if Gulf had achieved its

demand-side management goals during this time period, do you know if Gulf's customers would have incurred costs for these additional resources?

A. Would the plant have been built, is that what you're asking?

Q. Would the plant have been built or would the customers have paid less?

A. Well, I'll give my opinion what I know, what I feel comfortable speaking to about this. The generating unit that was added in 2001 was a combined cycle generating unit of approximately 600, 585, 600 megawatts. That would be much greater than any demand-side management goals that Gulf has had in place. So I would say that that unit would have not been avoided by demand-side management.

Q. Since 1994 what has been the main contributor to Gulf's inability to achieve its Commission-approved goals?

A. Gulf's performance has been primarily associated with this -- with the Energy Select critical peak pricing program. This program was introduced initially in the mid 1990s really as a very leading edge, innovative approach to residential demand-side management. Very leading edge. First of its kind. Even today Gulf's program is the largest of its kind in

the entire industry. But it is a program that works. It's a program that customers really like. The customers who participate in the program have very high satisfaction with the program, and it provides reliable demand response. So it's really a win for both of us.

But with the program being developed the way that it was, being so new, and such a revolutionary approach, Gulf has encountered, you know, a number of technological challenges that we had not anticipated, as well as experiencing customer adoption rates below what we had projected. Those things, you know, all have resulted in Gulf not meeting its goals, which have contributed to the overall performance of not achieving the goals.

Gulf continues to work with the current vendor on overcoming some of those types of technological obstacles so that we can increase the availability of the program. Long-term the advanced metering infrastructure that is being deployed throughout Gulf's service area may be a way to increase the availability of the program. That's something that is still a little bit far out there.

But really, going forward, Gulf recognizes that this program should be part of a larger portfolio of DSM offerings for our customers. And that is really

what's reflected in our proposed goals here, is that this not be, you know, such a large part of our overall goal, but that it be just a part among other DSM programs as well.

Q. Mr. Floyd, in the last goal setting proceeding in 2004, were goals approved, DSM goals raised or lowered?

A. They were lowered.

Q. And has Gulf successfully achieved its 2004 Commission-approved goals?

A. In 2005, Gulf exceeded the goal, and then in the subsequent years Gulf has fallen below the goal, again, for the reasons that I just explained.

MR. SAYLER: All right. Thank you very much. Staff has no further questions.

CHAIRMAN CARTER: Thank you.

First Commissioner McMurrian and then Commissioner Skop.

COMMISSIONER McMURRIAN: Thank you, Chairman. I think I just have one, Mr. Floyd. Mr. Sayler was asking you some questions about your critical peak pricing program, and you were just talking about that a second ago, and you talked about it being set at a default setting, and I just want to make sure I understand this. Isn't also true, though, that the

customer can adjust those settings whether or not they want more sensitivity to, I guess, less critical peak times? For instance, aren't their different levels that they can adjust for --

THE WITNESS: Yes, and actually that is one of the things that makes this such a unique program. It is fully adjustable by the customer. So Customer A may have less sensitivity to the temperature in their home during a summer season, and as a consequence more willing to set the thermostat higher to respond to the peak price. Customer B may have less sensitivity to that. They may not be willing to set their thermostat quite as high. But in this program those decisions are completely the -- you know, completely in the hands of the customer. Gulf merely provides the price signal that reflects the cost of generating electricity, you know, during that peak time. And, of course, that is intended to, you know, to draw a response from the customer, but it's completely up to the customers. So they can, you know, they can respond in any way that they wish.

COMMISSIONER McMURRIAN: I guess one follow-up. Can't they also override -- if, for instance, they had company for a weekend, and they didn't want the thermostat adjusted, according to that

critical peak time, they could override it somehow also, right?

THE WITNESS: Yes, that is correct. They could override that for temporary time periods, so that it did not adjust up and down during maybe the company's stay or the party or whatever might be going on.

COMMISSIONER McMURRIAN: Okay. Thank you, Mr. Chairman.

CHAIRMAN CARTER: Okay. Commissioner Skop, you're recognized.

COMMISSIONER SKOP: Thank you, Mr. Chairman. Good afternoon, Mr. Floyd.

THE WITNESS: Good afternoon.

COMMISSIONER SKOP: I guess in the interest of fairness I probably should have presented some of my general questions to prior witness, but I guess you are in the hot seat at the right time. So don't take it personally. I am just going to ask some general questions.

I guess from your prefiled testimony that the avoided unit in Gulf's case is a 2014 combined cycle combustion turbine, is that correct?

THE WITNESS: Yes.

COMMISSIONER SKOP: And would it be correct to say that the ability to implement any given energy

conservation measure is essentially constrained or limited by avoided costs and then further by the cost-effectiveness test?

THE WITNESS: Yes. Avoided cost is a main driver in what determines, you know, which measures would be cost-effective to promote.

COMMISSIONER SKOP: Okay. And then prior to the amendment of Florida statute 366.82, several legislators had expressed concerns that the Commission's historical reliance on the RIM test served as a substantial barrier to the adoption of energy conservation and efficiency measures. And how would the adoption of the E-RIM and E-TRC criteria mitigate these concerns?

THE WITNESS: Well, as I stated earlier, for the first time Gulf considered the expanded RIM test in evaluation of these measures. And by including the CO2, the projected costs of CO2 as a benefit, that allowed a lot more measures to become cost-effective. So by including these carbon assumptions in our analysis that has allowed Gulf, and I believe the other companies represented here, to propose goals that are associated with more cost-effective measures than would have been the case had we not considered those aspects of the new FEECA statute.

COMMISSIONER SKOP: Thank you.

Now with respect to, I guess, on Page 3 of your prefiled testimony, Lines 7 through 8, I guess that you mentioned the potential studies were conducted by Itron consulting and local services, is that correct?

THE WITNESS: Yes.

COMMISSIONER SKOP: Okay. Now isn't also true that the primary business segment of Itron would be advanced metering infrastructure or smart meters?

THE WITNESS: I can't speak to what their primary business is.

COMMISSIONER SKOP: Okay. I guess my concern would be, would there be any inherent conflict on the consulting analytical services that might arise or the analysis being, perhaps, biased favoring Itron -- other Itron products over other alternatives that might be in consideration? I think it's remote, but I think it's a fair question to ask. If you can't answer it, that's fine, I'll move on.

THE WITNESS: Well, I can say that I'm not aware of that. And at any time during this process, I had never sensed that there was any, you know, steering towards any other Itron business units associated with what we are evaluating. As a matter of fact, in an interrogatory response, we indicated that none of the

measures that were being evaluated here would require any automated meter and infrastructure to be in place. Again, I think further supporting that there was no bias at all in this evaluation.

COMMISSIONER SKOP: Okay. Thank you. And that's just, again, a concern in passing that I think is a fair question.

With respect to Page 16 of the prefiled testimony it identifies the Itron incentive scenarios that were considered, and I guess I had a question with respect to the scenarios to the extent on Page 16, Line 9, Item A, incentive of 33 percent of the incremental cost of the measure which would be the low scenario?

THE WITNESS: Right.

COMMISSIONER SKOP: Were there any other scenarios lower than one-third of the cost subsidy being provided or run under the Itron analysis?

THE WITNESS: No, that was the lowest level.

COMMISSIONER SKOP: And then with respect to -- just to touch on Commissioner McMurrian's prior question, and then I'll go into some other questions. With respect to the time-of-use pricing, I guess at least from what I have seen -- and when I managed wind projects, in terms of the deliveries we made, you know, PG&E, and I think they have some pretty good programs

for advanced metering, which I would encourage our IOUs to take a look at, but at least for deliveries, it was based on peak pricing, partial peak, and off-peak. But at least what I'm seeing for time-of-use pricing that has been adopted there seems to be a four-tier pricing criteria, which would include critical peak, which the pricing gets very substantial, and I think PG&E actually has a safeguard protection for consumers to the extent that during the first year that their bill will be the lesser of what it traditionally is, so they don't get -- you know, guess wrong on this critical peak.

But I guess what I am wondering just empirically is why would it be necessary to have a four-tier time-of-use structure over a three-tier that would be, you know, peak, partial peak, and off-peak? Because I guess that critical peak gets really, really kind of expensive.

THE WITNESS: I can't speak to the rate design of Gulf's program. I can confirm it is a four-tier, you know, with three fixed tiers and then one critical peak price. But, again, I can't really speak to why we opted for a four-tier versus a three-tier.

COMMISSIONER SKOP: And not to be critical, I'm just trying to look at best practices in terms of, you know, encouraging consumer migration over to that,

because I think it does send a strong pricing signal that consumers could learn from. But in that transition there is also some inherent consumer risk to the extent that if you're not cognizant about when you are using electricity, your bill could be substantial. And I think that for the benefit of our staff as well as the IOUs, I think PG&E's programs have -- have some best practices that might be worthy of taking a look at. And I just mention that in passing.

Going on to JNF-1, Schedule 7, which was a summary of PV technical potential results, and then relating that back to Page 18, which might have been the basis of a prior question that Ms. Brownless asked, but I'm not sure. But am I correct to understand that the summary of the PV technical potential results, none of those were included, because the PV measures did not pass the RIM, PT, or the TRC PT cost-effectiveness test?

THE WITNESS: Yes, that's correct.

COMMISSIONER SKOP: Okay. And moving on to Page 20 and 21 of the prefiled testimony, I guess the discussion centered on -- as to should the Commission establish separate goals for demand-side renewable energy system, and I think the Gulf response was no?

THE WITNESS: Yes.

COMMISSIONER SKOP: Okay. And I guess where

I'm going with this is I'm looking at the amended statute, 366.82(1)(b), Subsection 2, and then Subsection 3, and trying to, you know, gain a better understanding of the legislative intent in terms of, you know, how far the Commission should, you know, push in terms of encouraging what has been provided here.

And I guess earlier this morning I asked Mr. Masiello a little bit about the solar wise projects that are done, and all of our IOUs, I think, are kind of embracing that, but we discussed at length the additional benefits that enure to PV installed on public schools and that would be, you know, just in summary an educational benefit. It would be, you know, math and applied sciences by encouraging students to study and look holistically at what's going on. But also a multi-tier public outreach to the extent that you have inquisitive students who take that knowledge home and discuss it with their families and try and get them involved as well as the spillover to the general public.

And then I think the third benefit, notwithstanding some other, you know, being able to count the measures as energy efficiency or demand-side management for the benefit of the utilities in compliance with the goal, it would also offer a cost savings to the various public schools to the extent

that, you know, they get a nominal reduction in their otherwise electric consumption, and that has been a big issue for public schools.

But I guess with respect to the goal-setting task before us, I'm wondering whether it might be appropriate to selectively think outside the box on a case-by-case basis. And this turns me to, at least from the testimony I have heard, it seems to reveal that the solar PV or demand-side renewables, particularly solar, don't really meet the criteria of either the RIM test or the TRC. And I'm trying to grapple with that a little bit more in terms of should the Commission accept that as, you know, as fact and look at other cost-effective alternatives, or would there be a particular instance where something would arise to a level whether it be looking at intangibles as I think Gulf has done with the carbon pricing and the E-RIM and E-TRC test, but looking at something holistically where if you garner a whole bunch of additional -- and I don't want to call them social benefits, but there are a lot of benefits that stem from -- or bang for the buck, if you will, by putting solar PV on schools, because you would tend to get more collectively than the individual would get in lieu of just, you know, cost savings to cost savings. You also get those additional benefits.

So I guess what I was, trying to rein this in, I did an analysis this morning just as a see-what-could-be-accomplished. And it is my understanding -- based on my executive assistant who did diligent research for me, and I commend her for that -- in the state of Florida we have 3,674 public schools. I just ran some quick numbers that if the challenge or the goal or we could find a way, and, again, assuming we had willing investor-owned utilities that would collectively, as the Commission and utilities find a way to do something, if you assumed a cost, which is a high cost of $8,000 per kilowatt for an installed solar PV panel, and you decided to put 8 kilowatts on every school, subject to check, because I'm getting old and my math may be wrong, that would be $64,000 per school.

So if you multiply that by the total number of public schools in Florida -- again, that's a very high number, to the extent that all the public schools don't fall in each IOU's respective service area, but I'm just using it as an open thought here -- the total cost to outfit every public school with 8 kilowatts of solar PV would be approximately $235 million. And assuming that something could be done in a timely manner, which you could further avail one's self of the convertible investment tax credit that's available under the

economic stimulus plan, taking 30 percent off that 235 million, it would cost $164.5 million to do the same. And if you look at what that would provide, it would be 29.4 megawatts of solar in the state of Florida. So, again, not to stretch this beyond the current discussion, but kind of think outside the box and encourage, maybe, you know, this may not be the venue for it. But, again, I think it is a good thing that maybe should be considered.

I would respect our staff and utilities to -- in totality. And, again, I will respect if there is opposition to that, but just trying to embrace the concept, and this is about the most appropriate forum I could think of to have it, because I can't really call people on the phone, given the limitations that we have as Commissioners. But I wonder if the utilities might be willing to file a late-filed exhibit as to whether the TRC test should be used as the exclusive screening test for putting solar PV on public schools, what could be done to accomplish this goal, what rate impact would be experienced by that and, also, briefly opine as to whether having a separate workshop might be helpful.

I mean, I don't want to go and embrace a whole policy on my own initiative, sua sponte. But, again, if we are looking for ways to do something out of the

ordinary, you know, and there does seem to be some sort of constraints towards implementing demand-side solar renewables, then perhaps we could find a way somehow, some way. Again, it all depends on the cooperation of the investor-owned utilities and looking at innovative ways that you could leverage convertible investment tax credit, and then, obviously, the consumers would have to pay some.

But, again, what Progress has effectively done, as Mr. Masiello spoke this morning, is in a sense they have leveraged the resource demand-side management by encouraging the consumer to give up their rebate and send it over to putting solar PV on schools. Now, the scale of that is not -- is obviously limited for the reasons that Mr. Masiello mentioned. But I think that as a state, as an IOU, as a Commission, if we could find a way to do that, I can't think of a better bang for the buck that would provide -- not only embrace renewables, the educational benefit, the public outreach benefit. I mean, we have heard a lot of discussion about home fairs and such like that.

But it would seem to me that those have a lot of benefit, but if you have an inquisitive, you know, grade school child that's going home and nagging his parents, saying, mommy, daddy, we need to be

conservative, it not only hits home with the child, it hits home with the family, it hits home with the general public. But if you look at the intergenerational movement, those grade school children will ultimately be end-use consumers. So if you teach them young, you know, you might not have goals. They might able to do it on their own. But, again, I'm just looking at innovative ways to maybe think out of the box on a selective manner. I'm not saying, you know, across the board. Because, again, there has been some tremendous testimony on the rate impacts.

But, again, if the utilities would not be averse, and maybe we could have a late-filed exhibit just briefly touching upon maybe looking at that issue selectively and see what could be done and what the impacts would be, that might be a good thing to take some time while we're going through this exercise to look at selectively.

THE WITNESS: Sure.

CHAIRMAN CARTER: For informational purposes, I wouldn't have a problem looking at that. But for the last couple of months, Commissioner, and the rate hearings that we have had, I think that the customers have already said that, you know, no mas. So whatever we look at, I would venture or suggest that we look at

it from the standpoint where we don't pile on the ratepayers.

COMMISSIONER SKOP: And, Mr. Chair, that's what exactly I'd ask the utilities to do in terms of, you know, looking at the rate impact. But, equally, you know, if we find innovative ways, whether it be through government or even the utilities themselves to maybe take a look and see what could be done, whether it be through, you know, tax credits and such. I'm just looking to brainstorm. But, again, that might be a selective way if we are to spend certain monies on certain projects. Certainly, you know, in a resource-constrained environment, you want to be able to maximize your investment, any consumer would. And so I can think of a lot of benefits that might entail if we can find a way that it doesn't cause a critical rate impact. And, again, I'm just trying to assess that as an alternative over some other options that the utilities may have considered through the Itron analysis, but just generally speaking.

CHAIRMAN CARTER: I mean, I'm all for information and all, and thinking out of the box. But, like I say, you were there.

COMMISSIONER SKOP: I was there.

CHAIRMAN CARTER: You heard what the public

said, and they -- and I would think that obviously if we can get some creative information from the company, we'd love to have that and we'd love to see it. But I would caution to where I wouldn't -- I would not be privy to want to put any more on the ratepayers.

COMMISSIONER SKOP: And I agree, Mr. Chair. I just used 8 kilowatts as a sample. If you bumped it down to four kilowatts per school or even two kilowatt, at four kilowatts it would be $80 million. And I think in the grand totality of the decisions that the Commission makes, you know, I think that, yes, that is a lot of money, and I don't reflect that for a second. But I think there has been some other discussions in terms of in the magnitude of that, you know, it might not be so much given some of the things that the Commission has the discretion to look at.

So I was just looking for opportunities and suggestions on how you could maybe kill a couple of birds with a single stone, because, you know, that would have the benefit of not only helping the utilities meet their energy efficiency and conservation goals, but it provides that extra educational benefit, the outreach benefit, that we are already trying to do, but also encourages renewables. So it seems to be a whole lot of benefit there if we can find a way to make it

affordable. Because, I mean, absent some of the convertible investment tax credits, it wouldn't be affordable, and I wouldn't even be bringing it up. What I'm saying is there seems to be, perhaps, a window of opportunity that if we could collectively come together as stone soup, maybe you can do something constructive, not only for the state, but also for the utilities. It's just that we have got to be very conscious of the cost impacts so --

CHAIRMAN CARTER: And I think the fact that not all the companies are doing it is that no one -- we don't really have a one-size-fits-all. But I do think from an informational standpoint, we would be more than happy to have that. We would ask the company's to -- and also the intervenors, you guys may have some information, too, that may be helpful to us on that. So why don't we make that, Commissioner, Exhibit -- place holder 163, and I'm going to give you a short title, Commissioner, I hope, that encapsulates what you are saying, Placing Solar PVs on Schools in Florida.

COMMISSIONER SKOP: Late-filed Solar PV on Public Schools in Florida. Thank you.

CHAIRMAN CARTER: Is that okay with all the parties? That way -- I mean, even --

COMMISSIONER EDGAR: Can we clarify exactly

what we're asking to be provided?

CHAIRMAN CARTER: He is asking -- Commissioner Skop, you're recognized.

COMMISSIONER SKOP: Thank you, Mr. Chair.

Yes. Basically, it would be a late-filed exhibit with the title the Chair mentioned, Solar PV on Florida's Public Schools. And in that it would be basically a four-prong question: Should TRC be used as the exclusive screening test for putting solar PV on schools; B would be what could be done to accomplish this goal; prong C would be the rate impact on consumers; and D would be would, you know, a workshop or further discussion be helpful, or is this just not going to work at all.

But it would be interesting to have some discussion on that. I mean, during the course of other proceedings, which I won't get into them, I mean, certainly the schools are feeling budget impacts. And if you can find a win/win situation leveraging federal dollars. And until you do the analysis, I don't know whether it is even practical to do it. My gut feel would be maybe not. But, again, if people get innovative, you know, it's amazing what can come together, just like in the stone soup example.

So, again, if you get a lot of people working

towards a very common goal with minimal rate impact, if any, you know, and it provides attractive alternatives over and above doing some other projects that might not have the same amount of penetration, then it becomes to me an analysis of total utility. If we're going to spend the same amount of money, then spending money wisely over spending money that just doesn't get full value, then that might be something worthy of consideration.

COMMISSIONER ARGENZIANO: Mr. Chair.

CHAIRMAN CARTER: You're recognized, Commissioner.

COMMISSIONER ARGENZIANO: Just a question to Commissioner Skop. I'm trying to follow through, and I have lost you a couple of times here technical-wise here. But are you trying to float the idea of utility-owned solar investments that are paid far by ratepayers and attach them to the schools or state buildings, is that where you're going?

COMMISSIONER SKOP: No, not at all. Because I think where I would be going is more towards what Progress has done, where, basically, the utilities by finding a way to do it, you essentially -- you do it, and the ownership is turned over to the school as a, you know, as a benefit. I mean, I would need to think

through that a little bit more, but certainly something I don't think that they would be earning a return on. It would just be a, you know, one time pass-through cost offset by any federal convertible investment tax credits and any innovative contributions that the utilities themselves might be able to come up with.

COMMISSIONER ARGENZIANO: Okay. Then you are saying that the utility does this through the base rates, and then it gets turned over to the school. And the school then at some point owns the solar facility?

COMMISSIONER SKOP: Partially correct and partially incorrect. The school would own the solar facility. It would be used, you know, on-site like some utilities have already done. It would not be in base rates. It would be in a clause offset by any federal investment -- convertible investment tax credits and any --

COMMISSIONER ARGENZIANO: Okay. Okay. Wait a minute. Stop there for a minute. The ratepayer is going to pay for it.

COMMISSIONER SKOP: Through -- partially through the ECCR.

COMMISSIONER ARGENZIANO: Okay.

COMMISSIONER SKOP: So it's not going to be in base rates. It's not going to earn a return on

invest -- I mean, a return on equity. It would be more -- the cost that we are talking about here, and correct me if I'm wrong, staff, are clause recoverable costs so that they are not -- is that generally correct?

MS. FLEMING: Generally, through the ECCR clause, any conservation-approved programs the utilities can recover reasonable and prudent costs. And those are usually dollar-for-dollar.

COMMISSIONER SKOP: Okay. All right. So, again, it is just mainly thinking outside the box, looking at a higher level goal which would facilitate legislative intent as long it could be done in a cost-effective manner. And, again, I think at least doing a cursory analysis might be worthwhile in light of some of the federal incentives that are currently available. Because, again, the benefit of the utility is they can lay credit to the energy efficiency investments and demand-side conservation savings that would be incurred by doing the demand-side renewable energy systems. And at least the legislative intent at least spoke partially, but, again, the cost impact is, you know, of concern, but they speak --

COMMISSIONER ARGENZIANO: But the question, Commissioner Skop -- if I may, Mr. Chairman.

CHAIRMAN CARTER: You're recognized.

COMMISSIONER ARGENZIANO: And I understand what you are saying and what you are trying to get at, and I still think it is more of a policy call. But what would the utilities -- what benefit would it be to the utilities? I'm just trying to flesh the whole thing out, as they are not in the construction business.

COMMISSIONER SKOP: Well, they would not have to construct it. I'm not asking them to do anything. It is just merely that we look at -- you know, the goal is to further energy conservation and efficiency. Part of that goal, as articulated by the legislature, has been consideration of demand-side renewable energy on customer premises. At the end of the day, schools are customers of the utilities, respective IOUs. You know, they have been crying for mercy in terms of some of the budget constraints they've received. But I'm just looking at the totality of the benefits. You know, there are certain initiatives that can be done that the subscription rate is not -- or the penetration rate is not very high. I mean, there has been a lot of up-front effort and costs put into offering an incentive, but that may not be adopted, so there's a lot of sunk cost there. And I'm just looking at the --

COMMISSIONER ARGENZIANO: I understand that, but I think I want to just clarify again. I don't mean

to cut you off, but if the -- I mean, there are plenty of private companies who would love to retrofit even the PSC building with solar panels or whatever, and I commend them. I think that's a great way to go. I'm just not sure that the ratepayer should be the one paying it and not the state, or if there is not some kind of federal way of getting that done without putting that through the ratepayer. Have you given much thought to that?

COMMISSIONER SKOP: Right. And, again, I'm trying to minimize any ratepayer impact. I guess what I'm saying or suggesting is that during these energy efficiency and conservation goal-setting proceedings, obviously, there is going to be a ratepayer cost, no matter what is done. And I'm merely trying to look at all possible alternatives to see what maximizes total value. And if you can attain a greater amount of benefit by doing Option A at the same cost as doing Option, you know, C, D, and E, then perhaps, you know, looking at Option A or selectively thinking outside of the box on a specific case basis might be worthwhile.

But I tend to agree with you, that the only reason I'm positing this is due to the 30 percent convertible investment tax credit that's available, which essentially slices one-third off the cost of

anything to begin with. And then, you know -- you know, there are other innovative ways of looking at reducing ratepayer impacts. So if you can get it down to the same equivalent cost as the ratepayers are otherwise going to pay, or less than that, then maybe there is an ability. But it's just merely an exercise to see if there's something that could be done in that area that to me, at least, has a host of benefits over limited benefit. Because you're still going to get the same demand-side management, no matter kind of what you do, but there just seems to be some additional benefits over and above that.

So, again, Progress hinted at some innovative ways where the consumer could sign up for demand-side management, forgo the deposit and that -- I mean, excuse me, forgo the rebate, and that rebate was otherwise then used to put solar PV on schools, which has that leveraging effect on the value. But, again, I don't want to tie up the discussion. I'm just merely looking at -- briefly, I would just like to get the utilities' thoughts on that, maybe, you know, they could come up with something innovative. Maybe it is not cost-effective at all. Maybe, you know, in terms of being good stewards, you know, maybe that is something they would want to pursue for any host of reasons that

might be beneficial to them. I don't know. But I'm just looking at all the alternatives as we go through this goal-setting process, which is only done, I believe, once every five years.

So I think, you know, times are changing, costs are coming down, but the solar PV still seems to be slightly out of the reach of being practical. Although Progress has articulated that it can be done on a rebate level. And the question is, if you can offer a rebate of $2 or $1.50, and I won't put words in Progress' mouth, but I commend their thinking. $1.50 per kilowatt is $1,500. If the PV panel for a kilowatt costs 6,000, you have a 30 percent investment tax credit, that's taking one-third of that off the costs, so you are at a total cost of 4,000. Then you have got 1500 off the 4,000, then you are suddenly at 2500 to make the panel happen. So then we look at other alternatives and, you know, can we create value by doing something like that?

So, again, I don't want to belabor the discussion, I'm just merely looking to creatively think outside the box on one specific issue that seems to me has a lot of -- seems to offer a lot of benefits. But, again, I'm not cognizant of what the costs would be in relation to the cost that are currently being incurred

under the current goal setting that we're at. So I'm just looking at the apples-to-oranges comparison.

CHAIRMAN CARTER: From an informational standpoint that is one thing, but we have also had testimony that -- in this proceeding here that one is that when contractors see that there's a rebate given, that doesn't necessarily reduce the price. They say -- well, they start from a position, they're going up on the price. The other thing is that over a period of time, from the testimony that has been given, is that the cost has not gone down. So I think that in the process of -- and I think that information is one thing, but I'm really -- if we're going to start talking about things that are going cost people more, I'm not --

COMMISSIONER SKOP: Mr. Chair, I'm not suggesting that at all. I'm just simply asking for the utilities to opine in a late-filed exhibit. I'm not suggesting whatsoever that we would ask the consumers to incur additional costs. You know, I could make some other comparisons to other dockets, but I won't get into that.

CHAIRMAN CARTER: Yeah, let's not do that. Let's stay on this one.

COMMISSIONER SKOP: This is merely a discussion that I think that -- that, you know, that I

would like to see a little bit of additional analysis put on. And if it is just entirely on my behalf, that's fine, I'm willing to take the heat for that. But I'm just trying to do the right thing, to look at all the alternatives.

CHAIRMAN CARTER: We're all here to do the right thing, Commissioner. I'm just saying is that from an informational standpoint, we can ask for the information, but we are cognizant about the costs, too.

Let me do this. Are there any further questions for the bench? I need to give our court reporter a break, and I need to give staff an opportunity. We have got some difficulties.

Commissioner Argenziano, we have some difficulties with one of our cameras here, so we're going to take a break, and we will come back on 10 after. We are on recess.

COMMISSIONER ARGENZIANO: Okay.

(Recess.)

CHAIRMAN CARTER: We are back on the record, and when we last finished, we had completed questions from the bench.

Redirect?

MR. GRIFFIN: Very briefly, Mr. Chair.

REDIRECT EXAMINATION

BY MR. GRIFFIN:

Q. Just to make sure that the record is clear, Mr. Floyd, earlier you talked about Gulf Power's 2014 need, the avoided unit. Did you refer to that as a 2014 combined cycle?

A. Yes, I did.

Q. Okay. Thank you. One additional question, and this is the only other question I have. Does Gulf Power currently have a program involving solar and schools?

A. Yes. Gulf does offer the solar for schools program in conjunction with the Florida Solar Energy Center. It's a customer -- it's a program that's available to customers to contribute -- that is the word I was looking for -- contribute on their electric bill for donations toward that program. And Gulf uses those funds to facilitate PV installations and currently has four PV installations in area schools. And that's, you know, to promote the education and awareness of solar PV technology.

Q. Is that program subject to any sort of cost-effectiveness constraints or criteria?

A. No, it's not.

MR. GRIFFIN: That's all I have. Thank you.

CHAIRMAN CARTER: Exhibits?

MR. GRIFFIN: Gulf Power would move Number 54.

CHAIRMAN CARTER: Are there any objections on 54? Without objection, show it done.

(Exhibit 54 admitted into evidence.)

CHAIRMAN CARTER: Okay. You may proceed.

MR. GRIFFIN: And then Mr. Floyd's errata sheet, which was 159.

CHAIRMAN CARTER: 159. Are there any objections? Without objection, show it done.

(Exhibit 159 admitted into evidence.)

CHAIRMAN CARTER: 160?

MS. KAUFMAN: FIPUG would move 160, Mr. Chairman.

CHAIRMAN CARTER: Are there any objections? Without objection, show it done.

(Exhibit 160 admitted into evidence.)

CHAIRMAN CARTER: 161 is void. It was a place holder. 162. Oh, I had this wrong.

MS. BROWNLESS: Florida Solar Coalition would move Exhibit 162.

CHAIRMAN CARTER: Are there any objections on 162, which is a composite Ms. Brownless. Any objections? Without objection, show it done.

(Exhibit 162 admitted into evidence.)

CHAIRMAN CARTER: 163, which is the

information that was requested by Commission Skop. Are all the parties clear on that?

MR. BURNETT: Mr. Chair.

CHAIRMAN CARTER: Yes, sir.

MR. BURNETT: If I may. Certainly I'm not raising any sort of objection, but just perhaps a concern. One thing that does concern me about having 163 as a late-filed is if any of -- anyone who was submitting their position on 163 were to include something that another party may contend was outside of the record or outside of the four corners or subject to cross or redirect, and the like, my fear is that may impede the Commission getting meaningful information and may cause a legal battle. I just wonder, sort of thinking out loud, does it make more sense for us to have perhaps some time to get together and submit that information outside of an exhibit, perhaps, to avoid any potential legal arguments. But then --

CHAIRMAN CARTER: Well, let's do -- this may lend itself to a workshop or something like that, and there are some things pertaining to this that is outside of the scope of several of the parties and all, so let's do this. Let's not make this part of it, but certainly we will ask the companies and the parties to submit this information to us later. And that way we won't hold up

the process, and we won't hold up these dockets. Okay. We'll get from an informational standpoint, and that will give us, Commissioners, an opportunity to review it for ourselves as well as talk with our staff and have further information gleaned and maybe look at some best practices. I think Commissioner Skop mentioned PG&E. Maybe we could look at some other states and see what they are doing.

Commissioner Skop.

COMMISSIONER SKOP: Thank you, Mr. Chair. I will just withdraw the request for the late-filed exhibit. I mean, that is the cleanest thing to do. Again, I was just trying to facilitate having an open discussion, but that may cause more problems than it solves. So, again, I will respectfully withdraw.

CHAIRMAN CARTER: Okay. 163 is withdrawn. Okay.

Staff, you're recognized.

MR. SAYLER: Mr. Chairman, staff would move into the record Exhibit 138.

CHAIRMAN CARTER: Commissioners, that was -- 138 was an exhibit, the yellow one, where staff had asked each one of the company's for information, and they went through it, and they were just holding off until they had all four companies to respond to that.

Is there any objection from any of the parties on Exhibit 138? Are there any objections? Hearing none -- staff, you're recognized.

MS. FLEMING: Yes, Commissioner. With respect to exhibit --

CHAIRMAN CARTER: Oh, let me be -- let me be clear. 138 is entered.

(Exhibit 138 admitted into evidence.)

CHAIRMAN CARTER: Okay. You may proceed.

MS. FLEMING: Yesterday Mr. Cavros started questioning and introduced Exhibit 151, and it was brought to our attention that a supplemental response was filed. We are now prepared to supplement Exhibit 151 with the supplemental response. This has been provided to all the parties.

CHAIRMAN CARTER: Okay.

MS. FLEMING: And it only includes the relevant pages that Mr. Cavros crossed the witness on with respect to Progress. And I have checked with Mr. Cavros and with Progress and there aren't any objections.

CHAIRMAN CARTER: Without objection, show it done. 151 entered in, too.

(Exhibit 151 admitted into evidence.)

CHAIRMAN CARTER: Okay. Staff, any further

exhibits?

MS. FLEMING: Yes.

CHAIRMAN CARTER: You're recognized.

MS. FLEMING: One more exhibit. This morning we handed out an exhibit with a yellow cover page. It's FPL's Response to Staff's 8th Set of Interrogatories, Number 96. This is a stipulated exhibit, and we would just ask that this be marked as Exhibit 164 and be moved into the record.

CHAIRMAN CARTER: Are there any objections? Without objection, show it done. Commissioners, this will be Exhibit 164, and it will be presented by Staff. I'm trying to write and talk at the same time. I guess that is like riding a bicycle and chewing bubble gum. Are there any objections? Without objection, show it done.

MS. BROWNLESS: I'm sorry. I didn't get what that was.

CHAIRMAN CARTER: Riding a bicycle and chewing bubble gum. Oh, oh, you mean the exhibit?

MS. BROWNLESS: Yes.

CHAIRMAN CARTER: Staff, you're recognized.

MS. FLEMING: It was FPL's response to staff's 8th set of interrogatories. It was provided to you first thing this morning, a yellow cover page. We

discussed it at the conclusion of yesterday's hearing.

CHAIRMAN CARTER: We will take a moment so you can see it. Do you have it? It says -- let's just take a quick moment.

MS. BROWNLESS: I'm just trying to find it in my --

MS. FLEMING: I think we have an extra copy if you need it.

CHAIRMAN CARTER: Okay. Let's do that.

MS. BROWNLESS: Oh, I've got it. Is it FP&L's Response to Staff's 8th Set of Interrogatories, Number 96.

CHAIRMAN CARTER: Number 96.

MS. BROWNLESS: Thank you.

CHAIRMAN CARTER: Any objections?

MS. BROWNLESS: No, sir.

CHAIRMAN CARTER: Without objection, show it done.

(Exhibit 164 marked for identification and admitted into evidence.)

CHAIRMAN CARTER: Okay. Staff, any further exhibits?

MS. FLEMING: I'm not aware of any other exhibits.

CHAIRMAN CARTER: All right. Any other

exhibits from any of the parties for witness or at this point in time?

Okay. Thank you. You may be excused.

THE WITNESS: Thank you.

CHAIRMAN CARTER: Call your next witness.

MR. HORTON: Mr. Chairman.

CHAIRMAN CARTER: Hold the phone. Staff, Commissioners, the next witness has been stipulated, so what we will have is the attorney for FPUC will move the prefiled testimony of the witness into the record as though read, is that right?

MR. HORTON: Yes, sir. I was afraid you weren't going to let me speak.

CHAIRMAN CARTER: You're recognized. I was just on a roll there. You're recognized.

MR. HORTON: It is with pleasure that we request that the direct testimony of Joseph Eysie be inserted into the record pursuant to the stipulation of the parties.

CHAIRMAN CARTER: Commissioners, it has been stipulated by the parties, and objections? Without objection show it done.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY OF JOSEPH R. EYSIE

ON BEHALF OF

FLORIDA PUBLIC UTILITIES COMPANY

DOCKET NO. 080411

JUNE 4, 2009

Q. Please state your name and business address.

A. My name is Joseph Eysie. My business address is 401 S. Dixie Highway, West Palm Beach, Florida 33401.

Q. By whom are you employed and in what capacity?

A. I am employed by Florida Public Utilities Company (FPUC) as Energy Conservation Manager.

Q. Please summarize your educational background and professional experience.

A. I received a BA in Criminal Justice and Sociology from Castleton State College and a Master's Degree, Business Administration from Nova Southeastern University. I have been employed by FPUC since 2005 and have worked in the demand-side management and conservation area since 2006. As Energy Conservation Manager I am responsible for performance of energy efficiency programs in 4 company divisions through Fl. I have also been responsible for designing and executing electric and natural gas energy efficiency campaigns for

the Company. Prior to taking this position I was an Energy Conservation Rep responsible for implementing FPU's Central Florida Division Energy Conservation programs. In that position I conducted residential, commercial, and industrial energy surveys for exiting customers and worked directly with local builders and contractors to promote our New Construction programs.

I have led or participated in several association and regulatory conservation workshops and committees.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony is (1) to discuss FPUC's historical and ongoing commitment to conservation and demand-side management (DSM), (2) to describe the overall process to develop DSM goals, (3) to explain FPUC's approach to conservation and DSM, (4) to explain FPUC's proposed DSM goals, and (5) to address areas the Public Service Commission Staff has expressed an interest in investigating through this Docket.

Q. Are you sponsoring any exhibits to your testimony?

A. No I am not.

Q. Please describe FPUC's service territory and the customers that FPUC serves.

A. FPUC provides electric service to approximately 34,000 customers in two separate geographic areas -- the Northeast Division headquartered in Fernandina

Beach serving customers on Amelia Island and the Northwest Division headquartered in Marianna serving customers in all or parts of Jackson, Calhoun and Liberty counties.

FPUC is the smallest of the FEECA utilities with a peak demand of approximately 100 MW and energy requirements of approximately 460 GWh per year. FPUC does not generate any of the power we provide customers but we purchase power from JEA for our Northeast Division and from Gulf Power for the Northwest Division.

Q. Does FPUC currently offer DSM programs to its customers?

A. Yes. Goals were first established for FPUC in 1996 based on measures that were cost-effective under the Ratepayer Impact Measure (RIM) and Participants tests. We have offered and encouraged participation in conservation programs designed to achieve those and goals established in subsequent goal setting procedures.

Q. Please explain FPUC's approach to DSM programs.

A. Our size and limited resources impact our approach to conservation and DSM, and therefore educating customers on the benefits associated with energy efficiency and energy conservation is a key element of our DSM plan. As a result, we put a heavy emphasis on promoting no or low cost energy efficiency and conservation measures through customer education.

Q. How were potential new DSM measures identified and evaluated for FPUC for purposes of this proceeding?

A. In response to the mandate of Section 366.80 through Section 366.85, F.S., FPUC joined a collaborative (the Collaborative) with the other Florida Energy Efficiency and Conservation Act (FEECA) jurisdictional utilities to engage a single contractor (Itron) to identify DSM measures and evaluate the technical, economic, and achievable potential for DSM for each of the utilities' service areas.

Q. Please describe the Collaborative among the utilities and other entities.

A. The Collaborative consisted of the FEECA utilities, the Natural Resources Defense Council (NRDC), and the Southern Alliance for Clean Energy (SACE). The goal of the Collaborative was to develop the technical, economic, and achievable potential for DSM in Florida. The Collaborative conducted workshops in conjunction with the Florida Public Service Commission Staff.

Q. Why was a collaborative approach taken?

A. The collaborative approach offered opportunity for reduced costs to the FEECA utilities in complying with the requirements of the Florida Energy Efficiency and Conservation Act. In addition, the collaborative approach allowed for a consistent methodology for the evaluation of DSM potential and formed a vehicle for non-utility stakeholders' input.

Q. Please describe the process of how the Collaborative selected Itron to be the consulting firm utilized to provide the necessary assistance in the DSM goals setting process.

A. The Collaborative selected Itron through a request for proposals (RFP) process administered by Florida Power & Light Company. The RFP was issued to several entities qualified to perform DSM potential studies for all the FEECA utilities.

Q. As the consultant selected by the Collaborative, what were Itron's responsibilities?

A. Itron's responsibilities included providing assessments of the technical and achievable potential for energy and peak demand savings from energy efficiency, demand response, and demand-side renewable energy for each of the FEECA utilities, as well as Florida as a whole. Itron also provided economic potential estimates for FPUC.

Q. How were potential energy efficiency, demand response, and demand-side renewable energy technologies identified?

A. A comprehensive list of measures was developed by Itron from their vast experience and supplemented with measures identified by the Collaborative, as described in detail in the testimony of Mike Rufo.

Q. How was FPUC's achievable potential for the 2010 through 2019 period determined?

A. Achievable potential was determined for FPUC by Itron as discussed in the testimony of Mike Rufo.

Q. What are FPUC's estimated residential and commercial/industrial energy efficiency achievable potentials based on the Ratepayer Impact Measure, or RIM, test?

A. Itron's analyses indicated that there is no achievable potential for residential and commercial/industrial energy efficiency for FPUC based on the RIM test.

Q. What are FPUC's estimated achievable potentials for residential and commercial/industrial demand response?

A. Itron estimated achievable potential for residential and commercial/industrial demand response under two different scenarios for enrollment under critical peak price (CPP)/time of use (TOU) as discussed in the testimony of Mike Rufo. The technical potential under the high CPP/low TOU scenario is approximately 1.33 MW (summer) and 1.24 MW (winter) by 2019. The technical potential under the low CPP/high TOU scenario is approximately 1.07 MW (summer) and 0.75 MW (winter) by 2019.

Q. Is the demand response achievable potential included in FPUC's proposed DSM goals?

A. No. The demand response is assumed to be from several measures, each requiring a significant system to be installed to achieve the reductions. The relatively small amount of reductions by the end of the period considered in this Docket was deemed insufficient to justify implementation.

Q. What are FPUC's estimated residential and commercial/industrial demand-side renewable energy technology achievable potentials based on the RIM test?

A. Itron's analyses indicated that there is no achievable potential for residential and commercial/industrial demand-side renewable energy technology for FPUC based on the RIM test.

Q. What cost-effectiveness test or tests should the Commission use to set DSM goals, pursuant to Section 366.82, F.S.?

A. In general, the Commissions should use, as a threshold, the results of the RIM test as the basis for setting DSM goals. If the results of the RIM test indicate a DSM measure may be cost-effective, then it should also be required to pass both the TRC test and the Participants test.

Q. Has FPUC provided an adequate assessment of the full technical potential of available demand-side and supply-side conservation and efficiency

measures, including demand-side renewable energy systems, pursuant to Section 366.82 (3), F.S.?

A. Yes. The technical potential study performed by Itron, as described in the testimony of Mike Rufo, provided an adequate assessment of the full technical potential of available demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy systems. Drawing upon their recognized expertise, Itron utilized its state-of-the-art models to comprehensively analyze the full technical potential of energy efficiency, demand response, and demand-side renewable energy technologies.

Q. Has FPUC provided an adequate assessment of the achievable potential of available demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy systems?

A. Yes. The achievable potential study performed by Itron, as described in the testimony of Mike Rufo, provided an adequate assessment of the achievable potential of available demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy systems. Drawing upon their recognized expertise, Itron utilized its state-of-the-art models to comprehensively analyze the achievable potential of energy efficiency, demand response, and demand-side renewable energy technologies.

It should be noted that as a non-generating utility, supply-side conservation and efficiency measures are not applicable to FPUC.

Q. Should the Commission establish separate goals for demand-side renewable energy systems for the period 2010 through 2019?

A. No. The Commission should not establish separate goals for demand-side renewable energy systems. All goals should be established to promote cost-effective DSM without bias towards any particular technology. Furthermore, if demand-side renewable energy systems are cost-effective, utilities should have the flexibility to include such systems as part of their renewable portfolio or as part of their DSM goals.

Q. Should the Commission establish separate goals for residential and commercial/industrial customer participation in utility energy audit programs for the period 2010 through 2019?

A. No. The Commission should not establish separate goals for residential and commercial/industrial customer participation in utility energy audit programs. Utility energy audits are performed as a result of customer interest in such audits, and the utility cannot dictate that customers have interest in receiving energy audits. Utilities should be allowed the flexibility to integrate energy audits into conservation programs as appropriate.

Q. Should the Commission establish incentives to promote both customer-owned and utility-owned energy efficiency and demand-side renewable energy systems?

A. No. As part of this Docket, we have comprehensively analyzed customer-owned energy efficiency and demand-side measures and none we found to be

cost-effective. Utility-owned energy efficiency and renewable energy systems are supply-side issues that are not applicable to FPUC as a non-generating utility.

Q. Please identify the 2010 through 2019 projected technical potential for FPUC.

A. Projected technical potential for FPUC is presented in the Executive Summary section of the *Technical Potential for Electric Energy and Peak Demand Savings for Florida Public Utilities Company* (dated April 27, 2009) which was developed by Itron and has been filed previously in this Docket.

Q. What overall DSM goals (peak demand and energy reductions) are appropriate and reasonably achievable for FPUC for the 2010 through 2019 period?

A. Based on Itron's evaluations using the RIM test, no DSM measures were shown to be cost-effective. Therefore, we believe there should be no Commission-required DSM goals for the 2010 through 2019 period.

Q. Do FPUC's proposed DSM goals adequately reflect the costs imposed by state and federal regulations on the emission of greenhouse gases, pursuant to Section 366.82(3)(d), F.S.?

A. Greenhouse gases are not currently regulated at either the State or Federal level, and there currently are no costs imposed on the emissions of greenhouse gases.

FPUC does not believe it is appropriate to base the establishment of DSM goals on speculation related to yet-to-be defined potential regulations of emissions of greenhouse gases. However, for informational purposes, Itron is performing additional analyses related to several different combinations of fuel and carbon dioxide emissions allowance prices.

Q. Does FPUC propose to continue its existing conservation programs even though FPUC request that no goals be applied based on Itron's evaluations?

A. Yes. FPUC proposes to continue and update its existing conservation programs subject to Commission approval of cost recovery through the Conservation Cost Recovery Clause. FPUC has invested significant cost and effort in the development and implementation of its existing conservation programs which increases their cost-effective implementation and which FPUC believes are in the overall best interest of its customers. FPUC's existing conservation programs are generally low cost programs based significantly on customer education. FPUC will update their existing conservation programs to reflect changes in minimum appliance efficiency standards and to improve the efficiency of the implementation of the programs with their Conservation Plan to be filed after Commission approval of FPUC's proposed conservation goals subject to Commission approval of cost recovery through the Conservation Cost Recovery Clause.

Q. Does this conclude your testimony?

A. Yes it does.

MR. HORTON: And the same for Mr. Myron Rollins, we would request that his direct testimony be inserted into the record pursuant to stipulation of the parties.

CHAIRMAN CARTER: Commissioners, it has been agreed to and stipulated by the parties. Any objections?

Without objection, show it done.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY OF MYRON R. ROLLINS

ON BEHALF OF

FLORIDA PUBLIC UTILITIES COMPANY

DOCKET NO. 080411

JUNE 1, 2009

Q. Please state your name and business address.

A. My name is Myron R. Rollins. My business address is 11401 Lamar Avenue, Overland Park, Kansas 66211.

Q. By whom are you employed and in what capacity?

A. I am employed by Black & Veatch Corporation. My current position is Director.

Q. Please describe your responsibilities in that position.

A. I am responsible for the management of various projects for utility and non-utility clients. These projects encompass a wide variety of services for the power industry. The services include load forecasts, conservation and demand-side management, reliability criteria and evaluation, development of generating unit addition alternatives, fuel forecasts, screening evaluations, production cost simulations, optimal generation expansion modeling, economic and financial evaluation, sensitivity analysis, risk analysis, power purchase and sales evaluation, strategic considerations, analyses of the effects of environmental

regulations, feasibility studies, qualifying facility and independent power producer evaluations, power market studies, and power plant financing.

Q. Please describe Black & Veatch.

A. Black & Veatch Corporation has provided comprehensive engineering, consulting, and management services to utility, industrial, and governmental clients since 1915. Black & Veatch specializes in engineering, consulting, and construction associated with utility services, including electric, gas, water, wastewater, telecommunications, and waste disposal. Service engagements consist principally of investigations and reports, design and construction, feasibility analyses, rate and financial reports, appraisals, reports on operations, management studies, and general consulting services. Present engagements include work throughout the United States and numerous foreign countries.

Q. Please state your educational background and experience.

A. I received a Bachelor of Science degree in Electrical Engineering from the University of Missouri – Columbia. I also have two years of graduate study in Nuclear Engineering at the University of Missouri – Columbia. I am a licensed professional engineer and a Senior Member of the Institute of Electrical and Electronic Engineers.

I have 33 years of experience in the power industry specializing in generation planning and project development. In the past ten years, I have been the project manager for over 100 projects, the vast majority of which have been for Florida

utilities. Florida utilities for which I have worked include Florida Public Utilities Company (FPUC), Florida Municipal Power Agency (FMPA), Kissimmee Utility Authority, Lakeland Electric, Orlando Utilities Commission (OUC), JEA, City of Tallahassee, Reedy Creek Improvement District (RCID), City of St. Cloud, Utilities Commission of New Smyrna Beach, Sebring Utilities Commission, City of Homestead, Florida Power Corporation, Tampa Electric Company, and Seminole Electric Cooperative.

I was responsible for the development of Black & Veatch's POWRPRO chronological production costing program and POWROPT optimal generation expansion program. I am also responsible for power market analysis and project feasibility studies. I have been responsible for supporting need for power petitions on a number of power plants in Florida including Stanton 1, 2, A, and B; Cedar Bay; Cane Island 3 and 4; McIntosh 5; the Brandy Branch Combined Cycle Conversion, Greenland Energy Center, and Treasure Coast Unit 1;. I also participated in the need for power proceeding for the Hardee and Hines projects. I have presented expert testimony on several occasions before the Alaska, Indiana, Missouri, and Florida public service commissions and have presented numerous papers on strategic planning and cogeneration.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony is to discuss FPUC's avoided costs provided to Itron for use in the economic and achievable conservation and demand-side management evaluations.

Q. Are you sponsoring any exhibits to your testimony?

A. Yes. Exhibit No. __ [MRR-1] is a copy of my résumé, Exhibit No. __[MRR-2] presents FPUC's avoided costs.

Q. Please describe FPUC's power supply?

A. FPUC is unique among the Florida Energy Efficiency and Conservation Act (FEECA) utilities in that FPUC purchases all of its power supply requirements from JEA and Gulf Power Company. FPUC provides electric service to approximately 34,000 customers in two separate geographic areas – the Northeast Division headquartered in Fernandina Beach serving customers on Amelia Island and the Northwest Division headquartered in Marianna serving customers in all or parts of Jackson, Calhoun and Liberty counties. JEA serves the Northeast Division and Gulf Power serves the Northwest Division. The load in the two Divisions is approximately equal.

Q. Please describe how FPUC's avoided costs are calculated?

A. FPUC's avoided costs are the purchase power costs. The purchase power costs for each Division are calculated and averaged together to obtain the avoided costs for FPUC. Purchase power costs are estimated for the following cases.

- Reference Case
- CO_2
- Low Fuel/Low CO_2
- High Fuel/High CO_2

- Low Capital
- High Capital

Q. Please describe the avoided cost for the purchase power from JEA?

A. JEA provided average fuel costs including variable operation and maintenance (O&M) cost, and emission allowance costs for various cases evaluated by Itron. These average fuel costs were from the production cost model runs that JEA used to determine JEA's avoided costs in the Conservation Goals Docket. JEA also provided projections of purchase power costs through May 2011 for FPUC. The annual increases in the average fuel prices were applied to energy price portion of the purchase power price to obtain projections of FPUC's JEA avoided energy costs. JEA's avoided capacity costs from JEA's Conservation Goals Docket were combined with FPUC's generation demand costs along with transmission, ancillary service, distribution, and distribution O&M costs to obtain FPUC's JEA avoided capacity costs.

Q. Did JEA include emission allowance costs in the average energy costs?

A. Yes. JEA included SO_2, NO_x, and CO_2 allowance price projections developed by the Energy Information Administration as appropriate for each case.

Q. How were the avoided costs for Gulf Power developed for the reference case?

A. FPUC did not receive any projected purchase power costs from Gulf Power. The existing Gulf Power purchase energy costs were escalated at 2 percent

annually. FPUC is billed on a demand ratchet by Gulf Power for capacity costs. FPUC's load in the Northwest Division has dropped and FPUC does not believe that they will ever exceed the ratchet. Thus FPUC's Gulf Power avoided capacity costs are assumed to consist of only FPUC's avoided distribution and distribution O&M costs.

Q. How were FPUC's avoided costs developed for the other cases?

A. The avoided energy costs were escalated at the escalation rates developed for the JEA avoided energy costs. The avoided capacity costs did not change.

Q. How were the FPUC avoided costs obtained from the JEA and Gulf Power avoided costs?

A. The JEA and Gulf Power avoided energy and avoided capacity costs were averaged.

Q. How were the avoided costs developed for the low and high capital cost cases?

A. The avoided capacity costs were decreased 20 percent for the low capital cost case and increased 20 percent for the high capital cost case. The avoided energy cost was the same as for the reference case.

Q. Please provide the avoided capacity and energy costs provided to Itron.

A. The avoided capacity and energy costs are presented in Exhibit No.__ [MRR-2].

1 **Q. Does this conclude your pre-filed testimony?**

2 **A.** Yes.

MR. HORTON: And Mr. Rollins had two exhibits, 55 and 56, and we would request --

CHAIRMAN CARTER: Okay. Let's take a moment. Exhibits 55 and 56. Are there any objections? Without objection show it done, entered into the record.

MR. HORTON: Thank you, sir.

(Exhibits 55 and 56 marked for identification and admitted into evidence.)

CHAIRMAN CARTER: Okay. Thank you.

Next we'll have Mr. Young.

MR. YOUNG: Thank you, sir. I would call Randall Halley to the stand, please.

CHAIRMAN CARTER: Randall Halley.

MR. YOUNG: Be gentle with him, Mr. Chairman, this is his maiden voyage, I think.

CHAIRMAN CARTER: Oh, so we get to haze him?

RANDALL HALLEY

was called as a witness on behalf of Orlando Utilities Commission, and having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. YOUNG:

Q. Mr. Halley, will you state your name, address and by whom you are employed for the record, please?

A. Yes. My name is Randy Halley, and the address

is 100 Northwest Anderson Street, Orlando, Florida 32082, and I am employed by the Orlando Utilities Commission.

Q. Did you prepare some Direct Testimony that was prefiled in this proceeding?

A. Yes.

Q. If I asked you each of the questions that were asked in that, would your answers be the same?

A. Yes.

Q. Do you have any corrections to your testimony?

A. No.

Q. And there were, I believe, three exhibits to your testimony as well, right?

A. That's correct.

Q. Are there any corrections to those exhibits?

A. No.

MR. YOUNG: Okay. I would ask that his testimony, Mr. Chairman, be placed in the record as though read.

CHAIRMAN CARTER: The prefiled testimony of the witness will be inserted into the record as though read.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY OF RANDALL E. HALLEY

ON BEHALF OF

ORLANDO UTILITIES COMMISSION

DOCKET NO. 080412

JUNE 1, 2009

Q. Please state your name and business address.

A. My name is Randall E. Halley. My business address is Reliable Plaza at 100 West Anderson Street, P.O. Box 3193, Orlando, Florida 32802.

Q. By whom are you employed and in what capacity?

A. I am employed by Orlando Utilities Commission (OUC) as Manager of Strategic Planning.

Q. Please summarize your educational background and professional experience.

A. I have a Bachelor of Science degree in Finance from the University of Central Florida.

In my current role as Manager of Strategic Planning, I am responsible for leading the strategic planning group through initiatives within the organization focused on long-term planning. These initiatives pertain to electric and water integrated resource planning, developing, implementing and monitoring energy

conservation measures, conducting various research and analysis studies regarding cost of service and rate design options, capital prioritization process, measurement and verification of OUC's renewable and conservation programs. Strategic Planning is also responsible for forecasting customer billing determinants and related revenues, forecasting of fuel costs, the financial feasibility analyses for major capital projects, developing the cost of service models for electric, water, and chilled water operations, developing rate designs for electric, water, and chilled water services, as well as determining the feasibility of new business opportunities for OUC.

Prior to joining OUC in July 2006, I was a Principal Consultant with the Utility Advisors' Network. I have 18 years of financial and management experience related to municipal utilities owning and operating electric, natural gas, water and wastewater systems. As a consultant, I provided clients with services such as; forecasting, cost of service analysis, retail and wholesale rate design development, and financial feasibility analysis for capital additions and acquisitions.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony is (1) to discuss OUC's unique customer base and demographics, (2) to discuss OUC's historical and ongoing commitment to conservation and demand-side management (DSM), (3) to describe the overall process to develop DSM goals, (4) to explain OUC's approach to conservation and DSM, (5) to explain OUC's proposed DSM goals, and (6) to address areas

the Public Service Commission Staff has expressed an interest in investigating through this Docket.

Q. Are you sponsoring any exhibits to your testimony?

A. Yes. Exhibit No. __ [RH-1] is a copy of my résumé. Exhibit No. __[RH-2] presents a list of the DSM, conservation, and renewable energy programs currently offered by OUC and activities in which we are involved. Exhibit No. __ [RH-3] presents the estimated bill impact to OUC's residential customers for DSM measures passing both the Total Resources Cost (TRC) and Participants tests.

Q. How is OUC governed?

A. OUC's governing board consists of five members, including the Mayor of the City of Orlando, who is an ex-officio member. Members must be OUC customers and at least one member must reside outside of the City limits in unincorporated Orange County. Members serve without salary and may serve two consecutive four-year terms. The governing board sets the rates and policies governing OUC's operations. OUC's board meetings are open to the general public and rate payers are permitted to participate in Commission meetings. OUC's governing board sets policies and programs consistent with the best interests of OUC's customers and community.

Q. Please describe OUC's service territory.

A. OUC is the municipal electric utility provider for the City of Orlando, portions of Orange County, portions of Osceola County and a full requirements provider to the City of St. Cloud.

Q. Please describe the demographics of OUC's customer base.

A. OUC serves approximately 204,000 customers. OUC's customers are approximately 86 percent residential, approximately 55 percent of which are multi-family residences, many of which are rentals. Approximately 40 percent of OUC's customers have household incomes of less than $35,000. Many of OUC's customers are employed in the service industry, which is especially vulnerable to the impacts of economic downturns. The combination of low income and rental customers presents special challenges to the effective implementation of conservation and DSM programs. Any impacts on rates resulting from implementation of DSM measures would have a disproportionate impact on low income customers. Furthermore, rental customers have less control over energy conservation efforts than homeowners.

Q. Please explain OUC's existing Commission-approved DSM and conservation goals.

A. OUC's 2005 Demand-Side Management Plan was approved by the Florida Public Service Commission on September 1, 2004 (Docket No. 040035). The Commission determined there were no cost-effective DSM measures available

for use by OUC, and established zero DSM goals for OUC's residential, commercial, and industrial sectors through 2014.

Q. Has OUC offered DSM programs to its customers since the Commission approved zero DSM goals in the 2004 goal setting process (Docket No. 040035)?

A. Yes. OUC has continued to voluntarily offer DSM programs to customers across all customer classes. OUC offers DSM programs that are directly quantifiable, as well as programs that are not directly quantifiable. Since 2005, the quantifiable DSM programs that OUC has voluntarily offered have saved a total of approximately 5 MW of summer peak demand, approximately 4 MW of winter peak demand, and nearly 15,000 MWh of energy.

Q. How does OUC evaluate and select the DSM programs that are offered to your customers?

A. OUC works with several consultants to identify DSM programs that may be available to OUC. OUC evaluates those programs initially based on the unique characteristics of OUC's customer and community needs and potential for successful implementation. If a program appears to provide benefits, OUC considers implementation of the identified DSM programs to test customer acceptance and quantify measurable results. Based on these results, OUC may extend or discontinue the program as well as evaluate additional programs. OUC's goal is to remain responsive to the needs of its customers rather than

impose mandated programs that may be ineffective when applied to OUC's unique customer base.

Q. How were potential DSM measures identified and evaluated for OUC for purposes of this proceeding?

A. In response to the mandate of Florida Energy Efficiency and Conservation Act (FEECA) , OUC joined a collaborative (the Collaborative) with the other FEECA jurisdictional utilities to engage a single contractor (Itron) to identify DSM measures and evaluate the technical, economic, and achievable potential for DSM for each of the utilities' service areas.

Q. Please describe the Collaborative among the utilities and other entities.

A. The Collaborative formed consisted of the FEECA utilities, the Natural Resources Defense Council (NRDC), and the Southern Alliance for Clean Energy (SACE). The goal of the Collaborative was to evaluate the technical, economic, and achievable potential for DSM in Florida. The Collaborative conducted workshops in conjunction with the Florida Public Service Commission Staff.

Q. Why was a collaborative approach taken?

A. The collaborative approach offered opportunity for reduced costs to the FEECA utilities in complying with the requirements of the Florida Energy Efficiency and Conservation Act. In addition, the collaborative approach allowed for a

consistent methodology for the evaluation of DSM potential and formed a vehicle for non-utility stakeholders' input.

Q. Please describe the process of how the Collaborative selected Itron to be the consulting firm utilized to provide the necessary assistance in the DSM goals setting process.

A. The Collaborative selected Itron through request for proposals (RFP) process administered by Florida Power & Light Company. The RFP was issued to several qualified entities to perform DSM potential studies for all the FEECA utilities.

Q. As the consultant selected by the Collaborative, what were Itron's responsibilities?

A. Itron's responsibilities included providing assessments of the technical and achievable potential for energy and peak demand savings from energy efficiency, demand response, and customer-scale renewable energy for each of the FEECA utilities, as well as Florida as a whole. Itron also provided economic potential estimates for OUC.

Q. How were potential energy efficiency, demand response, and demand-side renewable energy technologies identified?

A. A comprehensive list of measures was developed by Itron from their vast experience and supplemented with measures identified by the Collaborative, as described in detail in the testimony of Mike Rufo.

Q. How was OUC's achievable potential for the 2010 through 2019 period determined?

A. Achievable potential was determined for OUC by Itron as discussed in the testimony of Mike Rufo.

Q. What are OUC's estimated achievable potentials for residential and commercial/industrial energy efficiency based on the Ratepayer Impact Measure (RIM) test?

A. Itron's analyses indicated that there is no achievable potential for residential and commercial/industrial energy efficiency for OUC based on the RIM test.

Q. What is the purpose of the RIM test?

A. The purpose of the RIM test is to ensure that utility rates do not increase as a result of implementation of DSM measures, thereby ensuring that customers who cannot participate in the measure will not be penalized.

Q. What are OUC's estimated achievable potentials for residential and commercial/industrial demand response?

A. Itron estimated achievable potential for residential and commercial/industrial demand response under two different scenarios for enrollment under critical peak price (CPP)/time of use (TOU) as discussed in the testimony of Mike Rufo. The achievable potential under the high CPP/low TOU scenario is approximately 11 MW (summer) and 10 MW (winter) by 2019. The achievable

potential under the low CPP/ high TOU scenario is approximately 9 MW (summer) and 6 MW (winter) by 2019.

Q. What are OUC's estimated achievable potentials for residential and commercial/industrial demand-side renewable energy technologies based on the RIM test?

A. Itron's analyses indicated that there is no achievable potential for residential and commercial/industrial customer-scale renewable energy technology for OUC based on the RIM test.

Q. What cost-effectiveness test or tests should the Commission use to set DSM goals, pursuant to Section 366.82, F.S.?

A. OUC believes the iterative process for evaluating DSM programs described earlier in my testimony is adequate and the most appropriate means for determining DSM programs for OUC. To the extent the Commission does set DSM goals for municipal utilities it should use, as a threshold, the results of the RIM test as the basis for setting DSM goals, particularly since the Commission does not have rate setting jurisdiction over municipal utilities. If the results of the RIM test indicate a DSM measure may be cost-effective, then it should also be required to pass both the TRC test and the Participants test.

Q. Has OUC provided an adequate assessment of the full technical potential of available demand-side and supply-side conservation and efficiency

measures, including demand-side renewable energy systems, pursuant to Section 366.82 (3), F.S.?

A. Yes. The technical potential study performed by Itron, as described in the testimony of Mike Rufo, provided an adequate assessment of the full technical potential of available demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy systems. Drawing upon their recognized expertise, Itron utilized its state-of-the-art models to comprehensively analyze energy efficiency, demand response, and demand-side renewable energy technologies.

Q. Has OUC provided an adequate assessment of the achievable potential of available demand-side conservation and efficiency measures, including demand-side renewable energy systems?

A. Yes. The achievable potential study performed by Itron, as described in the testimony of Mike Rufo, provided an adequate assessment of the achievable potential of available demand-side conservation and efficiency measures, including demand-side renewable energy systems. Drawing upon their recognized expertise, Itron utilized its state-of-the-art models to comprehensively analyze energy efficiency, demand response, and demand-side renewable energy technologies.

Q. Should the Commission establish additional goals for efficiency improvements in generation, transmission, and distribution?

A. No. OUC believes that efficiency improvements in generation, transmission, and distribution are supply-side issues.

Q. Should the Commission establish separate goals for demand-side renewable energy systems for the period 2010 through 2019?

A. No. The Commission should not establish separate goals for demand-side renewable energy systems. Any goals should be established to promote cost-effective DSM without bias toward any particular technology. Furthermore, if demand-side renewable energy systems are cost-effective, utilities should have the flexibility to include such systems as part of their renewable portfolio or as part of their DSM goals.

Q. Should the Commission establish separate goals for residential and commercial/industrial customer participation in utility energy audit programs for the period 2010 through 2019?

A. No. The Commission should not establish separate goals for residential and commercial/industrial customer participation in utility energy audit programs. Utility energy audits are performed as a result of customer interest in such audits, and the utility cannot dictate whether customers have interest in receiving energy audits. Utilities should be allowed the flexibility to integrate energy audits into conservation programs as appropriate.

Q. Should the Commission establish incentives to promote both customer-owned and utility-owned energy efficiency and demand-side renewable energy systems?

A. No. As part of this Docket, we have comprehensively analyzed customer-owned energy efficiency and demand-side measures and none were found to be cost-effective. Utility-owned energy efficiency and renewable energy systems are supply-side issues.

Q. Please identify the 2010 through 2019 projected technical potential for OUC.

A. Projected technical potential for OUC is presented in the Executive Summary section of the *Technical Potential for Electric Energy and Peak Demand Savings for Orlando Utilities Commission* (dated April 8, 2009) which was developed by Itron and has been filed previously in this Docket.

Q. What overall DSM goals (peak demand and energy reductions) are appropriate and reasonably achievable for OUC for the 2010 through 2019 period?

A. In Order No. PSC-04-0767-PAA-EG the Florida Public Service Commission established OUC's DSM goals at zero for the period of 2005 - 2014. In that Order the Commission agreed with OUC that where no DSM measures passed both the Participant and RIM cost-effectiveness tests, no DSM measures were appropriate. As noted earlier in my testimony, none of the DSM measures evaluated by Itron passed the RIM test. Consistent with the Commission's prior

Order, OUC believes the DSM goals for OUC should remain at zero through the current evaluation period ending in 2019.

OUC respectfully submits that the Commission's analysis in the Order still holds true and that as the Commission notes in the Order, "...it is reasonable to allow OUC to determine whether or not such programs should be continued because OUC is in the best position to determine its customer's needs." As discussed previously, OUC continues to offer the programs outlined in the Order and continues to evaluate new measures. OUC's *2009 Annual Conservation Report*, filed with the Public Service Commission in March 2009, describes the DSM programs, conservation programs, and the renewable energy programs and initiatives that OUC offered its customers in calendar year 2008. Subsequent to that time, OUC has developed additional DSM and conservation programs that are now offered to our customers. The DSM, conservation, and renewable energy programs currently offered by OUC as well as other activities in which OUC participates are presented in Exhibit No. __ [RH-2].

Q. What are OUC's proposed residential and commercial/industrial DSM goals for the 2010 through 2019 period?

A. OUC proposes that the DSM goals approved by the Public Service Commission for OUC's residential and commercial/industrial customers remain zero.

The results of the Itron study identified one demand response program that may have potential to provide cost-effective demand reductions. This program will

be evaluated by OUC, consistent with the process outlined earlier in my testimony. If shown to be beneficial to our customers and the community, OUC will consider implementing such a program.

Q. Do OUC's proposed DSM goals adequately reflect the costs imposed by state and federal regulations on the emission of greenhouse gases, pursuant to Section 366.82(3)(d), F.S.?

A. Greenhouse gases are not currently regulated at either the State or Federal level, and there currently are no costs imposed on the emissions of greenhouse gases. OUC does not believe it is appropriate to base the establishment of DSM goals on speculation related to yet-to-be defined potential regulations of emissions of greenhouse gases. However, for informational purposes, Itron is performing additional analyses related to several different combinations of fuel and carbon dioxide emissions allowance prices.

Q. For OUC, what are the 2010 through 2019 annual bill impacts on residential customers using 1,200 kWh/month for the projected TRC achievable portfolio, the projected RIM achievable portfolio, and the company's proposed DSM goals?

A. Exhibit No. __ [RH-3] presents an approximation of the annual bill impacts on residential customers for the TRC achievable portfolio projected by Itron due to the DSM measures included in the TRC achievable portfolio based upon information provided by Itron and OUC's projected annual revenue and energy

consumption by year. As shown in Exhibit No. __ [RH-3], the estimated bill impact is approximately 12.7 percent by 2019.

There is no incremental impact based on the RIM achievable portfolio, as there are no DSM measures that pass the RIM test for OUC based on Itron's analyses. As OUC has no proposed DSM goals, there is no incremental impact.

Q. Does this conclude your testimony?

A. Yes it does.

MR. YOUNG: I would note that all witnesses stipulated to Mr. Halley except Ms. Brownless, and I assume we will turn him over to her cross.

BY MR. YOUNG:

Q. Well, I am going to ask him, if he would, did you prepare a short statement for the Commission, less than five minutes?

A. Yes, sir, I did.

Q. Would you mind doing that at this time.

MR. YOUNG: I got carried away, Mr. Chairman.

CHAIRMAN CARTER: That's all right. Better to be carried away than to be carried out.

A. Okay. Mr. Chairman, Commissioners, I do want to thank you for your time for allowing me to share a brief summary of OUC and our customers. OUC is a municipal utility providing electric, water, and chilled water services to our customers. Our electric service territory includes the city of Orlando, portions of Orange County, the city of St. Cloud and portions of Osceola -- excuse me, Osceola County as well.

We have approximately 204,000 electric customers of which 86 percent are residential. Within this residential base we have approximately 55 percent are multi-family residents, and many of these are rentals as well. Given our service area being located

near the attractions, many of our customers are employed in the service industry. This does contribute to approximately 40 percent of our residential customer base having a combined household income of less than $35,000.

The combination of low income and rental customers does make it challenging to effectively implement conservation programs. Despite these challenges and the fact that OUC's current DSM goals are set of at zero, OUC has implemented several conservation measures -- or several conservation programs, excuse me, in which our customers can participate. A summary of these programs are included in Exhibit RH-2 of my testimony.

As a citizen-owned utility, we do focus on the unique needs of our customers and the community to help identify programs that have a potential for success. When looking at potential programs to offer, we do evaluate the program based on input directly from our customers, as well as its cost-effectiveness. Sometimes we'll run a program as a pilot just to allow us an opportunity to more accurately validate our assumptions. We also provide our customers with informational energy saving measures that they can implement on their own that do not require incentives.

We communicate this information in various ways, such as our website, monthly newsletters, our energy auditors, as they meet with the customers in their homes, and also bill inserts. Another way that we are educating our community is that we have teamed up with the Orlando Science Center and prepared a curriculum for fifth graders that start this fall and focuses on energy conservation, renewable energy and water conservation measures.

Our commissioners, who approve our conservation programs and rates, do live in our community and hear what our customers are saying. Our customers are always informed of public meetings and workshops and are welcomed to provider their input to commissioners prior to any decisions that they may make. These are just a few ways that we stay in touch with our customers and our community to identify programs that can be beneficial.

As you know, you OUC is participating as one the FEECA utilities in this proceeding. We were a part of the initial RFP process that selected Itron as the consultant to perform the analysis for this process. This selection process was a joint effort by the seven FEECA utilities, NRDC and SACE, and collectively the Collaborative. Itron was contracted to evaluate the

technical economic and achievable potentials of various DSM measures. The evaluation process began with the Collaborative working with Itron to identify a comprehensive list of measures. These measures were thoroughly vetted by the Collaborative prior to beginning the technical potential.

Once the technical potential was completed for all FEECA utilities, Itron put forward sensitivities for OUC in the economic potential and then on through the achievable potential. Itron's achievable potential analysis determined that there were no cost-effective energy conservation measures available to OUC. This conclusion is consistent with our last two DSM goal-setting dockets, as well as our needs filing for the Stanton B generation facility. OUC has demonstrated its ability to -- has demonstrated our ability to understand the needs of our customers and community by offering various energy conservation and renewable energy programs without significantly impacting the bills of those who cannot participate in the programs.

We are requesting that the PSC allow OUC to maintain its current flexibility in identifying and implementing programs that best meet all of our customers' needs.

Thank you, again, for your time.

CHAIRMAN CARTER: Thank you.

Ms. Kaufman.

MS. KAUFMAN: Thank you, Mr. Chairman. I don't have any questions.

MR. LONGSTRETH: Thank you, Mr. Chairman. I will pass as well.

CHAIRMAN CARTER: Ms. Brownless.

CROSS-EXAMINATION

BY MS. BROWNLESS:

Q. Hi, how are you.

A. I'm fine, thank you.

Q. I am privileged to be the first person to cross-examine you, and I shall try to be gentle. And that's spoken as someone who started her career as a forensic chemist testifying, so I have a unique perspective on a first-time event.

A. Good.

Q. Did you find that there were no cost-effective demand-side measures, either energy efficiency measures or solar measures when conducting the RIM and TRC tests?

A. Yes, that's consistent with (inaudible) Itron, yes.

Q. Okay. And unlike the IOUs, your economic potential study was done by Itron and not by OUC individually, right?

A. That is correct.

Q. And am I correct that Itron ran the RIM test for all of the solar technologies identified that we have been talking about, the solar water heating, commercial PV, residential PV, roof top, parking lot, et cetera?

A. That is my understanding.

Q. Okay. And none of those passed, is that right?

A. That is my understanding, yes.

Q. Okay. And as a result, you're asking for zero megawatt conservation goals in this docket?

A. Yes.

Q. Now, not withstanding that fact, your Exhibit Number 2 discusses the solar programs that OUC has in effect at this time, is that right?

A. That's correct.

Q. Okay. And how has OUC justified these solar programs? Do you use a portfolio approach to your conservation program? And when I say a portfolio approach, what I mean is you take all of your conservation programs and evaluate them, use the RIM test to evaluate them as a portfolio, rather than as on an individual measure?

A. No, we did not use a portfolio method in

determining which ones we were going to offer. Most of the programs that we have in place right now were due to direct interest from customers, interest from our community and our commissioners to evaluate how best to, you know, most cost-effective ways to try to look at how to implement different renewable energy programs. So they are more to help us kind of test the market to see how things are working.

Q. Okay. So is it fair to say that the programs that you have are a direct result of customer demand, your customers' demand for those programs?

A. Yes, I would say their interest in those programs and the demand for looking at how better to implement those programs.

Q. Can you describe the residential solar PV program that you have in place at this time?

A. Sure. The PV program that we have we do allow the customers to install their PV systems, obviously, on their roof, and we use a net metering process. So that's -- I need to explain that one, but we do allow the net metering process. We have also, to just kind of further assist with the initial up-front costs, we have worked with the local federal credit union to line up low interest or no interest loans for those, for the equipment for installing the PV systems. And we also

have a -- kind of a production credit that we offer the customers as well for any amount of kWh that is generated through the system. We offer them five cents for that energy that's generated.

Q. Okay. And the low production loan, that is discussed on -- your exhibit isn't numbered.

A. It should be 2.

Q. Let's see. It looks like it's about Page 6 of your Exhibit Number 2.

A. I'll find it. Okay. I'm there.

Q. Okay. And is it fair to say that you also -- your residential solar PV program, what is the maximum number of kW allowed under that program?

A. Under that program? That's a very good question. That's under a different business unit. I'm not sure what the maximum is on that. I apologize.

Q. Is there a maximum?

A. I'm not sure.

Q. Can it be coupled with residential solar water heating?

A. The thermal can.

Q. Yeah. Okay. So you can have a residential PV system coupled with a hot water, solar hot water?

A. Yes.

Q. Okay. So in that sense it becomes a hybrid

system, in effect?

A. I'm not familiar with the termination, that hybrid --

Q. Hybrid in the sense it includes two types of solar technologies?

A. Okay. If that is your definition, then it's a hybrid.

Q. Okay. When you installed the solar PV or the solar hot water, who pays for the equipment.

A. The customer will pay for the equipment.

Q. Okay. And who pays for the Btu meter on the --

A. Currently we offer a $250 credit for the Btu meter.

Q. Does that cover the full cost of the meter?

A. I'm not sure if that covers the full cost or not.

Q. Okay. Under this program, OUC gets the rights to any environmental attribute or renewable energy credit, is that correct?

A. That's correct.

Q. Who installs the equipment?

A. We have a list of preferred contractors that we recommend to the customers, but the customers are free to use whoever they feel the need to. We just want

to make sure they get it installed correctly and work through the Florida Solar Energy Center as they do the examination, or -- not the examination, the --

Q. Inspection?

A. Thank you. Inspection.

Q. So there's private contractors, is that correct?

A. Correct.

Q. Okay. And I think you just answered my question that it would be. Does the equipment have to be inspected before they receive any incentive?

A. Yes.

Q. And is there an incentive paid to defray the cost of, for example, the solar hot water, an up-front payment?

A. We'll allow the low interest loans on that one as well. But we don't have a rebate, if you will, from OUC.

Q. Right. And the low interest loans, the rates are discussed on the bottom of the page, right?

A. Yes, ma'am.

Q. So it's zero percent for three years and then it escalates up?

A. Correct.

Q. Does OUC subsidize that rate?

A. Yes, we do.

Q. And you have described that they get a monthly credit, and am I correct that the monthly credit is three cents per kWh for solar water heaters?

A. Yeah, on the thermals, yes, ma'am.

Q. And five cents per kWh for PV?

A. Yes.

Q. Okay. And any excess electricity -- in other words, any electricity that is generated but not used in that home and sent to the grid, how do you pay -- what rate do you pay for that?

A. It is their retail rate, their effective retail rate.

Q. How long has OUC had this program?

A. I think that one has been in place for a couple of years now. I'm not exactly sure what the exact date was.

Q. Okay. How many customers do you have on the solar PV program?

A. The PV program, we currently have 25 customers.

Q. And how many customers do you have in the hot water program?

A. 122.

Q. Do you know how many have signed up in the

last year?

A. I don't know how many have sign up in the last year, but we currently have approximately -- we have 50 customers that are in the queue, if you will, to go through the process. The majority of those are thermal.

Q. Hot water, right?

A. Yes, I'm sorry.

Q. Okay. And do you have a cap on either program?

A. Currently we do not.

Q. Can you tell me how many megawatt hours or megawatts per year each of these programs generate?

A. Yes. The capacity installed on the PV side is 1270 kW, but I will note that one customer, the convention center, is one megawatt of that. And on the thermal side we have 275 kW installed.

Q. Does a customer participating, for example, in the solar hot water program recover all of his costs over the life of the water heater?

A. I'm not sure if they do or not. I think when we have looked at it from the standpoint of -- from the cost-effectiveness test, it does not pass the Participant test either.

Q. So these are customers that are participating in this program even though they are not, quote,

breaking even?

A. Correct.

Q. How much did OUC spend in advertising this program in 2008?

A. That I don't know.

Q. Do you know how much OUC spent in incentives?

A. No, ma'am, I don't.

Q. Do you know how much OUC spends in administering the program?

A. That I do not have, either.

Q. Do you know what the budget is for this program in either 2008 on 2009?

A. No, I do not, different business unit.

Q. Can you tell me how many people have taken advantage of the credit union?

A. That I can. We've got 41 customers that have taken advantage of the loan process.

Q. And do you know how much money has been borrowed to date?

A. No, I do not.

Q. Is there a cap on how much money is available?

A. No, because it's based on the customer's credit worthiness as well, so they still have to go through the whole credit process with the credit union. So the credit union can deny the loan if they are not

qualified.

Q. So it's fair to say there's no cap on it?

A. Yeah.

Q. Okay. And do you know the rate at which OUC subsidizes these loans?

A. I am not -- I don't know what that is, either.

Q. Okay. Have you performed the RIM test or the TRC test or the Participant test on the solar PV program?

A. No.

Q. Okay. Have you performed any of those tests on the solar thermal program?

A. No.

Q. Do you intend to continue the solar thermal program?

A. As of right now, we are continuing the program.

Q. Okay. Do you intend to continue the solar PV program.

A. As of right now we are, yes.

Q. Subject to check, would you agree that the gross revenues for OUC for the year ending September 30th of 2008 was $746,225,127?

A. That sounds in the right range, so subject to check, yes.

Q. Are you an attorney?

A. I am not.

Q. To the extent that you have offered in your testimony any opinions regarding the interpretation of PSC rules, Section 366.82, or any other statutes, are those based on your experience in the electric industry?

A. Yes.

Q. Okay. And it would not be based on any legal training, is that right?

A. Absolutely not.

MS. BROWNLESS: We have no further questions, and as far as we are concerned, Mr. Halley can be released.

CHAIRMAN CARTER: Let's see, staff do you have any questions?

MS. FLEMING: No, we don't have any questions.

CHAIRMAN CARTER: From the bench?

Commissioner Skop, you're recognized.

COMMISSIONER SKOP: Thank you, Mr. Chair.

Just if Ms. Brownless or the reporter could read back the question. I guess she had asked about a specific dollar amount, and I didn't hear what that was related to.

MS. BROWNLESS: It was the total gross revenues for the year end for OUC.

COMMISSIONER SKOP: Okay. Thank you.

And just one question for the witness, please, Mr. Chair.

CHAIRMAN CARTER: You're recognized.

COMMISSIONER SKOP: Thank you. On Page 15 of prefiled testimony, Lines 1 and 2, they discuss the estimated bill impacts in RH-3, and those have been reduced to percentage increases on a specific bill. It's RH-3.

MR. YOUNG: Which page?

COMMISSIONER SKOP: And it is Page 15, Lines 1 and 2.

THE WITNESS: Yes, sir.

COMMISSIONER SKOP: And those are the percentage increases. Is that just across the customer base or is that by kilowatt hour or the thousand kilowatts -- excuse me, a thousand kilowatt hours?

THE WITNESS: Hang on a second. That is on the residential customers, the average residential customer.

COMMISSIONER SKOP: And do we have -- in terms of if that were, and maybe you know off the top of your head, if not, that's fine. But, obviously, they had a total dollar value that was spent and those were reduced down into the average impact per customer. Do we know

what the total dollar amount was in terms of what was spent either in 2010 or through 2019?

THE WITNESS: You mean for the R -- I'm sorry, the --

COMMISSIONER SKOP: DSM measures.

THE WITNESS: Thank you. I do not have them with me, no, sir.

COMMISSIONER SKOP: Thank you.

CHAIRMAN CARTER: Thank you.

Mr. Halley, I want to let you know you did an outstanding job.

THE WITNESS: Thank you.

CHAIRMAN CARTER: Mr. Young, redirect?

MR. YOUNG: No redirect. I think the agreed-upon numbers for his three exhibits would be 57, 58 and 59.

CHAIRMAN CARTER: Any objection on the exhibits? Without objection show it done.

MR. YOUNG: Thank you, sir.

(Exhibits 57, 58, and 59 admitted into evidence.)

CHAIRMAN CARTER: Okay. Staff anything further? Staff, you are recognized.

MS. FLEMING: I just had a quick question for clarification. Mr. Halley is scheduled to come up again

for rebuttal, but I think I wanted to get clarification from Suzanne Brownless, if this witness can be released.

CHAIRMAN CARTER: Ms. Brownless.

MS. BROWNLESS: That is why I said that he could be released, as far as we were concerned.

CHAIRMAN CARTER: Wow, you did better than I thought. Okay. So is that agreeable with all the parties?

Thank you so kindly, Mr. Halley. Please say hello to your commissioners down there. Tell them they are doing a good job. Thank you.

THE WITNESS: Thank you, sir.

CHAIRMAN CARTER: And Commissioners, for the record, Mr. Halley will also be cleared for the rebuttal portion of our docket. I notice we have him here on -- okay.

MR. LONGSTRETH: Excuse me, Mr. Chairman.

CHAIRMAN CARTER: Yes, sir.

MR. LONGSTRETH: I think that I should not have released Mr. Halley for rebuttal.

CHAIRMAN CARTER: Too late. Go ahead. Mr. Weiner, go ahead.

MR. LONGSTRETH: Longstreth, just for the record. So we have some questions that I think we would like to address with Mr. Halley on rebuttal.

CHAIRMAN CARTER: Okay. All right.

MR. LONGSTRETH: Thank you.

CHAIRMAN CARTER: Not a problem. Okay.

Mr. Vento.

Mr. Perko, you are recognized.

MR. PERKO: Thank you, Mr. Chairman. JEA calls Richard J. Vento.

RICHARD J. VENTO

was called as a witness on behalf of Jacksonville Electric Authority, and having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. PERKO:

Q. Good afternoon, Mr. Vento.

A. Good afternoon.

Q. Have you been sworn?

A. Yes, I have.

Q. If you could, please, state your full name and business address for the record.

A. Richard Joseph Vento, 21 West Church Street, Jacksonville Florida.

Q. And, Mr. Vento, by whom are you employed and in what position?

A. JEA, Director of their Demand-side Management Programs.

Q. Did you prepare and cause to be filed Direct Testimony consisting of 14 pages in this docket?

A. I have.

Q. Do you have any changes or revisions to that testimony?

A. No, I don't.

Q. If I were to ask you the same questions today, would your answers be the same?

A. Yes.

MR. PERKO: At this time, Mr. Chairman, I would move that Mr. Vento's Direct Testimony be inserted into the record as though read.

CHAIRMAN CARTER: The prefiled testimony of the witness will be inserted into the record as though read.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY OF RICHARD J. VENTO

ON BEHALF OF

JEA

DOCKET NO. 080413

JUNE 1, 2009

Q. Please state your name and business address.

A. My name is Richard J. Vento. My business address is 21 West Church Street, Jacksonville, Florida 32202.

Q. By whom are you employed and in what capacity?

A. I am employed by JEA. My current position is Director of Corporate Data Integration.

Q. Please summarize your educational background and professional experience.

A. I hold a Bachelor of Science in Business Administration from the University of Florida.

With 26 years in the utility industry, my experience includes electric production operations and maintenance, water and wastewater operations and maintenance, technology integration, load research and demand side management (DSM).

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony is (1) to discuss JEA's unique customer base and demographics, (2) to discuss JEA's historical and ongoing commitment to conservation and demand-side management (DSM), (3) to describe the overall process used to develop DSM goals, (4) to explain JEA's approach to conservation and DSM, (5) to explain JEA's proposed DSM goals, and (6) to address areas the Public Service Commission Staff has expressed an interest in investigating through this Docket.

Q. Are you sponsoring any exhibits to your testimony?

A. Yes. Exhibit No. __ [RJV-1] is a copy of my résumé. Exhibit No. __ [RJV-2] presents a list of the DSM, conservation, and renewable programs currently offered by JEA and other activities in which we are involved. Exhibit No. __ [RJV-3] presents the estimated bill impact to JEA's residential customers for DSM measures passing both the Total Resources Cost (TRC) and Participants tests.

Q. How is JEA governed?

A. JEA's governing board consists of seven members appointed by the Mayor of the City of Jacksonville and approved by the City Council. The governing board sets the rates and policies governing JEA's operations. The JEA operating budget requires City Council approval.

JEA's board meetings are open to the general public and ratepayers are permitted to participate in board meetings. JEA's governing board sets policies and programs consistent with the best interests of JEA's customers and community.

Q. Please describe JEA's service territory.

A. JEA is the municipal electric utility provider for the City of Jacksonville and portions of St. Johns and Nassau Counties.

Q. Please describe the demographics of JEA's customer base.

A. JEA serves approximately 400,000 customers. JEA's customers are approximately 88 percent residential. Approximately 30 percent of Jacksonville's population lives in households whose income is less than twice the Federal Poverty Level ($29,140 for a family of 2). The combination of low income and rental customers presents special challenges to the effective implementation of conservation and DSM programs. Any impacts on rates resulting from implementation of DSM measures would have a disproportionate impact on low income customers. Furthermore, rental customers have less control over energy conservation efforts than homeowners.

Q. Please explain JEA's existing Commission-approved DSM and conservation goals.

A. JEA's 2005 Demand-Side Management Plan was approved by the Florida Public Service Commission on September 1, 2004 (Docket No. 040030). The

Commission established zero DSM goals for JEA's residential, commercial, and industrial sectors through 2014 based on the Ratepayer Impact Measure (RIM) test evaluations.

Q. What is the purpose of RIM test?

A. The purpose of the RIM test is to ensure that utility rates do not increase as a result of implementation of DSM measures, thereby ensuring that customers who cannot participate in the measure will not be penalized.

Q. Has JEA offered DSM programs to its customers since the Commission approved zero DSM goals in the 2004 goal setting process (Docket No. 040030)?

A. Yes. JEA has continued to voluntarily offer DSM programs to customers across all customer classes. JEA offers DSM programs that are directly quantifiable, as well as programs that are not directly quantifiable. Since 2005, the quantifiable DSM programs that JEA has voluntarily offered have saved a total of approximately 7 MW of summer peak demand, approximately 6 MW of winter peak demand, and nearly 62,100 MWh of energy.

Q. Has JEA taken any action to increase the level of conservation and DSM offered to its customers?

A. Yes. In June 2006, JEA established a policy to consider all DSM measures that passed the TRC test while maintaining an overall portfolio RIM value of no less than 1.0. The RIM constraint was to ensure no future upward pressure on

customer rates resulting from JEA's DSM programs. As a result of this policy, JEA developed a new DSM portfolio.

Q. Are current conditions affecting the new DSM portfolio?

A. Yes. Underlying assumptions used to develop JEA's new DSM portfolio have changed in light of the recent economic downturn. These assumptions include JEA's load forecast, the costs of fuels, and the costs and timing of avoided units. In light of these changes in assumptions, JEA will be re-evaluating our DSM portfolio.

Q. How were potential DSM measures identified and evaluated for JEA for purposes of this proceeding?

A. In response to the mandate of Section 366.80 through Section 366.85, F.S., JEA joined a collaborative (the Collaborative) with the other Florida Energy Efficiency and Conservation Act (FEECA) jurisdictional utilities to engage a single contractor (Itron) to identify DSM measures and evaluate the technical, economic, and achievable potential for DSM in each of the utilities' service areas.

Q. Please describe the Collaborative among the utilities and other entities.

A. The Collaborative consisted of the FEECA utilities, the Natural Resources Defense Council (NRDC), and the Southern Alliance for Clean Energy (SACE). The goal of the Collaborative was to evaluate the technical, economic, and

achievable potential for DSM in Florida. The Collaborative conducted workshops in conjunction with the Florida Public Service Commission Staff.

Q. Why was a collaborative approach taken?

A. The collaborative approach offered opportunity for reduced costs to the FEECA utilities in complying with the requirements of the Florida Energy Efficiency and Conservation Act. In addition, the collaborative approach allowed for a consistent methodology for the evaluation of DSM potential and formed a vehicle for non-utility stakeholders' input.

Q. Please describe the process of how the Collaborative selected Itron to be the consulting firm utilized to provide the necessary assistance in the DSM goals setting process.

A. The Collaborative selected Itron through a request for proposals (RFP) process administered by Florida Power & Light Company. The RFP was issued to several entities qualified to perform DSM potential studies for all the FEECA utilities.

Q. As the consultant selected by the Collaborative, what were Itron's responsibilities?

A. Itron's responsibilities included providing assessments of the technical and achievable potential for energy and peak demand savings from energy efficiency, demand response, and demand-side renewable energy for each of the

FEECA utilities, as well as Florida as a whole. Itron also provided economic potential estimates for JEA.

Q. How were potential energy efficiency, demand response, and demand-side renewable energy technologies identified?

A. A comprehensive list of measures was developed by Itron from their vast experience and supplemented with measures identified by the Collaborative, as described in detail in the testimony of Mike Rufo.

Q. How was JEA's achievable potential for the 2010 through 2019 period determined?

A. Achievable potential was determined for JEA by Itron as discussed in the testimony of Mike Rufo.

Q. What are JEA's estimated achievable potentials for residential and commercial/industrial energy efficiency based on the RIM test?

A. Itron's analyses indicated that there is no achievable potential for residential and commercial/industrial energy efficiency for JEA based on the RIM test.

Q. What are JEA's estimated achievable potentials for residential and commercial/industrial demand response?

A. Itron estimated achievable potential for residential and commercial/industrial demand response under two different scenarios for enrollment under critical peak price (CPP)/time of use (TOU) as discussed in the testimony of Mike Rufo.

The achievable potential under the high CPP/low TOU scenario is approximately 36 MW (summer) and 39 MW (winter) by 2019. The achievable potential under the low CPP/high TOU scenario is approximately 76 MW (summer) and 81 MW (winter) by 2019.

Q. What are JEA's estimated achievable potentials for residential and commercial/industrial demand-side renewable energy technology based on the RIM test?

A. Itron's analyses indicated that there is no achievable potential for residential and commercial/industrial demand-side renewable energy technology for JEA based on the RIM test.

Q. What cost-effectiveness test or tests should the Commission use to set DSM goals, pursuant to Section 366.82, F.S.?

A. JEA believes the process for evaluating DSM programs that was described earlier in my testimony is adequate and the most appropriate means for determining DSM programs for JEA. To the extent the Commission does set DSM goals for municipal utilities it should use, as a threshold, the results of the RIM test as the basis for setting DSM goals, particularly since the Commission does not have rate setting jurisdiction over municipal utilities. If the results of the RIM test indicate a DSM measure may be cost-effective, then it should also be required to pass both the TRC test and the Participants test.

Q. Has JEA provided an adequate assessment of the full technical potential of available demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy systems, pursuant to Section 366.82 (3), F.S.?

A. Yes. The technical potential study performed by Itron, as described in the testimony of Mike Rufo, provided an adequate assessment of the full technical potential of available demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy systems. Drawing upon their recognized expertise, Itron utilized its state-of-the-art models to comprehensively analyze the full technical potential of energy efficiency, demand response, and demand-side renewable energy technologies.

Q. Has JEA provided an adequate assessment of the achievable potential of available demand-side conservation and efficiency measures, including demand-side renewable energy systems?

A. Yes. The achievable potential study performed by Itron, as described in the testimony of Mike Rufo, provided an adequate assessment of the achievable potential of available demand-side conservation and efficiency measures, including demand-side renewable energy systems. Drawing upon their recognized expertise, Itron utilized its state-of-the-art models to comprehensively analyze the achievable potential of energy efficiency, demand response, and demand-side renewable energy technologies.

Q. Should the Commission establish additional goals for efficiency improvements in generation, transmission, and distribution?

A. No. JEA believes that efficiency improvements in generation, transmission, and distribution are supply-side issues.

Q. Should the Commission establish separate goals for demand-side renewable energy systems for the period 2010 through 2019?

A. No. The Commission should not establish separate goals for demand-side renewable energy systems. All goals should be established to promote cost-effective DSM without bias toward any particular technology. Furthermore, if demand-side renewable energy systems are cost-effective, utilities should have the flexibility to include such systems either as part of their renewable portfolio or as part of their DSM goals.

Q. Should the Commission establish separate goals for residential and commercial/industrial customer participation in utility energy audit programs for the period 2010 through 2019?

A. No. The Commission should not establish separate goals for residential and commercial/industrial customer participation in utility energy audit programs. Utility energy audits are performed as a result of customer interest in such audits, and the utility cannot dictate that customers have interest in receiving energy audits. Utilities should be allowed the flexibility to integrate energy audits into conservation programs as appropriate.

Q. Should the Commission establish incentives to promote both customer-owned and utility-owned energy efficiency and demand-side renewable energy systems?

A. No. As part of this Docket, we have comprehensively analyzed customer-owned energy efficiency and demand-side measures and none were found to be cost-effective. Utility-owned energy efficiency and renewable energy systems are supply-side issues.

Q. Please identify the 2010 through 2019 projected technical potential for JEA.

A. Projected technical potential for JEA is presented in the Executive Summary section of the *Technical Potential for Electric Energy and Peak Demand Savings for JEA* (dated April 7, 2009) which was developed by Itron and has been filed previously in this Docket.

Q. What overall DSM goals (peak demand and energy reductions) are appropriate and reasonably achievable for JEA for the 2010 through 2019 period?

A. In Order No. PSC-04-0767-PAA-EG the Florida Public Service Commission established JEA's DSM goals at zero for the period of 2005 - 2014. In that Order the Commission found that JEA appropriately evaluated the cost-effectiveness of measures using the RIM test. As noted earlier in this testimony, none of the DSM measures evaluated by Itron passed the RIM test. Consistent with the Commission's prior Order, the DSM goals for JEA should remain at zero through the current evaluation period ending in 2019.

As the Commission found in their 2004 Order, "...it is reasonable to allow JEA to determine whether or not it should continue to offer existing DSM programs as JEA is in the best position to determine its customer's needs." That same finding holds true today. As discussed previously, JEA has continued to evaluate and offer DSM programs. The DSM, conservation, and renewable energy programs currently offered by JEA as well as other activities in which JEA participates to promote energy efficiency and conservation are presented in Exhibit No. __ [RJV-2].

Q. What are JEA's proposed residential and commercial/industrial DSM goals for the 2010 through 2019 period?

A. JEA proposes that the DSM goals approved by the Public Service Commission for JEA's residential and commercial/industrial customers remain zero.

The results of the Itron study identified one demand response program that may have potential to provide cost-effective demand reductions. This program will be evaluated by JEA, consistent with the process outlined earlier in my testimony. If shown to be beneficial to our customers and the community, JEA will consider implementing such a program.

Q. Do JEA's proposed DSM goals adequately reflect the costs imposed by state and federal regulations on the emission of greenhouse gases, pursuant to Section 366.82(3)(d), F.S.?

A. Greenhouse gases are not currently regulated at either the State or Federal level, and there currently are no costs imposed on the emissions of greenhouse gases. JEA does not believe it is appropriate to base the establishment of DSM goals on speculation related to yet-to-be defined potential regulations of emissions of greenhouse gases. However, for informational purposes, Itron is performing additional analyses related to several different combinations of fuel and carbon dioxide emissions allowance prices.

Q. For JEA, what are the 2010 through 2019 annual bill impacts on residential customers using 1,200 kWh/month for the projected TRC achievable portfolio, the projected RIM achievable portfolio, and the company's proposed DSM goals?

A. Exhibit No. __ [RJV-3] presents an approximation of the annual bill impacts on residential customers for the TRC achievable portfolio projected by Itron due to the DSM measures included in the TRC achievable portfolio based upon information provided by Itron and JEA's projected annual revenue and energy consumption by year. As shown in Exhibit No. __ [RJV-3], the estimated bill impact is approximately 12.8 percent by 2019.

There is no incremental impact based on the RIM achievable portfolio, as there are no DSM measures that pass the RIM test for JEA based on Itron's analyses. As JEA has no proposed DSM goals, there is no incremental impact.

Q. Does this conclude your testimony?

A. Yes it does.

BY MR. PERKO:

Q. Mr. Vento, did you also sponsor three exhibits that were preliminarily labeled RJV-1 through RJV-3?

A. Yes, I did.

Q. Are there any changes or revisions to those exhibits?

A. No, there are not.

MR. PERKO: I would just note for the record, Mr. Chairman, that those exhibits have been marked on the Comprehensive Exhibit List as Exhibits 60, 61, and 62.

CHAIRMAN CARTER: Thank you.

BY MR. PERKO:

Q. Mr. Vento, have you prepared a summary of your direct testimony?

A. I have.

Q. Could you please provide that at this time?

A. Yes. Thank you.

Chairman Carter, Commissioners, good afternoon. And thank you for the opportunity to appear before you on behalf of JEA. JEA is the largest municipal utility regulated by FEECA, and we are a municipal utility. We are governed by our board, which is appointed by our mayor and confirmed by our city council. Our budget must be approved by both our board

and the Jacksonville City Council. JEA's board represents our ratepayers and its decisions are made in the best interest of our community. Our board also sets our utility's rates. Therefore, any action to set FEECA goals to place an upward pressure on JEA's rates would necessarily impact our board's local decision-making and independent ratemaking authority.

As you know, JEA participated in the statewide Collaborative with the FEECA utilities and SACE and NRDC to identify and hire Itron, a highly qualified DSM consultant. And Itron was hired to provide DSM potential analysis for JEA. As Witness Rufo will discuss in more detail, Itron has provided the full technical, economic, and achievable potential of energy efficiency and renewable energy available to JEA's ratepayers.

As shown in our testimony, there are no DSM or renewable measures that passed the RIM test in conjunction with the Participant test. This is consistent with the results of JEA's last goals-setting proceedings in which the Commission appropriately established zero goals for our utility based upon the RIM test results. Therefore, JEA goals should again be set to zero.

As a municipal utility, JEA continues to be

committed to maintaining a philosophy of environmental sustainability. Our board, representing our ratepayers, continues to determine the appropriate level of ratepayer investment in demand-side and renewable energy systems. JEA's board takes seriously the balancing of the interest within our community and the flexibility to rapidly adjust to the community's changing needs.

Since the JEA's last goal-setting docket, JEA has continued to voluntarily offer DSM programs to our customers. In 2006 JEA established a new expanded DSM portfolio. However, due to the recent economic down turn, we are re-evaluating the portfolio and some portion of it have been deferred. Again, our board takes seriously the balancing of those interests, both within the community, and also the flexibility to rapidly adjust to our changing community's needs. Establishing goals based upon the RIM test and the Participant test would not put upward pressure on our rates, maintain our boards flexibility, and would be consist with our board's ratemaking authority.

Thank you for your time.

CHAIRMAN CARTER: Thank you.

MR. PERKO: We tender the witness for cross-examination.

CHAIRMAN CARTER: Thank you.

Ms. Kaufman.

MS. KAUFMAN: Thank you, Mr. Chair. We have no questions for this witness.

CHAIRMAN CARTER: Mr. Weiner.

MR. LONGSTRETH: Thank you, Mr. Chair. We have no questions.

CHAIRMAN CARTER: Ms. Brownless.

CROSS-EXAMINATION

BY MS. BROWNLESS:

Q. Good afternoon, Mr. Vento, lovely to see you.

A. Good afternoon.

Q. You indicate on Page 2 of your testimony that JEA has about 400,000 customers, is that right?

A. That's correct.

Q. Okay. Well, let me ask you this question before I go there. In your position as the Director of Corporate Data Integration, how long have you been dealing with demand-side management measures?

A. Approximately three years.

Q. Okay. Thank you. And subject to check, would you agree that JEA's gross revenue for the fiscal year ending September 30th of 2008 was $1.274 billion?

A. Yes, subject to check.

Q. Now, I believe that you indicated, and it states on Page 4 that in June of 2006 JEA developed a

DSM portfolio, is that correct?

A. That is correct.

Q. Okay. And you used the TRC test as a screening measure for that portfolio, is that right?

A. That is one of the screening tests that we used was the TRC.

Q. Okay. And am I correct that you used the RIM test, not on an individual measure basis, but on a total portfolio basis?

A. That is correct. That was the JEA's policy at that time.

Q. Okay. And does that allow certain demand-side management measures that would otherwise not be included in your portfolio to be included in your portfolio?

A. Well, we certainly recognize the value of the Rate Impact Measure test, and through that test we utilized that test to build the portfolio that has a rate impact equal to one.

Q. Right.

A. All right. So if we have left over, or we will say remaining benefits from those that are RIM positive programs, we do convert those into benefits to the non-RIM, but yet they must still have a total benefit to community or must pass the TRC test, yes.

Q. So it basically allows tests that individually

would not pass RIM and would be excluded to be included in the portfolio?

A. It does allow that, yes.

Q. Now, similar to OUC, Itron evaluated both -- conducted both your economic potential and achievable potential tests, is that correct or screenings?

A. Yes, they did.

Q. Okay. And is it true that no renewable energy technology, either demand-side or energy efficiency passed that screening process?

A. Yes, that is correct.

Q. Because they basically didn't pass RIM, is that right?

A. That is correct.

Q. You have described -- but notwithstanding that fact, you do have demand-side management renewable energy measures in your portfolio at this time, is that right?

A. I just don't want to confuse the portfolio. Again --

Q. Well, let me withdraw that. I can be more specific. Do you offer solar thermal programs?

A. Yes, we do.

Q. Okay. And with regard to the solar thermal, solar hot water, do you have a residential program?

A. Yes, we do.

Q. Okay. What is the size of that program? Is it capped by size?

A. It is. We allocate -- again, this is by board policy, an amount of up to $250,000 towards demand-side thermal projects which would be solar hot water.

Q. For residential?

A. For residential.

Q. Okay.

A. Actually, that's residential and commercial, I'm sorry.

Q. Okay. Do you know how they are divied up?

A. I know the basis for how the incentives are -- I'm sorry -- yeah, the incentives.

Q. Well, of that $250,000, do you know how much is residential and how much is --

A. It is actually a pool that can be used for either.

Q. Okay. And that depends on first come, first serve?

A. Yes, ma'am.

Q. All right. And can you -- I want to stick with the residential hot water. How is that program structured?

A. The way our residential thermal program is

structured is we currently, again, taking from the pool of $250,000 made available for those solar thermal programs, the residential program we allocate $800 per installation to our residential customers.

Q. And that's an up-front payment?

A. It is a payment after --

Q. Well, after inspection.

A. -- a qualified contractor and inspection, yes.

Q. Okay. And is there any other, other than the up-front payment, is there anything else associated with that with regard to -- that JEA pays, or do they just participant in the net metering program?

A. We don't have a solar thermal net metering program. It is strictly an up-front incentive.

Q. Okay. Is there cap on participation in that program?

A. It is only limited by the budget.

Q. Okay. How many customers do you have on that program?

A. You know, I don't know the exact number, so I can't tell you. I can tell you how many megawatts we have.

Q. That's good. How many megawatts?

A. We have nine megawatts of solar thermal total, and that's residential/commercial.

Q. Total?

A. Yes.

Q. Okay. Do you know what the program budget is for the next fiscal year, 9/30, 2009?

A. Yes. The incentive budget is 250,000, and we have an equivalent of -- one full-time equivalent that operates that program.

Q. Okay. And that is an employee?

A. Yes.

Q. One FTE, as it were?

A. Yes. I'm sorry, full-time employee.

Q. Do you have a residential PV program at this time?

A. No, we do not. We discontinued that program.

Q. Okay. When did you discontinue it?

A. I believe it was 2004.

Q. Okay. Did you have participants on that program when you discontinued it?

A. We did. I don't have the exact count. I believe there were three participants.

Q. Okay. Do you have a commercial PV program?

A. No, we do not.

Q. Do you know how long JEA has offered these programs?

A. Yes. All PV or all solar programs have been

offered since 2003. We continued to offer the solar thermal, but then discontinued the solar photovoltaic in 2004.

Q. Okay. Have you done individual RIM and TRC analyses of these programs?

A. Multiple times. The most recent evaluation, cost-effective evaluation was performed by Itron.

Q. Okay. And we've heard testimony today that with regard to measure costs, Itron started out with the measure costs and then sometimes utilities took that cost and ran their programs, ran the economic analysis and sometimes they adjusted it. Did you take Itron's costs, or did you adjust it?

A. We adopted Itron's costs.

MR. GUYTON: Object -- I'm sorry. I'm too late. I just think that's a mischaracterization testimony, but I'm too late.

CHAIRMAN CARTER: Go ahead, Mr. Brownless. You're doing fine.

BY MS. BROWNLESS:

Q. When is the last time that JEA individually evaluated these programs for cost-effectiveness? This last time was obviously Itron. The time before that was?

A. We tried very hard to make it work, let me put

it that way. You know, I can't give you dates, but probably over the last two years we have attempted at least two or three times.

Q. Okay. And is it fair to say that you are offering these programs because you have a demand for these programs?

A. That is correct. In addition to the demand from our public, it is also a board policy to endorse.

Q. I was going to ask that question next.

Do you have any other solar programs that you are in the process of developing at this time for either sector, residential or commercial?

A. No.

Q. Has JEA tried combining programs such as what Progress Energy does, load control with solar hot water. For example?

A. No, we have not.

Q. Okay. Are you adverse to that as a philosophical measure as we have heard some utilities say, or have you just not done it?

A. I believe that we are doing solar for purposes of demonstrating to our customers that we hear them, and that they want this offering and we provide it. And that we also need some level of sustained solar presence within the service area in order to make that available

to them. It's not cost-effective under TRC, and so JEA through its policy would not endorse -- again, from a cost-effective point of view, would not endorse putting it together with any other program because by itself it does not pass TRC. They do it for completely different reasons, yes.

Q. Okay. However, if I hear you correctly it is board policy to try to encourage this type of --

A. That is correct.

Q. Okay. And do you believe that there is substantial potential for solar hot water in the state of Florida? Is that what your technical potential study that Itron did indicated to you?

A. The technical potential study indicated a significant amount.

Q. Okay. So is it your position that were the incentives correct more people would sign up?

A. I think that would be considered a natural consequence of adding dollars, yes.

Q. Okay. Because it would lower the total out-of-pocket cost for the --

A. For the participant, yes.

Q. And if more people signed up, do you believe that would put a downward pressure on the price of solar hot water?

A. Yes. Again, the way I have seen the economics work, it is consist with the rest of the FEECA utilities that have testified today, that a lot of times the vendors do inflate their prices based upon rebates. That's just the way it is.

Q. So they are trying to get the same -- they are trying to --

A. Get the benefits.

Q. -- get the benefit, increase their margin by the rebate is what you're saying.

A. That's correct.

Q. Do you think it's a good idea to have an established market for solar technology in Florida? And by established market, I mean vendors and people who can install and maintain this type of equipment?

A. I can tell you that is why our board puts that policy in place and endorses solar is to have a presence and make it available. So through their action, I would say yes.

Q. Okay. And if there were more vendors, do you think there might be some competitive market forces pushing the price of the technology or the installed price down?

A. Based upon my knowledge of the economics, I would assume that would be correct, yes.

Q. Okay. Are you an attorney Mr. Vento?

A. No, I am not.

Q. And to the extent that you have offered any opinions in your testimony regarding the PSC rules or Section 366.82 or any other statutes, those are based on your experience in the electric industry and not on any legal training, is that correct?

A. Yes, it is.

MS. BROWNLESS: And I have no further questions for Mr. Halley, and he can be released as far as I am concerned.

CHAIRMAN CARTER: Mr. Longstreth, have I been calling you Weiner all -- he's a very good lawyer, by the way.

MR. LONGSTRETH: Twice.

CHAIRMAN CARTER: That's why I confused you with --

MR. LONGSTRETH: I was honored.

CHAIRMAN CARTER: And I apologize to you. I wanted to say that before we went any further. I apologize for, you know, misplacing a great name like that.

MR. LONGSTRETH: No problem at all.

CHAIRMAN CARTER: Okay. Commissioner McMurrian, you're recognized, and then we'll come to

staff.

COMMISSIONER McMURRIAN: Oh, I am sorry. I didn't mean to --

CHAIRMAN CARTER: You're recognized.

COMMISSIONER McMURRIAN: I have questions.

Mr. Vento, I think in your discussion with Ms. Brownless, you talked a lot about the portfolio approach you use, and how you apply RIM to a portfolio. And I guess that gives you flexibility to have some cost-effective and noncost-effective programs in there. I guess what I'm interested in -- first, I guess I should ask is that correct? Do you I understand correctly?

THE WITNESS: That is correct. Cost-effective, meaning -- meaning RIM.

COMMISSIONER McMURRIAN: The RIM?

THE WITNESS: Yes.

COMMISSIONER McMURRIAN: And how do you -- I guess I'm interested in how you decide, and I think we have talked about it in your discussion with Ms. Brownless in a round about way, but how do you all decide which noncost-effective programs would go into your portfolio?

THE WITNESS: It is actually quite difficult, because you have all -- many, many considerations

including who is going to absorb the rate? In other words, what classes, actually, those programs are being offered. But in general our approach is we try to make sure that there is something for each of our rate classes, okay. And included in that, we also make sure that there is something for our low income also. So a portion of that benefit goes to sponsor our low income program.

COMMISSIONER McMURRIAN: Thank you. That was all. I appreciate that.

CHAIRMAN CARTER: I think I kind of got sidetracked trying to clear up Mr. Longstreth's name. But what I wanted to do was even though, Ms. Brownless, you are complete with Mr. Vento both now and rebuttal, but you are not. Is that correct?

MR. LONGSTRETH: Correct. Thank you.

CHAIRMAN CARTER: Okay. Good. That's what I was trying to do.

Staff, you're recognized.

MS. FLEMING: We have no questions for this witness.

CHAIRMAN CARTER: Okay. Redirect?

MR. PERKO: No redirect.

CHAIRMAN CARTER: Excellent. Exhibits?

MR. PERKO: At this time, JEA would move

Exhibits 60, 61, and 62.

CHAIRMAN CARTER: Are there any objections? Without objection, show it done.

(Exhibit Number 60, 61, and 62 admitted into the record.)

CHAIRMAN CARTER: Thank you, sir. You are excused.

Okay. Mr. Perko, Witness Kushner.

MR. PERKO: I believe he has been stipulated, sir.

CHAIRMAN CARTER: Yes, sir. And at this point in time we will need to go through our routine of his prefiled testimony. Do you want to --

MR. PERKO: Yes, sir. If I could move the prefiled direct testimony of Mr. Bradley Kushner.

CHAIRMAN CARTER: The prefiled testimony of the witness will be inserted into the record as though read.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY OF BRADLEY E. KUSHNER

ON BEHALF OF

ORLANDO UTILITIES COMMISSION

DOCKET NO. 080412

JUNE 1, 2009

Q. Please state your name and business address.

A. My name is Bradley E. Kushner. My business address is 11401 Lamar Avenue, Overland Park, Kansas 66211

Q. By whom are you employed and in what capacity?

A. I am employed by Black & Veatch Corporation as a Manager.

Q. Please describe your responsibilities in that position.

A. I am responsible for the management of various projects for utility and non-utility clients. These projects include production cost modeling associated with power system expansion planning, feasibility studies, and demand-side management (DSM) evaluations. I also have involvement in the issuance and evaluation of requests for proposals (RFPs).

Q. Please describe Black & Veatch Corporation.

A. Black & Veatch Corporation has provided comprehensive engineering, consulting, and management services to utility, industrial, and governmental

clients since 1915. Black & Veatch specializes in engineering, consulting, and construction associated with utility services including electric, gas, water, wastewater, telecommunications, and waste disposal. Service engagements consist principally of investigations and reports, design and construction, feasibility analyses, rate and financial reports, appraisals, reports on operations, management studies, and general consulting services. Present engagements include work throughout the United States and numerous foreign countries.

Q. Please state your educational background and professional experience.

A. I received my Bachelors of Science in Mechanical Engineering from the University of Missouri – Columbia in 2000. I have more than 9 years of experience in the engineering and consulting industry. I have experience in the development of integrated resource plans, ten-year-site plans, DSM plans, and other capacity planning studies for clients throughout the United States. Utilities in Florida for which I have worked include OUC, Florida Municipal Power Agency, JEA, Kissimmee Utility Authority, Lakeland Electric, Reedy Creek Improvement District, Tampa Electric Company, and the City of Tallahassee. I have performed production cost modeling and economic analysis, and otherwise participated in five Need for Power Applications that have been filed on behalf of Florida utilities and approved by the Florida Public Service Commission. I have also testified before the FPSC in Need for Power proceedings.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony is to discuss the methodology used to develop the avoided capacity costs that were provided to Itron for use in their analyses of DSM measures for OUC. I will also discuss the fuel forecasts that were used by OUC in their production cost modeling that was used as the basis for the avoided energy costs provided to Itron for use in their analyses of DSM measures for OUC.

Q. Are you sponsoring any exhibits to your testimony?

A. Yes. Exhibit No. __ [BEK-1] is a copy of my résumé. Exhibit No. __ [BEK-2] presents the carbon dioxide emissions allowance prices considered in OUC's analyses.

Q. How was the timing of avoidable capacity additions determined?

A. The timing of avoidable capacity additions was determined by comparing OUC's existing and planned new generation resources to the forecast annual peak demands over the 2010 through 2029 period. In developing this comparison, a reserve margin of 15 percent was reflected. The first year in which capacity requirements exceed available generating capacity is projected to be 2018, at which time it has been assumed for purposes of this analysis that a simple cycle combustion turbine (approximately 158 MW) would be added to satisfy the capacity requirements. Subsequent capacity shortfalls were met by the addition of similar simple cycle combustion turbines. Such additions were necessary in 2021, 2024, and 2027.

Q. How were capital costs for these combustion turbine additions calculated?

A. Overnight capital costs for the combustion turbines were based on the estimated capital costs for the General Electric 7FA simple cycle combustion turbine presented in JEA's Greenland Energy Center (GEC) Combined Cycle Conversion Need for Power Application, which was approved by the Public Service Commission in February 2009 (Docket No. 080614). The overnight capital costs were then escalated to the date each unit is assumed to be installed to satisfy capacity requirements, and interest during construction costs were also added. The resulting installed capital costs were multiplied by OUC's levelized fixed charge rate to determine a levelized installed capital cost, which was divided by the output of the combustion turbine to calculate the levelized installed capital cost per kW.

Q. How were fixed operating and maintenance (O&M) costs for these combustion turbine additions calculated?

A. Fixed O&M costs were based on the estimated capital costs for the General Electric 7FA simple cycle combustion turbine presented in JEA's GEC Need for Power Application. The fixed O&M cost estimates were expressed in $/kW, and were escalated from 2008 dollars to nominal dollars at a 2.5 percent escalation rate.

Q. Please discuss how the total avoided costs per kW were calculated.

A. Total avoided costs per kW were calculated by adding the avoided capital costs per kW to the avoided fixed O&M costs per kW for each unit addition. The total annual avoided costs were calculated by multiplying the costs per kW by the kW output of the combustion turbines, and the resulting total costs for each unit addition were aggregated for all unit additions. The resulting total annual avoided costs were then divided by the total annual avoided capacity, and the annual total avoided costs per kW for all avoided units were carried forward and provided to Itron for use in their analyses of DSM measures for OUC.

Q. Were any sensitivities to the capital cost of avoided capacity additions considered.

A. Yes. OUC considered a high capital cost case in which the capital cost of the avoided capacity additions was increased by 20 percent and a low capital cost case in which the capital cost of the avoided capacity additions was decreased by 20 percent. The resulting avoided capacity costs for the high and low capital cost cases were carried forward into development of total avoided costs per kW as discussed previously in my testimony.

Q. Please discuss the base case fuel price forecast.

A. The base case fuel price forecast was developed by OUC and is consistent with the forecast presented in OUC's 2009 Ten-Year Site Plan (which was filed with the Florida Public Service Commission in April 2009). The forecast fuel prices include applicable transportation costs and represent delivered fuel prices.

Q. Did OUC consider high and low fuel price sensitivities?

A. Yes. In addition to the base case fuel price forecasts, high and low coal and natural gas price sensitivity forecasts were considered.

Q. How did the fuel price forecasts consider of the possible costs associated with potential regulation of carbon dioxide (CO_2) emissions?

A. CO_2 emissions allowance prices were not reflected in the fuel price forecasts. However, as will be discussed later in my testimony, sensitivity cases were evaluated to address possible costs associated with the potential regulation of CO_2 emissions.

Q. Please explain the analyses that considered possible costs associated with potential regulation of CO_2 emissions?

A. There were three separate analyses performed that considered CO_2 emissions allowance prices. The three analyses reflected a range of CO_2 emissions allowance price projections.

Projected CO_2 emissions allowance prices were based on those presented in the US Energy Information Administration's (EIA) April 2008 *Energy Market and Economic Impacts of S.2191, the Lieberman-Warner Climate Security Act of 2007* report. The three cases that were used as the basis for the CO_2 emissions allowance prices considered by OUC are the *S.1766 Update* case (representing the low end of the range of the CO_2 emissions allowance price forecasts), the

S.2191 Core case (representing the middle of the range of the CO_2 emissions allowance price forecasts), and the *S.2191 Limited Alternatives/No International* case (representing the high end of the range of the CO_2 emissions allowance price forecasts). Exhibit No. __ [BEK-2] presents the nominal CO_2 emissions allowance price projections for each of these cases that were used in OUC's analyses.

Q. How were the sensitivity fuel price forecasts and CO_2 emissions allowance price projections considered in OUC's analyses?

A. In addition to the base case fuel price forecast, OUC considered combinations of fuel and CO_2 emissions allowance price projections. These combinations are summarized as follows:

- "High Fuel Price with High CO_2 Emissions Allowance Costs" – reflects the high fuel price forecasts with the *S.2191 Limited Alternatives/No International* case CO_2 emissions allowance price projections.
- "Low Fuel Price with Low CO_2 Emissions Allowance Costs" – reflects the low fuel price forecasts with the *S.1766 Update* case CO_2 emissions allowance price projections.
- "Base Fuel Price with Mid CO_2 Emissions Allowance Costs" – reflects the base fuel price forecasts with the *S.2191 Core* case CO_2 emissions allowance price projections.

Q. How were marginal energy costs for each of the cases previously identified in your testimony developed?

A. Under my supervision and direction, OUC performed detailed production cost modeling using the GenTrader production cost model. Marginal energy costs were extracted from the model for each year.

These costs were provided to Itron, Inc. (Itron) for use in their cost-effectiveness analyses of DSM measures for OUC, which is discussed in the testimony of Mike Rufo.

Q. Were marginal energy costs developed for each of the fuel and CO_2 emissions allowance price cases discussed previously in your testimony?

A. Yes. Marginal energy costs were developed for the base fuel price case, and each of the combination of fuel and CO_2 emissions allowance price forecasts. The marginal energy costs are identical for the base capital cost and the high and low capital cost cases, as changes to the avoided units' capacity costs do not affect production costs.

Q. Does this conclude your testimony?

A. Yes it does.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY OF BRADLEY E. KUSHNER

ON BEHALF OF

JEA

DOCKET NO. 080413

JUNE 1, 2009

Q. Please state your name and business address.

A. My name is Bradley E. Kushner. My business address is 11401 Lamar Avenue, Overland Park, Kansas 66211

Q. By whom are you employed and in what capacity?

A. I am employed by Black & Veatch Corporation as a Manager.

Q. Please describe your responsibilities in that position.

A. I am responsible for the management of various projects for utility and non-utility clients. These projects include production cost modeling associated with power system expansion planning, feasibility studies, and demand-side management (DSM) evaluations. I also have involvement in the issuance and evaluation of requests for proposals (RFPs).

Q. Please describe Black & Veatch Corporation.

A. Black & Veatch Corporation has provided comprehensive engineering, consulting, and management services to utility, industrial, and governmental

clients since 1915. Black & Veatch specializes in engineering, consulting, and construction associated with utility services including electric, gas, water, wastewater, telecommunications, and waste disposal. Service engagements consist principally of investigations and reports, design and construction, feasibility analyses, rate and financial reports, appraisals, reports on operations, management studies, and general consulting services. Present engagements include work throughout the United States and numerous foreign countries.

Q. Please state your educational background and professional experience.

A. I received my Bachelors of Science in Mechanical Engineering from the University of Missouri – Columbia in 2000. I have more than 9 years of experience in the engineering and consulting industry. I have experience in the development of integrated resource plans, ten-year-site plans, DSM plans, and other capacity planning studies for clients throughout the United States. Utilities in Florida for which I have worked include JEA, Florida Municipal Power Agency, Kissimmee Utility Authority, OUC, Lakeland Electric, Reedy Creek Improvement District, Tampa Electric Company, and the City of Tallahassee. I have performed production cost modeling and economic analysis, and otherwise participated in five Need for Power Applications that have been filed on behalf of Florida utilities and approved by the Florida Public Service Commission. I have also testified before the FPSC in Need for Power proceedings.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony is to discuss the methodology used to develop the avoided capacity costs that were provided to Itron for use in their analyses of DSM measures for JEA. I will also discuss the fuel forecasts that were used by JEA in their production cost modeling that was used as the basis for the avoided energy costs provided to Itron for use in their analyses of DSM measures for JEA.

Q. Are you sponsoring any exhibits to your testimony?

A. Yes. Exhibit No. __ [BEK-1] is a copy of my résumé. Exhibit No. __ [BEK-2] presents the carbon dioxide emissions allowance prices considered in JEA's analyses.

Q. How was the timing of avoidable capacity additions determined?

A. The timing of avoidable capacity additions was determined by utilizing the STRATEGIST optimum generation expansion planning model. The STRATEGIST model was used in JEA's Greenland Energy Center (GEC) Combined Cycle Conversion Need for Power Application, which was approved by the Public Service Commission in February 2009 (Docket No. 080614).

STRATEGIST analyzed JEA's projected annual peak demands over the 2010 through 2027 period and compared the peak demands to JEA's existing and planned new generation resources. In developing this comparison, a reserve margin of 15 percent was reflected. The capacity additions considered were

based on those included in the GEC Need for Power Application and included various sizes of simple cycle combustion turbines and a combined cycle configuration. The first year in which capacity requirements exceed available generating capacity is projected to be 2022, at which time it has been assumed for purposes of this analysis that a simple cycle combustion turbine (approximately 158 MW) would be added to satisfy the capacity requirements. Subsequent capacity shortfalls were met by the addition of simple cycle combustion turbines (either 158 MW or 98 MW units). Such additions were necessary in 2023, 2024, 2025, 2026, and 2027.

Q. How were capital costs for these combustion turbine additions calculated?

A. Overnight capital costs for the combustion turbines were based on the estimated capital costs for the generating unit alternatives presented in JEA's GEC Greenland Need for Power Application. The overnight capital costs were then escalated to the date each unit is assumed to be installed to satisfy capacity requirements, and interest during construction costs were also added. The resulting installed capital costs were multiplied by JEA's levelized fixed charge rate to determine a levelized installed capital cost, which was divided by the output of the combustion turbine to calculate the levelized installed capital cost per kW.

Q. How were fixed operating and maintenance (O&M) costs for these combustion turbine additions calculated?

A. Fixed O&M costs were based on the estimated capital costs for the generating unit alternatives presented in JEA's GEC Need for Power Application. The fixed O&M cost estimates were expressed in $/kW, and were escalated from 2008 dollars to nominal dollars at a 2.5 percent escalation rate.

Q. Please discuss how the total avoided costs per kW were calculated.

A. Total avoided costs per kW were calculated by adding the avoided capital costs per kW to the avoided fixed O&M costs per kW for each unit addition. The total annual avoided costs were calculated by multiplying the costs per kW by the kW output of the combustion turbines, and the resulting total costs for each unit addition were aggregated for all unit additions. The resulting total annual avoided costs were then divided by the total annual avoided capacity, and the annual total avoided costs per kW for all avoided units were carried forward and provided to Itron for use in their analyses of DSM measures for JEA.

Q. Were any sensitivities to the capital cost of avoided capacity additions considered.

A. Yes. JEA considered a high capital cost case in which the capital cost of the avoided capacity additions was increased by 20 percent and a low capital cost case in which the capital cost of the avoided capacity additions was decreased by 20 percent. The resulting avoided capacity costs for the high and low capital

cost cases were carried forward into development of total avoided costs per kW as discussed previously in my testimony.

Q. Please discuss the base case fuel price forecast.

A. JEA used the Reference Case fuel price projections that were presented in the GEC Need for Power Application as the base case fuel price forecast in this Docket. Reference Case fuel price projections were developed based on the US Energy Information Administration (EIA) Annual Energy Outlook 2008. The forecast fuel prices include applicable transportation costs and represent delivered fuel prices.

Q. Did JEA consider high and low fuel price sensitivities?

A. Yes. In addition to the base case fuel price forecasts, JEA considered the high and low fuel price cases that were presented in the GEC Need for Power Application.

Q. How did the fuel price forecasts consider of the possible costs associated with potential regulation of carbon dioxide (CO_2) emissions?

A. CO_2 emissions allowance prices were not reflected in the fuel price forecasts. However, as will be discussed later in my testimony, sensitivity cases were evaluated to address possible costs associated with the potential regulation of CO_2 emissions.

Q. Please explain the analyses that considered possible costs associated with potential regulation of CO_2 emissions?

A. There were three separate analyses performed that considered CO_2 emissions allowance prices. The three analyses reflected a range of CO_2 emissions allowance price projections.

Projected CO_2 emissions allowance prices were based on those presented in the US Energy Information Administration's (EIA) April 2008 *Energy Market and Economic Impacts of S.2191, the Lieberman-Warner Climate Security Act of 2007* report. This report was used as the basis of the CO_2 emissions allowance price projections included in the GEC Need for Power Application.

The three cases that were used as the basis for the CO_2 emissions allowance prices considered by JEA for this Docket are the *S.1766 Update* case (representing the low end of the range of the CO_2 emissions allowance price forecasts), the *S.2191 Core* case (representing the middle of the range of the CO_2 emissions allowance price forecasts), and the *S.2191 Limited Alternatives/No International* case (representing the high end of the range of the CO_2 emissions allowance price forecasts). Exhibit No. __ [BEK-2] presents the nominal CO_2 emissions allowance price projections for each of the cases that were used in JEA's analyses.

Q. How were the sensitivity fuel price forecasts and CO_2 emissions allowance price projections considered in JEA's analyses?

A. In addition to the base case fuel price forecast, JEA considered combinations of fuel and CO_2 emissions allowance price projections. These combinations are summarized as follows:

- "High Fuel Price with High CO_2 Emissions Allowance Costs" – reflects the high fuel price forecasts with the *S.2191 Limited Alternatives/No International* case CO_2 emissions allowance price projections.
- "Low Fuel Price with Low CO_2 Emissions Allowance Costs" – reflects the low fuel price forecasts with the *S.1766 Update* case CO_2 emissions allowance price projections.
- "Base Fuel Price with Mid CO_2 Emissions Allowance Costs" – reflects the base fuel price forecasts with the *S.2191 Core* case CO_2 emissions allowance price projections.

Q. How were marginal energy costs for each of the cases previously identified in your testimony developed?

A. Under my supervision and direction, JEA performed detailed production cost modeling using the PROSYM production cost model. Marginal energy costs were extracted from the model for each year.

These costs were provided to Itron, Inc. (Itron) for use in their cost-effectiveness analyses of DSM measures for JEA, which is discussed in the testimony of Mike Rufo.

Q. Were marginal energy costs developed for each of the fuel and CO_2 emissions allowance price cases discussed previously in your testimony?

A. Yes. Marginal energy costs were developed for the base fuel price case, and each of the combination of fuel and CO_2 emissions allowance price forecasts. The marginal energy costs are identical for the base capital cost and the high and low capital cost cases, as changes to the avoided units' capacity costs do not affect production costs.

Q. Does this conclude your testimony?

A. Yes it does.

MR. PERKO: As well as Exhibits 63 and 64.

CHAIRMAN CARTER: Are there any objections? Without objection, show it done.

(Exhibit Number 63 and 64 admitted into the record.)

MS. FLEMING: And, Chairman, if I may.

CHAIRMAN CARTER: Yes, ma'am, you're recognized.

MS. FLEMING: I would note that Mr. Kushner, his Exhibits 63 and 64 are also identical to his rebuttal exhibits for 128 and 129. So at this point we would just ask that instead of putting in the exhibits twice, just note for the record that Exhibits 63 and 64 are for OUC and JEA direct and FPUC rebuttal.

CHAIRMAN CARTER: Okay. Let's do this, everyone, since we are all on the same page here. Let's just do this: For the record, now that we have entered into evidence Exhibits 63 and 64, without objection let's show 128 and 129 also entered into the record. So that way the parties can refer to them by either number will be fine. Okay. Without objection, show it done.

(Exhibits 128 and 129 admitted into the record.)

CHAIRMAN CARTER: Okay, good. So based upon the stipulation, Commissioners, any questions regarding

Witness Kushner? Hearing none, he is excused, and the exhibits are entered into the record as though read.

Okay. Next is Mr. Rufo. Was there anything else, staff, before we call Mr. Rufo?

MS. FLEMING: No, we have nothing else.

CHAIRMAN CARTER: Okay. You may proceed.

MS. CLARK: Mr. Chairman.

CHAIRMAN CARTER: Yes, ma'am.

MS. CLARK: Could I ask Mr. Rufo to move down a little bit. I can't see him.

CHAIRMAN CARTER: He is trying to hide from you. He is purposefully doing that. Hang on one second, Ms. Clark. Hang on one second. Let's take a five-minute stretch break.

(Recess.)

CHAIRMAN CARTER: We are back on the record, and when last we left we were getting ready. Ms. Clark.

MS. CLARK: Thank you, Mr. Chairman.

MICHAEL WARREN RUFO

was called as a witness on behalf of Itron, Incorporated, and having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MS. CLARK:

Q. Good evening, Mr. Rufo. Have you been sworn?

A. Yes, I have.

Q. Would you please state your name and business address?

A. Yes. My name is Michael Warren Rufo, and my business address is 1111 Broadway, Suite 1800, Oakland, California.

Q. By whom are you employed and in what capacity?

A. I am employed by Itron, Incorporated, and I am the Managing Director of Itron's Consulting and Analysis Group.

Q. Have you prepared and caused to be filed 32 pages of Prefiled Direct Testimony in this proceeding?

A. Yes, I have.

Q. Do you have any changes or revisions to your prefiled testimony?

A. No, I do not.

Q. If I asked you the same questions contained in your Prefiled Direct Testimony, would your answers be the same?

A. Yes, they would.

MS. CLARK: Mr. Chairman, I would ask that the Prefiled Direct Testimony of Mr. Mike Rufo be inserted into the record as though read.

CHAIRMAN CARTER: The prefiled testimony of the witness will be inserted into the record as though

read.

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

IN RE: COMMISSION REVIEW OF NUMERIC CONSERVATION GOALS

DIRECT TESTIMONY OF MIKE RUFO

DOCKET NO. 080407-EG (Florida Power & Light Company)

DOCKET NO. 080408-EG (Progress Energy Florida, Inc.)

DOCKET NO. 080409-EG (Tampa Electric Company)

DOCKET NO. 080410-EG (Gulf Power Company)

DOCKET NO. 080411-EG (Florida Public Utilities Company)

DOCKET NO. 080412-EG (Orlando Utilities Commission)

DOCKET NO. 080413-EG (JEA)

Q: Please state your name, title and business address.

A. My name is Mike Rufo. I am Managing Director in the Consulting and Analysis Group at Itron, Inc. (Itron), 1111 Broadway Street, Suite 1800, Oakland, California 94607.

Q: Please describe your education, work experience and qualifications.

A: I graduated with full honors from Sonoma State University in 1985 with a Bachelor's degree in Environmental Studies and Planning with an Energy Management emphasis. I received a Master's Degree in Technology and Human Affairs from Washington University in St. Louis in 1986. I am currently a Managing Director of Itron's Consulting and Analysis (C&A) group, which specializes in the analysis of energy efficiency (EE), demand response (DR), distributed generation, resource planning, and advanced metering infrastructure (AMI)/SmartGrid. Previously, I was

Senior Vice President at Quantum Consulting, Inc. and Vice President at XENERGY, Inc. (now KEMA, Inc.). I have been employed as an energy consultant since 1987. Since that time, I have conducted numerous EE potential studies, energy program evaluations, energy-related market assessments, energy program best practice assessments, as well as analyses of energy market restructuring.

Organizations for which I have conducted EE potential or EE goals studies include the Public Utilities Commission of Texas (PUCT), PNM (Public Service New Mexico), California Public Utilities Commission (CPUC), California Energy Commission, Energy Foundation, Group Endesa, Idaho Power, Los Angeles Department of Water & Power, Portland General Electric Company, Pacific Gas & Electric Company, Sacramento Municipal Utilities District, San Diego Gas & Electric Company, and Southern California Edison Company. I have also contributed to a number of other potential studies as a subcontractor including studies for Connecticut Energy Conservation Management Board, New Zealand, New Jersey, Rhode Island, San Antonio (City Public Service), and Xcel Energy (Colorado).

I have been conducting EE potential studies since 1989. I recently led the National Energy Efficiency Best Practices project (www.eebestpractices.com), which produced the most systematic and comprehensive assessment of energy programs in the country. I have evaluated a wide variety of EE and DR programs ranging from standard performance contracting programs to critical peak pricing. I conducted the industry's first comprehensive analyses of EE measure costs as part of the Database

for Energy Efficiency Resources (DEER) projects throughout the 1990s. I am also co-directing a comprehensive update of the DEER that includes unit energy savings estimates, measure impact load shapes, net-to-gross ratios, and effective useful lives for thousands of measure-market segment combinations.

Q: Please describe Itron's Consulting and Analysis Group, including its history, organization and services provided.

A: Itron is made up of the former consulting practices of Regional Economic Research, Inc. (RER) and Quantum Consulting, Inc. Itron's C&A group includes over 50 professional staff with expertise in economics, engineering, statistics, energy policy, business management, and related fields. Itron's C&A group has provided consulting services to the energy industry since the early 1980s, primarily to electric and gas utilities and related public and private sector institutions.

Itron's C&A group has extensive experience and proven success managing consulting contracts ranging from small projects to large multi-year, multi-million dollar efforts. These projects have been conducted for a variety of clients including Florida Power & Light Company (FPL), We Energies, Pacific Gas & Electric Company, Baltimore Gas & Electric Company, Southern California Edison, CPUC, PUCT, and many others.

Itron acquired Quantum Consulting (QC) in April 2006. RER joined Itron in October 2002. QC and RER staff developed and refined some of the industry's most important evaluation, planning, and forecasting tools and approaches including

conditional demand (CDA) and statistically-adjusted engineering (SAE) models, discrete choice and net-to-gross methodologies, the duty-cycle approach to load control impacts, the COMMEND and REEPS end-use forecasting models, industry-leading EE potential models, and end-use metering data cleaning and analysis techniques, among others. Itron C&A staff have authored some of the industry's most influential projects and reports including the *2001 Framework for Assessing Publicly Funded Energy Efficiency Programs*, the national *Energy Efficiency Program Best Practices Project*, the *California Secret Surplus Study*, the *California End Use Survey*, the DEER, and the Electric Power Research Institute (EPRI) Duty Cycle method for load control impact analysis, among others.

Itron's C&A staff has extensive experience in performing potential studies and is a proven industry leader in this area. During its early experience in this area in the late 1980s through the mid 1990s, C&A developed a sophisticated computer model called Assessment of Energy Technologies (ASSET™). The model has been used in a wide range of EE potential studies. Itron staff members have also contributed to the development of other widely used demand side management (DSM) potential models, including DSM ASSYST, which is the model used for this study.

Q: What specific projects or studies has Itron undertaken to assess EE potential?

Itron has conducted numerous potential studies for various clients over the past few years. The most recent potential studies conducted by Itron are listed in Exhibit MR-1 attached to my testimony.

Q: What is the purpose of your testimony in this proceeding?

A: The purpose of my testimony is to present and summarize the methodology, input data, and findings contained in the studies of technical potential and achievable potential for cost-effective EE and load management for the seven utilities subject to the requirements of the Florida Energy Efficiency and Conservation Act (FEECA).

Q: What exhibits are you sponsoring?

A: I am sponsoring Exhibits MR-1 through MR-11, which are attached to my testimony.

Q: What is the scope of work for which Itron was retained?

A: Itron's contract with the FEECA utilities was to assess the technical, economic, and achievable potential for electric energy and peak demand savings from EE and DR measures, as well as customer-scale photovoltaic (PV) and solar thermal installations in the service territories of the seven FEECA utilities. This scope of work included the development of end-use baseline data, development of measure cost and savings data, collection of building characteristics and end-use saturation data via on-site surveys of commercial customers, estimation of technical potential, estimation of economic potential, and estimation of achievable potential.

The analytic boundaries of Itron's potential estimates were limited to residential, commercial, and industrial customers of the seven FEECA utilities. Chapter 2 of each FEECA utility's technical potential report provides a detailed discussion of the analytic boundaries of Itron's study.

Q: How, if at all, did the work performed by Itron differ across the seven FEECA utilities?

A: Itron performed the same work for all seven FEECA utilities with one key exception. For Florida Public Utilities (FPU), Orlando Utilities Commission (OUC), and JEA, Itron performed the Rate Impact Measure (RIM) and the Total Resource Cost (TRC) cost-effectiveness analyses for efficiency measures using avoided cost and retail rate forecasts provided by each respective utility. Based on those cost-effectiveness results, Itron then estimated the achievable potential for EE for FPU, OUC, and JEA.

In the case of FPL, Progress Energy Florida, Inc. (PEF), Tampa Electric Company (TECO), and Gulf Power Company (Gulf), Itron provided the measure data inputs required for those utilities to conduct RIM and TRC cost-effectiveness testing for efficiency measures themselves. These utilities chose to do their own cost-effectiveness testing to maintain consistency with cost-effectiveness models and assumptions used in other internal planning and analysis processes at each utility. Based on the cost-effectiveness results as produced and delivered by those utilities to Itron, Itron then estimated achievable potential for EE measures that were determined to be cost-effective for FPL, PEF, TECO, and Gulf.

Q: Was Itron retained to advocate policy positions before this commission?

A: No, Itron was retained to provide the technical and achievable potentials based on industry-recognized, unbiased methods and modeling processes in accordance with the direction provided by the FEECA utilities.

Q: What studies have been or will be produced in the scope of Itron's work?

A: The studies are listed in Exhibit MR-2 attached to my testimony.

Q: Are any of the reports listed in Exhibit MR-2 attached to your testimony as separate exhibits?

A: Yes, the forecast of total achievable potential for all of the FEECA utilities is attached as Exhibit MR-3. The forecasts of achievable potential for each of the FEECA utilities are attached as Exhibits MR-4 through MR-10. The Technical Potential Studies for Electric Energy and Peak Demand Savings in Florida and for each of the FEECA utilities have been filed with the Commission and are part of staff's composite exhibit.

Q: What were the major steps in the analytical work Itron performed?

A: The major steps in Itron's analytic work were as follows. The first step was to identify and select the EE, DR, and PV measures to be analyzed in the study. Once measure identification and selection was completed, the next step was to develop measure cost and savings data for each in-scope measure and develop baseline estimates of end-use energy consumption and peak demand savings for all in-scope market segments. Using this end-use baseline and measure data, Itron then estimated technical potential.

The next step was to assess the cost-effectiveness for each measure based on the results of the technical potential analysis using the RIM and TRC tests. As described earlier, Itron conducted the cost-effectiveness analysis for FPU, OUC, and JEA using avoided cost and retail rate forecasts provided by those utilities. Itron also

determined the maximum incentive levels for each measure for FPU, OUC, and JEA according to the incentive scenarios defined by the FEECA utilities.

For FPL, PEF, TECO, and Gulf, Itron provided the measure data inputs required for calculating RIM and TRC ratios, and those utilities conducted the cost-effectiveness and maximum incentive calculations themselves and provided the results to Itron.

The final step was to estimate the achievable potential for the measures that passed the cost-effectiveness criteria established by the FEECA utilities under various scenarios of measure incentive levels.

MEASURE IDENTIFICATION AND SELECTION

Q: Please explain the process by which DSM measures were identified for assessment in the Itron Studies.

A: The development of the final measure scope was an iterative process that began with the minimum list of measures provided by the FEECA utilities in Appendix A of the original Request for Proposals. Itron then proposed additional measures that had been recently analyzed in previous potential studies conducted in other jurisdictions, as well as additional measures from knowledge of existing DSM programs administered by FPL. Other FEECA utilities also proposed additional measures based on their own current program offerings. Similarly, Southern Alliance for Clean Energy/Natural Resources Defense Council (SACE/NRDC) proposed additional

measures based on reviews of the current technology research literature, pilot programs in other jurisdictions, and trade literature.

In general, the scope of measures proposed for consideration in the study was limited to measures that are currently available in the Florida market for which independently-verified cost and savings data are available. In this sense, non-commercialized technologies were specifically excluded from the study.

Once the master list of proposed measures was compiled, Itron conducted assessments of data availability and measure-specific modeling issues and communicated the findings of these assessments to the study collaborative. The FEECA utilities and SACE/NRDC provided responses to these findings. These pieces formed the basis for a series of conference calls designed to either reach consensus among the study collaborative or determine further action items required to finalize the data assessment.

Q: How were DR measures identified?

A: For this study, DR measures were identified using a combination of literature review, reviews of current DR program activities of the FEECA utilities, and discussions with FEECA utilities about the near-term outlook for AMI and DR programs in their respective service territories.

Q: How were the customer-scale PV technologies identified?

A: Customer-scale PV measures were identified by explicitly considering the following characteristics related to PV electric systems: 1) PV material type, 2) energy storage,

3) tracking versus fixed systems, 4) array mounting design, 5) host sites, and 6) on versus off grid systems. Each of these PV system characteristics is described in more detail on pages 5-1 and 5-2 of each FEECA utility's technical potential report. After discussions with the FEECA utilities, Itron defined one residential rooftop PV system, one commercial rooftop PV system, and one ground-mounted PV system in commercial parking lots for purposes of assessing customer-scale PV potential.

Q: Was the process of measure identification and selection appropriate for the objectives of the study?

A: Yes, the measure identification and selection process was appropriate for the objectives of the study. The final measures list was comprehensive and, indeed, included a significant number of measures that Itron had not previously analyzed in potential studies conducted for other clients.

Q: Did it allow for the assessment of the full Technical Potential of the FEECA utilities?

A: Yes, the final measure list was broad enough to allow for a reasonable assessment of the full technical potential of DSM measures for the FEECA utilities.

Q: How many measures did this measure identification and selection process cause Itron to analyze that it had not previously assessed?

A: The final measures list included 25 residential measures and 24 commercial measures that Itron had not previously analyzed.

Q: Ultimately, how many DSM measures were identified for analysis?

A: The study considered 257 unique EE measures (including 61 residential measures, 78 commercial measures, and 118 industrial measures), seven (7) unique DR measures

(five (5) residential measures and two (2) commercial/industrial measures), and three (3) unique PV measures (one (1) residential and two (2) commercial).

The final list included some measures that are likely to face significant supply constraints in near term, e.g., Seasonal Energy Efficiency Ratio (SEER) 19 central air conditioners, hybrid desiccant-direct expansion cooling systems, and heat pump water heaters. The final EE measures list also included some end-use specific renewable energy measures, e.g., solar water heating and PV-powered pool pumps. These renewable measures were included in the efficiency analysis (rather than the PV analysis) because they affect end-use specific loads, rather than whole building loads, and can therefore be treated the same as efficiency measures in the DSM ASSYST modeling framework.

Q: Once measures were selected by the collaborative, what was the next step in Itron's analysis?

A: The next step in Itron's analysis was to develop bottom-up baselines of current energy use and peak demand at the end-use and technology level in the market segments of interest. Section 3-3 of each FEECA utility's technical potential report contains detailed discussions of the baseline data required to establish bottom-up modeling baselines and presents the building type and end-use definitions used in the study. Once bottom-up baselines were established, Itron then used data on actual total sales and system peak demand provided by the FEECA utilities to ensure that all of the bottom-up end-use energy and peak demand estimates correctly sum to within a reasonable range of actual sales and observed system peak demand.

TECHNICAL POTENTIAL

Q: Please define Technical Potential.

A: Technical potential is defined in this study as the complete penetration of all measures analyzed in applications where they were deemed technically feasible from an engineering perspective.

It is important to note several key caveats to interpreting and evaluating technical potential estimates. First, it should be understood that technical potential is a theoretical construct that represents the upper bound of EE potential from a technical feasibility sense, regardless of cost, acceptability to customers, or normal replacement rates of equipment. Specifically, feasibility limits measure installation to opportunities where installation is feasible from an engineering perspective and physically practical with respect to constraints such as available space, noise considerations, and lighting level requirements, among other things. However, technical potential does not account for other important real-world constraints such as product availability, contractor/vendor capacity, cost-effectiveness, customer preferences, or normal equipment replacement rates. In this way, technical potential does not reflect – and is not intended to reflect – the amount of EE potential that is achievable through voluntary, utility programs and should not be evaluated as such.

It is also important to note that, as defined, technical potential does not have a time dimension associated with it and, in this way, should be viewed as a snapshot of the

technically feasible efficiency resource given available information on measures and the size of the feasible and eligible market.

Q: What Technical Potential Reports did Itron generate?

A: Itron generated and delivered the technical potential reports listed in Exhibit MR-2.

Q: Do these Itron Technical Potential Reports provide a detailed description of Itron's methodology, data, and assumptions?

A: Yes, each technical potential report provides detailed descriptions of Itron's methodology as well as the input data and assumptions used in the study.

Q: Do these Technical Potential reports identify the full Technical Potential for the FEECA utilities?

A: Yes, each technical potential report identifies the full technical potential of the measures analyzed for each FEECA utility.

Q: Please summarize the methodology, data, and assumptions used to develop the Technical Potential of EE measures for the FEECA utilities.

A: Total technical potential is developed from estimates of the technical potential of individual measures as they are applied to discrete market segments (commercial building types, residential dwelling types, etc.). The core equation used to calculate the technical potential for energy savings from each individual efficiency measure is shown below (using a commercial measure example).

Baseline Data *Measure Data*

Technical Potential (GWh) = [Units of Consumption (10e6 ft^2)] [End-use Tech Saturation (%)] [Base Tech EUI (kWh/ft^2)] [1 - Measure Saturation (%)] [Measure Feasibility (%)] [Measure Impacts (%)]

As the equation shows, technical potential is estimated by interacting "baseline data" that describe current, end-use energy consumption in a given market segment with "measure data" that describe the energy savings impacts, feasibility, and current saturation of a given measure in a given market segment.

By treating measures independently, their relative cost-effectiveness is analyzed without making assumptions about the order or combinations in which they might be implemented in customer premises. However, total technical potential across measures cannot be accurately estimated by simply summing the individual measure potentials directly, since some savings would be double-counted. For example, the savings from a measure that reduces heat gain into a building, such as window film, are partially dependent on other measures that affect the efficiency of the system being used to cool the building, such as a high-efficiency chiller – the more efficient the chiller, the less energy saved from the application of the window film.

In the second step of the DSM ASSYST modeling framework, total cumulative technical potential is estimated using a supply curve approach. The critical aspect of supply curves is that total potential savings from any given measure are calculated incrementally with respect to measures that precede them. This incremental accounting of measure costs and savings takes into account interactive effects between multiple measures applied to the same end use, such as those described above in the case of efficient chillers and window film measures.

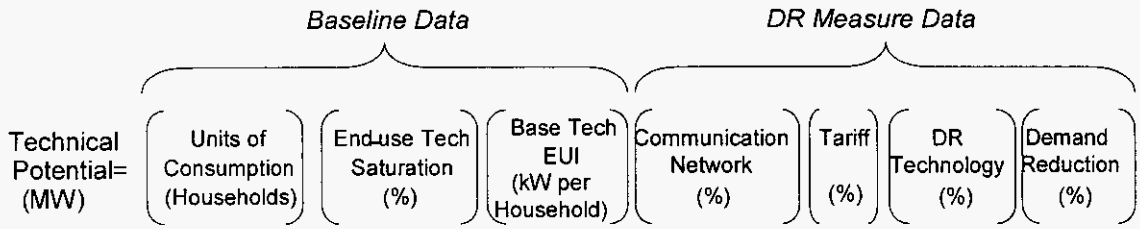
The methodology and data used to estimate the technical potential of EE measures is described in more detail in section 3.2 of each FEECA utility's technical potential report.

Q: Please summarize the methodology, sources of data and assumptions used to develop Technical Potential for DR measures for the FEECA utilities.

A: The methodology used to develop technical potential estimates for DR measures was based on an "engineering" approach that relies on a bottom-up engineering accounting of DR potential by end-use and DR-enabling technology. This approach is analogous to the approach used for estimating EE potential and is readily applicable to utility-controlled DR resources (e.g., direct load control).

In this approach, developing technical potential estimates for DR programs requires making judgments about the fraction of buildings that are likely to be integrated into new communications networks (ranging from simple one-way paging to advanced communications networks), the rate choices available to these customers, and the advanced DR technologies likely to be available to each customer class. In this analysis, the availability of communication networks, advanced DR technologies, and dynamic pricing tariffs is driven by technical feasibility of deployment over a 10-year period without consideration of policy or economic factors.

Using a residential example, the core equation used for estimating DR technical potential is:



This equation is analogous to the equation used for estimating the EE technical potential. The baseline data used for estimating DR technical potential is the same as that used for estimating the EE technical potential. As such, it should be understood that the technical potential estimates for EE and DR are not strictly additive, since efficiency improvements reduce the baseline peak demand available to be reduced in DR programs.

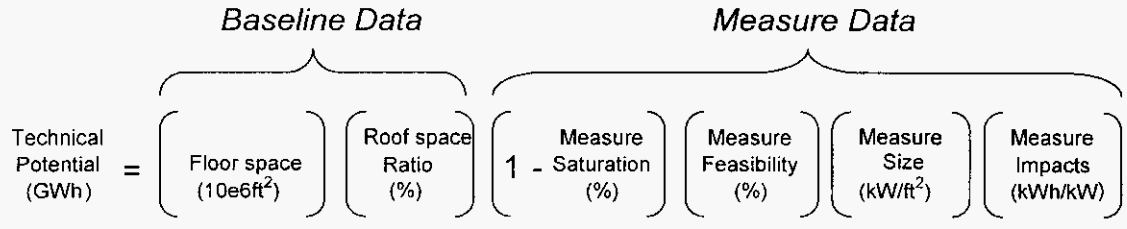
In order to estimate technical potential, therefore, it is necessary to develop estimates for three key factors for each DR program considered: 1) the availability of communication networks, 2) the availability of advanced DR technologies, and 3) the availability of dynamic pricing tariffs. For DR programs and strategies beyond traditional direct load control programs, however, comprehensive data to support such estimates was not readily available for this study, largely due to the relative newness of advanced DR technologies, dynamic tariffs, and advanced communications networks. Additionally, the scope of Itron's study did not support primary data development for advanced DR measures. As such, Itron developed a scenario-based, assumption-driven analysis framework in order to develop the DR measure data

required to estimate technical potential. In this approach, Itron developed an initial set of straw-man values for each factor that was then presented to each of the FEECA utilities. The utilities' feedback was then utilized as the basis for the final parameters. The analysis results were then presented to the FEECA utilities, and Itron incorporated these comments in the final results. The final set of key assumptions is shown in section 4.2 of each FEECA utility's technical potential report.

Q: Please explain the methodology, sources of data and assumptions used to develop Technical Potential for PV measures for the FEECA utilities.

The analytic methodology used to estimate technical potential for PV measures consisted of first estimating total roof area suitable for siting customer-scale PV systems and then translating this roof area into estimates of annual electricity generation and power output coincident with the electric system summer and winter peaks. For commercial buildings, the total roof area also is used to estimate parking lot area over which parking shade structures might hold PV systems.

The form of the PV core equation is similar, but not identical, to that of the EE and DR core equations. The core equation used for estimating PV technical potential is (for a commercial sector example):



Because PV potential is not correlated with baseline energy consumption but rather

the non-energy physical characteristics of buildings and facilities, the "baseline data" for PV potential analysis is available roof space. Estimates of the technical potential for peak generation (as opposed to annual energy generation) are calculated by adjusting the units of the measure impacts term to be a ratio of kW output at the time of system coincident peak to the nominal, rated PV system size. The peak impact factors are derived from PV hourly generation profile data that are then used to estimate PV power output at the time of system coincident peak load. Note that it is not necessary to use supply curve modeling in the PV technical potential assessment because whereas EE measures are subject to substantial interactive effects, the PV measures are not.

The baseline and measure data used to estimate the technical potential of PV measures are described in more detail in sections 5.3 and 5.4 of each FEECA utility's technical potential report.

Q: Once Technical Potential estimates were developed, what was the next step in your analysis?

A: The next step in the analysis was to conduct cost-effectiveness screenings at the measure level and determine the incentive levels to be applied in the adoption forecast.

ECONOMIC COST-EFFECTIVENESS SCREENINGS AND INCENTIVE LEVEL ESTIMATION

Q: How was economic potential defined and estimated for this study?

A: For this study, economic potential was defined as the technical potential of all measures determined to be cost-effective according to two different cost-effectiveness tests, the RIM test and the TRC test. In the RIM "portfolio" case, measures were defined as being cost-effective if the calculated RIM value was greater than or equal to 1.01. Measures with RIM values less than 1.01 were excluded from the RIM "portfolio" and screened from the achievable potential analysis. Likewise, in the TRC "portfolio" case, measures were defined as being cost-effective if the calculated TRC value was greater than or equal to 1.01. Measures with TRC values less than 1.01 were excluded from the TRC "portfolio" and screened from the achievable potential analysis.

It is important to note that for the purpose of evaluating cost-effectiveness to estimate economic potential, the measure-specific RIM values were calculated without administrative costs or incentive costs in the denominator. Similarly, the measure-specific TRC values were calculated without administrative costs in the denominator. (Incentives are not considered in the TRC test). In this respect, the cost-effectiveness screening was based on purposefully liberal implementations of the standard RIM and TRC tests.

Q: Were any additional screening criteria for estimating Achievable Potential used for this study?

A: Yes, in addition to the aforementioned purely economic screening based on the RIM and TRC tests, measures that demonstrated simple payback periods of less than two years with no incentive applications were excluded from the RIM and TRC "portfolios" and screened from the achievable potential analyses. Additionally, measures with Participant Test values of less than 1.01 were also screened from the achievable potential analysis.

FPL, PEF, TECO, and Gulf also conducted a second phase of screening based on the RIM and TRC test results with administrative costs included in the denominator. Measures with RIM values less than 1.01 (inclusive of administrative costs) were excluded from the RIM "portfolio" and screened from the achievable potential analyses. Similarly, measures with TRC values less than 1.01 (inclusive of administrative costs) were excluded from the TRC "portfolio" and screened from the achievable potential analyses.

Q: After these additional screenings were performed, what was the next major activity?

A: The next major activity was to determine the measure incentive scenarios to be modeled in the adoption forecast. This activity was performed by the FEECA utilities.

Q: What incentive scenarios were defined for this study?

A: The FEECA utilities defined three measure incentive scenarios – low, mid, and high – for the TRC and RIM portfolios, respectively.

For the RIM portfolio, the measure incentives in the high case were defined as the lesser of the incentive level that produces a simple payback period to the customer of two years or the maximum incentive allowable that produces a RIM ratio of 1.01 (max RIM). The measure incentives in the mid case were defined as the lesser of 50% of incremental measure cost or max RIM. The measure incentives in the low case were defined as the lesser of 33% of incremental measure cost and max RIM.

For the TRC portfolio, the measure incentives in the high case were defined as the lesser of the incentive level that produces a simple payback period to the customer of two years or 100% incremental measure cost (max TRC). The measure incentives in the mid case were defined as the lesser of 50% of incremental cost and the incentive level that produces a simple payback period to the customer of two years. The measure incentives in the low case were defined as the lesser of 33% of incremental cost and the incentive level that produces a simple payback period to the customer of two years.

Q: How were the incentive levels determined for the municipal utilities?

A: For FPU, OUC, and JEA, Itron calculated the incentive levels according to the incentive scenario defined by the FEECA utilities. Specifically, Itron used the measure cost and savings data developed in the technical potential phase of the study

together with avoided costs and retail rate forecasts provided by FPU, OUC, and JEA to determine RIM and TRC ratios, simple payback periods, and other metrics required to calculate measure incentives according to the incentive scenarios defined above.

Q: What was the next step in the development of Achievable Potential?

A: After cost-effectiveness screenings and incentive level estimation was complete, the next step in the study was to forecast customer adoption of all passing measures and estimate the energy and peak demand savings impacts of utility-funded incentive programs for the period 2010-2019.

ACHIEVABLE POTENTIAL

Q: Please explain the methodology and models used by Itron to develop Achievable Potential estimates for the cost-effective EE measures.

A: I will summarize the methodology and models used by Itron to develop achievable potential for EE measures. A more detailed explanation is attached to my testimony as Exhibit MR-11.

Itron used KEMA's DSM ASSYST model to develop the achievable potential estimates. The achievable potential model of DSM ASSYST was developed in the mid-1990s. The DSM ASSYST achievable potential model has been used by Itron and KEMA staff on a wide variety of EE potential and goals-setting related projects over the past decade, including most of the projects referenced previously in my testimony. This particular achievable potential model has a number of important

features and characteristics that make it one of the leading, if not the leading, model of this type in the industry. These features include the following:

- Incorporation of both program information and incentive effects on measure adoption;
- Stock accounting of both physical stock and the fraction of the remaining market that is aware and knowledgeable of each measure;
- Measure adoption curves that reflect both direct and indirect economic factors;
- Internal methodological consistency between forecasts of program adoptions and naturally-occurring adoptions; and
- The ability to assign and calibrate adoption curves to individual measures.

Itron used a method of estimating adoption of EE measures that applies to both program and naturally-occurring analyses. Note that naturally occurring includes "free riders" and is an estimate of the amount of efficiency adoptions predicted to occur without further program interventions. Whether as a result of natural market forces or aided by a program intervention, the rate at which measures are adopted is modeled in the method as a function of the following factors:

- The availability of the adoption opportunity as a function of capital equipment turnover rates and changes in building stock over time;
- Customer awareness and knowledge of the efficiency measure;
- The cost-effectiveness of the efficiency measure; and
- The relative importance of indirect costs and benefits associated with the efficiency measure.

Only measures that pass the measure screening criteria are put into the penetration model for estimation of customer adoption.

A critically important step in the achievable potential methodology is to calibrate the adoption estimates to actual program adoptions as much as possible. For this study, program accomplishments were received from the FEECA utilities and used in this calibration process. Summer peak results were initially calibrated primarily using FPL's recent accomplishments. In addition, for several utilities winter peak results were of equal or greater importance than summer peak. Recent program results for PEF, a winter peaking utility with a strong winter peak focus to their programs, were used to calibrate the adoption results for measures with significant winter impacts. The calibration process utilized was iterative. Itron began with measure-specific adoption curves developed from other recent Itron and KEMA potential studies. Itron then compared the results from using these curves to the FEECA utilities' recent program results. Adjustments were then made to some of the adoption curves to obtain results that better align with actual program accomplishments in Florida. This process was repeated in consultation with the FEECA utilities until the utilities and Itron agreed that the results were consistent with program experience in Florida.

Q: **Please explain the methodology and models used by Itron to develop Achievable Potential estimates for PV and DR measures.**

A: In the case of PV measures, Itron did not produce estimates of achievable potential due to the fact that PV measures did not pass the cost-effectiveness criteria

established by the FEECA utilities for purposes of this study, i.e. TRC, RIM, and/or Participant tests.

In the case of DR measures, Itron used a scenario-based, assumption-driven forecasting approach. The core equation used for estimating DR achievable potential is (example is for the residential sector):

$$\begin{pmatrix} Achievable \\ Potential \\ (MW) \end{pmatrix} = \begin{pmatrix} Units\ of \\ Consumption \\ (Households) \end{pmatrix} \begin{pmatrix} End-use \\ Techno\log y \\ Saturation \\ (\%) \end{pmatrix} \begin{pmatrix} Base\ Tech \\ EUI \\ (kW\ per \\ Household) \end{pmatrix} \begin{pmatrix} Communication \\ Network \\ (\%) \end{pmatrix} \begin{pmatrix} Tariff \\ (\%) \end{pmatrix} \begin{pmatrix} DR \\ Tech \\ (\%) \end{pmatrix} \begin{pmatrix} \Pr ogram \\ Participation \\ Rate \\ (\%) \end{pmatrix} \begin{pmatrix} Load \\ \mathrm{Re}duction \\ (\%) \end{pmatrix}$$

The methodology for estimating the first six quantities in the identity shown above was described previously in this testimony. The methodology for estimating the last two quantities – program participation and load reduction – is described here.

For this study, program participation is viewed from the perspective of a "typical" year of a mature program, with the understanding that a multiyear ramp-up period will be necessary, and that ongoing participation may be subject to fluctuations due to factors both within and outside of the program administrator's control. Although various quantitative methods are available for estimating DR program participation, this study used a combination of expert judgment and internal projections from the FEECA utilities to develop the assumptions used for future program participation for DR programs.

Similar to DR program participation, customer load reductions during DR events may vary yearly, seasonally, and from event to event. The operational trigger for using DR programs is usually a system reliability event. Consequently, predicting the number of DR events (i.e. when the trigger conditions occur) and the circumstances in which they are dispatched is uncertain. For this study, load reduction is viewed from the perspective of average expected reductions over multiple events, with the understanding that size of load reductions will vary from event to event and may be subject to fluctuations due to factors both within and out of the program operator's and customer's control.

Itron used two different methods to estimate customer load reductions during DR events for Critical Peak Pricing (CPP) tariffs and direct load control (DLC) programs, respectively. In the case of CPP tariffs, Itron used an "economic" analysis approach to estimate load reduction. The "economic" approach relies on empirical modeling of the customer's likely behavior in response to economic signals (e.g., the difference between critical peak event and non-event on-peak prices). The "economic" approach consists of estimating price elasticities from the consumption data of customers exposed to varying prices or tariffs. The price elasticities are then used for estimating the load reduction. Assumptions about DR program design (specifically, CPP) and price elasticities (used in the "economic" approach) were developed on the basis of an extensive literature review of existing programs in different parts of the U.S. and were reviewed with and approved by all seven FEECA utilities.

In the case of DLC programs, Itron used an "engineering" analysis approach to estimate customer load reductions. The "engineering" approach consists of explicit "bottom-up" accounting of end-uses, applicability of DR technologies, and historical estimates of observed load reductions. Assumptions about load reductions from DLC programs were developed in collaboration with the FEECA utilities based on past evaluations of existing DLC programs.

Given the assumption-driven forecasting framework used to estimate achievable potential for DR measures in this study, an important aspect of the analysis was the use of scenarios to capture a range of assumptions and outcomes, particularly with regard to future program participation in CPP tariffs. While the scenarios developed for this study should be properly viewed as a subset of possible future outcomes (rather than a comprehensive assessment of all possible future outcomes), it should be noted that the scenarios were designed to reflect the range of possible outcomes that is consistent with expert judgment (based on past program experience) and each utility's internal analysis, ongoing projects, future plans, and projections.

Q: Please explain how the residential and commercial new construction market segments were addressed in the analysis of Achievable Potential.

A: The residential and commercial new construction market segments were modeled as separate market segments in the achievable potential study, using the same supply-curve and adoption forecasting methodologies that were applied to the residential and commercial existing construction markets. The only differences between the new construction and existing construction analyses for the residential and commercial

sectors were related to the baseline data, the measure data, and the population data. Each of these differences is described in more detail below.

In the new construction analyses, the baseline end-use energy intensities (kWh/home for residential and kWh/square foot for commercial) were adjusted to reflect minimum code baselines for new construction in Florida. Specifically, the residential heating, ventilation, and air conditioning (HVAC) baselines were adjusted to reflect the 13 SEER federal minimum efficiency standard for central air conditioners and heat pumps. In commercial new construction, the lighting, HVAC, and refrigeration baselines were adjusted to reflect end-use energy intensities consistent with the 2007 Florida Building Code.

The second key difference in the new construction analyses was the list of EE measures modeled. In residential new construction, the achievable potential forecast was based on a direct subset of the measures modeled in the existing construction analysis reflecting only those measures that were applicable to residential new construction. For example, the AC Maintenance and Proper Refrigerant Charging measures were not applicable to new construction and were thus removed from the analysis. Similarly, the R-0 to R-19 Ceiling Insulation measure was not applicable to new construction due to minimum code requirements. In commercial new construction, the FEECA utilities choose to consider measure "packages" that reflected integrated design approaches with whole-building energy reduction targets rather than a direct subset of the itemized measures considered in the commercial

existing construction analysis. These measure "packages" were defined to achieve the following energy reduction targets relative to code: 15% more efficient lighting, 25% more efficient lighting, 10% more efficient cooling and ventilation, 30% more efficient cooling and ventilation, 10% more efficient commercial refrigeration, and 20% more efficient commercial refrigeration.

The third key difference in the new construction analyses was the population data used to estimate the size of the eligible market. For the existing construction analyses, the eligible market was defined by the current residential and commercial building stocks for each FEECA utility. For the new construction analysis, the eligible market was defined by the annual new construction rates expected for each FEECA utility. For this study, Itron developed estimates of annual residential and commercial new construction rates based on the revised load forecasts developed by each FEECA utility for their 2009 Ten-Year Site Plan filings submitted in April 2009.

Q: Are the methodology and models Itron employed to develop Achievable Potential estimates for the FEECA utilities analytically sound?

A: Yes, the methods and models used by Itron are analytically sound. The methods and models used have a history of success because they appropriately blend theory and practice. The models use advanced stock and awareness accounting along with measure-specific adoption curves that reflect real-world differences in end user adoption of efficiency measures as a function of direct and indirect measure attributes. The calibration of the adoption models to the FEECA utilities' actual program experience provides an additional important grounding to the study results.

Q: Have these methodologies and models been relied upon by other commissions or governmental agencies?

A: Yes, these methods and models have been used by Itron and KEMA to develop EE potential estimates and EE goals in a variety of jurisdictions. For example, the methods and models were used to conduct the potential studies in California that were used by the CPUC to set EE goals for 2004-2011. The methods and models were also used to complete a report on EE goals for the Texas Legislature pursuant to a contract with the PUCT. The methods and models have been used for many other related projects including those for Xcel Energy (Colorado), PNM, Idaho Power, Los Angeles Department of Water & Power, Northwestern Energy, as well as many others.

Q: Can you summarize your estimates of the amount of EE and demand reduction that can reasonably be achieved by the FEECA utilities?

A: Across the seven FEECA utilities, Itron estimates that the 10-year cumulative savings potential for the RIM-based EE portfolios modeled to range from 1,174 GWh to 2,675 GWh of electric energy consumption, 373 to 963 MW of system coincident summer peak demand, and 232 to 460 MW of system coincident winter peak demand, depending on the level of incentive levels assumed. For the TRC-based EE portfolios modeled, Itron estimates 10-year cumulative savings potential to range from 1,581 to 4,554 GWh of electric energy consumption, 424 to 1,492 MW of system coincident summer peak demand, and 252 to 983 MW of system coincident winter peak demand, depending on the incentive levels assumed.

For DR, Itron estimates that the 10-year cumulative savings potential for the DR programs modeled to range from 504 to 545 MW of system coincident summer peak demand and 353 to 481 MW of system coincident winter peak demand, depending on the relative participation in CPP tariffs and DLC programs assumed. Note that the DR savings potential is additional and incremental to the existing DR resources in the FEECA utilities.

Q: Please describe the sensitivity and robustness of the estimates of Achievable Potential to variations in your assumptions.

A: As noted previously, achievable potential results were developed for several scenarios. Use of multiple scenarios is an effective and common way of testing sensitivities and increasing the robustness of results. Achievable potential estimates are sensitive to a variety of factors including measure costs, measure savings, program information and knowledge building activities, program incentives, and non-energy measure costs and benefits. Differences in incentive levels and cost effectiveness tests are the defining elements of these scenarios. By their nature as forecasts of end user adoption over a 10-year period, there is of course uncertainty associated with these and all such estimates. Calibration of the achievable potential results to program adoptions in recent FEECA utility programs is an important part of the study and serves to increase the reliability of the results by tying them to actual customer measure adoption rather than simply hypothesized adoption levels. In addition, the adoption methods and curves used for this study are informed by the results of similar work conducted by the project team for many other clients. The Itron and KEMA team's adoption forecasts have been shown to be robust over time

as evidenced by comparison of our previous studies' results with subsequent actual portfolio accomplishments.

Q: Are these estimates of Achievable Potential a reasonable basis for FEECA utilities to propose DSM Goals?

A: Yes, Itron's study results provide directly relevant estimates of achievable potential for the measures passing the cost-effectiveness and screening criteria. These estimates are a reasonable basis for FEECA utilities to propose DSM goals. FEECA utilities can use these results in conjunction with their own assessments of their utility's resource needs, along with their recent actual program and portfolio experiences, to develop their goals.

Q: Does this conclude your testimony?

A: Yes, this concludes my testimony.

BY MS. CLARK:

Q. And are you also sponsoring any exhibits to your direct testimony?

A. Yes, I am.

Q. And do those exhibits consist of Exhibits MR-1 through MR-11?

A. Yes, they do.

MS. CLARK: Mr. Chairman, I would note that Mr. Rufo's exhibits have been premarked for identification as Numbers 65 through 75 on staff's exhibit list.

CHAIRMAN CARTER: For the record, 65 through 75 for identification purposes.

(Exhibit Number 65 through 75 marked for identification.)

CHAIRMAN CARTER: You may proceed.

BY MS. CLARK:

Q. Mr. Rufo, have you prepared a summary of your direct testimony?

A. Yes, I have.

Q. Would you please provide that summary now?

A. Yes, I will. Thank you. Good evening. My direct testimony and exhibits present and summarize the methodology, input data, and findings contained in the studies conducted by Itron of technical potential and

achievable potential for cost-effective energy efficiency, load management, and distributed solar for the seven utilities subject to FEECA.

The steps in Itron's analytical work were as follows: The first step was to identify and select the energy efficiency demand response and photovoltaic measures to be analyzed consistent with statutory and Commission requirements. Energy efficiency measures were developed through an exhaustive iterative process with the FEECA utilities, Itron, and the NRDC/SACE proposing measures. DR measures were identified using a combination of literature review, reviews of current DR program activities, and discussions. The PV technologies were identified by explicitly considering six characteristics specific to PV electrical systems.

The final measures list was comprehensive and broad, providing an aggressive yet reasonable assessment of the full technical potential of demand-side management for the FEECA utilities. Indeed, the final list of measures included 257 unique energy efficiency measures, seven unique DR measures, and three unique PV measures. Further, the list included 25 residential measures and 24 commercial measures that Itron had not previously analyzed in potential studies for other clients.

The next steps were to develop measure cost and savings data for each measure and to development bottom-up baseline estimates of end-use energy consumption and peak demands for all in scope market segments. Using this end-use baseline and measure data, Itron then estimated technical potential. Technical potential is defined as the complete penetration of all measures analyzed in applications where they were deemed technically feasible from an engineering perspective.

Technical potential is a theoretical construct representing the upper bound of energy efficiency potential from a technical feasibility sense, regardless of cost, acceptability to customers, or normal replacement of equipment. As such, technical potential does not reflect and is not intended to reflect the amount of energy efficiency potential that is actually achievable or cost-effective relative to other resource options.

The next step was to assess the cost-effectiveness for each measure based on the results of the technical potential analysis using the Rate Impact Measure, Total Resource Cost, and Participant tests. A threshold value of 1.01 was used in the step for each of the tests.

The next step was to calculate the payback

level of each of the measures. Measures with paybacks of less than two years were excluded from the achievable potential scenarios.

The next step was to calculate the incentive levels to be used in the achievable potential forecasts. Three incentive levels were developed under both RIM and TRC for the total -- for a total of six achievable potential scenarios.

For FPU, OUC, and JEA, Itron performed the cost-effectiveness tests for efficiency measures using avoided cost and retail rate forecasts. Itron also determined the incentive levels for each measure for FPU, OUC, and JEA, according to the incentive scenarios defined by the FEECA utilities.

For these utilities, Itron also conducted the two-year payback screening analysis. For FPL, PEF, TECO, and Gulf, Itron provided the measure data input, and these four utilities conducted their own cost-effectiveness, maximum incentive, and two-year payback screening calculations and provided the results to Itron.

After the cost-effectiveness screenings and incentive level estimation were complete, the next step in the study was to forecast customer adoption of all measures passing -- of all passing measures using

measure specific adoption curves that take into account direct and indirect economic factors, and then to estimate the achievable potential for energy efficiency measures. Itron developed the achievable potential using KEMA's DSM ASSYST model, which is generally recognized as a leading model of this type in the industry.

Itron's study results provide directly relevant estimates of achievable potential for the measures passing the cost-effectiveness and screening criteria. The resulting estimates of achievable potential are reasonable estimates under the criteria that define each scenario.

MS. CLARK: Mr. Chairman, we tender Mr. Rufo for cross-examination.

CHAIRMAN CARTER: Thank you.

Ms. Kaufman.

MS. KAUFMAN: Thank you, Mr. Chairman. We have no questions.

CHAIRMAN CARTER: Mr. Longstreth.

MR. LONGSTRETH: Thank you, Mr. Chairman.

CROSS EXAMINATION

BY MR. LONGSTRETH:

Q. Good afternoon, Mr. Rufo.

A. Good afternoon, or evening as it were.

Q. Yes. I would like to start by asking you a couple of questions about Itron's role in this process. Was Itron responsible for determining whether the goals proposed by the FEECA utilities should be set on the RIM or the TRC test?

A. No, we were not.

Q. Did the FEECA utilities consult Itron with respect to which tests they should use in setting their goals?

A. No.

Q. Is it correct that the FEECA utilities, not Itron, defined the three measure incentive scenarios that were used?

A. That is correct.

Q. And, Mr. Rufo, is it correct that the FEECA utilities provided Itron the marketing budgets that they should use in, or that Itron should use in the DSM ASSYST model?

A. On that I am not 100 percent sure. There were other people working on the project, so I would say I'm not 100 percent sure about that.

Q. And do you know the basis for the marketing budgets?

A. I am not perfectly sure about that, so I don't want to venture an answer.

Q. That's fine. I would like to ask some questions about the two-year payback issue. Was it Itron or the FEECA utilities who decided to screen out all measures that had a payback of less than two years?

A. The two-year payback criteria was provided by the utilities and the Collaborative.

Q. And you said by the utilities and the Collaborative. Do you know who made that decision between the utilities and the Collaborative?

A. I would say that from our perspective we were given the direction to implement that criteria.

Q. Okay, thank you. And did the FEECA utilities or other members of the Collaborative consult you or anyone at Itron with respect to this screen?

A. As I recall, Itron participated in conversations, teleconferences on the scenarios. I wasn't on all of those calls. I was on some of them. Other Itron staff were on other calls. I think my sense is that we were mostly listening. I think we would have answered any questions that were directed to us, but I think we were in mostly a listening mode as I recall.

Q. So you couldn't tell me any advice that you provided about the two-year payback?

A. No.

Q. Mr. Rufo, do you believe that measures with

paybacks of less than two years will be adopted automatically by customers based on natural market forces?

MS. CLARK: Mr. Chairman.

CHAIRMAN CARTER: Yes, ma'am.

MS. CLARK: I would like to object to that question. As Mr. Rufo has stated, the two-year payback was something agreed to by the Collaborative. He was only running the numbers based on the guideline and has not provided any testimony in this docket in his direct testimony regarding any advice or opinion he has on that matter.

CHAIRMAN CARTER: Mr. Longstreth.

MR. LONGSTRETH: Mr. Chairman, I believe that this is an important issue and that it stems and relates directly to the testimony that Mr. Rufo does provide. There is an attachment to his testimony that discusses adoption rates in some detail, and those issues we believe are critical issues that need to be considered in assessing free ridership.

CHAIRMAN CARTER: Ms. Helton.

MS. HELTON: Can I take a minute and look at the exhibit that he's referencing?

CHAIRMAN CARTER: Okay. Let's take a little break in place. Nobody leaves.

MS. HELTON: Can you provide me, Mr. Longstreth, with the exhibit number that you are referencing?

MR. LONGSTRETH: Let me just get it. I believe there is -- I believe I'm referencing MR-11, which discusses the achievable potential method. And, for example, on --

CHAIRMAN CARTER: The basis of the objection was the fact that he said no regarding the basis of your question in the context in terms of who made those decisions to go with the two-year.

MR. LONGSTRETH: My question was not actually -- I have moved beyond the question of who. I think we have established it was not a decision that Mr. Rufo made. The question is he is an expert on the subject of --

CHAIRMAN CARTER: I understand that, but we are dealing with the objection right now. Let's stay focused on the objection.

MS. HELTON: If you could point me, Mr. Longstreth, I'm looking now at Exhibit MR-11, to where he is opining about the two-year payback period.

MR. LONGSTRETH: There is no specific discussion in this of the two-year payback period, but there is discussion in this about measure adoption,

adoption curves, and those are relevant to, in our opinion, certainly, to the question of whether if you apply the two-year payback, will through natural market forces the customers of these utilities will they adopt those measures or not. Which is, I would submit, central to whether or not the two-year payback is a rational -- being applied in a sensible manner here, because --

CHAIRMAN CARTER: Unless I hear more, I'll be forced to sustain the objection. I think that you could probably get where you need to get through a different way. But I'm going to sustain the objection. Let's move on.

If you want to use that exhibit, then you can use that exhibit, but the basis of the objection is sustained.

MR. LONGSTRETH: Okay. I will do that.

I'd just like to pass out the residential and commercial measures, which is exhibit -- and here I'll admit a little uncertainty about whether the full content of Exhibit 151 has been included. I believe that it has not yet; and, therefore, I'd like to pass that out as an exhibit. The commercial measures were passed out earlier this morning, and are --

CHAIRMAN CARTER: Just hang on a second. Let

everybody get on the same page here. Okay.

MS. HELTON: Just for purposes of the record, Mr. Chairman, I think 151 was the exhibit that was supplemented the end of July. So if we could just make sure we are using the most recent version, I think that would be good.

MR. LONGSTRETH: Mr. Chairman, I believe that I have -- and I confirmed with Ms. Clark earlier that the versions I'm going to pass out are the most recent corrected versions.

CHAIRMAN CARTER: Okay. Is that fine, Ms. Clark?

MS. CLARK: I believe he has the right ones, yes.

CHAIRMAN CARTER: Okay. All right, then.

MR. GUYTON: Mr. Chairman.

CHAIRMAN CARTER: Yes, sir.

MR. GUYTON: Will we identify this as a new exhibit since we already have a 151, or is this --

CHAIRMAN CARTER: Are you just going to use it for cross-examination, or are you planning -- please leave one for Commissioner Argenziano.

MR. LONGSTRETH: Based on the discussion I had with staff, I believe that the entirety of this has not been entered, so I would like to introduce it as a new

exhibit, and we could just have these two as a composite.

CHAIRMAN CARTER: Thank you. Okay.

MS. BROWNLESS: Commissioner, may I inquire?

CHAIRMAN CARTER: Hello.

MS. BROWNLESS: I have two pieces of paper. I'm just trying to keep this straight. One was passed out this morning that says Itron Supplemental and Corrected Response to First Set of Interrogatories Number 1 through 8, okay. And then we had one yesterday, Itron response. So what are we -- what is 151?

CHAIRMAN CARTER: 151 is the one we entered this afternoon. Remember when we entered the exhibits for staff? Remember we had a plethora, for lack of a better word, of exhibits that we entered in. And then I recognized staff, and that 151 was the one that staff had entered in.

MS. BROWNLESS: Well, are they --

MS. HELTON: Mr. Chairman, I think that supplement that we entered in this afternoon or, I guess, earlier today had just two pages that had Progress-specific information. It might be cleaner and easier if we just number this the next number.

CHAIRMAN CARTER: All right. So let's do that

so we can all be on the same page. Let's not go back and retread water. Let's make this 165, Commissioners. 165. Okay. A short title? And it will be a composite, Commissioners, for your records. 165 will be a composite exhibit.

MR. LONGSTRETH: A short title could be Two-Year Payback Measure Data.

CHAIRMAN CARTER: Okay. Two-Year Payback Measure Data. Hang on before you start again. Just hang on a second.

Now, this is -- okay. There are two documents here, do you want those to be part of 165, as well?

MR. LONGSTRETH: No. I just -- and pardon me. I was just passing these out so that we didn't break up the flow.

CHAIRMAN CARTER: Oh, okay. I'm all in favor of the flow. Cool. For now, 165, Commissioners, composite, these two charts.

(Composite Exhibit Number 165 marked for identification.)

CHAIRMAN CARTER: Does everyone have those? And they are entitled the Two-Year Payback Measure Data. Okay. You ready? Hold on one second. Let's make sure everyone gets this. Okay. Does everyone have one?

Okay. Mr. Longstreth, you may proceed.

MR. LONGSTRETH: Thank you.

BY MR. LONGSTRETH:

Q. Mr. Rufo, are you familiar with the two tables that have been just handed out now?

A. Generally.

Q. And am I correct that Itron produced these?

A. That's correct.

Q. And would you be able to just walk me through, maybe we can start with the commercial table, and I'm particularly interested in just having clarity on what is represented by the cumulative year ten penetration rate.

A. That would be the cumulative penetration rate for each of the measures shown here with respect to the remaining potential. So I think, as was mentioned by Witness Masiello earlier -- I don't remember if that was today or maybe yesterday, I think it was today -- the achievable adoption analysis takes us to a starting point, the adoptions as of 2007, I believe it is. So if a given measure had X percent already adopted saturated in the market, the Y, one minus X would be the Y remaining percent. These percents then apply to the Y remaining percent. So a low value here, a zero here would be Y is still remaining. A 100 percent value here would be Y has been exhausted. Does that help?

Q. So we'll just -- maybe if we could explain that without the X and the Y?

A. I thought that was going to be helpful, but let's try it again. I'll slow down.

Q. Why don't we just take the commercial premium T-8 electronic ballast. Maybe -- what is that? What's a premium T-8?

A. That is a high-efficiency linear fluorescent lighting system. Premium refers to one of the later generations of T-8 technology. T-8 technology has been around since the 1980s. It really began to penetrate heavily in the 1990s, first generation T-8. And there are now, in the jargon of the field, multiple generations of T-8 technology with the later generations being the more efficient. Premium refers to those later more efficient generations.

Q. And so on this chart, cumulative ten-year penetration rate is 91 percent. Does that mean that there is 91 percent remaining to be penetrated, or does that mean it has penetrated to 91 percent?

A. That means the amount that we started with as remaining at the beginning of the analysis. So let's just -- let me make up a number. Let's say the measure was 50 percent saturated at the time we started the analysis in 2007. That would mean 50 percent would

remain available, hadn't yet adopted the measure. This would be 91 percent of that 50 percent that is remaining.

Q. Okay. And so then the next, the premium T-8 reflector, that has a 5.5 percent. So there is --

A. The converse would be true.

Q. The converse.

A. Uh-huh.

Q. And when you indicate in this column this is the penetration rate in the absence of a DSM program, is that correct?

A. That is correct.

Q. And then in the final column you have cumulative year penetration rate RIM. What is the reference to RIM versus TRC?

A. I think that -- to the best of my knowledge, we may have been asked to provide it that way, but in our modeling framework, as you can see, we estimate -- this is a reflection of what we call naturally occurring. And we estimate it. It's by definition independent of programs, so it is the same under all the scenarios.

Q. Okay. Is it possible that the -- there's some measures that are not in both categories. Perhaps they didn't past the RIM test versus the TRC test?

A. That would be possible. I don't know looking at this -- okay. I do see some blanks, but, yes.

Q. If you don't -- if you're not --

A. Yes, that's right. When they are both present, they are identical. But in cases where only one of the criteria was met, then you wouldn't see the value.

Q. And just to make sure everything is clear, the table is the same for the residential measures as well?

A. Yes.

Q. So if we looked at a measure like on the first page, AC maintenance, could you tell me what the penetration rate in the absence of programs will be for that?

A. Yes. That's showing a 2.9 percent under the TRC, and it's not present under the RIM.

Q. And, Mr. Rufo, does this indicate -- table indicate what the current penetration rate is for any of these measures?

A. No, it does not.

Q. Okay. And is it possible that the current penetration rate could be higher if a program existed now?

A. Can -- I'm not sure exactly what you mean.

Q. I thought earlier today one of the witnesses

indicated, and I apologize I can't remember who it was exactly, that some of their existing penetrations are currently higher than those shown for the ten-year penetration rate. And for programs which they have, I believe, non-incentive marketing type programs.

A. I would, I guess, recharacterize maybe the way that I thought I heard that. I think that was a reference to just what I had said before, let's call -- the remaining saturation at the start year of the study analysis, let's call that saturation. So cumulative saturation as of 2007. That's also referred to in our model documentation as the not complete factor. I think that was a reference to the fact that that cumulative penetration -- saturation as of 2007 may be higher than this what I will call marginal penetration rate for the remaining eligible stock.

Q. Okay. And other words --

A. And that could be case with or without any particular program. That just may be an artifact of where the cumulative saturation is today versus this, which is a forecast of marginal -- the remaining incremental potential in percentage terms. So these numbers would have to be added to those numbers if you wanted, say, to know what is the cumulative penetration in year ten in total. That would be these numbers plus

those at the current penetration levels.

Q. And does the current level that you consider, for example, for AC maintenance, outer coil cleaning, does that -- did you assume that whatever current activities are in place would continue into the future?

A. In the naturally occurring forecast?

Q. Correct. If there were, for example, education programs currently in place?

A. No. In the naturally occurring forecast, we turn everything off. So it is the world without the programs, even if they do currently exist.

Q. Okay. And for that example, the 2.9 is 2.9 percent above the current penetration. So everybody who is cleaning them now keeps cleaning?

A. Yes. If the current penetration was 30 percent, this would be 2.9 percent plus the 30 percent would be your year ten total saturation.

Q. All right. Thank you.

And, Mr. Rufo, do you have any estimate or are you able to estimate the average penetration rates for all of these measures? Is that something you know, naturally occurring?

A. I don't remember off the top of my head whether that is something that we have provided in testimony or PODs. I don't have a firm number in my

head as far as a weighted average of these values, if that's what you are asking.

Q. Yes.

A. So I don't know if that has already been produced.

Q. Okay. I believe we should have passed out a document labeled Itron supplemental and corrected response to NRDC's and SACE's first sets of interrogatories.

CHAIRMAN CARTER: Do you need a number?

MR. LONGSTRETH: Am I correct that this is not yet --

CHAIRMAN CARTER: Staff, is this included already? Do we need a number?

MS. FLEMING: I believe this is already included as part of 151.

MR. LONGSTRETH: Okay. Yeah. Correct. So we do not need a number.

CHAIRMAN CARTER: Okay. At the break, make sure you check it out to make sure that it is there, okay?

Okay. You may proceed.

MR. LONGSTRETH: Thank you.

BY MR. LONGSTRETH:

Q. So, Mr. Rufo, if you could turn to Page 2 of

this document. Does this show the percentage of the technical potential that was eliminated due to application of the two-year payback criteria?

A. Yes, that is my understanding of what this shows.

Q. And is it correct that the annual gigawatt hour range is from 33.9 percent to up to 46.7 percent?

A. Yes.

Q. And, Mr. Rufo, it is fair to say that the measures -- that these measures are the most cost-effective measures that were evaluated as part of the technical analysis?

A. I guess that would depend on the definition of cost-effective.

Q. Is it -- well, I'll try rephrasing that.

Would you say that these measures provide the greatest amount of efficiency for the lowest up-front cost?

A. I don't -- I don't know if I would be able to say it exactly that way. Because by definition, what we're talking about here is a payback screen. So the proxy, if you will, for -- the economic proxy is payback, which is a measure of cost-effectiveness, one possible measure of cost-effectiveness from a customer's perspective. So I guess I'm struggling a little bit

with the exact characterization of how you characterize it, maybe.

Q. Could I just ask how would you characterize measures that have a payback of less than two years compared to measures that have a payback of more than two years?

A. Well, I guess I would just say that -- yeah, these are likely the lower -- the lower cost measures from the customer's perspective. Now, that's just from a payback. There is also -- you could do a benefit/cost ratio, which takes into account the time value of money and those kinds of things. But payback is reasonably, most of the time, correlated with a participant BC ratio. So from the customer's perspective, these are low cost measures, yes.

Q. And would you say from the customer's perspective they are the most low cost measures of all the --

A. With the caveat that a BC analysis might show somewhat of a different mix. So, yes, economists would say that a benefit cost, present value benefit/cost analysis is sounder than the payback, it's just shorthand. It may not be as indicative, but they are correlated most of the time.

Q. Okay. Mr. Rufo in the past energy efficiency

potential studies that you have performed, have you ever excluded all measures that have a payback of less than two years?

A. I guess I believe that Itron has previously -- well, I know that Itron has previously done work for FPL in which that criteria was used. To my knowledge, I haven't -- I don't know that we have used the two-year criteria in other studies recently that I'm aware of, but it's possible that it has been used. And, I mean, I have been doing this work for 20 years at several different firms, and so I don't know if it has been used in any other study that the firms that I have been engaged with have conducted.

Q. But you personally have never been involved in a project outside of Florida, let's say, in which all measures that had a payback of less than two years were excluded?

MR. GUYTON: Objection. It goes beyond the scope of this witness' testimony. This witness did not testify as to a two-year payback or did not testify as to his prior studies and whether or not they used the two-year payback. He simply --

CHAIRMAN CARTER: Hang on. Hang on. Let's just rephrase. Rephrase. Okay?

MR. LONGSTRETH: Okay. Can I just also

mention that the witness does make reference to --

CHAIRMAN CARTER: Just rephrase.

MR. LONGSTRETH: Okay.

CHAIRMAN CARTER: Do you need to take a moment?

MR. LONGSTRETH: I would like to take a moment.

CHAIRMAN CARTER: Yeah. Okay. Let's do that.

(Off the record.)

CHAIRMAN CARTER: We are back on the record. You may proceed.

BY MR. LONGSTRETH:

Q. Mr. Rufo, Exhibit MR-1 to your -- your testimony contains a list of studies that you have conducted recently. Have you -- in -- in any of these studies -- did all measures that have a pay -- were all measures with a payback of less than two years excluded?

MR. GUYTON: Objection. It goes beyond the scope of the testimony. This witness offered this list of studies simply to show his qualification who have done the analysis in this case. This is not offered for the substance of the studies and the information contain therein. It is beyond the scope of his direct, unless they are challenging his qualification.

CHAIRMAN CARTER: Ms. Helton, I am -- Ms.

Helton.

MS. HELTON: Yes, sir.

CHAIRMAN CARTER: I think -- I'm thinking aloud on this one about the --

Jane, could you read back the question, please?

(Pending question read by reporter.)

CHAIRMAN CARTER: This is on Exhibit MR-1. Ms. Helton.

MS. HELTON: Yes, sir. I'm looking at it right now.

THE WITNESS: I guess I never should have mentioned the air conditioning.

CHAIRMAN CARTER: Why don't we do this? Let me take this under advisement, and we will move on. I'll come back out. Let me take it under advisement, and we'll come back on that. I will hold off on my ruling.

This might be a good time for a stretch break. Why don't we do that. We will come back at ten after.

(Recess.)

CHAIRMAN CARTER: Okay. We are back on the record.

MR. GUYTON: Mr. Chairman.

CHAIRMAN CARTER: Yes, sir, you are

recognized.

MR. GUYTON: In the interest of time and trying to move this along, I will withdraw my most recent objection, and perhaps that will facilitate the cross.

CHAIRMAN CARTER: That will be most appreciated. Thank you very kindly. Let's proceed.

MR. LONGSTRETH: The objection was withdrawn?

CHAIRMAN CARTER: Withdrawn.

MR. LONGSTRETH: Thank you. Should I repeat the question?

CHAIRMAN CARTER: We can have her -- do you remember it?

MR. LONGSTRETH: No, I will repeat it, because it was very painful when I had it reread last time. It was so inartful. (Laughter.)

CHAIRMAN CARTER: You think it was painful for you.

MR. LONGSTRETH: I would like the community, as a whole, to have less pain.

BY MR. LONGSTRETH:

Q. Mr. Rufo, in the studies referenced in Exhibit MR-1 starting on Page 2 of 2 -- I'm sorry, I must -- sorry, on one of two and two of two, those studies, in any of those studies were measures that did not pass a

two-year payback omitted from the analysis?

A. I believe, as I mentioned before, there's an FPL study included on the list. So that one would -- I believe had the two-year payback. I'm pretty sure about that. Otherwise, for a two-year, I would say likely not. There is another study on here for Xcel Energy, DSM potentials for (inaudible) filing. That one, I was not directly involved with, so I can't definitively say. And then the DSM potential study Xcel Energy Colorado, as I recall, we were a subcontractor on that. And I believe that a client -- there was a one-year payback requested to be used during that study. But I'm not positive what eventuated with that as I was a subcontractor.

Q. So just other than those two that you have mentioned, you're not aware of --

A. The others did not have a two-year payback threshold.

Q. Okay. Thank you. With respect to the one-year payback that was, I believe you said requested to be used is that --

A. Yes. I'm only saying it that way because I was a subcontractor on the Xcel Energy Colorado project. So I was -- we were involved for awhile. There was a point where, as I recall, that was being used, but I

can't -- I can't say what the final outcome of that study was, because we handed over our data to the prime, and they continued on with the client and --

Q. So you don't know whether the commission in Colorado set goals based on the analysis that included the one year payback?

A. I'm not sure, correct.

Q. Okay. And do you have any reason to believe that they may not have done so? Was the one-year payback in dispute, as you understood it?

A. You know, one of the reasons why I thought there may have been a reference to that in somebody else's testimony, and so that was the reason. So I just wasn't -- wasn't sure.

Q. Okay. Mr. Rufo, is it correct that different measures have different barrier curves?

A. Yes.

Q. And could you explain what a different -- what a barrier curve is?

A. Okay.

Q. Without using any X and Ys.

A. Okay. Well, I guess it might be -- the way I have explained this in the past is using my chart, which was provided in Exhibit MR-11 on Page 7. So is it okay if I reference that in my reply? Okay. So this chart

shows example measure implementation curves that we use in the DSM ASSYST potential model. And just starting with the description of what's on each of the axes. At the bottom we have the participant benefit/cost ratios, which I think everybody, given the discussion I have heard the last few days, is comfortable with what that is, benefits over costs in a net present value analysis from the participant or end user's perspective. And on the other axis we have the penetration rate for the measure.

So the idea is that as the measure is more and more attractive to the customer, the probability that the customers will adopt the measure increases because of the financial benefit. That's why all of the curves have the basic shape that they do, starting low and going high.

I have added -- a few years ago, I added this top curve here to try to explain this more generally to folks because it can be a little bit complicated. What the idea here is -- and that curve you see there is labeled the no barriers curve. So if you notice the starting point there or the first point, and you could draw a line from zero, it's just absent here, is at a benefit/cost associate of 1.0. So what that would say is if there were no barriers and the Participants

benefit/cost ratio was one, then you might expect under, you know, classical economic theory, the average customer would adopt the measure. It is 50 percent, because these are averages, and there is always a distribution of customer characteristics around the mean. But, on average, that measure would be attractive.

What has happened, what we have observed historically in the field, is oftentimes when we calculate these benefit/cost ratios, and then we go out to observe what we call revealed preferences, what actual adoptions are in the market, we don't find adoption falling on that curve. As traditional economic theory would tell us that they might. And we find oftentimes that it is not even close. That is something that is often referred to as the implicit discount rate issue or the payback gap in the literature, which is to say why don't customers adopt these measures when they look to be in the customer's economic interest. And there is lots of, you know, literature out there on that topic.

So what we have to do as analysts is we say, well, okay, that curve didn't work. It didn't explain what we observed. Let's try to construct a curve that is based on what we observe. Colleagues of mine at a --

at a firm that was active in the 1990s energy, we developed this DSM ASSYST model during that time, and the first curve that we developed was the one in the middle, we called the moderate barrier curve. And that we developed. I think it's referenced in the testimony maybe or one of the reply interrogatories. That was developed based on observing customer adoption from a series of controlled experiments that Synergy did for various clients in the mid-1990s, in which different levels of incentives were offered, and this curve was developed to explain -- to correlate the benefit/cost ratio to what the actual adoptions were.

So that was the first curve that we used in this adoption model in the mid-1990s. And you can see in that curve that it takes a higher benefit/cost ratio than one for the customer to adopt the measure in the scenario. Maybe in that moderate curve it looks like a benefit/cost ratio of almost 7 for 50 percent of the market to adopt. So that's benefit/cost ratio. I know it is easier for people to think in terms of payback. It is a little bit more of an intuitive number, and there's not a one-to-one translation of BC ratio to payback. But that would be a pretty -- a pretty low payback measure. Whereas, I didn't mention that BC ratio of one under the no barrier curve, that might be a

payback of 7 years, 8 years. It might be the equivalent value for the BC of one.

So, we have been -- developed these -- so that was the curve we used and it worked pretty well for certain kinds of lighting, commercial lighting programs, which was the basis for the development of the original curve. But then, again, we found that that curve explained what we observed and revealed preferences for a number of measures, but it didn't explain all of them very well. And over time, you know, we found that to calibrate our models to what we observed, we needed a variety of different curves. And they are labeled here qualitatively as low barrier versus high barrier.

So the high barrier curves are just reflecting that the benefit/cost ratio that seems to be necessary to get an equivalent percentage of the population to adopt is a lot higher than it would be for a low barrier measure or a no barrier measure.

Now I will pause and see if I have made any ground there, or if I've confounded things.

Q. Thank you. I found that very helpful. One follow-up. I think you indicated that for some a benefit/cost ratio of -- would need to be 7 to get 50 percent. I think -- was that the moderate barrier?

A. Yes. I was using this as an example.

Q. And did you provide us what the -- what the range of payback might be for that to get to that --

A. No, I didn't, because it's not a one-to-one. I can't -- I can't convert the BC ratio of 7 directly to a payback. It depends on the discount rate and the life of the measure and some other factors.

Q. And, well, just briefly, can you explain what factors influence these?

A. Yes, that is important.

Q. Just briefly?

A. Well, on the next page, Exhibit C, is one group of analysts' summary of, well, what are the these market barriers? Why don't customers adopt these measures at the levels that economic theory would say they should? And that is -- this is a list of market barriers. And I don't know if it would be -- let me just give people a minute to look at that. I don't know if would be fruitful to go over some of them.

Q. I guess just sort of one -- yeah, I think people can review that. That's helpful to have it there. Just turning to Page 5 of this exhibit, am I correct that for a measure with a high barrier curve and -- well, you have a footnote in Footnote 5 here, and I was just interested. In here you do indicate some of the payback periods, and I wonder if you could just

explain those for us?

A. To go through the footnote?

Q. Yes. I'm not asking you to read it. I thought you could probably summarize it more accurately than I could summarize it in my answer (sic).

A. Well, yes, I guess the purposes of the footnote was to, again, just continue to try to explain in illustrative terms what's going on here. And I added this footnote over the last couple of years, because I thought, you know, a lot of people had trouble conceptualizing BC ratio. But the particular example in the footnote is just kind of a random example. With, you know, you've seen 15-year measure life and a 15 percent discount rate. And, basically -- I'm trying to refresh my memory on exactly what we are doing here.

Right. This is a reference to the low barrier curve, and I think someone graciously in their testimony may have pointed out an error that that should be the high barrier curve in the exhibit. No, no. I'm sorry this part is right. I think it may have been another part. Let's see here. I haven't look at this for a while. Let me refresh my memory.

Q. Take your time.

A. I'm sorry. That is the high barrier curve. Right. So that's saying that in the high barrier case

it takes a very low payback of six months for half the market to adopt; whereas in the lower barrier case, a payback of two years would be adequate for half the market to adopt. In this hypothetical, that's just one particular hypothetical example. And there's another set of assumptions that aren't shown here on what the savings and the costs would be in that hypothetical example. But there are, you know, hundreds of different combinations of costs and savings and discount rates and such that would --

Q. And, Mr. Rufo -- are you finished?

A. No, I'm done. Go ahead.

Q. Would you recommend that because of these different barrier curves, different incentive levels are required to overcome the barriers present for different measures?

A. Well, I guess in my testimony I'm not -- I'm not making those kinds of recommendations. That's a policy choice. And there may be, you know, there may be multiple ways of encouraging adoption of that measure, so I wasn't -- it wasn't the purpose of my testimony to, I guess, opine on that. I would end up -- what I'm trying to do in my testimony is to summarize the estimates that we made under the criteria that we are provided for the study.

Q. Maybe I can just ask with respect to past studies that you have worked on, among those listed MR -- let's do -- sorry. In MR-1, those that you personally worked on, did you ever recommend incentive levels as part of your analysis?

A. No. In most of these -- in most of these studies, we have provided -- I think in all of them we provided results for multiple scenarios, with each scenario having different incentive levels. And I don't believe in any of these studies, subject to check, there was a firm -- a recommendation for which scenario to choose or which incentive level to choose.

Q. And, Mr. Rufo, if you were just based on the different adoption curves presented on MR-11, Page 7, again, that Exhibit A, if I were trying to achieve 30 percent adoption for a measure, would I have to offer a different incentive for a low, moderate, or high or extremely high barrier measure that is a measure that had that, that fell along that barrier curve?

A. Well, in this -- in this modeling world, is that what you are referring to, in the DSM ASSYST modeling framework?

Q. Correct. I guess I --

A. Or in general if you were running a program?

Q. I was suggesting if I were running a program

and I had a measure, one of which had a low barrier and one which I believe had a high barrier, would I need to offer different incentives to achieve the same penetration level?

A. Well, you might -- that would be one of your choice, but other choices would be to -- if your goal was to increase the penetration level, to mitigate the market barriers. So there might be other ways to mitigate the market barriers more directly than the incentive.

Q. And what are some of those ways?

A. Through information and training, and there is -- there's a lot of different, depending on the market barrier, there are a lot of different ways to try to mitigate these barriers. They are not necessarily easy, and the full spectrum of ease or extreme difficulty for any particular measure at any particular point in time to address any particular market barrier.

Q. And for some measures, do you believe it is -- could it be effective to offer education programs, for example that, I guess, reduced the information or search cost barrier that might increase the penetration of a measure?

A. Yes.

Q. Mr. Rufo, I'd just like to turn back to the table of commercial measures. That is Exhibit 165. In the other programs that you have --

A. Mine is not marked. This one?

Q. Yes. It didn't start out marked. We -- after we handed it out --

A. The naturally occurring?

Q. Correct.

A. Okay.

Q. Are the measures -- do you know whether the measures that are contained in this two-year payback, are those measures that in the past studies you have worked on listed in your -- in the attachment to your testimony, are many of these measures frequently employed as part of those studies?

A. If you're asking whether the measure list here is fairly similar to the measure list in the other studies.

Q. That is the measure list that is implemented as part of -- as a result of those studies. Are the measures here frequently included among measures --

A. Yes, I think we said in our testimony that -- I think what we said was there were a number of measures that were implement in this study that haven't been implemented in any of our recent studies. So the

implication of that is the remaining measures were pretty similar, and I forget exactly what the numbers are. But I think that the majority of measures were included in the other studies as well.

Q. I guess the question I have, and maybe you don't know this, but after those studies were completed, those other studies, at the program phase do you know whether the measures included, for example, in this list of commercial measures, obviously there are a lot of them, I'm not asking you to review all of them, but do you know whether some of those were included in those studies?

MS. CLARK: Mr. Chairman.

CHAIRMAN CARTER: Yes, ma'am.

MS. CLARK: We withdrew the objection to the other. This is going beyond the scope of his testimony in terms of describing what this study was. Now they're asking him to describe other studies. It's beyond the scope of what he filed in his testimony today.

MR. LONGSTRETH: Mr. Chairman, I would believe that it's -- stems out of his assessment of what are achievable potential measures and his expertise on that, which all the utilities are relying on, and which is an important consideration for the Commission to know whether the measures that were excluded are measures

that are -- can be successfully implemented elsewhere.

MS. CLARK: Mr. Chairman.

CHAIRMAN CARTER: Yes, ma'am.

MS. CLARK: I would offer that they are offering -- they had their witnesses to present this testimony, and they have asked other witnesses, other of the utilities' witnesses on the two-year payback. I think this is going beyond the scope of Mr. Rufo's testimony at this point.

MR. GUYTON: If I might just interject.

CHAIRMAN CARTER: Let me -- hold on, I'm thinking. Because I think you can get what you need to get without doing what you're doing. I think you can get there.

Ms. Helton.

I do think that you can get the necessary information you need without doing it. I mean, I'm not second-guessing your abilities as a lawyer by no stretch of the imagination, because I play one on TV, and that's not the real world. But let's do this. Let's just kind of let's -- everybody just kind of hold up for a second. I know it's late for everybody. We have been going for a long day, and we are about to get there. But let's do this. Before I ask Ms. Helton on this objection, let's just kind of take a quick break everybody. Everybody

kind of put your guns back in your holsters and everybody just kind of take five. Look over your notes again, and let's kind of just take five.

Jane, we're going off the record.

(Off the record.)

CHAIRMAN CARTER: We are back on the record.

Ms. Helton.

MS. HELTON: Mr. Chairman, I think you have given Mr. Longstreth quite a bit of latitude to ask questions with respect to the studies that are listed as an exhibit to Mr. Rufo's testimony. However, it seems to me that we have kind of wandered far afield here, and we have gotten off the scope of Mr. Rufo's Direct Prefiled Testimony.

CHAIRMAN CARTER: Okay. We'll sustain the objection. Move on.

BY MR. LONGSTRETH:

Q. Mr. Rufo --

MR. LONGSTRETH: I am just going to try to rephrase and see if that makes any difference? If I --

CHAIRMAN CARTER: Go for it.

MR. LONGSTRETH: Well, how about I -- given the hour we'll see where I get to, and I can concentrate on the best way to do it.

BY MR. LONGSTRETH:

Q. Mr. Rufo, I would like to look at the residential measure table again. And is it -- perhaps we could just look at, for FPL, the low flow showerhead measure. What is the penetration rate for that measure?

A. I'm showing 9.6 percent.

Q. So is it correct that if this measure is not included in some DSM program, there will only be an additional 9.6 percent penetration through natural market forces?

A. That's the estimate from the model, yes, additional to the current saturation.

Q. And, Mr. Rufo, is it your opinion that that level of penetration could be increased if an incentive were applied?

MS. CLARK: Mr. Chairman, again, I think this is going beyond the scope. He's asking for his opinion on this. He's the numbers person. He took what was provided in way of guidelines to come out with this study, and that's what these numbers are.

MR. LONGSTRETH: Mr. Chairman, what I understood that Mr. Rufo did was the achievable analysis for this, meaning that he is the expert that was hired to determine how many of the measures that were technically -- passed the technical potential, how many of those were achievable and to what levels.

And what I'm asking him here is whether or not this measure could be -- higher rates of penetration could be achieved if an incentive were applied, and I would also like to ask him if other nonincentive measures could be used.

CHAIRMAN CARTER: Sometimes I second-guess myself when I give people the time that we are going to begin or end, which usually is at that point in time when things get, as we say in south Georgia, they get a little squirrelly.

Let's do this. I think that in the rephrasing it may not have been exactly where he wanted to go. I'm going to save myself and you some time on this, and we are just going to break and come back tomorrow. And maybe that will give you a chance to kind of go through it and all. Because this witness is -- you know, kind of get your thoughts together. It has been a long day. I mean, everybody has a bad day at Black Rock.

MR. LONGSTRETH: And I appreciate that.

CHAIRMAN CARTER: Not that you had it, but, look, we can kind of -- we can all be a little bit more refreshed. In fact, I'm thinking about fried chicken right now.

COMMISSIONER ARGENZIANO: Mr. Chairman, that sounds like a good idea.

CHAIRMAN CARTER: Well, we're going to go home and eat, and we will come back tomorrow morning at 9:30.

MR. LONGSTRETH: Thank you.

CHAIRMAN CARTER: Okay.

(The hearing adjourned at 6:51 p.m.)

STATE OF FLORIDA)

: CERTIFICATE OF REPORTER

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.

DATED THIS 14th day of August, 2009.

JANE FAUROT, RPR
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