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1	FI OR TDA	BEFORE THE PUBLIC SERVICE COMMISSION
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3	In the Matter of:	
4	PETITION FOR RATE I FLORIDA POWER & LIG	
5		/
6	PETITION FOR APPROV 2016-2018 STORM HAR	
7	BY FLORIDA POWER &	LIGHT COMPANY
8	2016 DEPRECIATION A	
9	DISMANTLEMENT STUDY POWER & LIGHT COMPA	-
10		/
11	PETITION FOR LIMITE TO MODIFY AND CONTI	
12	MECHANISM, BY FLORI	DA POWER &
13 _	LIGHT COMPANY.	VOLUME 11 PAGES 1240 THROUGH 1448/
14	PROCEEDINGS:	HEARING
15	COMMISSIONERS	CHAIRMAN JULIE I. BROWN
16	PARTICIPATING:	COMMISSIONER LISA POLAK EDGAR COMMISSIONER ART GRAHAM COMMISSIONER RONALD A. BRISÉ
17		COMMISSIONER JIMMY PATRONIS
18	DATE:	Wednesday, August 24, 2016
19	TIME:	Commenced at 11:40 a.m. Concluded at 3:45 p.m.
20		_
21	PLACE:	Betty Easley Conference Center Room 148 4075 Esplanade Way
22		Tallahassee, Florida
23	REPORTED BY:	ANDREA KOMARIDIS Court Reporter
24		-
25	APPEARANCES:	(As heretofore noted.)

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1	PROCEEDINGS
2	(Transcript follows in sequence from Volume
3	10.)
4	CONTINUED EXAMINATION
5	BY MS. CHRISTENSEN:
6	Q Okay. Ms. Morley, are you familiar with the
7	concept of parsimony and economic economic
8	ecometric modeling?
9	A Yes.
10	Q Okay. I appreciate that.
11	Essentially, is it a fancy way of saying to
12	keep it simple?
13	A I think it's more than that. It's it's to
14	keep it as simple as you can while still having an
15	accurate forecast.
16	Q Okay. And this is to resist the potential
17	problems associated with what is called an over-
18	specification error when erroneous independent variables
19	are included within a regression model; is that correct?
20	A Yes.
21	Q Okay. Are you familiar with what is referred
22	to as Enogy (phonetic) information criteria and the
23	Bayesian and Schwartz information criteria? And I
24	apologize if I butchered those names.
25	A Yes.
1	

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1 These are diagnostic statistics that Q Okav. 2 balances the explanatory power of the model within the 3 complexity of the model; is that correct? 4 Α Yes. 5 Q Okay. And essentially, each of these 6 variables says that, for each new independent variable that is added to a model, the predictive power of the 7 8 model show -- show improved by an -- a noticeable 9 percentage; is that correct? 10 I would ask you to repeat that. Α 11 Let me give that one another try. 0 12 Okay. Essentially, each of these variables 13 says that, for each new independent variable that is 14 added to a model, the predictive power of the model 15 shows -- show improved by a noticeable percentage; is 16 that correct? 17 Α Yes, you should be getting value out of each 18 variable added to the model. 19 Okay. And these statistics are often used to 0 20 determine the superiority of a chosen model to its alternative; is that correct? 21 22 I'm not sure I would agree with that. Α I think 23 there are several factors that go into that. In 24 addition to that, you want to look at the MA, the 25 R-squared, and also, how well the forecast is doing. (850) 894-0828 Premier Reporting Reported by: Andrea Komaridis

1	Q Okay. But you would agree that that is one of
2	the tools that shows whether or not a particular model
3	is superior to an alternative?
4	A Yes.
5	Q Okay. And is it correct that you did not
6	examine either the Enogy information criteria or the
7	Bayesian-Schwartz information criteria in developing
8	FPL's forecasted models?
9	A We may have looked at it.
10	Q Okay. Is that one of the things that you
11	included as part of your testimony?
12	A No, I did not discuss that detail in my
13	testimony.
14	MS. CHRISTENSEN: I think, Ms. Morley, that is
15	all of the questions that I have for you. So,
16	thank you very much.
17	THE WITNESS: Thank you.
18	CHAIRMAN BROWN: Thank you, OPC.
19	Mr. Moyle?
20	MR. MOYLE: Thank you, Madam Chair.
21	EXAMINATION
22	BY MR. MOYLE:
23	Q Good morning.
24	A Good morning.
25	Q Do you have an understanding as to whether

1 you're testifying as a fact witness or an expert witness 2 in this case? 3 Α You know, I don't. I just support the load 4 forecast. 5 (Laughter.) 6 MS. MONCADA: Madam Chair? 7 CHAIRMAN BROWN: Yes? 8 MS. MONCADA: Your advisers yesterday have 9 spoken to this issue. And this is not an 10 appropriate time for voir dire. If he wanted to do 11 that, he should have followed the order 12 establishing procedure. He did not. And 13 Commissioner Edgar, the pre-hearing officer in this 14 case, has already made a ruling on this. 15 CHAIRMAN BROWN: Mr. Moyle? 16 MR. MOYLE: I didn't say anything about 17 voir-deer. 18 CHAIRMAN BROWN: You didn't. 19 Or voir-dire. MR. MOYLE: 20 CHAIRMAN BROWN: You didn't. 21 I just want to understand if she MR. MOYLE: 22 is testifying -- I'm not sure how to pronounce that 23 exactly -- but I'm not sure if she's testifying as 24 a fact witness or an expert. So, I think I can ask 25 her that question. Like she said, she didn't know.

1 CHAIRMAN BROWN: I allowed that question 2 previously by you and -- from an earlier witness. 3 So, I'll allow the question now as well. 4 MR. MOYLE: Okay. And I think she's answered. 5 She said she didn't know. She didn't know. Please move 6 CHAIRMAN BROWN: 7 on, then. 8 BY MR. MOYLE: 9 0 You -- you do rely on inputs from other third-10 party experts, correct? 11 Α Yes. 12 And that would include IHS Global Insight? Q 13 Α Yes. 14 And Itron? Q 15 Α Yes. 16 Do you know -- is anybody here from IHS Global Q 17 Insight or Itron? Are they witnesses in this case? 18 Α No. 19 You are responsible for forecasting for the 0 20 company; is that right? 21 Α I'm responsible for the load forecast. 22 Load forecast. 0 23 I want to ask you some questions, if I Okay. could, about the -- 616, the exhibit that OPC provided 24 25 to you. Do you still have that in front of you? Premier Reporting

1 Α Yes. 2 So, on Page 2 of 3, at the top of Page 2, you 0 3 say, quote: The updated analysis utilized this 4 July 2015 fuel cost forecast low base, high bans. Do 5 you have familiarity with fuel forecasts? 6 Α Only very generally. I believe Witness 7 Forrest could address those issues. I'll probably ask him -- I'll try to 8 Q Okay. 9 stay -- if you don't know, you just tell me you don't 10 But I assume, with 70 percent or 69 percent of know. 11 natural gas, that you update fuel forecasts regularly; 12 is that fair? Or do you --13 Α T --14 Q Do you know? 15 I -- I don't know the specifics. I think Α 16 Mr. Forrest could -- could help you out. 17 You were asked a lot of questions about Q Okay. 18 the load forecast. I guess that is more -- you have 19 more familiarity with that? 20 Α Yes. 21 So, you reference in this interrogatory Q Okay. 22 a new October 2015 load forecast? Madam Chair, I want to make 23 MS. MONCADA: 24 clear for the record, it was never established that 25 Dr. Morley sponsored the interrogatory answer that

	. –
1	Mr. Moyle is referring to.
2	CHAIRMAN BROWN: Thank you for making that
3	clear for the record.
4	Please proceed.
5	BY MR. MOYLE:
6	Q Did you were you involved or did you let
7	me ask you this: If I just did the calculations right,
8	based on the exhibits, you have the October 2015 load
9	forecast, and you have the PSC entering an order in
10	in January of '16; is that is that right?
11	A I think you're referring to the order in the
12	Okeechobee case?
13	Q Yes, ma'am.
14	A Yes.
15	Q How often do you update load forecast? Don't
16	you file the ten ten-year site plan on April 1?
17	A Yes, we file the ten-year site plan on
18	April 1. In terms of the timing of the load forecast,
19	it's typically once a year in anticipation of the ten-
20	year site plan. So, there is no set date, but it would
21	typically be in the fourth quarter of each year.
22	Q So, when when you reference the new
23	October 2015 forecast, was this what was filed on
24	April 1 in '16?
25	A There is no, there is a slight difference

1	because we updated for the price of electricity because
2	we knew in January we were going to have a mid-course
3	correction. So, we wanted to incorporate that.
4	But otherwise, it's identical to the 2016 ten-
5	year site plan and what we're proposing in this case.
6	Q Do you do you keep up with the I know
7	you have some testimony about normalized weather. And
8	OPC asked you some questions about that. Do you keep
9	up with with the weather
10	A I think
11	Q suggestions or the historical weather
12	that's tracked by NOAA? I mean, what's your source for
13	weather data?
14	A Our vendor for weather data is WSI. They are
15	the leading provider of weather data in the country.
16	They actually get their data from NOAA weather stations.
17	Q Okay. So, I guess NOAA is pretty reliable;
18	isn't that right?
19	A Yes, for weather data.
20	Q Do you know how often NOAA provides weather
21	data with respect to looking and seeing whether a year
22	was abnormally warm or abnormally cool? Is that an
23	annual thing? Do they do they do that on a rolling
24	average? Do you have any information on that?
25	A No, I don't know specifically. I believe they

1 update their 30-year average only once every ten years. 2 Do you know if they update and an- -- if they 0 3 do an annual update with respect to -- sometimes you see 4 in the press, this was the hottest year ever. Do you 5 ever see those kinds of stories in the press? I think you're asking about not updates 6 Α Yes. 7 to normal, but actually looking at actual weather data, 8 which I'm sure they do every day. 9 0 Okay. And do you look at that as part of what 10 you do; look at the weather data as compared to 11 normalized? 12 Α Yes, because it's an input into our models. 13 So, do you have an understanding as to Q Okay. 14 how 2015 compared with respect to other years? Was it 15 the hottest year ever? 16 Oh, abs- -- absolutely. Yes, 2015 was the Α 17 hottest year on -- on -- that we've had in quite some 18 By contrast, 2013, 2014, were guite mild. time. 19 And I assume you also are tracking 2016 as --0 20 do you understand that that's also on track to beat 21 And I say beat -- be hotter than 2015? 2015? 22 Yes, we're definitely tracking the weather in Α 23 2016. I don't -- I don't know that it's on track to 24 beat 2015 at this point. 25 But it's -- it's maybe comparable or pretty 0

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1	close?
2	A I know that that it's probably hotter than
3	normal. And by the same token, we had a very mild
4	winter, much fewer heating-degree days than normal, but
5	I I'm not sure I actually don't believe it's
6	hotter than 2015 at this point.
7	Q Well, there are still some months that need to
8	go into the calculation, right?
9	A That's right.
10	Q Do you track macro trends with respect to the
11	weather?
12	A Could you define what you mean by macro
13	trends?
14	Q There there's been a lot of weather events
15	that have been taking place that, at least, the press
16	says: This is abnormal, unusual, the 30-something
17	inches of rain in Louisiana that surpassed the national
18	average for rain.
19	I'm just wondering if you have a general
20	understanding or you track whether whether as
21	w-h-e-t-h-e-r whether or not there are some leading
22	experts that are suggesting that there are some big
23	weather changes taking place in the last few years?
24	A I'm not a meteorologist. So, I track that
25	just as probably we all do in terms of the news and so
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1	forth.
2	Q But you have a little more reason to track it
3	because you put together the load forecast than, say,
4	somebody like me, right?
5	A That's probably true.
6	(Laughter.)
7	Q And and given given that, do you have an
8	understanding as to whether or not there seems to be
9	some suggestion that some macro weather trends are
10	taking place?
11	A I know that there is coverage in the media on
12	that. I don't know how to what extent that is
13	because exceptional events make news and no one would
14	report, hey, we had a real average weather day, so
15	but I would agree that there has been news coverage on
16	that.
17	Q I'm not sure how the news-coverage evidence
18	would be weighed, but I appreciate your your response
19	to that.
20	If that is happening, that would argue maybe
21	for reconsideration of the period of time used to,
22	quote, unquote, normalize weather. You would agree with
23	that, wouldn't you?
24	A No, I don't. In fact, if anything, I think
25	that would support using 20 years because, if we are
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getting more volatile, using a shorter period of time, such as ten years, would create even a -- an unstable definition of weather. I think, if we are getting more volatile, that, if anything, would support using the 20 years.

6 0 I don't follow that logic in this regard. If 7 you assume, for the purposes of our conversation, that 8 abnormal weather is taking place, and it's getting 9 hotter and hotter and hotter, I would think, as the 10 person forecasting for an electric company, you would 11 want to take that into account and make sure you have 12 enough assets available to serve firm load, which --13 rather be safe than sorry. If that trend is taking 14 place, you would use a shorter period of time as 15 compared to a longer period of time.

A Well, I agree, we definitely want to make sure we have enough assets in place to serve our customers. It think using a shorter period of weather, such as ten years, would actually create unintended consequences if we were to use a ten-year period. And if I could explain for a moment --

Q Sure.
A The ten-year period of weather is very
volatile to year to year. If we tracked, like, the
cooling load as your cooling-degree days on a ten-year

1	basis and took a rolling average just on ten years, it
2	would go up and down every year.
3	That meant every year, when we're updating our
4	load forecast and we're we're using that to plan the
5	system, the future, we could get a lot of volatility in
6	our load forecast for, let's say, the same year, what
7	does 2019 look like.
8	If we are looking at a specific year and using
9	a short-term period of weather that's only going out 10
10	years, our view of that year could change year to year
11	just on the way we're forecasting normal weather.
12	So, to me, if we are getting more volatile
13	with our weather, it would argue for using the 20-year
14	period, not the ten.
15	Q Are you are you aware that some utilities
16	use a ten-year period for weather normalization?
17	A Yes, I'm aware that some utilities outside of
18	Florida do. My understanding, though, even industry-
19	wide, that it's still the minority of utilities.
20	Q Isn't it really the decision about how many
21	years to use with respect to your normal weather your
22	weather-normalization calculation, a matter of judgment?
23	A I don't know if it's a matter of judgment. I
24	would say, to a certain extent, it's a matter of policy
25	because it would have implications for a lot of areas;
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1 not just setting rates in this case. 2 I would agree it's policy. I don't know if 3 the word "judgment" would apply. 4 0 Well, you would have helped me if you had 5 given me a yes or no on that. 6 Who should set that policy? Should it be this Commission or should it be utilities? 7 I mean, policy, 8 as I understand it, is set by this Commission. Do you 9 have that understanding? 10 Α Yes. 11 Okay. And do you know, do they have a rule 0 12 that says how many years are used for weather 13 normalization? 14 They don't have a rule; however, to my Α 15 knowledge, they have never approved a period shorter 16 than 20 years. 17 0 Okay. Do you have an understanding as to 18 whether rules are the proper place under Florida 19 Statutes for agencies to set policy? 20 Α I don't have that knowledge. 21 Q When you do your forecasting, you also do 22 it -- you do it weather normalized and you do it with 23 the actual results as well, correct? 24 I'm going to say yes, but I'm going to Α 25 explain --

Q	Please.
А	if that might help your knowledge. When we
develop ou	ır model it's our net-energy-for-load
model v	ve look at history, we look at the actual
values for	r net energy for load historically. And of
course, we	e look at the actual weather. That's that's
our model	calibration.
	Now, when we go forward for weather, we use
the assump	otion of normal weather.
Q	Okay. So, a couple of just general questions
about you	business. And you've been in it for a long
time, corr	rect?
А	Oh, yeah.
Q	You would agree that you have more certainty
with respe	ect to forecasts that are forecasting an event
closer in	time as compared to an event further out in
time, all	other things being equal?
А	Yes. I think that's one of the reasons why
our propos	sed sales forecast, in this case, is superior
to OPC's i	recommendation that we revert back to the 2015
ten-year s	site plan forecast.
Q	Okay. I don't need the OPC your lawyers
will have	a chance to get on the OPC forecast. I just
wanted to	get you to agree that it's easier to predict

something closer in time as compared to further out.

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1 So, you can predict the weather tomorrow with 2 more certainty than you can predict the weather in 3 Tallahassee two weeks from now, correct? 4 CHAIRMAN BROWN: Asked and answered. 5 MR. MOYLE: Okay. 6 BY MR. MOYLE: 7 As a -- as a person responsible for Q 8 forecasting for Florida Power & Light, if -- if you were 9 asked to provide a forecast, a load forecast, and all 10 the things that are in your testimony for the year 2025, 11 could you do that? 12 Α Yes. 13 You could. Would you be comfortable in Q 14 your -- in your forecast for 2025? 15 What do you mean by "comfortable"? Α 16 Would you be comfortable presenting it to this Q 17 Commission and asking this Commission to make a decision 18 based on a forecast of -- of the components that you 19 talk about in your testimony for the year 2025? 20 Α I think I probably have requested or presented 21 to the Commission longer-term forecasts. So, yes. 22 What about 2050? Could you -- could 0 Okay. 23 you present a forecast with all the components in your testimony here, professionally in your job, for 2050 and 24 25 ask the Commission to make a decision on it?

1 Madam Chair, I'm having some MS. MONCADA: 2 trouble seeing the relevancy of 2050 in the context 3 of this proceeding. 4 CHAIRMAN BROWN: Mr. Moyle, your 5 hypothetical --MR. MOYLE: 6 I'll bring -- I'll bring it 7 together, if you give me a little latitude. 8 CHAIRMAN BROWN: As you said, a landing? 9 (Laughter.) 10 MR. MOYLE: Yes. 11 BY MR. MOYLE: 12 Q Could you do it for 2050? 13 I think you asked two parts to that. Could we Α 14 present a forecast -- and I think in our nuclear 15 clauses, we have actually been required to present very 16 long-term forecasts and to support them. So, the answer 17 is yes. 18 You also asked if I could present them in all 19 this detail here. Of course, when we go out very far to 20 2050, at a certain point in time, there is no -- the 21 forecast for an individual -- independent variables such 22 as population and economy and so forth need to be 23 trended because they're -- they're going out so far. 24 MR. MOYLE: Right. I didn't ask that question 25 very well.

1	And Madam Chair, if I could maybe
2	CHAIRMAN BROWN: Rephrase it.
3	MR. MOYLE: rephrase it.
4	BY MR. MOYLE:
5	Q If you were asked to say, listen, we're
6	we're going to come in and we're going to ask for rates
7	in the year 2050 from this Commission, can you prepare
8	testimony that would support us asking for rates in
9	in 2050? What would what would the answer to that
10	question be?
11	A The answer would be I'm not sure why we're
12	looking at a rate case in 2050. I
13	CHAIRMAN BROWN: Fair enough.
14	Q Okay. Why are you looking at one in 2018?
15	A Why are we looking at 2018, in this case?
16	Q Well, let me ask it this way: Doesn't the
17	degree of uncertainty trend out so that you have more
18	uncertainty the further out in time you go so that you
19	have more comfort with your predictions for the test
20	year 2017, as compared to 2018, all other things being
21	equal?
22	A Yes. Of course, given that we have such a
23	good and low weather-normalized variance this year, that
24	does create additional confidence in our forecast going
25	out longer term.

1 But there are a whole bunch of variables in Q 2 the forecast, correct? 3 Α Yes. And tell the -- tell the -- tell the 4 0 5 Commission what role variables play in your forecast. 6 I'm -- go ahead and answer that question, if you would. 7 If you were thinking of rewording it, that Α 8 might help. 9 0 What -- what would -- what would be a way that 10 I could reword it that you would be most comfortable 11 with? 12 (Laughter.) 13 CHAIRMAN BROWN: I don't think that's the way 14 it works. 15 THE WITNESS: I'll say --16 BY MR. MOYLE: 17 Q All right. Here, we'll come at it this way: 18 I assume you don't insert in your model variables that 19 are insignificant or meaningless; is that fair? 20 Α Yes. 21 Q You only run sensitivities based on variables 22 that potentially could affect the results. 23 Α Yes. 24 And your job is to determine all of the 0 Okay. 25 variables that should be put into a model and run for

1 sensitivity analysis, correct? That's part of your job? 2 Yes, and more importantly, the variables that Α 3 go into the model that come up with our proposed sales 4 forecast. 5 Q You used a variable called UKH, right? 6 Α Yep. 7 And what does that stand for? Q 8 Α It stands for unknown usage premise. And if 9 you want, I can get into an explanation of that. 10 0 Please. 11 Okay. FPL has always had a certain number of Α 12 what's called are unknown usage accounts. And these are 13 premises where someone moved into a house or apartment 14 and they forgot to tell FPL they were moving in. So, 15 they never opened up an account, but the meter is 16 running and consuming electricity. 17 With our smart-meter technology, around 2013, 18 2014, we had the ability to disconnect those premises 19 So, we began a program under our customer remotely. service business unit around 2013, 2014 where we -- we 20 21 notified all of these premises that, by the way, you are 22 consuming electricity. If you don't, you know, call up 23 and open an account, we will disconnect you within a 24 certain number of days. I don't know if it was a month 25 or whatever.

1 And when we did that, a lot of those premises 2 decided to open up electric accounts. And we saw a bump 3 in the number of our customers around 2014. So, when we 4 come up with our customer model, we look at not only 5 population, but the impact of that program. 6 Q How long, typically, does it take for this 7 process you described to take place? 8 Α When you say the process, are you talking 9 about --10 Just -- it sounds like somebody is using 0 11 electricity. They are not a customer. They use the 12 electricity for a while, and then you contact them and 13 say, hey, you're using our electricity and you're not a 14 We need you to be a customer. And they say, customer. 15 well, yes, I will or I guess they say, no thank you. How -- how -- is -- is that fair? 16 17 Α I think I want to make a -- clarify that is we 18 have always had a certain number of unknown usage 19 But in 2013, '14, we had a specific program accounts. 20 where we sent out letters to these premises. 21 So, when you said how long does it last, I was 22 a little confused. This was really kind of a program 23 specific to that time period. 24 0 Okay. Well, when you send out letters, I mean 25 that -- that would take five to ten days, right? You (850) 894-0828 Premier Reporting

1 send a letter out -- you're sending it by U.S. Mail? 2 Α I assume so. 3 0 And then somebody would get it; give them some 4 time to respond back. I'm just trying to understand how 5 long someone gets electricity for which they are not 6 paying anything? 7 Well, in some cases, these premises had been Α 8 using electricity for some time. It was with the use of 9 this advanced metering technology that we were able to 10 do this program. 11 So, I was always under the impression that 0 12 when, back in the days when I was in Miami in FPL's 13 service territory, if you had an apartment, I had to 14 call FPL up and get them to turn the electricity on. 15 I didn't have an understanding that I could 16 move in and still have electricity and -- and it would 17 take a couple of weeks before they called me up and 18 said, hey, would you open an account? 19 Well, is that a good thing that you didn't Α 20 have that knowledge? 21 (Laughter.) 22 Well, I don't know. Q 23 How many college campuses do you have in your 24 service territory? 25 Α I -- I'm not sure. Ms. Santos would have been

a good witness to address this. Perhaps Witness Miranda
was -- would be when he comes back. I can tell you what
I know is that we have always had a certain number of
unknown usage accounts.

In the past, if the usage went on over a certain period of time -- and unfortunately, I can't give you a specific number -- or the usage was above a particular level, they would actually go out and send the truck and disconnect it, so forth. That's no longer necessary with the smart-grid technology.

Q Okay. And -- and also, given the answer to your question about variables, I assume it's not an insignificant amount if you're using it as a variable for your model, the number of unknown UKUs -- unknown -unknown customers who are using your electricity without paying. I assume that's a significant number.

A Yes. And if I can give you a quantification is -- with the UKU, I believe in 2014, our customer growth jumped up to 1.8 percent. Last year, it's 1.4 percent. That difference is almost entirely due to the UKU program.

Q Okay. You would agree it's not very efficient to provide people electricity for which they are not paying money, all other things being equal as -- in terms of running a business?

1 MS. MONCADA: Madam Chair, she's not here to 2 talk about efficiency. 3 CHAIRMAN BROWN: Mr. Moyle, she's not. 4 MR. MOYLE: Efficiency is a big theme in this 5 case about why you should --6 CHAIRMAN BROWN: This is a load-forecast 7 witness --8 MR. MOYLE: -- a rider, 50-basis-point rider. 9 MS. MONCADA: I agree that efficiency is a 10 theme in this case. Dr. Morley is here to talk 11 about the load forecast. 12 I'll withdraw the question. MR. MOYLE: 13 CHAIRMAN BROWN: Thank you. Please proceed. 14 MR. MOYLE: Thank you. 15 BY MR. MOYLE: 16 I think you clarified this, but can you make 0 17 sure I have this right. When -- when you count your 18 customers who opt to open accounts with you and be 19 customers, you're counting them as -- as one customer 20 per account, so that -- let's say I have a family of 21 five people and I open an account with you. You count 22 that as one, not five, correct? 23 Α Correct. 24 But then do you have a way where you also 0 25 figure out how many people ultimately you serve? Do you

1 track census data or some other way come out and say, 2 well, we have this many accounts/customers and we serve 3 this many people? 4 Α Yes, we have. It's challenging in our case 5 because of the 35 counties we serve. In some cases, we 6 serve actually a very small percentage of the 7 population. 8 But we have looked at that from time to time. 9 0 Okay. And -- and do you ever look at census 10 Doesn't census data track information kind of data? 11 granularly? 12 Α We've looked at the census data for the state 13 of Florida, which we are very representative of since 14 we're half the -- half the state. They also have county 15 I don't know that we've really delved into that data. 16 that much. 17 And are you familiar with Florida? 0 Okay. 18 Have you spent time traveling around North Florida, and 19 you think you have a fairly good feel for the state? 20 Α I think so. 21 Okay. So, you would agree that there are Q 22 areas in North Florida -- Dixie, Dixie County, maybe --23 maybe Baker County, Suwannee County -- that aren't very 24 populated? 25 I would clarify those are not Α I would agree.

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1 the counties we serve. 2 Q Right, but -- but -- but those are counties in 3 Florida, right? 4 Α Yes, they are. 5 Q And -- and those counties -- aren't they characterized by a lot of -- I say, a lot -- but the 6 7 prison -- state prisons are a key employer in those 8 counties? 9 Α You know, I have not analyzed that issue. 10 How about rural? Do you have a sense that 0 11 they're rural? 12 Α Yes. 13 MS. MONCADA: Mr. Moyle, she's already 14 testified those counties were not in the FPL 15 service territory. 16 CHAIRMAN BROWN: Mr. Moyle, I'm giving you 17 some latitude on this line of questioning. Could 18 you move along? 19 Well, I'll tie it to where MR. MOYLE: Sure. 20 I think it's relevant. 21 BY MR. MOYLE: 22 You -- when you're doing your analysis and 0 23 your forecasting, you don't use data on a county-by-24 county basis, do you? 25 Α No, we don't. And we've had --

1 Q That -- that's okay. Just you use it on a 2 statewide basis, correct? 3 Α We -- we do, because --4 0 And --5 Α -- we are half the state, and we mirror the 6 state. 7 I'm sorry. I interrupted you, you said that Q 8 yes, you do use it on the state because you're half the 9 state? 10 And we mirror the state and our growth tends Α 11 to match that of the state and, in some cases, the 12 county data is not as timely as the statewide data. 13 So, would you tell me where in your service Q 14 territory you think you mirror Suwannee County and Dixie 15 County? 16 Α Perhaps in Okeechobee or Glades. 17 Q And out of your service area, do you know what 18 percent of your customers live in Okeechobee or Glades? 19 It's a very small number, I would think. 20 Α Yes. 21 And don't the majority of your customers live Q 22 in large, metropolitan areas? 23 Α Yes, I would -- probably the biggest group of 24 our customers live in Miami-Dade, Broward, and Palm 25 Beach County.

Q And have you looked at an analysis with respect to county data providing you with more-detailed information? Does county data -- county data exists, right?

A County data exists. It tends not to be as timely as the statewide data. And also for us, it tends to be not the full picture because, as I said, of the 35 counties we serve, in many cases, we serve, like, less than half the county.

Q Okay. So -- so, I would assume that best forecasting practices, you would -- if you say, well, we're going to use the state data, then you would also use maybe the county data to confirm or reconcile? Do you use the county data in any way, shape, or form, or just not use it?

16 A No, we have definitely looked and this has 17 come up regarding population. We have definitely looked 18 at the trends in how the population projections look at 19 the state level versus the county level. And the fact 20 is the counties we served really tend to match the 21 state.

Q And that was an inartful question because I --I didn't ask it specifically enough to say, have you used county data in the analysis and the forecast that you're presenting to this Commission in this case. If

1 yo	u could, answer it yes or no.	
2	A I would say no, because, having analyzed the	
3 is	sue, we believe we are doing the appropriate thing to	
4 lo	ok at the statewide data.	
5	Q Page 6, Line 12, you make the following	
6 st	atement. And I believe Ms. Christensen may have drawn	
7 yo	ur attention to this. But you say on Line 11, quote:	
8 FP	L's forecast of customers, sales, and peak demands	
9 re	ly on a consistent set of assumptions regarding	
10 we	ather, the economy, and other critical drivers,	
11 co	rrect?	
12	A Yes.	
13	Q Okay. The assumptions change over time,	
14 co	rrect?	
15	A Yes. When we update the load forecast, it's a	
16 ne	w set of assumptions.	
17	Q Okay. So, when you say consistent set, what	
18 ar	e you what are you talking about?	
19	A It means that, when we are forecasting, let's	
20 sa	y, the long-term peak demand versus the sales	
21 fo	recast, we are using the same economic forecasts, the	
22 sa	me economic forecasting vendor, Global Insight. We're	
23 us	ing the same customer and population forecast. And	
24 we	're using the same definition of normal weather.	
25	And we also have the same adjustments to the	
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1 forecast, whether it's the sales forecast or the long-2 term peak-demand forecast. We're adjusting for new 3 plug-in electric hybrid vehicles, our economic 4 development terrace, the effects of rooftop solar, and 5 so forth. That's what that means. 6 0 So, when has the set of assumptions that you 7 reference here -- when was the last time it's changed? 8 Α I think it evolves year to year. For example, 9 I think with the 2015 ten-year site plan forecast, we 10 incorporate the impact of rooftop solar for the first 11 time. 12 On the other hand, some of these -- some of 13 the factors such as the impact of new wholesale 14 contracts -- that's -- that's been an adjustment we've 15 used for a number of years. So, that's something we 16 would look at each time we update the forecast. 17 Q All right. You brought up wholesale 18 That's part of what you look at, correct? contracts. 19 Α Yes. 20 Q And -- and when you look at wholesale 21 contracts -- when you're planning, do you say, well, we 22 have to serve these wholesale contracts? And will you 23 plan for them, just like they are a retail customer or 24 an industrial customer like one of my clients? 25 We do if it's what we call a wholesale-Α

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1 requirements contract. And that's a contract that 2 specifies that it has an equivalent reliability, if you 3 will, relative to our native load customers. 4 0 And in your testimony, you reference a number 5 of wholesale obligations. Are all of the contracts that 6 you reference in your testimony requirements contracts? 7 Or are some of them -- I guess, the opposite or maybe 8 another variation on the contract is that you have a 9 contractual provision that says, hey, if we really need 10 the electricity, we can pull it back from you; is that 11 right? 12 Α Our forecast includes only wholesale-13 requirements customers that have an -- like, a level of 14 service equivalent to native load. 15 Q Okay. So --16 Α Because that's what we have to build for. 17 Q So, everything in your testimony, then, would 18 be that, people that -- that have the requirements 19 contracts; is that correct? 20 Α Yes. 21 Okay. And you do have some, I guess, Q 22 customers that are not requirements contracts; is that 23 right? 24 Α Yes. 25 0 Okay. But you didn't -- you didn't put those

A No, because they are not --

4 **Q** Okay.

form?

1

2

3

6

16

17

19

5 A -- requirements customers.

Q Thank you.

7 You make a point on Page 9, Line 10 that --8 and you made this point about the sales forecast being 9 used for all business purposes; is that right? 10 Α Yes. 11 Has that ever not been the case? 0 12 Α Once a forecast is approved as the official 13 load forecast, that's used henceforth for everything. 14 Q Okay. So, then you would say, yes, that has 15 always been the case?

A Yes, until a new load forecast is approved.

Q There was never a point in time where

18 different forecasts were used for different matters?

A Not to my knowledge.

20 Q Page 10, Line 16. So, if I understand this, 21 you're saying that the customers are expected to grow at

a compound rate of 1.5 percent per year, right?

23 A Yes.

24 Q And then that the retail-delivered sales --25 you're projecting for that same time period that they

1	will grow at a .7-percent rate, down on Line 21?
2	A Yes. And I believe, with the adjustments in
3	Witness Ousdahl's rebuttal, that would actually be
4	slightly higher. I think it would be 0.8, but yes, I
5	see that.
6	Q Okay. Well, you have do you need to
7	correct your testimony there?
8	A No.
9	Q Okay.
10	MS. MONCADA: And Madam Chair, I would note
11	that, during the introduction of Dr. Morley's
12	testimony, we did say her testimony was correct,
13	subject to the adjustments in KO-20.
14	CHAIRMAN BROWN: Okay.
15	BY MR. MOYLE:
16	Q All right. So, for the purposes of my
17	question, I want to ask about the ratio with respect to
18	the annual rate. The customer-growth rate is a 1.5
19	percent; yet, your forecasted sales are half of that.
20	Is that is that a trend that is consistent
21	in based on your experience where your sales are
22	forecast to be approximately half of the number of
23	customers that you serve?
24	A Yes, it's consistent with the trend we've seen
25	for the last few years where we have actually seen a
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1 decline in weather-normalized use per customer. 2 Do you know why that -- why that is? Q 3 Α Yeah, I think there is a multitude of -- of 4 reasons including improved energy efficiency, both codes 5 and standards and customer behavior, having more 6 conservation of -- more awareness of turning off the 7 lights, if you will, when you leave the room. 8 Q Why -- why do you look at economic conditions? 9 Α We look at economic conditions because --10 depending on the disposable income customers have or 11 their -- so forth, they -- that's what they need; that 12 they need the income to spend money on all goods and 13 services, including electricity. 14 And I've asked this question of some 0 Okay. 15 other witnesses, but you're -- you're aware that other witnesses have said that industrial customers provide 16 17 good jobs in the state, generally? 18 Α Yes. 19 You state on -- on Page 20, Lines 5 that, 0 20 between 2007 and 2010, Florida lost more than 900,000 21 jobs; is that right? 22 Α That's right. 23 Did you get that from the labor statistics Q 24 bureau? 25 Α Yes.

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1 And by April 2015, that's just when Florida Q 2 got back to being even and has recovered the 900,000 3 jobs; is that right, on Page 20, Line 11? 4 Α Yes, that's right. 5 Q So, from -- from April 2015 to today, how many 6 new jobs has Florida created? 7 It's adding jobs at about a 3-percent growth Α 8 I can't give you the exact jobs added, but it's rate. 9 about 3-percent growth in the jobs this year. 10 So, 3 percent of what number? 0 11 I can look it up, if you want. Α 12 Q Sure. 13 Α (Examining document.) As of December of last year, Florida was adding about 200 and -- 2,000 --14 15 300,000 jobs on a year-over-year basis -- basis each 16 month. 17 Q So, what would be the -- what would I -- what 18 would -- do you have the annual number? 19 I have the annual growth. Do you want, like, Α 20 the average? 21 No, just give me -- give me the monthly Q 22 number. 23 Α In December 2015, the level of employment in 24 Florida was eight million -- I would say 8.1 million. 25 That was an increase of about 233,000 over the prior (850) 894-0828 Reported by: Andrea Komaridis Premier Reporting

1	December.
2	Q 200,000 increase?
3	
	A Yes.
4	Q Okay.
5	A Actually, 233,000.
6	Q So, how would you calculate how many how
7	many jobs Florida has added since April of 2015?
8	A I would since this is the most-recent
9	number I have here, I would look at December of 2015 and
10	subtract that April number.
11	Q And what would you get?
12	A (Examining document.) Florida has added about
13	1.1 million jobs since the low point of employment,
14	which was reached around 2010.
15	Q Okay. So, my question was: Since April of
16	2015, how many jobs has it added?
17	A Oh, I apologize.
18	(Examining document.)
19	CHAIRMAN BROWN: You getting it, Dr. Morley?
20	THE WITNESS: I'm trying.
21	In the last eight months of 2015, Florida
22	added about 160,000 jobs. That does not count the
23	additional jobs added this year, since I don't have
24	ready access to those numbers.
25	///

1 BY MR. MOYLE:

2	Q Based on forecasting, can you make an
3	assumption for I assume you have to make assumptions
4	based on on things, right, on how many jobs would be
5	added on a monthly basis as part of your load
6	forecasting?

7 MS. MONCADA: Madam Chair, she's been doing 8 math for quite a few minutes, now. Dr. Morley has 9 answered hundreds of discovery questions in the 10 last few months. And this seems like material that 11 could have been asked in discovery, as opposed to 12 taking the time now, during cross examination. 13 CHAIRMAN BROWN: A valid point. 14 But I'm not sure that an objection MR. MOYLE: 15 was stated that's recognizable under Florida law. 16 Said, well, you could have asked her in deposition, 17 but -- but I mean, it's her testimony. 18 I'll tell you what, let me try to -- try to 19 move along --20 CHAIRMAN BROWN: That --21 MR. MOYLE: -- on that, but --22 CHAIRMAN BROWN: Thank you. 23 BY MR. MOYLE: 24 Another line in your testimony, you say 0 25 that -- and I'll move along in terms of not asking that

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1 question -- the jobs are important. You say there is a 2 concern about Florida has concentrated on lower-paying 3 industry jobs; is that right? 4 Α Yes, I do. 5 Q Okay. And what's the basis of that statement? 6 Α It's based on the fact that when we look at 7 the employment growth by sector, much of the growth is incurring in retail and hospitality, which tend to pay 8 9 below-average wages. 10 Have you tried to track that with any degree 0 11 of specificity, like the average wage in those 12 industries? 13 Α No. 14 And for your business, for load forecasting, Q 15 does that make a difference whether jobs are higher-16 paying or lower-paying? Do people -- higher-paid use more electricity generally than lower-paid? Why is that 17 18 something that you consider, if you do? 19 I think it's -- it's a factor in the overall Α 20 health of the Florida economy. And that's why it's 21 noted here. 22 And -- and on Page 21, I guess you are 0 Okay. 23 stating there some projections about what you think the 24 number of jobs will grow at; is that right? 25 That's Global Insight's forecast of jobs. Α

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1 Q I'm sorry. 2 It's -- it's the forecast from Global Insight. Α 3 Q Okav. Do you -- do you rely on that? 4 Α Yes. 5 Q Okay. And is this for Florida jobs? 6 Α Yes. 7 So, for 2016, it's a 2-percent Q Okay. 8 number -- I'm sorry -- 2.6 percent? 9 Α Yes. 10 And then on Page 21, you're asked about 0 Okay. 11 a forecast of deceleration in employment. What's 12 deceleration in employment? 13 MS. MONCADA: I object. That's not precisely 14 the answer that was posed on Page 21. 15 CHAIRMAN BROWN: Mr. Moyle? 16 MR. MOYLE: Well, I'll rephrase. 17 BY MR. MOYLE: 18 Q Do you -- you use the term "deceleration" in 19 employment -- you answered that question, correct? 20 Α Yes, I do. 21 What is your understanding of deceleration in Q 22 employment? 23 Α It's a deceleration in employment growth. And 24 that -- what that means is that, while we are going 25 continue to add jobs in Florida, our projections from (850) 894-0828 Reported by: Andrea Komaridis Premier Reporting

1 Global Insight indicate that the rate of job growth is 2 going to slow. And in fact, we're already seeing some 3 evidence of that. 4 0 Okay. And so, to -- to bring this to your 5 forecast, that means you won't need as much energy as, 6 say, if the economy were going gangbusters; is that 7 fair? 8 I'm not sure what you mean by, you won't need Α 9 energy. 10 Well, I'm sorry. An assets to serve -- if 0 11 you're -- if you're planning -- if you're planning FPL's 12 system and the economy is going gangbusters, you 13 probably need more generating assets or other assets as 14 compared to if the economy is slowing; is that fair? 15 А Answering in terms of the load forecast, the 16 higher the economic growth, the higher the growth in the peak demand and sales tend to be, holding all else 17 18 equal. 19 Were you involved in any of the Okay. 0 20 decisions or discussions related to the peaker projects 21 in this case? 22 Α No. 23 Your forecast -- fuel prices are a big Q 24 variable in your forecast, correct? 25 I think, more specifically, it's -- we have Α

1 two terms for the price of electricity. And fuel 2 projections would be an input into that. 3 Q Okay. So, on Page 22, Line 19, your 4 electricity projections are based on the fuel projection 5 developed in 2016; is that right? 6 Α Yes. 7 Okay. Are there more-current fuel forecasts Q 8 than January of 2016? 9 Α I believe they are in the process of being 10 I think Witness Forrest could probably developed. 11 address that. 12 Q Okay. Page 38, Line 15, you have testimony 13 about forecasts being billed on a revenue-class basis, 14 correct? 15 Did you say bills? Α I'm sorry. 16 I'm sorry. As part of your load forecasting, Q 17 do you look and try to figure out, well, how much is 18 residential going to grow by, how much is commercial 19 going to grow by, how much is industrial maybe going to 20 change by -- that's a better -- better term; is that 21 right? 22 Α Yes. 23 So, you take all -- you look at those Q Okay. 24 rate classes and then put them together, and then come 25 up with your overall projected growth rate.

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1 Α No, they are not rate -- they are not rate 2 classes; they are revenue classes. And our forecasting 3 methodology relies on our net-energy-for-load model, so that, we do have models for the individual revenue 4 5 classes. But those are reconciled to the sales forecast 6 implied by the net-energy-for-load model because that's 7 a much more accurate model. So, that's what we use. We don't -- no, we don't just add up --8 9 0 Okay. So, Page 38, Line 15, you use the 10 phrase "industrial revenue class," correct? 11 Α Yes. 12 Did you look at the industrial revenue class Q 13 and make some projections as to what the future looked 14 like for them? 15 We have forecasts for all the revenue Α Yes. 16 classes including industrial. 17 Q Okay. What did you -- what's your forecast 18 for industrial? 19 I'm going to refer to my notes for a moment. Α 20 0 Go ahead. 21 MS. MONCADA: And I would like a clarification 22 on the question. You're pointing to Page 38. So, 23 are you asking her for the forecast of billed 24 sales? 25 CHAIRMAN BROWN: Mr. Moyle, is that what

1 you're asking? Well, maybe -- maybe I'll ask an 2 MR. MOYLE: 3 open-ended question and say: What did you do to 4 forecast the future for my clients, the industrial 5 class. 6 THE WITNESS: Do you want me to answer that 7 question --8 Yes, please. CHAIRMAN BROWN: 9 THE WITNESS: -- or -- okay. 10 We have a forecast for the industrial revenue 11 class that's based on the sum of three separate 12 components. We have a forecast for what we call 13 small industrial customers. And they actually 14 account for most industrial customers. And they 15 tend to be, for the most part, temporary construction accounts. 16 They are not, like, big 17 manufacturing plants. 18 Then we have a model for what we call medium 19 industrial customers. Those also include a lot of 20 temporary construction accounts, municipal water 21 plants and so forth. 22 And then finally, we have a forecast for what 23 we call large industrials. And those are the 24 really, truly largest industrial customers. So, we 25 have a forecast for industrial that's based on the

1 sum of those three components. 2 BY MR. MOYLE: 3 0 Okay. What did your -- what did your forecast 4 show with respect to large industrial customers? 5 Α The number of large industrial customers has been declining on a long-term basis, probably for 15 6 7 years or more. So, we are showing, like, a continued --8 that that's going to continue. 9 I should clarify that when we look at large 10 industrial -- and I mentioned they were declining over 11 time in numbers -- some of that may be because, as those 12 customers do certain conservation measures, they may be 13 reclassified as medium industrial customers. 14 Do you know that or you just -- are you just Q 15 speculating? 16 No, I know that. Α 17 Q Okay. So, your forecast is forecasting a 18 continued decline in the number of industrial customers, 19 is that -- of large -- I'm sorry -- large industrial 20 customers; is that right? 21 Α Yeah, I -- I believe we have about 200 large 22 industrial customers. And I believe that's forecasted 23 to be not increased. 24 Do you track changes in large industrial 0 25 customers that may occur over a period of, say, six or

1 seven months? 2 We -- we track the number of customers by the Α 3 categories I mentioned, if that's what you mean. 4 0 Yeah, there -- I'll represent to you there is 5 a document in evidence that shows over a seven-month 6 period -- I think it ends in February of '16 -- that 7 there were a number of industrial customers that 8 declined by -- by four. Do you track that kind of 9 information? 10 And I believe I may have sponsored that Α Yes. 11 discovery request. And as I said, that's been the long-12 term trend in large industrial customers for 15 years or 13 more. 14 And again, in some cases, it may be customers 15 who are not going away, but are performing certain 16 conservation measures and are being reclassified as 17 medium industrial customers. 18 So, with respect to the overall economic Q 19 growth, you would say it's not particularly positive 20 for -- for industrial, based on your forecast of the continued decline in the number of customers in your 21 22 service territory, large industrial customers; is that 23 right? 24 No, I wouldn't agree with that because you Α 25 said for industrial as a whole. And we are forecasting

1 increases in the number of industrial customers. And as 2 I said, the fact that the number of large industrial 3 customers -- which is really a specific subset of 4 industrial customers, really the largest -- the fact 5 that they are declining is not a new phenomenon. 6 0 I thought I said "large" in my question. 7 I think you said large, and then you said Α 8 industrial, but I could remember wrong. 9 0 Large industrial. What's a large industrial 10 customers in your classification? 11 Α A large industrial customers -- and we, 12 frankly, only have about 200 of them -- is a customer 13 who is involved in a manufacturing or processing 14 activity and has a -- is what we call a large-demand 15 They would have a load at a single delivery customer. 16 point, at a single account of more than 500 kW. 17 That's why I say, as I said, we see migration 18 sometimes where these types of customers perform certain 19 conservation measures, and they would be reclassified as 20 medium. 21 Q Right. And in that interrogatory you 22 sponsored, that reflected a loss in the number of large 23 industrial customers, correct? 24 Yes, that's my recollection. Α 25 Have you done any analysis -- when you do your 0

1	analysis, do you try to determine how your rate
2	proposed rate increases will impact certain classes of
3	customers?
4	A No, not directly.
5	Q So, if I told you that FPL was proposing an
6	83-percent increase for large industrials, would you
7	have a sense as to how that might impact the industrials
8	in terms of whether that might result in more of them,
9	or less of them, all other things being equal?
10	A No, I don't.
11	MR. MOYLE: I think I'm just about done, Madam
12	Chair.
13	BY MR. MOYLE:
14	Q On Page 25, Line 14
15	A Yes.
16	Q you you say, approved wholesale
17	contracts and the sales forecasts. I was unclear what
18	you meant by "approved wholesale contracts." Could you
19	tell me what you mean by "approved wholesale contracts"?
20	A It simply means we have a it's a it's a
21	signed contract where we have committed to serve their
22	load and, therefore, they are now incorporated into the
23	load forecast.
24	I think, truthfully, it's probably repetitive
25	with the executed.

1 So, it's not approved by this Commission? Q 2 Α I'm not an expert on those contracts. 3 Perhaps, Witness Deaton could help. I think in -- I'm 4 not sure they are always approved by this Commission or 5 they are approved by FERC. I don't know. But I know that we only include, like, signed 6 7 and executed contracts into our load forecast. 8 So, when you said approved here, who were you Q 9 talking about approving it? I think just approved between the two parties. 10 Α 11 Thank you. MR. MOYLE: Okay. That's all I 12 have. 13 CHAIRMAN BROWN: Okay. Thank you. 14 We will recess for lunch and we'll be back 15 here at 1:30. Have a good lunch. 16 (Brief recess from 12:41 p.m. to 1:35 p.m.) 17 CHAIRMAN BROWN: We are reconvening this 18 hearing. The time is about 1:35. 19 We stopped at -- Mr. Moyle is done conducting 20 his cross. And now, we are at the hospitals. 21 Madam Chair, Mr. Skop requested MR. WISEMAN: 22 if he would be permitted to go before me, which I 23 said that was fine with me if it was okay with the 24 Commissioners. 25 CHAIRMAN BROWN: Do any of the intervenors

1 have a problem with that? 2 MR. MOYLE: No. 3 CHAIRMAN BROWN: All right. That's -- and you 4 would like to go right after Mr. Skop, then? 5 MR. WISEMAN: Yes, please. 6 CHAIRMAN BROWN: All right. 7 Mr. Skop? 8 MR. SKOP: Thank you, Madam Chair. 9 EXAMINATION 10 BY MR. SKOP: 11 Good afternoon, Dr. Morley. Q 12 Α Good afternoon. 13 I had a few questions on cross. You would Q 14 agree that abnormal conditions can skew even the most-15 accurate, well-prepared forecast, correct? 16 What do you mean by "abnormal conditions"? Α 17 Q It's a general question. I mean, abnormal 18 conditions such as economic downturns, for example. 19 Yes, I would agree that, if there is a large Α 20 economic downturn that was not forecasted, that would 21 affect our results. 22 And so, my next question would be Q Okay. 23 various factors skewing projections might include 24 economic downturns, which, I believe, you answered in 25 the affirmative.

1 Would you agree that recession could also 2 adversely skew projections? 3 Α Yes. 4 0 Okay. How about economic growth rates? 5 Α Less so with that because, when things go 6 down, they go down dramatically; whereas, when things are growing, they are growing at a relatively steadier 7 8 pace. 9 0 And how about weather? 10 No, because, consistent with the Commission's Α 11 directive, our forecast is based on the assumption of 12 normal weather. 13 But you would agree, would you not, 0 Okay. 14 that if you had an unduly hot summer, for example, that 15 FPL would sell more electricity and generate more 16 revenue during that time period, correct? 17 Α Yes, I would agree that the level of non-18 weather-normalized sales would be higher in that case. 19 Okay. Are you familiar with how FPL's load 0 20 forecast affects revenue requirement? 21 My understanding is my forecast of customers Α 22 by sales -- customers and sales by revenue class is 23 provided to Witness Cohen. And she uses it to come up 24 with the company's billing determinates. But you're generally familiar with the 25 0 Okay.

1 revenue requirement, correct? 2 Α Very generally. 3 Q Okay. All right. If FPL's load forecast is 4 overly conservative, projecting less-than-actual 5 revenue, then a greater revenue requirement would be 6 required, correct? 7 Could you repeat that? Α Sorry. 8 Q If FPL's load forecast is overly Yes. 9 conservative, projecting less-than-actual revenue, then 10 a greater revenue requirement would be required, 11 correct? 12 Α What do you mean by "revenue require-" -- what 13 do you mean by "revenue would be required"? 14 If your load -- if your load forecast is Q 15 lower -- or is low and understated, then a higher 16 revenue requirement and greater rate increase would be required to set fair, just, and reasonable rates, 17 18 correct? 19 Higher than what? Α The -- just for the last 20 part of your clause. 21 May I have a moment? MR. SKOP: 22 Yes, absolutely. CHAIRMAN BROWN: And I was 23 going to say, I would suggest maybe just rephrasing 24 it. 25 MR. SKOP: Yes. I think it's -- it's phrased

1 appropriately. I'm just not getting an answer --2 CHAIRMAN BROWN: It's confusing to the 3 witness. Maybe --MR. SKOP: Okay. 4 BY MR. SKOP: 5 6 0 FPL's load forecast, if it were understated, 7 it would project less revenue during the applicable test 8 periods, correct? 9 Α Yes. And conversely, if it's overstated, it 10 would be -- it would have the opposite effect. 11 Okay. But that was -- that was not my 0 12 question. 13 So, with that in mind, if the forecast is 14 understated, all things being equal, then a greater 15 revenue requirement is implied, which results in higher 16 rates, correct? 17 Α Yes, that's my basic understanding. Of 18 course, in this case, our sales forecast actually has a 19 small over-forecasting variance. So, that would not be 20 the case. 21 Okay. So, generally speaking, the lower Q 22 revenue, the -- excuse me. Generally speaking, the 23 lower the revenue requirement, the lower the rate 24 increase that would be required to set fair, just, and 25 reasonable rates, correct?

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1	A Yes, that's my generally understanding.
2	Q Okay. Has the Commission ever made an
3	adjustment to the FPL's sales forecast that you
4	presented?
5	A Yes.
6	Q When was that?
7	A In 2009.
8	Q Okay. And in the 2009 FPL rate case, the
9	Commission reduced FPL's revenue requirement by
10	approximately \$37 million, correct? Subject to check.
11	A Yes.
12	Q Okay. And the 2009 rate case, FPL rate case,
13	was the only FPL rate case that was fully decided by the
14	Commission issue by issue in the past 30 years, correct?
15	A I'm not sure about the 30 years, but in the
16	last ten years, yes.
17	Q Okay. All right. Thank you.
18	And despite the Commission's or excuse me.
19	Despite that the fact that the Commission reduced FPL's
20	revenue requirement by approximately \$37 million, FPL
21	remained financially healthy, correct?
22	A I don't monitor
23	MS. MONCADA: Objection to that question. She
24	is not here to talk about anything other than the
25	load forecast.
1	

1 CHAIRMAN BROWN: Objection sustained. 2 Please move along. 3 MR. SKOP: Okay. 4 BY MR. SKOP: 5 Q Dr. Morley, you mentioned that you understood 6 that if FPL's load forecast was low, then the revenue 7 requirement would be greater, correct? 8 Α Yes. 9 MS. MONCADA: She's --10 CHAIRMAN BROWN: Asked and answered. 11 MS. MONCADA: -- asked and answered --12 MR. SKOP: Okay. 13 We said it at the same time. CHAIRMAN BROWN: 14 MR. SKOP: You get an objection, you try to 15 find a different way, so -- no further questions. 16 Thank you, Dr. Morley. 17 THE WITNESS: Thank you. 18 CHAIRMAN BROWN: Thank you, Mr. Skop. Circling back to hospitals, Mr. Wiseman. 19 20 MR. WISEMAN: Thank you, Madam Chair. And I 21 have a number of exhibits. 22 And also, pursuant to the protocol that's been 23 followed with some witnesses, I would request that 24 FPL's attorneys not be permitted to -- that they 25 turn over the stack and not be permitted to look at

1 the exhibits in advance. And the same with the 2 witness, please. 3 CHAIRMAN BROWN: Okay. FPL? 4 MS. MONCADA: We agree. 5 CHAIRMAN BROWN: Okay. So, we're going to be Would you like to label one to 6 starting at 619. 7 begin with or wait? 8 I would prefer to wait --MR. WISEMAN: 9 CHAIRMAN BROWN: That's fine. 10 -- if that's permissible. MR. WISEMAN: 11 CHAIRMAN BROWN: That's fine. And you can 12 begin with your cross whenever you're ready. 13 MR. WISEMAN: Thank you. 14 EXAMINATION 15 BY MR. WISEMAN: 16 Good afternoon, Dr. Morley. Q 17 Good afternoon. Α 18 Would you agree that the purpose of your Q 19 testimony is to support FPL's forecasting process used 20 for this case; is that right? 21 Α No, I -- I don't think it's that general. Ι 22 think the purpose of my testimony is to support the load 23 forecast in specific. 24 Well, the specific forecasts that you 0 Okay. 25 support -- tell me if I'm correct -- would be the Premier Reporting

1 forecast for -- of net energy for load; is that correct? 2 Α Yes. 3 Q And you support the forecast of retailed --4 retail-delivered sales; is that right? 5 Α Yes. 6 0 And you support the forecasts of peak demands, 7 correct? 8 I'm sorry. I didn't hear that last one. Α 9 0 Peak demands. 10 Α Yes. 11 And you also support forecasts of customers Q 12 and sales by revenue class; is that right? 13 Α Yes. 14 All right. And actually, you're in charge of Q 15 preparing all of those forecasts, correct? 16 Α Yes. 17 Q All right. Now, you're not supporting 18 forecasts of natural gas prices, correct? 19 That is correct. I think Witness Forrest Α 20 could address that. 21 Q Great. 22 But you would agree that the forecasts of 23 natural gas prices affect your forecasts of net energy for load, retail-delivered sales, and billed sales for 24 25 residential in the commercial class -- rate classes, (850) 894-0828 Reported by: Andrea Komaridis Premier Reporting

1 correct? 2 Α Yes. 3 Q All right. Now, is it also -- I think you may 4 have testified about this, but just to make sure, your 5 forecast of net energy for load of billed sales includes 6 a forecast by revenue class, meaning the residential 7 class, the commercial class, industrials, et cetera, 8 correct? 9 Α Not exactly, no. 10 Could you clarify that for me? 0 11 We have a forecast of net energy for load. Α 12 And that forecast implies a certain amount of billed 13 We also have a forecast for the individual sales. 14 revenue classes. 15 The NEL model is superior to those of the 16 individual revenue classes. So, there is a 17 reconciliation process, but those are separate steps. 18 Q All right. And once -- once you're done with 19 those separate steps in your forecasts, you provide --20 the forecasts that I just talked about, net energy for load of billed sales and the forecast by revenue 21 22 class -- you provide those forecasts to Ms. Cohen, who 23 uses the forecasts in the billing determinate -- in determining billing -- billing determinates; is that 24 25 right?

1	A Yes.
2	Q All right. Now, I want to talk about your
3	forecasts of peak demand for a little bit. First of
4	all, you forecast both a summer and a winter peak; is
5	that right?
6	A Yes.
7	Q And FPL, you would agree, is typically a
8	summer-peaking utility?
9	A Yes, typically. We have had very high winter
10	peaks on occasion, but we are typically summer-peaking.
11	Q And why don't you explain for the record, so
12	it's just clear, what does it mean to be a summer-
13	peaking utility?
14	A It means that we typically experience our
15	highest hour of annual usage during the summer period as
16	opposed to a winter-peaking utility, which would
17	experience the highest hour of usage during the winter
18	period.
19	Q And you would agree that the norm actually is
20	that FPL experiences its summer peak in late August,
21	correct?
22	A That's the most popular time. We can we
23	can have a summer peak any time from June 1st through
24	the end of August.
25	Q Now, I think you testified about this earlier,
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1 and I think it was in your opening remarks as well, 2 but -- so, you would agree that, for purposes of 3 evaluating a utility's load forecasts, the Commission 4 considers that utility's record of forecast --5 forecasting accuracy; is that right? And we did a very good job forecasting 6 Α Yes. 7 sales in the last rate case. 8 Q Okay. Can you refer to your testimony at 9 Page 11, Lines 1 to 3. 10 Α Yes. 11 And you state there: FPL has an accur- -- has Q 12 a record of providing accurate and reliable load 13 forecasts, right? 14 Α Yes. 15 All right. If I could have MR. WISEMAN: 16 marked for identification as the first exhibit --17 I'm sorry -- it was --18 CHAIRMAN BROWN: 619. 19 MR. WISEMAN: Yes, 619. This would be an 20 excerpt of Ms. Morley's testimony in the 2012 rate 21 case. 22 Okay. The title on the sheet CHAIRMAN BROWN: 23 is direct testimony of Rosemary Morley in Docket 24 No. 120015-EI, correct? 25 MR. WISEMAN: Yes.

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1	CHAIRMAN BROWN: All right. That will be
2	marked as Exhibit 619.
3	(Whereupon, Exhibit No. 619 was marked for
4	identification.)
5	CHAIRMAN BROWN: Dr. Morley, do you have a
6	copy of that?
7	THE WITNESS: I do.
8	CHAIRMAN BROWN: Please proceed.
9	BY MR. WISEMAN:
10	Q Dr. Morley, do you recognize the document
11	that's been marked for identification as Exhibit 619 as
12	an excerpt from your direct testimony provided in FPL's
13	2000 [sic] rate case in Docket No. 120015?
14	A Yes.
15	Q All right. Can you please turn to Page 10,
16	Lines 3 to 4 of that testimony? Do you have that?
17	A I do.
18	Q And you're asked there the question: Does FPL
19	have a proven record of providing accurate, reliable
20	forecasts. Do you see that?
21	A I do.
22	Q And your answer at that time was "yes,"
23	correct?
24	A Uh-huh.
25	Q All right.

1	MR. WISEMAN: Madam Chair, if I could have
2	marked for identification as
3	CHAIRMAN BROWN: 620.
4	MR. WISEMAN: Exhibit 620, this would be
5	the title of the document is Rosemary Morley,
6	direct testimony in Docket No. 080677, 2009 FPL
7	rate case.
8	CHAIRMAN BROWN: Sounds good.
9	(Whereupon, Exhibit No. 620 was marked for
10	identification.)
11	CHAIRMAN BROWN: Dr. Morley, you have a copy
12	of that?
13	THE WITNESS: I'm sorry. What's the exhibit
14	number?
15	CHAIRMAN BROWN: 620.
16	MR. WISEMAN: $6-2-0$.
17	THE WITNESS: Got it.
18	MR. WISEMAN: Do you have that?
19	CHAIRMAN BROWN: You may proceed.
20	BY MR. WISEMAN:
21	Q Dr. Morley, does the document that's been
22	marked for identification as Exhibit No. 620 is that
23	an excerpt of testimony that you provided in FPL's 2009
24	rate case in Docket No. 080677?
25	A Yes.

1 All right. And could you turn to your --Q 2 well, to that testimony at Page 24, please. Do you have 3 that? 4 Α Yes. 5 Q Okay. And you -- you discuss there that 6 FPL -- FPL made certain adjustments to the output of its 7 econometric model, right? 8 Α Yes. 9 0 Okay. And then if you go over to Page 25, 10 Lines 1 to 3, is it correct that you asserted in that 11 testimony that making the adjustments to the output of 12 the econometric model improved the accuracy of your 13 forecasts? 14 Α Yes. 15 And then, if you turn over to Page 26 of that 0 16 testimony, Lines 15 to 20, is it correct that you represented in the 2009 rate case that FPL's NEL 17 18 forecast was reasonable? 19 Α Yes. I'm -- I'm sorry. I need to clarify my 20 answer to your prior question. You asked about 21 adjustments. And I think you said, do adjustments make 22 the forecast better. And I should have clarified the --23 that my testimony in this case was the -- the 24 adjustments we were making in this case improved the 25 forecast in accuracy; not adjustments generically. Premier Reporting

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1 MR. WISEMAN: Thank you for that 2 clarification. 3 Now, if I could have marked for identification 4 as Exhibit 621 --5 CHAIRMAN BROWN: Okay. 6 MR. WISEMAN: This is the document entitled 7 "FPL proposed short-term and long-term load 8 forecast presentation ex-" -- and then in 9 parentheses, "Exhibit 502 from Docket No. 10 120015-EI." 11 Okay. We'll go ahead and CHAIRMAN BROWN: 12 mark that. 13 (Whereupon, Exhibit No. 621 was marked for 14 identification.) 15 CHAIRMAN BROWN: Dr. Morley, do you have a 16 copy of that in front of you? Yes? 17 THE WITNESS: Yes. Sorry. 18 CHAIRMAN BROWN: Okay. You may proceed. 19 MR. WISEMAN: Thank you. 20 BY MR. WISEMAN: 21 Dr. Morley, if you turn past the cover page of Q 22 the exhibit, there is another cover page that has 23 No. 50- -- it shows Exhibit No. 502 up in the right-hand 24 corner. Do you see that? 25 А Yes.

1 Okay. And then if you turn to the next page, Q 2 it's the first page of the PowerPoint presentation. And 3 it says proposed short-term and long-term load 4 forecasts. And then it identifies you, Rosemary Morley, 5 director of load forecasting, and a date of 6 September 27, 2011. Do you see that? 7 Α Yes. 8 Q And do you recall that we discussed Okav. 9 this document in the 2012 rate case? 10 Α Yes. 11 Can you turn to Page -- I'm going to Q Okav. 12 refer to -- let me see which -- which numbers are most 13 easily -- do you see the bottom-left corner -- I 14 understand it's faint, but do you see there is a number, 15 24, there? 16 Α Yes. 17 CHAIRMAN BROWN: That would be the next page. 18 MR. WISEMAN: Yeah, I'm going to refer to 19 Just -- I think it will be those page numbers. 20 easiest for clarity. 21 MS. MONCADA: And before the question is 22 posed, we were advised yesterday by your adviser, 23 Ms. Helton, if we had any objections, we should try 24 to do them up-front. 25 CHAIRMAN BROWN: Okay.

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1 MS. MONCADA: And this exhibit doesn't seem to 2 be a --3 CHAIRMAN BROWN: Full. 4 MS. MONCADA: A full presentation. The page 5 numbers jump around, and it seems to be just an 6 excerpt of it. 7 CHAIRMAN BROWN: I'm sure Mr. Wiseman has a 8 copy of the full one. 9 MR. WISEMAN: You're correct, Madam Chair. We 10 have a full copy. Again, just trying to save 11 If FPL wants us to put in the whole trees. 12 document, we'll put in the whole document. 13 CHAIRMAN BROWN: FPL, would you like -- would 14 you like that at the -- at the time we address 15 entering in the exhibit -- do you want the full 16 document? You have that before you right now. 17 MS. MONCADA: Yes. 18 CHAIRMAN BROWN: Okay. We'll get to that when 19 we get to exhibits later. 20 Please proceed. 21 Thank you. MR. WISEMAN: 22 BY MR. WISEMAN: 23 Dr. Morley, do you have the page -- it's Q 24 Page 24 in the bottom-left corner. 25 Α Yes, I do.

1 And that page -- it -- there is -- there are Q 2 actually two titles on it. The one at the top says --3 well, let's -- actually the second title in the page, 4 just above the bar graphs, it says "Forecast of the 2011 5 summer peak by ten-year site plan vintage," correct? 6 Α Correct. 7 And would you agree that this page shows that Q 8 FPL over-forecasted the 2011 summer peak in its ten-year 9 site plans in all but one year from 2002 through 2011? 10 And it also shows we dramatically Α Yes. 11 improved our forecasting accuracy beginning with the 12 2009 ten-year site plan. 13 And you would agree that this shows that in 0 14 the range -- from 2006 to 2008, your forecast of the 15 summer 2011 peak was off by approximately 12 percent? 16 Would you agree with that? 17 Α I would agree with that. And that has not 18 been the case recently. 19 Can you turn to the next page, which Okay. 0 20 has the number 25 in the lower left-hand corner. 21 Is it correct that from -- that this page 22 shows that, from 1988 to 2011, your forecasts of the 23 2011 peak on a weather-normalized basis in FPL's ten-24 year site plans was off by as much as 17 percent? 25 I'm going to -- I apologize. Α I'm going to

 Q 25. And I'm focusing on, in the bar graph, the highest column that's sort of in the middle of the bar graph. A And that would be Q It looks like I'm sorry. I see it it's for the year 2003. A Right. And that would have been the forecast developed around 1993. 	
 4 bar graph. 5 A And that would be 6 Q It looks like I'm sorry. I see it it's 7 for the year 2003. 8 A Right. And that would have been the forecast 9 developed around 1993. 	
 A And that would be Q It looks like I'm sorry. I see it it's for the year 2003. A Right. And that would have been the forecast 9 developed around 1993. 	
 Q It looks like I'm sorry. I see it it's for the year 2003. A Right. And that would have been the forecast developed around 1993. 	
7 for the year 2003. 8 A Right. And that would have been the forecast 9 developed around 1993.	
8 A Right. And that would have been the forecast 9 developed around 1993.	
9 developed around 1993.	
-	
10 Q And it shows that forecast was off by	
11 17 percent, correct?	
12 A Yeah. And again, that was the forecast	
13 developed in 1993.	
Q All right. And can you turn to the next page	,
15 which has a 28 in the left-hand corner. Do you see	
16 that?	
17 A Yes.	
18 Q Okay. And would it be correct that, at the	
19 time you prepared this document first of all, this	
was prepared in October 2011; is that correct?	
21 A That's what it's labeled.	
22 Q Okay. And would it be correct that you	
23 dropped your forecast of the summer peak for 2021 by	
about a thousand megawatts, as compared to the forecast	
that you had made just a few months earlier in the 2011	

1	ten-year site plan?
2	A Yes.
3	MR. WISEMAN: Okay. Now, if I could have
4	marked for
5	CHAIRMAN BROWN: 622.
6	MR. WISEMAN: identification actually, I
7	want to identify five documents and and Madam
8	Chair, if I could ask you, one of the documents
9	actually is a is the same as one of the OPC
10	exhibits that was used earlier.
11	CHAIRMAN BROWN: Uh-huh. I can see that.
12	MR. WISEMAN: I think for just continuity and
13	clarity, it might be easier if we just marked all
14	of these in a row.
15	CHAIRMAN BROWN: I don't have a problem with
16	that.
17	MR. WISEMAN: Great. Thank you.
18	So, if we could mark the first one should
19	be the 2012 ten-year site plan.
20	CHAIRMAN BROWN: That will be marked as
21	Exhibit 622.
22	(Whereupon, Exhibit No. 622 was marked for
23	identification.)
24	MR. WISEMAN: Okay. And then the 2013 ten-
25	year site plan would be next, so
L	

1 CHAIRMAN BROWN: 623 for 2013. 2 (Whereupon, Exhibit No. 623 was marked for 3 identification.) 4 MR. WISEMAN: And then, next would be the 2014 5 ten-year site plan. 6 CHAIRMAN BROWN: That would be marked as 624. 7 (Whereupon, Exhibit No. 624 was marked for 8 identification.) 9 MR. WISEMAN: And then FPL 2015 ten-year site 10 plan --11 CHAIRMAN BROWN: That will be marked as 625. 12 (Whereupon, Exhibit No. 625 was marked for 13 identification.) 14 MR. WISEMAN: And the last one is FPL's 2016 15 ten-year site plan. 16 CHAIRMAN BROWN: That will be marked as 626. 17 And I do want to remind Counsel, though, that 18 unduly-repetitious evidence shall be excluded from 19 this record. Are you aware of that? MR. WISEMAN: Yes, and I -- that's why I 20 21 prefaced my --22 Different questions. CHAIRMAN BROWN: 23 MR. WISEMAN: -- questions, yes. 24 CHAIRMAN BROWN: Thank you. 25 (Whereupon, Exhibit No. 626 was marked for
1 identification.) 2 BY MR. WISEMAN: 3 Q Dr. Morley, first of all, you have five 4 documents in front of you now that have been marked for 5 identification as Exhibit Nos. 622 through 626. Do all 6 of these appear to be excerpts from FPL's ten-year site 7 plan for the applicable years? 8 Α I haven't checked them, but --9 0 If -- if you could --10 (Examining document.) Α Yes. 11 All right. Now, what I would like you to do Q 12 is, if you could take Exhibit No. 626 -- so, that's the 13 data from the 2016 ten-year -- ten-year site plan. And 14 I would like to sort of keep that as a reference point 15 because I'm going to ask you some questions about the 16 others in comparison to that -- to the data in that 17 ten-year site plan. All right? 18 Α Okay. 19 So, now, let's -- let's start with 0 Okay. 20 Exhibit -- we're going to compare Exhibit 622 to the 21 data in Exhibit 626. All right? 22 I would like you to start -- there is data 23 there concerning Schedule 3.2 in both documents. Do you 24 have that? 25 Α Yes.

1 Looking first at Exhibit 622, the Q All right. 2 '12 -- 2012 site -- year -- 2012 ten-year site plan, 3 would you agree that, for the winter peak of 2012, you 4 forecast that that would be 20,889 megawatts -- megawatt 5 hours? 6 Α Megawatts. 7 0 Is that correct? 8 Α Yes. 9 And then, if we go over to Exhibit 626 and we 0 10 look at the actual history, we can see that the 2012 11 winter peak was actually 17,934 megawatt hours, correct? 12 Α And of course, that's a non-weather-Yes. 13 normalized actual. And we had a very mild winter that 14 year. 15 Will you accept, subject to check, that 0 Okay. 16 your forecast of the 2012 winter peak was too high by 17 approximately 16 percent? 18 Α No, because I think you're looking at non-19 weather-normalized actuals. 20 I'm talking about on a non- -- on a non-0 21 weather -- weather-normalized basis, would you agree, 22 subject to check, that your forecast was -- of the 2012, 23 winter peak was too high by approximately 16 percent? 24 Α Yes, but the appropriate way to do forecasting 25 accuracy is on a weather-normalized basis.

1	Q Well, we'll go over the data and that's
2	fine. Let me make it clear, I want to talk about these
3	data on a non-weatherized weather-normalized basis.
4	Okay?
5	A Uh-huh.
6	Q All right. Let's go back to Exhibit 622. And
7	if we look at the forecast for the 2013 winter peak,
8	would you agree that your forecast it would be
9	21,101 megawatts, correct?
10	A Yes.
11	Q And then if we go to Exhibit 626 for 2013, we
12	see that the actual was 15,931 megawatts, correct?
13	A Yes. And again, a very mild winter that year.
14	Q And would you accept, subject to check, that
15	your forecast in 2012 of the 2013 winter peak was too
16	high by about 32 percent?
17	A Yes, on a non-weather-normalized basis.
18	Q All right. Now, again, let's go to the 2012
19	ten-year site plan. And would you agree that, for the
20	year 2014, you forecast a winter peak of 21,900 I
21	can't tell if it's 959
22	CHAIRMAN BROWN: Yes.
23	Q megawatts or
24	CHAIRMAN BROWN: That's what it looks like.
25	Q 950 megawatts, but it's either it's

1 21,500 -- 950 megawatts --2 CHAIRMAN BROWN: Nine --3 Q -- or so, correct? I think it's actually a nine at the end, 4 Α 5 but --All right. And going back to 6 Q Okay. Exhibit 626 --7 8 MS. MONCADA: Before the question is posed, 9 Madam Chair, FPL is willing to stipulate on the 10 numbers in all of the ten-year site plan excerpts 11 that Mr. Wiseman has handed to the witness for the 12 sake of expediency, if he's willing to stipulate 13 that all of his comparisons are on a non-weather-14 normalized basis. 15 Mr. Wiseman? CHAIRMAN BROWN: 16 I'm willing to stipulate that MR. WISEMAN: 17 these are -- what I'm asking her about is on a non-18 weatherized basis. And you know, what I would like 19 to do -- I'll short- -- I'll shortcut it. 20 CHAIRMAN BROWN: I understand the point --21 MR. WISEMAN: Okay. 22 -- that you are trying to CHAIRMAN BROWN: 23 If you could, streamline it. make. 24 I will do that. MR. WISEMAN: 25 CHAIRMAN BROWN: Thank you.

1 BY MR. WISEMAN:

2	Q Just as a general question, you would agree
3	that, if we go to the ten-year site plans that are
4	contained in Exhibit 622, 623, 624, and 625, they'll all
5	have forecasts of peak demands winter-peak demands
6	that we could compare to the actuals that occurred,
7	which are reflected in Exhibit 626; is that right?
8	A Yes. What you're not seeing is how well we
9	did forecasting this year with the winter peak. And we
10	have had challenges forecasting the winter peak. It
11	tends to be much more erratic, frankly, because
12	sometimes we don't actually have cold weather.
13	So, we've been able to improve the model. And
14	I'm pleased to say that this year, we were within
15	2 percent of the weather-normalized actuals.
16	Q All right.
17	A But I will agree that, historically, it has
18	been a challenge for us.
19	Q And and obviously, we can take the numbers
20	in the 2012, 2013, 2014, 2015 ten-year site plans and
21	figure out a percentage of it by comparison to the 2016
22	ten-year site plan of how much the forecast was off,
23	correct?
24	A No, you would need to look at the weather-
25	normalized winter peak, which I believe has been
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1 provided in discovery.

	provided	in arbeovery.
2	Q	And my question to you is based upon doing a
3	non-weath	nerized weather-normalized comparisons.
4	A	Yes. That's not the appropriate way of doing
5	it, but i	f you wanted to do it that way, you could.
6	Q	All right. Now, so to speed this up, I'm
7	not ke	eep them before you because I want to ask you
8	some more	e questions about another subject covered in the
9	data that	are in these exhibits.
10		But to the best of your knowledge, Ms. Cohen
11	uses the	summer peak demand in her forecasts of billing
12	determina	ates, but not the winter-peak the forecasts
13	of winter	peak demand; is that right?
14	A	That's not my understanding. I don't believe
15	Ms. Coher	n uses any peak demands. Obviously, she would
16	be the be	est witness to address that.
17	Q	(Brief pause.)
18		CHAIRMAN BROWN: You have a few more exhibits?
19		MR. WISEMAN: No. No. I'm just going to ask
20	her	
21	BY MR. WI	SEMAN:
22	Q	Do you recall I asked you about this during
23	you recal	ll I took your deposition a couple of weeks ago,
24	right?	
25	A	I do recall it. I even have a copy of it
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1 here. You asked a variety -- you asked a variety of 2 questions in terms of how Ms. Deaton uses my forecasts 3 and how Ms. Cohen uses it. Ms. Cohen definitely uses my 4 forecast of customers and sales by revenue class. I'm 5 not aware that she uses any peak demands. 6 Q Now, do you --7 Α I do --8 I'm sorry. I didn't mean to interrupt. Q 9 Α I do provide Ms. Deaton peak demands that she 10 uses in her cost-of-service allocation process. 11 And do you recall I asked you about Q Okay. 12 this subject during the deposition? 13 Α Yes. 14 And do you recall what you told me Q Okay. 15 during the deposition? I asked you, can you explain how 16 that forecast would affect the -- the forecasting --17 CHAIRMAN BROWN: Mr. Wiseman, can you hold on 18 a second. There is a lot of chatter going on to 19 the right of me. I'm going to scold Counsel for 20 interrupting the process. Take it outside. 21 Please proceed. 22 Thank you. 23 MR. WISEMAN: Thank you. I will scold him as 24 well. 25 CHAIRMAN BROWN: Okay. Good.

1 MR. MOYLE: Long line.
2 CHAIRMAN BROWN: Long line of people.
3 (Laughter.)
4 BY MR. WISEMAN:
5 Q Dr. Mor Morley sorry. Okay. The
6 specific question I asked you was: In forecasting the
7 winter peak, can you explain how that forecast would
⁸ affect the forecast of billing determinates, if at all?
9 And do you recall what you told me?
10 A I thought I said it it doesn't. If I did,
11 I apologize, because
12 Q Do you I'm sorry. I think you said you
13 have the deposition there?
14 A I do.
15 Q Can you read go to Page 125.
16 MS. MONCADA: I would also like a second to
17 get there. If you could
18 MR. WISEMAN: I'm sorry?
19 MS. MONCADA: If you could, give me a second
20 to get there as well.
21 MR. WISEMAN: Oh, sure. Sure.
22 MS. MONCADA: 125?
23 MR. WISEMAN: 125 for the deposition.
24 THE WITNESS: I'm there.
25 MR. WISEMAN: Okay. And

1	MS. MONCADA: I'm there, too.
2	CHAIRMAN BROWN: Okay.
3	BY MR. WISEMAN:
4	Q I'm reading at Line 16 this is me speaking.
5	And I say: Okay. In forecasting the winter peak, can
6	you explain how that forecast would affect the forecast
7	of billing determinates, if at all.
8	Can you read your answer out loud that appears
9	at Lines 19 to 21?
10	A "I don't believe it's used at all. You may
11	want to verify that with Ms. Cohen, but to my knowledge,
12	it's not used at all."
13	Q All right. Thank you very much.
14	And all right. Let's move to another
15	subject, but related to these same exhibits. Do you see
16	that the second page of each exhibit has Schedule 3.3
17	from the ten-year site plans attached?
18	A Yes, I see that.
19	Q Okay. And that has both the history of net
20	annual net energy for load and the forecasts of annual
21	net energy for load, correct?
22	A Yes.
23	MR. WISEMAN: All right. I just want to do a
24	couple of comparisons. And then I I will stop,
25	if that would be acceptable.

1 CHAIRMAN BROWN: You get two. Can you do two? 2 I'll do two. Let me find the MR. WISEMAN: 3 two best. 4 CHAIRMAN BROWN: FPL has stipulated to 5 those -- the figures in there, Mr. Wiseman. 6 BY MR. WISEMAN: 7 All right. If you could, go to the '15 --Q 8 2015 ten-year site plan, which is Exhibit No. --9 CHAIRMAN BROWN: 625. 10 MR. WISEMAN: Thank you. 11 CHAIRMAN BROWN: You said the 2015? 12 MR. WISEMAN: Yes. 13 CHAIRMAN BROWN: Yep. 14 BY MR. WISEMAN: 15 And again, I want you to -- we're going to do 0 16 a comparison to the actuals that appear in Exhibit 626. And I understand I'm asking you this on a non-17 18 weatherized -- non-weather-normalized basis. 19 So, in the 2015 ten-year site plan, you would 20 agree that your forecast of net energy for load for 2015 21 would be 119,713 gigawatts hours, correct? 22 Yes, excluding the impact of incremental DSM. Α 23 And the actual net energy for load in Q Okay. 24 2015 was 128,556 gigawatts hours, correct? 25 And as we discussed early -- earlier --Α Yes.

1 it was an extremely hot year in 2015. 2 Okay. Would you accept, subject to check, 0 3 that the forecast was off by -- it was too low by 4 approximately 6.8 percent? 5 Α No, I don't -- I don't accept that because the 6 purpose of the forecast is to -- is based on the 7 assumption of normal weather. So, I don't -- I don't 8 buy the use of "off" or "wrong" in that context. 9 0 Okay. Let me rephrase the question, then. 10 I'm talking -- my question is directed to you talking 11 about these data on a non-weather-normalized basis. 12 Just would you accept that the difference between the 13 forecast in the 2015 ten-year site plan of net energy 14 for load and the actual for 2015, was 6-point --15 approximately 6.8 percent? 16 Yes, on a non-weather-normalized basis. Α 17 Q All right. Now, am I correct that -- and I 18 assume FPL's stipulation as to this -- these documents 19 would relate both to the calculations of net energy for 20 load as well as for the winter peak demands; is that 21 correct? 22 Did you hear that? CHAIRMAN BROWN: FPL? 23 MS. MONCADA: I didn't --24 CHAIRMAN BROWN: Can you -- Mr. --25 Mr. Wiseman, please repeat.

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1 MR. WISEMAN: Yes, just my question was 2 whether your stipulation as to the numbers in these 3 Exhibits 622 through 626 relates to the data 4 concerning net energy for load as well as for the 5 data for winter peak demands. 6 MS. MONCADA: Yes. 7 CHAIRMAN BROWN: Okay. 8 MR. WISEMAN: Great. 9 CHAIRMAN BROWN: So, we can move along? 10 MR. WISEMAN: Yes. 11 CHAIRMAN BROWN: Thank you. 12 BY MR. WISEMAN: 13 Now, am I correct that, on a weather -- on a Q weather-normalized basis, you would want the variance 14 15 between your forecast of net energy for load and net 16 energy for load to be definitely under 1 percent? 17 Α Yes, we want it to be as low as possible and 18 as close to zero as possible. And below 1 percent --19 plus or minus 1 percent. 20 MR. WISEMAN: Okay. Now, will you accept, 21 subject to -- well, we've gone over these data. 22 Let's just go to another one. 23 If we could have marked for identification as 24 Exhibit 627 --25 CHAIRMAN BROWN: Yes.

1 MR. WISEMAN: This would be FPL's response to 2 Staff Interrogatory No. 73. 3 CHAIRMAN BROWN: We will do that. 4 (Whereupon, Exhibit No. 627 was marked for identification.) 5 6 CHAIRMAN BROWN: Dr. Morley, do you have a 7 copy of that in front of you? 8 THE WITNESS: T do. 9 CHAIRMAN BROWN: Okay. Please proceed. 10 BY MR. WISEMAN: 11 Dr. Morley, was the document that's been Q 12 marked for identification as Exhibit 627 prepared by you 13 or under your supervision? 14 Α Yes. 15 Now, among the data that are set All right. 0 16 forth in this interrogatory response are quantifications on a percentage basis of the difference between your 17 18 forecasts of net energy for load since 2012 on a 19 weather-normalized basis; is that correct? 20 Α Yes. 21 And to the best of your knowledge, the data Q 22 that are in these -- in this discovery response are 23 accurate, correct? 24 I want to just -- I think you said since Α Yes. 25 2012. These are forecasts -- actually, it would have

1	been it's forecast for the year years 2012, '13,
2	'14, and '15. And it covers forecasts that were
3	developed prior to 2012.
4	Q I I apologize. So, these are the forecasts
5	for the applicable years; is that correct?
б	A Yes.
7	Q All right. Would you agree that this
8	interrogatory response shows that, with just one
9	exception, out of the 16 forecasts that are reported
10	here, on a weather weather-normalized basis, your
11	forecasts net energy for load were lower than actual net
12	energy for load; is that right?
13	A Could you repeat that? I'm sorry.
14	Q Yeah, that was a horrible question. Let me
15	rephrase it.
16	Okay. There are actually, there are
17	yeah, there are there are forecasts for that are
18	applicable to four different years, correct?
19	A Yes.
20	Q And so, there are a total of 14 forecasts
21	reported here for net energy for load, correct?
22	A Yes.
23	Q And would you agree that, with one exception,
24	all of the forecasts of net energy for load are below
25	the actual net energy for load that occurred?
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1 A Are you saying weather-actual net energy
2 Q Weather-normalized, that's what I these
³ data are on a weather-normalized basis, correct?
4 A Yes.
5 Q Okay. And so, on a weather-normalized basis,
6 in all of in 15 of the 16 instances that are reported
7 here, weren't your forecasts below the actual net energy
8 for load that occurred?
9 A On a non-weather-normalized basis or a
10 weather-normalized basis?
11 Q On a weather-normalized basis.
12 A Yes. I mean, that has been the tendency for
13 us and other utilities is to have an over-forecasting
14 variance.
15 Q And if I'm looking at these data I'm on the
16 far right-hand column. Your forecasts of the 2012 net
17 energy load net energy for load were off as an
18 absolute average by 1 percent, right?
A Yes, and you'll also see under year one, the
20 negative 0.4 percent. That's the the negative or the
21 accuracy of the our forecast in the last rate case
22 that I mentioned in my summary.
23 Q So, to the point Mr. Moyle raised with you
24 earlier, the closer you get in time to a to a date
²⁵ when you're forecasting something, it's likely that
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1	
1	you're going to be more accurate than with respect to
2	a forecast that's farther out in time, right?
3	A Yes.
4	CHAIRMAN BROWN: That was asked and answered.
5	MR. WISEMAN: Okay.
6	BY MR. WISEMAN:
7	Q And if you look let's look at 2015. That's
8	the most-recent data reported here, correct?
9	A Under the zero years, it would be the most
10	recent.
11	Q Okay. Three years out for 2015, your forecast
12	of net energy for load on a weather-normalized basis was
13	too low by 2.4 percent, correct?
14	A Yes.
15	Q And two years out, your forecast of net energy
16	for load on a weather-normalized was too low by
17	2.5 percent, correct?
18	A Yes.
19	Q And then one year out, it was actually it
20	became more inaccurate. It was too low by 2.9 percent,
21	correct?
22	A Yes.
23	Q Okay. And on an average now, it looks
24	like and see, in zero years, you got closer. It was
25	too low by 1.4 percent, correct?
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1 Α Yes. 2 But in all years, it was below -- I'm sorry --0 3 the -- your forecast error was outside the more-than 4 1-percent target that you're shooting for; isn't that 5 true? 6 Α Yes. The 1 percent is more applicable to the 7 zero or one year, but I -- I agree with your statement. 8 Q All right. Now, would you agree that FPL 9 doesn't have data on actual net energy for load by rate 10 schedule or rate class? 11 That's my understanding. You might want to Α 12 check with one of the rate witnesses. 13 Would you agree that FPL doesn't utilize a Q 14 model to forecast growth by rate schedule? 15 Α Again, I'm not that rate witness. I think 16 that would be better addressed to Ms. Cohen or 17 Ms. Deaton. 18 MR. WISEMAN: If I could have one moment --19 CHAIRMAN BROWN: Sure. 20 MR. WISEMAN: -- Your Honor. 21 (Discussion off the record.) 22 BY MR. WISEMAN: 23 Would you agree that FPL doesn't use a model Q to forecast number of customers taking service by rate 24 25 schedule?

1 I would agree that I don't have such a model. Α 2 Again, you might want to check with the rate witnesses. 3 Q Okay. Do you agree that FPL doesn't track 4 customer growth in the form of new service accounts by 5 rate schedule or rate class? 6 Α Yes. 7 Okay. Do you agree that FPL doesn't forecast Q 8 or track actual weather -- weatherized -- weather-9 normalized net energy for load by rate class or rate 10 schedule? 11 I would agree that I don't do that. Α Aqain, 12 you might want to check with the rate witnesses. 13 Okay. Can you refer to Page 30 of your Q 14 testimony, please. 15 Α Yes. 16 Q Hold on. I have to get there. Sorry. 17 Starting at Line 16, and going over to 18 Page 31, Line 5, you indicate there that net energy for 19 load is forecast to decline in 2017, then increase 20 somewhat after that; is that correct? 21 Α We're forecasting a decline that year --Yes. 22 a decline in 2017 and then a resumption of growth. 23 MR. WISEMAN: All right. And if I could have 24 marked as the next exhibit in order -- this would 25 be FPL's response --

1	CHAIRMAN BROWN: 628.
2	MR. WISEMAN: I'm sorry. 628?
3	CHAIRMAN BROWN: Yeah, 628.
4	MR. WISEMAN: This would be FPL's response to
5	SFHHA Interrogatory No. 29.
6	CHAIRMAN BROWN: Okay. 29.
7	MR. WISEMAN: Yes.
8	CHAIRMAN BROWN: Or 19? Are you sure
9	MR. WISEMAN: No, 29. I skipped
10	CHAIRMAN BROWN: You skipped over okay.
11	It's it's further in the pile.
12	MS. HELTON: I'm sorry. Did you say 629?
13	MR. WISEMAN: The exhibit number is 628.
14	THE WITNESS: Okay.
15	MR. WISEMAN: But the the response it's
16	FPL's response to SFHHA Interrogatory No. 29.
17	CHAIRMAN BROWN: It's in the pile.
18	THE WITNESS: I have I have 19.
19	MR. WISEMAN: Yeah, I skipped I skipped
20	through several.
21	THE WITNESS: Okay.
22	MR. WISEMAN: I apologize.
23	THE WITNESS: Okay. Okay. Okay.
24	CHAIRMAN BROWN: It's probably probably
25	three three more documents in.

1 (Whereupon, Exhibit No. 628 was marked for 2 identification.) 3 CHAIRMAN BROWN: Do you have it? 4 THE WITNESS: The number, please? 5 CHAIRMAN BROWN: Oh, 628. 6 THE WITNESS: Exhibit 628. 7 CHAIRMAN BROWN: You may proceed. 8 All right. MR. WISEMAN: 9 BY MR. WISEMAN: 10 Dr. Morley, is the document that's been marked 0 11 for identification as Exhibit No. 628, the interrogatory 12 response -- that was prepared by you or under your 13 supervision? 14 Α Yes. 15 Now, do you see in this answer you 0 Okay. 16 represented that there would be declines in weather-17 normalized retail use per customer, which you said would 18 be offset by certain other factors? Is that a fair 19 characterization of that portion of your answer? 20 Α Yes. 21 All right. If I could have MR. WISEMAN: 22 marked for identification as the next exhibit 23 629 -- this would be NextEra Energy, NextEra Energy 24 Partners investor conference 2015 presentation. 25 Got it. CHAIRMAN BROWN: We will mark as

1	Exhibit 629 the NextEra Energy, NextEra Energy
2	Partners investor conference 2015 presentation.
3	(Whereupon, Exhibit No. 629 was marked for
4	identification.)
5	CHAIRMAN BROWN: Dr. Morley, do you have it?
6	THE WITNESS: I do.
7	CHAIRMAN BROWN: Okay. Please proceed.
8	BY MR. WISEMAN:
9	Q Okay. Dr. Morley, first, the document do
10	you see that this is from an investor conference in 2015
11	conducted by NextEra Energy, correct?
12	A Yes.
13	Q And if you could turn to the one substantive
14	page, do you see there's a page on the left side,
15	it shows annual customer growth, both actuals and
16	forecasts, and on the right side, it shows weather-
17	normalized use per customer, both actual and forecast,
18	correct?
19	A Yes, I believe this is from either the 2015
20	ten-year site plan forecast or perhaps even the 2014
21	ten-year site plan forecast.
22	Q I'm sorry. I missed what you said. Can you
23	repeat?
24	A Yes. You asked me to look at the chart that
25	says "weather-normalized use per customer."

1	Q Yes.
2	A And I was just pointing out that this forecast
3	was probably either the 20 from the 2015 ten-year
4	site plan forecast or, perhaps, even the 2014 ten-year
5	site plan forecast.
6	Q Okay. Well, looking at the bar graph on the
7	right side, "weather-normalized use per customer," you
8	would agree that, when this document was created, the
9	forecast was for .5-percent growth in 2015, 2016, and
10	2017, and flat thereafter, correct?
11	A Oh, yes, and that growth in 2015 did not
12	occur.
13	Q Okay. If I understand, it's your position
14	it's that primary the primary drivers of future
15	electric needs are population growth, weather, and the
16	energy-efficiency standards; is that correct?
17	A Did you say future electricity electricity
18	usage?
19	Q I said population growth, weather and energy-
20	efficiency standards
21	A Are the
22	Q as the drivers of future electric need
23	electricity needs.
24	A Yes, those would be well, I think the
25	the drivers, if we're looking at use per customer, would

1 be more in terms of codes and standards and the economy 2 and so forth. 3 0 But -- well, why don't you take a look at your And I direct you to 4 direct testimony at Page 8, please. 5 Lines 20 and 22. And I'm reading out loud. It says: 6 FPL has found that population growth, weather, the 7 economy, and any energy-efficiency codes and standards 8 are the primary drivers of future electricity needs. 9 Do you see that? 10 Α Yes, I do. 11 Okay. Now, your model doesn't serve for --Q 12 doesn't solve for those drivers, correct? 13 Α No. 14 Q They're -- they're inputs to your forecasts, 15 correct? 16 Α Yes. 17 Q Now, in your direct testimony, you explain 18 that the growth of customers in FPL's service 19 territories forecasted by an econo- -- econometric model; is that right? 20 21 Α Yes. 22 And the forecast is based upon a state --0 23 statewide forecast of customer growth that you discussed briefly with Mr. Moyle, correct? 24 25 Α Yes.

1 Q And you told Mr. Moyle -- and I think it's consistent with what you have in your prepared 2 3 testimony -- that you don't think your forecast of 4 customer growth would be improved in a significant way 5 by using a county -- to county-by-county forecast of population growth; is that right? 6 7 Α Yes. 8 Q That's a change from your position in Okay. 9 the 2012 rate case, isn't it? 10 I don't think so. We've used the statewide Α 11 population, I think, for a number of years. 12 MR. WISEMAN: If I could have marked --13 CHAIRMAN BROWN: 630. 14 MR. WISEMAN: 630 would be hearing testimony 15 of Rosemary Morley in Docket No. 120015-EI, FPL 16 2012 rate case. 17 CHAIRMAN BROWN: We will mark that as 18 Exhibit 630. 19 (Whereupon, Exhibit No. 630 was marked for 20 identification.) 21 CHAIRMAN BROWN: Dr. Morley, do you have a 22 copy of that in front of you? 23 THE WITNESS: T do. 24 CHAIRMAN BROWN: Okay. 25 MR. WISEMAN: Well --

1 CHAIRMAN BROWN: You can qo --2 BY MR. WISEMAN: 3 Q Maybe not strangely enough, but I'm following 4 up there with another question that was asked by 5 Mr. Moyle about population growth. And then at Line 8, 6 I say: Now, you would agree that FPL serves some 7 extremely densely-populated counties, such as --8 CHAIRMAN BROWN: Mr. Wiseman, which page are 9 you talking about? 10 Oh, I'm sorry. I apologize. MR. WISEMAN: 11 This is transcript Page 673. 12 CHAIRMAN BROWN: Thank you. 13 Do you have that? MR. WISEMAN: 14 CHAIRMAN BROWN: Go ahead. 15 MR. WISEMAN: Okay. 16 BY MR. WISEMAN: 17 Q So, on 673 -- Dr. Morley, you have that also? 18 Α I do. 19 And I -- I said to you: Now, would you agree 0 20 that FPL serves some extremely densely-populated 21 counties such as Dade and Broward, right? 22 And you answered: Yes, we serve those 23 counties. 24 Then I asked you -- I said: And there are 25 other counties in the state that clearly are not densely Premier Reporting

1 populated at all. Wouldn't that be true. 2 And you agreed with that. 3 Then I said: Is it fair to assume that 4 population growth in Dade and Broward Counties may 5 differ, for example, from population growth than a --6 than a rural area. 7 Why don't you read out loud your answer? 8 Α "Dade and Broward County differ in population 9 growth from each other. Dade actually has a much higher 10 population growth or, I should say, growth in customers 11 than Broward does." 12 Q And I said to you: Well, my question is --13 let me try it another way. So, in order to understand 14 population growth, you would need to look at individual 15 counties, I think. That's what you just said, correct? 16 In other words, the population growth in one county is going to be different than the population growth in 17 18 another county, right? 19 And can you read out loud your answer? 20 Α I said, yes. 21 Thank you. Q 22 And that was true at that time. Α What we're 23 looking at now is much more consistent growth. And I would also reiterate that we were using the statewide 24 population numbers in the last rate case. 25

1	Q I'm sorry. You were or were not?
2	A We were.
3	MR. WISEMAN: Yes. Okay.
4	I would like, now, marked for identification
5	as Exhibit 631 this would be the FPL direct
6	testimony of Stephen R. Simm that was provided with
7	the FPL petition for need determination, the
8	Okeechobee Clean Energy Center Unit 1?
9	CHAIRMAN BROWN: Okay. That is a very big
10	document in the stack. It has a clip on it. And
11	we will mark that as 631.
12	(Whereupon, Exhibit No. 631 was marked for
13	identification.)
14	MS. MONCADA: And at the risk of stating the
15	obvious
16	CHAIRMAN BROWN: Yes.
17	MS. MONCADA: Madam Chair, Dr. Morley and
18	Dr. Simm are not the same person.
19	CHAIRMAN BROWN: Yes, that is stated. Thank
20	you.
21	MR. WISEMAN: I am shocked. I didn't know
22	that.
23	THE WITNESS: Me, too.
24	CHAIRMAN BROWN: She doesn't look like
25	Dr. Simm.

1		MR. WISEMAN: Thank God although, I don't
2	know	what Dr. Simm I don't know what Dr. Sim
3	look	s like, but I'm sure
4		(Laughter.)
5		THE WITNESS: Mr. Wiseman, I thought of a
6	clar	ifying point I should have mentioned in our
7	last	line of questioning.
8	BY MR. WI	SEMAN:
9	Q	Yes.
10	А	If you wouldn't mind, I would like to
11	Q	I
12	A	offer it. If not, I understand.
13	Q	Please.
14	A	When we look at population by county and we
15	say that	the counties we serve on balance look like the
16	state, it	doesn't mean each county grows at the exact
17	same rate	of the state. We're serving 35 counties; some
18	growing f	aster, some growing slower. But on balance, we
19	look like	the state.
20	Q	Okay.
21	A	Thank you.
22	Q	You're welcome.
23		Now, Dr. Morley, Dr. Simm reports to you; is
24	that corr	ect?
25	А	Yes, he does.
L		

1 And is it right that you reviewed -- well, Q 2 first of all, he submitted this testimony that's before 3 you in support of the petition for need -- petition for 4 determination of need for the Okeechobee plant, correct? 5 Α Yes. 6 0 And am I correct that you reviewed his 7 testimony before it was finalized? 8 Α Yes. 9 0 And you -- and you provided comments on his 10 testimony before it was finalized, correct? 11 Α Yes. 12 And you reviewed his testimony after it was Q 13 finalized, correct? 14 Α Yes. 15 And is there -- so, you're familiar with the 0 16 testimony that's appended to the petition here in 17 Exhibit 631, correct? 18 I was familiar at the time it was filed. Α Tt's 19 fairly-lengthy testimony. I'm not sure how many details 20 I can recall right now, but I -- I definitely reviewed 21 it before it was filed. 22 And to the best of your knowledge, was Q Okay. 23 there anything in it that you disagreed with? 24 Α No. 25 MR. WISEMAN: Thank you.

1	Madam Chair, that's all I have.
2	CHAIRMAN BROWN: Fair enough.
3	All right. On to Retail Federation.
4	MR. LAVIA: No questions.
5	CHAIRMAN BROWN: Thank you, Mr. Lavia.
6	FEA? Mr. Jernigan?
7	MR. JERNIGAN: No questions. Thank you.
8	CHAIRMAN BROWN: Thank you, Mr. Jernigan.
9	Sierra Club?
10	MS. CSANK: I have questions, Madam Chair.
11	CHAIRMAN BROWN: I thought so. You may
12 pr	roceed.
13	MS. CSANK: Wonderful.
14	EXAMINATION
15 BY MS.	CSANK:
16 Q	Good afternoon, Dr. Morley.
17 A	Good afternoon.
18 Q	My name is Diana Csank. I represent the
19 Sierra	Club. And I would ask you to continue with the
20 yes, no	, I don't-know convention and only provide
21 explana	tions where needed to keep this moving along.
22	Dr. Morley, you're the director of resource
23 plannin	ng and assessment, right?
24 A	Yes.
25 Q	And you were promoted to this position last
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1	year?
2	A Yes.
3	Q You were promoted because you're qualified to
4	lead this important part of the company?
5	A I hope so. I guess you would have to ask my
6	boss why he promoted me.
7	Q Your current responsibilities include
8	overseeing the forecasts that support integrated
9	resource planning and the planning process, itself.
10	A I would agree with that, for the most part.
11	There are a lot of forecasts that goes into the
12	integrated resource plan forecast for natural gas prices
13	and so forth that I'm not responsible for.
14	Q Thanks for the clarification.
15	During this hearing, the term "resource
16	planning" has come up several times. And you seem to be
17	the most-qualified witness so far to define that term
18	for us. Please do so with an emphasis on integrated
19	resource planning.
20	A Well, I would disagree that I'm the most-
21	qualified. I think that, in this case, the issue of
22	generation projects is not are not addressed in my
23	direct testimony or my rebuttal. They are addressed in
24	the testimony of Mr. Barrett.
25	Q Okay.

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1 Α He has overseen the resource planning 2 department -- has reported up to him for several years. 3 And I think he's been identified as the resource planning witness in this case. 4 5 Q Okay. I appreciate that. 6 So, just to -- just to be clear -- and I will 7 keep my questions close to your testimony, I promise. 8 But because you identify integrated resource planning --9 and we've been using the shorthand of resource planning. 10 Are you familiar -- is there a difference or is that 11 kind of common electric-industry parlance to say 12 resource planning, but refer to the more-complete term 13 of integrated resource planning? Do you know? 14 I think they are --Α 15 -- comparable? 0 16 -- comparable. Α 17 Okay. And there's -- and as far as you know, Q 18 that's -- that's the practice in the company. So, when 19 FPL witnesses generally say resource planning, that's 20 not -- that's no different than integrated resource 21 planning; is that right? 22 Α My recollection, yes. 23 Q Thank you. Okay. 24 So, turning to Page 8, Line 20 of your 25 testimony, Dr. Morley --

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1	A Yes.
2	Q There, you state: FPL has found the
3	population growth, wealth, economy, and energy-
4	efficiency codes and standards are the primary drivers
5	of future electricity need.
6	Did I get that right?
7	A No, there was an errata there
8	Q Oh, okay.
9	A where I clarified that they are among the
10	primary drivers
11	Q Thank you for that.
12	A of the electricity needs.
13	Q And load forecasting, generally speaking,
14	focuses on the demand-side, right?
15	A Yes.
16	Q Okay. And I understand there are many drivers
17	to load forecasts. And here, you've identified some of
18	the primary drivers; meaning, that they are among the
19	more-important ones, yes?
20	A They are the models that we incorporate
21	directly into our model. There are other factors, such
22	as the company-sponsored energy-efficiency programs,
23	which are also important. And they are treated as
24	adjustments to the forecast.
25	Q Okay. And we'll get to that.

1	So, you say energy-efficiency codes and
2	standards are among the primary drivers of future
3	electricity need for the company?
4	A Yes.
5	Q Could you please give us a concise definition
6	of the codes and standards, as you use the term?
7	A Sure. It's it refers specifically to some
8	estimates that we've received from Itron, which is one
9	of the leading firms in the in the business. And
10	Itron, for a number of years, has quantified for us the
11	engineering impact of major changes in codes and
12	standards.
13	And this goes back to the 2005 Energy Policy
14	Act where we have higher standards for air conditioning.
15	We have new standards for lighting and so forth.
16	So, it's it's based on their engineering
17	study that they do for us. I think it's every other
18	year. And it looks at not all the energy-efficiency
19	codes and standards because there would be hundreds of
20	those, but looks at the major ones that have been
21	enacted.
22	Q Do you know if do other utilities, in their
23	forecasting, look at all? Is that something that's
24	feasible to do?
25	A I don't no, I don't think it would be

1 feasible. 2 And so, in other words, codes and 0 Okay. 3 standards are set typically by third parties and 4 government agencies. And they yield demand-side 5 resources? Is that a fair characterization? 6 Α They are set by the government. And the -- I 7 want to make sure I got that last part. 8 Q Oh --9 Α Their yield -- something? 10 Oh, I'm sorry. I should be more clear. 0 11 Demand-side resources. 12 Α They yield demand-side resources? 13 In other words, they contribute -- they have 0 14 megawatt-hour impacts that go towards forecasting or are 15 incorporated into forecasting. Did I get that right? 16 They -- they reduce the level of future sales. Α 17 Okay. So, codes and standards do not refer, I Q 18 think, as you said earlier, to the demand-side 19 management programs that the company sponsors? 20 Α That's correct. 21 Q But they are fairly similar. 22 So, let's call the company's demand-side 23 management programs DSM for short. Those programs aim to go above and beyond the contribution or reduction of 24 25 sales from codes and standards?

1 A Yes, that's my understanding. There is, of
2 course, a DSM witness in this case, as well.
3 Q Okay. And I just I want to understand how
4 DSM factors into your forecasting
5 A Sure.
6 Q which is why I'm putting these questions to
7 you.
8 DSM includes energy-efficiency measures, you
9 said?
10 A Yes.
11 Q And demand response?
12 A Yes. Yeah you mean load management?
13 Q Yeah.
14 A Yeah.
15 Q Anything else?
16 MS. MONCADA: And Madam Chair, before we go
17 too far down the line on DSM
18 CHAIRMAN BROWN: Yes.
19 MS. MONCADA: I just want to make sure that we
20 tie it to Dr. Morley's testimony and don't try to
21 convert this into a DSM
22 CHAIRMAN BROWN: Streamline it, please.
23 MS. CSANK: Absolutely. These are predicate
24 questions to where I'm going.
25 CHAIRMAN BROWN: Thank you, Ms. Csank.
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1 BY MS. CSANK: 2 0 So -- sorry. Just -- would you please just 3 answer the question? Anything else besides load management energy efficiency that are included in the 4 5 company's programs, that you know? 6 Α Not that I know of. 7 Q Okay. 8 I think Witness Koch would probably be a good Α 9 one to address that question. 10 0 Understood. 11 So, to your forecasting, DSM does show up. 12 And it shows up in net-energy-for-load forecast? 13 Yes, we take -- we take DSM into account in Α 14 coming up with our net-energy-for-load forecast. 15 How do you take it into account? 0 16 Α Yes. 17 Q How. 18 Α I'm sorry. We -- we reduce our net-How. 19 energy-for-load forecast based on the approved DSM 20 goals. 21 Q So, to put a finer point on it, this 22 Commission sets demand-side management goals for the 23 The last time those goals were set was in company. 24 2014. Yes? 25 А Yes.

1	Q Yes. And the input for your forecasting is
2	that incremental level of DSM that is comparable to the
3	target identified by the Commission? Or is it in
4	other words, is it less than, equal to, or greater than
5	whatever the Commission last set in the 2014 goals?
6	A It's based on what the Commission set in the
7	2014 goals, plus I think our estimated amount of sign-
8	ups through mid-20 no, let me that's not true.
9	It's based on what's in the in the goals.
10	Q So, it's equal to.
11	A Yes, that's my understanding.
12	Q Do you have any reason to think that wouldn't
13	be inaccurate or
14	A No.
15	Q No. Okay.
16	And how what's the relationship between net
17	energy for load the net-energy-for-load forecast and
18	peak peak demand?
19	A They are they are modeled separately. They
20	are, if I may, actually, reflecting different types of
21	usage. Net energy for load is used throughout the year,
22	you know, 8760, if you would; whereas, peak demand is a
23	single hour the single hour of highest usage.
24	So, they're they're different things. We
25	use different models to forecast them, but they are
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1 b	pased on the same customer forecast, the same definition
2 0	of normal weather, the same types of adjustments,
3 i	ncluding incremental DSM.
4	And they are based on the same economic
5 f	orecasting provided by Global Insight.
6	Q And codes and standards are also
7	A Yes.
8	Q included in peak demand?
9	A Yes.
10	Q Okay. So, it's fair to say, then, that the
11 a	ssumed level of megawatt-hour impacts for energy-
12 e	efficiency codes and standards, on the one hand, and
13 D	OSM, on the other, are primary drivers of not only net
14 e	energy for load, but also for peak demand?
15	A Yes, they are they are among the drivers,
16 y	res.
17	MS. CSANK: Okay. Great.
18	I'm breezing through my questions.
19	CHAIRMAN BROWN: Thank you.
20	MS. CSANK: One moment, please.
21 B	BY MS. CSANK:
22	Q So, in the spirit of continuous improvement in
23 a	ccurate forecasting, does FPL investigate whether it
24 c	oncede whether it can exceed the goals in between
25 C	Commission DSM goal dockets?
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1 I think that's an issue for Witness Koch. Α 2 0 Okay. But insofar as you did sponsor 3 forecasts that are before the Commission, do you know 4 whether there was any -- I mean, I think earlier, you 5 said the amount of incremental DSM, for example, was 6 equivalent to the goals. 7 And I was just wondering if there is -- if you 8 know of any other analysis underway that would actually 9 change that result or -- or lead to a higher level of 10 DSM being included in the forecast, either as you 11 presented to the Commission or in the near future. 12 Α No, our -- our purpose with the -- having an 13 adjustment for incremental DSM is to match what our 14 goals are and what our approved DSM plan is. 15 Q Okay. 16 (Brief pause.) 17 I'm skipping over questions. So, please bear 18 with me. 19 So, do you know if the company's integrated 20 resource planning examines the available cost-effective 21 DSM at any other point besides the forecasting we just 22 discussed? 23 CHAIRMAN BROWN: FPL? 24 MS. MONCADA: Resource planning will be 25 addressed by Witness Barrett.

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1 CHAIRMAN BROWN: Okay. 2 MS. CSANK: Okay. 3 CHAIRMAN BROWN: Counsel. 4 BY MS. CSANK: 5 Q I hope he knows the answer to that question. 6 Okay. Let's turn to the critical electric 7 load pockets in FPL's service territory. Are you 8 familiar with those? 9 Α Yes. 10 Have you overseen FPL's evaluation of such Q 11 pockets? Is that -- does that fall in your wheelhouse? 12 Α I think that's an evolving issue. So, yes. 13 Q Yes? Okay. 14 Are you aware of any new evaluations since the 15 last rate case of the critical load pocket in Broward 16 County? 17 Α I think that's an issue that we're continuing 18 to evaluate over time. 19 What does -- what does that mean exactly? 0 20 Α It's -- we're continuing to look at that 21 issue. 22 And Madam Chair, I would add MS. MONCADA: 23 that it's not addressed in her testimony. 24 CHAIRMAN BROWN: Okay. 25 MS. CSANK: Okay.

1 Please proceed. CHAIRMAN BROWN: 2 MS. CSANK: May I just ask, are you aware, 3 when you say the company is in the midst of 4 evaluating, who -- who would that fall to or who 5 could speak to that in this case? Or could 6 Counsel? I'm sorry. 7 MS. MONCADA: I don't. I'll turn 8 to my learned counsel next to me and see if he 9 knows. 10 (Discussion off the record.) 11 We would encourage her --MS. MONCADA: 12 Ms. Csank -- to ask Mr. Barrett, but I don't know 13 if he will know the answer. 14 CHAIRMAN BROWN: Okay. 15 MS. CSANK: Thank you. 16 Dr. Morley --17 MR. MOYLE: Madam Chair, just -- so, the 18 peakers -- we're taking the position that, you 19 know, maybe they don't need all these peakers. 20 They should put them in Fort Myers and --21 CHAIRMAN BROWN: Mr. Moyle, this is not the 22 place or time for this input. 23 MR. MOYLE: Okay. 24 CHAIRMAN BROWN: Ms. Csank has the floor. 25 Please proceed.

1 MS. CSANK: Thank you, Madam Chair. 2 BY MS. CSANK: The -- he was about to take my question from 3 0 4 me. 5 The \$800 million request for seven new gas-6 combustion turbines and FPL's request in this case, you 7 told me earlier, was not triggered by a resource need. 8 Is that still true? 9 Α Yes, that was --10 Madam Chair, again, this has --MS. MONCADA: 11 Dr. Morley is here to testify strictly about the 12 load forecast. And those issues are not addressed 13 There have -- there has been an issue by her. 14 identified in the pre-hearing order. And the --15 the witness for FPL identified for that issue is 16 Mr. Barrett. 17 CHAIRMAN BROWN: Okay. Objection sustained. 18 MS. CSANK: Okay. 19 CHAIRMAN BROWN: Please move along with your 20 questions. BY MS. CSANK: 21 22 Dr. Morley, you've talked a little bit with 0 23 other counsel about the load shape for FP&L. And you told us that typically FP&L is summer-peaking. 24 Could 25 you please identify when that summer peak typically Premier Reporting

1 occurs, both the month and the time during -- of day? 2 It typically occurs in August around Α Yes. 4:00 to 5:00 p.m.; although, we have also had peaks 3 4 occurring in the months of June and July as well. 5 Q Okay. Great. 6 And I'm not sure if this is something to put 7 to you, but I'll -- I'll try it. So, please indulge me. 8 In terms of the load forecasting that you do, could you 9 just describe how that interfaces with the -- the siting 10 decisions by the company? 11 In other words, what's the process? You 12 create the forecast. And you're the one who helps 13 identify the unmet needs? 14 Α Yes. 15 And then, how does that sort of Okay. 0 16 translate into decision-making around future siting of 17 additional generation resources, for example? 18 MS. MONCADA: That would go beyond the scope 19 of Dr. Morley's testimony. So, I object. 20 CHAIRMAN BROWN: Ms. Csank, can you direct me 21 to where that falls within her direct? 22 Well, she's describing the --MS. CSANK: 23 the -- the company's forecasts. And I'm trying to 24 understand, on a general level, how that informs 25 resource selection and siting. So, it's a -- it's

1	more of a general background question.
2	CHAIRMAN BROWN: I will allow it. If she
3	knows the answer, then she can testify to that.
4	MS. CSANK: That's
5	CHAIRMAN BROWN: If she doesn't, then
6	she can
7	MS. CSANK: the end of line for me on that
8	one.
9	THE WITNESS: As I understand your question,
10	you're asking how the load forecast determines
11	not not the need, but where we actually site
12	facilities.
13	BY MS. CSANK:
14	Q Yes.
15	A It does not play a role in that.
16	Q Okay. And we've we've talked before in
17	your deposition about various demographic-type
18	information that informs load forecasting, but does
19	that is that demographic information considered
20	elsewhere in identifying where generation should be
21	located? Do you know?
22	A To my knowledge, like the information we we
23	see from Global Insights is not used to determine a site
24	location
25	Q Okay.

A -- if that's your question.

1

2 Yeah, maybe if I rephrase my question -- so, 0 3 for example, you know, the environmental community and 4 Sierra Club's members are very concerned about equity 5 issues and low-income and minority communities that are 6 overburdened by pollution. 7 So, I'm just trying to understand whether you 8 have any knowledge in this case about how the company 9 identifies and addresses those issues with respect to 10 forecasting and its larger integrating resource planning 11 enterprise. 12 Α My understanding is that there are groups 13 within the company, project development, the real --14 real estate people, environmental people who would be 15 involved in those issues. And they would definitely 16 consider the factors that you're considering, like the neighborhoods and stuff like that. 17 18 Do you know if there is a witness who speaks Q 19 to that issue? 20 Α I do not. 21 Okay. It goes to the broader MS. CSANK: 22 question of prudency of some of the things --23 CHAIRMAN BROWN: Do you have any further

24 questions?

25 MS. CSANK: No, thank you.

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1 CHAIRMAN BROWN: Okay. Thank you, Ms. --2 MS. CSANK: Wait. No. No. Sorry. 3 CHAIRMAN BROWN: Oh. 4 MS. CSANK: On that issue. I do have further 5 questions. 6 CHAIRMAN BROWN: Jumped ahead. 7 MS. CSANK: Thank you. 8 BY MS. CSANK: 9 0 So, I just wanted to confirm -- you've spoken 10 quite a bit about jobs and how job forecasts are 11 derived. And I was wondering if you could tell us a 12 little bit more about whether or how monthly job growth 13 can be calculated by the company or is calculated by the 14 company. 15 It's actually calculated by the Bureau of Α 16 Labor Statistics. 17 Q Okay. 18 Do you want me to talk about that? Α 19 Does -- and so that -- that, for example, 0 20 identifies or can you -- yeah, describe the data that 21 you -- that you use it or how you use it. 22 Α Yeah, I understood your question to be what we 23 were talking about earlier, which is the historical 24 actuals for the number of jobs in Florida. And that's 25 provided by the Bureau of Labor Statistics.

1 Uh-huh. Q I also use a -- some projections on job growth 2 Α 3 that are from Global Insight. Do you want me to talk 4 about that? 5 Q Sure. Yes, please. I use the forecasts of job growth from 6 Α Okav. 7 Global Insight, more specifically within our net-8 energy-for-load model. We have a variable that's called 9 the weighted per-capita income. And that's based on a 10 projections of per-capita income in Florida, weighted by 11 the percent of the population employed so that we get 12 both that effect of income and employment in forecasting 13 sales. 14 So, for example, would you see increases in Q 15 clean-energy job growth? Is that something that's 16 identified in those data? 17 Α It's total jobs. It's not --18 Total jobs. So, it's not sector-specific? Q 19 Α No. 20 MS. CSANK: Okay. No further questions. 21 Thank you, Dr. Morley? 22 THE WITNESS: You're welcome. 23 CHAIRMAN BROWN: Thank you, Ms. Csank. 24 Walmart. 25 No questions for this witness. MS. ROBERTS:

1	CHAIRMAN BROWN: Thank you.
2	AARP?
3	MR. COFFMAN: No questions.
4	CHAIRMAN BROWN: Thank you.
5	Staff.
б	MS. HARPER: We have questions. Okay.
7	EXAMINATION
8	BY MS. HARPER:
9	Q Good afternoon, Dr. Morley.
10	A Good afternoon.
11	Q I know you've been through a lot of questions
12	already, but these are not going to be duplicative.
13	CHAIRMAN BROWN: And I was just going to
14	suggest, make sure that they are not unduly
15	repetitious.
16	MS. HARPER: They will not be. Thank you.
17	BY MS. HARPER:
18	Q Dr. Morley, I'm going to ask you some specific
19	questions about FPL's net-energy-for-load forecast in
20	this case. Is it correct that FPL's net-energy-for-load
21	forecast for 2017 and 2018 is based, in part, on the
22	price of the FPL's electricity in 2017 and 2018?
23	A Yes.
24	Q Is it also correct that FPL has used its
25	proposed increases in its base rates to determine the
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1 cost of electricity and, therefore, its 2 net-energy-for-load forecast load forecast? 3 Α Could you repeat the question? 4 0 Yes, ma'am. Is it also correct that FPL has 5 used its proposed increases in its base rates to 6 determine the cost of electricity and therefore, its 7 net-energy-for-load forecast? 8 Α No, not completely. At the time we did the 9 load forecast in January 2016, we used the most -- what 10 we thought was the most-current estimate of what that 11 increase was going to be. So, it was not the final 12 increase requested in this case. 13 Let's assume that the current base-rate Q Okay. 14 requests for 2017 is 50 percent of the amount FPL has 15 In this case, in accordance with your prior requested. 16 responses, is it correct that FPL's net energy for load 17 would be forecasted to increase by an additional 18 435,000 -- 435,727 megawatt hours? 19 I -- yes, it's forecasted to increase. Α I can 20 refer to the specific discovery response to confirm that 21 number. 22 I believe it's Exhibit 439. MS. HARPER: But 23 let me see if our exhibits have been distributed 24 yet. Hold on, please. We are about to distribute these exhibits at 25

1	this time. We have just a few.
2	CHAIRMAN BROWN: Ms. Harper, have these
3	already been pre-marked on the comprehensive
4	exhibit list?
5	MS. HARPER: Yes excuse me. The exhibits
6	that have not been marked there are there's a
7	combination. We you have gotten exhibits that
8	have been marked or actually that we're going to
9	ask to be marked today.
10	And then, the copies that I or the exhibits
11	I was referring Dr. Morley to we have provided
12	courtesy copies for her to look at because they are
13	on the comprehensive list.
14	CHAIRMAN BROWN: Okay. Would you like to mark
15	these at this time?
16	MS. HARPER: Can we wait and go through them?
17	If we can.
18	CHAIRMAN BROWN: Sure.
19	MS. HARPER: Thank you.
20	CHAIRMAN BROWN: Our next number is 632.
21	MS. HARPER: Okay. Thank you, ma'am.
22	BY MS. HARPER:
23	Q So, Dr. Morley, I will I wanted to just
24	confirm, because I wasn't sure if I got the answer
25	there, on my last question, I asked if you to make an
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1 assumption that, if the current base-rate request for 2 2017 was for 50 percent of the amount FPL had requested, 3 is it correct that FPL's net energy for load would be 4 forecasted to increase by an additional 435,727 megawatt 5 hours? 6 Α Yes. 7 0 Thank you. 8 This increase in megawatt hours would 9 necessarily be apportioned between the residential and 10 commercial classes as an adjustment to those forecasts; 11 is that correct? 12 Α Yes. 13 What impact would the 435,727 megawatt hours 0 14 have on FPL's revenue in this case? 15 That -- that, I don't have. Α 16 Isn't it true that the impact of higher Q Okay. current projected 2017 fuel costs could -- would offset 17 18 a portion of the net-energy-for-load increase? 19 Yes, that's my understanding; although, we Α 20 forecasted an increase in fuel going from 2016 to '17 in 21 our price-of-electricity variable in this case. My 22 understanding now is that that increase is likely to be 23 higher. 24 Has FPL provided an estimate of the higher 0 25 projected 2017 fuel costs it references in this response

1	for 2017 or 2018 in either this proceeding or the fuel
2	docket?
3	A No, not to my knowledge.
4	Q Has FPL provided an estimate of the impact of
5	such increased costs that it would have on its
6	net-energy-for-load forecast energy-for-load forecast
7	for 2017 or 2018?
8	A Not at this point. Perhaps that's something I
9	could provide when I return next week.
10	Q So, you do have such an estimate?
11	A No, but I am hopeful that we would have it
12	next week.
13	Q Okay.
14	MS. MONCADA: And FPL would also add that,
15	shortly and I don't know the exact date but
16	soon, we will have filed in the Fuel Clause
17	MR. BUTLER: September 1.
18	MS. MONCADA: September 1, thank you.
19	By September 1, we will have the new fuel
20	forecasts filed in Docket 160001.
21	CHAIRMAN BROWN: Okay.
22	MS. HARPER: Thank you.
23	BY MS. HARPER:
24	Q Are there any other electricity-costs
25	assumptions which have changed for FPL besides fuel

1	costs and the amounts requested in this case which could
2	also impact FPL's net-energy-for-load forecasts?
3	A Not to my knowledge.
4	Q Okay. Now, I'm going to ask you questions
5	about the weather variables you discussed in your net-
6	energy-for-load model. Isn't it true that, in prior
7	cases, FPL used a 30-year rolling average of weather to
8	forecast load?
9	A Yes, if by prior, you mean before 2009. Since
10	2009 or so, we have consistently used 20 years.
11	Q Okay. You stated in your deposition on
12	August 5th that: FPL's decision to reduce the period of
13	the rolling average of weather from 30 years to 20 years
14	was to, quote, be more contemporary, but to have enough
15	data points in enough years that it would not create
16	an unnecessary, volatile definition of normal weather.
17	Do you remember stating that?
18	A Yes.
19	Q What are the benefits that FPL expects to
20	receive from making that change?
21	A What change is that?
22	Q The 30 years to the 20 years.
23	A We we expect it to have a more contemporary
24	period and just to clarify is we were using not
25	30 years. We were using a period of, I think, 1949
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1 forward. It wasn't -- it was not 30 years prior to our 2 use of the 20 years. 3 We changed to 20 years to get a more 4 contemporary period and to be also more consistent with 5 the other Florida utilities. So, that was the reason 6 for the change. 7 Okay. Did FPL's decision to reduce the period Q 8 of rolling average of weather from 30 to 20 result in an 9 increase of volatility on the weather assumptions? 10 And in fact, 20 years is a -- a good Α No. 11 point, if you would, to use because it is a contemporary 12 period. It's actually shorter than the period NOAA 13 At the same time, it's enough data points, 20, to uses. 14 not create unnecessary volatility. 15 MS. HARPER: Okay. Thank you. 16 At this time, I would like to refer to the --17 one of the exhibits that we provided that's titled 18 "NEL forecast using ten-year weather 19 normalization." 20 CHAIRMAN BROWN: We'll label that -- we'll 21 title it -- 632. 22 (Whereupon, Exhibit No. 632 was marked for 23 identification.) 24 CHAIRMAN BROWN: And just to confirm, 25 Dr. Morley, you have a copy of that in front of

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1 you? 2 I do. THE WITNESS: 3 MS. HARPER: Okay. Thank you. 4 BY MS. HARPER: 5 Q Dr. Morley, please turn to the first page of 6 this exhibit. 7 Α I'm there. 8 Q Do you agree that this document is a graph of 9 FPL's historical cooling-degree hours based on a rolling 10 20-year average and a rolling 10-year average with 11 associated trend lines beginning in 2000 and ending in 12 2015? 13 Α Yes. 14 Is there a positive trend in FPL's Q Okay. 15 20-year cooling-degree hours average? 16 Yes, there is a positive trend. And it's a Α 17 fairly good R-squared -- pretty good R-squared. It's 18 90 percent. And that indicates to me that the rolling 19 20-year average that we are using in our proposed 20 forecast tracks well with that trend. 21 Q Dr. Morley, you will see in the right Okay. 22 portion of the page that you indicate that the R-square 23 for the ten-year trend line is .4433 or 44 and 24 .33 percent; is that correct? 25 And just to clarify, that -- that means Α Yes.

1 that the -- the trend line explains only about 2 44 percent of the variability in the rolling ten-year. 3 That is due to the fact that the rolling ten-year jumps 4 up and down a lot. It's -- it's quite volatile. 5 Q Okay. So, then, in this case, the line 6 accounts for -- just to make sure I have this clear --44.3 percent of the variability in the rolling ten-year 7 8 average, correct? 9 Α Yes. 10 Isn't it true that the R-square for the 0 Okay. 11 20-year trend line is .9031 or 90.31 percent? 12 Α Yes. 13 Does the roll -- doesn't the R-square of .9031 0 14 mean that the line accounts for 90.3 percent of the 15 variability in the rolling 20-year average? 16 Α And as you note, what we are using in Yes. 17 this case is that very last point on the rolling 20-year 18 average, that very last point on your right. And you 19 see it's -- it's almost right on the trend line. 20 Q Okay. Is it correct that you indicated in 21 your deposition that the trend of FPL's 20-year rolling 22 average of cooling-degree hours depends on what your starting period is? 23 24 I believe I was shown something similar Α Yes. 25 to this, but without the -- the R-square and so forth.

1	So, I didn't know at that time where that line was
2	coming from.
3	Q Okay. Can you accept, subject to check, the
4	R-square for FPL's 20-year rolling average of cooling-
5	degree hours with a starting year of 2006 and ending
6	year of 2015 is approximately 87.7 percent?
7	A Yes.
8	Q Okay. Can you accept, subject to check, the
9	R-square for FPL's 20-year rolling average of cooling-
10	degree hours with a starting year of 2006 and an ending
11	year of 2015 is 88 percent I'm sorry 10-year
12	rolling average.
13	A Could you repeat that?
14	Q Yes, ma'am. I'm sorry.
15	Could you accept, subject to check, the
16	R-square for FPL's 10-year rolling average of cooling-
17	degree hours with a starting year of 2006 and a ending
18	year of 2015 is 88 percent?
19	A Yes. Of course, that's in both the case of
20	the 10-year and the 20-year, you're fitting R-square
21	was about 10 points, which is a pretty limited sample.
22	Q Okay. I have just a few questions for you
23	about this trend line on the graph. Is FPL's NEL
24	forecast for 2016 through 2018 based, in part, on a
25	continuation of the trend of 20-year rolling average
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1 cooling-degree hours through the 2015 shown on this 2 graph? It's based on the very last point on the 3 Α No. 4 rolling 20-year average line. 5 Q Okay. Why did you determine not to use the 6 trend of cooling-degree hours through the projected test 7 years in your net-energy-for-load forecast if, in fact, 8 you recognize that there is a trend in the historical 9 data? 10 Because, as your questions earlier pointed Α 11 out, the trend line is sensitive to the starting point 12 and -- shall we start in 2000; shall we start in 2001; 13 shall we start in 1999. That's one reason. 14 And secondly, just based on this particular 15 line, is what we're using is, in fact, already very 16 close to the trend line. 17 MS. HARPER: Okay. Thank you. 18 At this time, I'm going to refer you to the 19 other exhibits that were provided. There were 20 three additional staff exhibits. 21 Would you like them marked CHAIRMAN BROWN: 22 for identification? 23 Yes, please. MS. HARPER: 24 CHAIRMAN BROWN: Okay. We could do the --25 MS. HARPER:

1	CHAIRMAN BROWN: We're at 633.
2	MS. HARPER: Yes. We can do the BE oh,
3	sorry BEBR Florida estimates of population,
4	2015.
5	CHAIRMAN BROWN: That's 633.
6	(Whereupon, Exhibit No. 633 was marked for
7	identification.)
8	MS. HARPER: Then we can do the demographic
9	estimating conference executive summary.
10	CHAIRMAN BROWN: That's 634.
11	(Whereupon, Exhibit No. 634 was marked for
12	identification.)
13	MS. HARPER: And then the final one, "Making
14	the housing unit method work."
15	CHAIRMAN BROWN: That's 635.
16	(Whereupon, Exhibit No. 635 was marked for
17	identification.)
18	MS. HARPER: Okay. Great.
19	And then
20	CHAIRMAN BROWN: I just want to confirm with
21	Dr. Morley, though, that she has all of those.
22	THE WITNESS: Yeah, I'm I'm with the first
23	one, I think.
24	MS. HARPER: Okay.
25	THE WITNESS: If you could repeat

1 CHAIRMAN BROWN: Okay. 2 MS. HARPER: So, Dr. --3 THE WITNESS: I meant, I really don't have any 4 of the numbers. If you could --5 MS. HARPER: Okay. 6 THE WITNESS: -- repeat them -- I apologize. 7 All right. So, the first one CHAIRMAN BROWN: 8 is identified BE -- the title is BEBR, Florida 9 estimates of population, 2015. That is identified 10 as Exhibit 633. 11 Hold on. THE WITNESS: Okay. 12 CHAIRMAN BROWN: The second one is the 13 demographic estimating conference executive summary. And that's identified as Exhibit 634. 14 15 THE WITNESS: 634. 16 Is the other one -- was that earlier -- okay. 17 That's later in the -- and that's 633? 18 CHAIRMAN BROWN: I'm sorry? You said? 19 I couldn't hear her. MS. HARPER: 20 CHAIRMAN BROWN: Did you say something? 21 THE WITNESS: Yes, I'm just trying to 22 clarify -- I apologize. My order is different, I 23 think, than y'all have. 24 634 is the demographic estimating conference? 25 MS. HARPER: Yes.

1 THE WITNESS: And BEBR Florida estimates of 2 population is 633? CHAIRMAN BROWN: 3 Yes. 4 THE WITNESS: Okay. 5 CHAIRMAN BROWN: And then the last one is 6 "Making the house unit method work." And that is 7 635. Got it? 8 THE WITNESS: Yes. 9 CHAIRMAN BROWN: All right. Please proceed, 10 staff. 11 MS. HARPER: Thank you. 12 BY MS. HARPER: 13 So, we're going to ask just a few questions Q 14 about these exhibits. You may recognize them from the 15 deposition. 16 Α I do. 17 Q Okay. Great. 18 So, until October 2015, has the Florida office 19 of Economic and Demographic Research and the University 20 of Florida's Bureau of Economic and Business Research 21 been the source of population data that FPL used to 22 forecast its total number -- or forecast its number of 23 total customers? 24 Α Yes. 25 0 Is it correct that -- I believe you stated

1	earlier that FPL now uses IHS Global Insight as its
2	source of population data?
3	A Yes. We believe both Global Insight and BEBR
4	are fine sources of population growth. We elected,
5	earlier in 2015, to go with Global Insight because it
6	was more consistent with the U.S. Census. And we
7	believe it has a slightly better track record in
8	forecasting.
9	But they are both fine sources. And we have
10	certainly used EDR or BEBR for a number of years.
11	Q Okay. So, I'm going to ask you to turn your
12	attention to the staff exhibit marked Florida estimates
13	of population, 2015. This is the University of
14	Florida the BEBR exhibit that we had that was 633, I
15	believe yes, 633.
16	If you could, please turn to Page 1.
17	A I'm there.
18	Q Thank you. Under the section titled
19	"guidelines for population estimates," in the first
20	paragraph, second sentence, does this document indicate
21	that the population estimates provided in the document
22	were prepared under a contractual agreement between the
23	Florida Legislature and the University of Florida's
24	Bureau of Economic and Demographic Research?
25	A Yes.

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1 And do you mind if I just refer that now to Q 2 BEBR -- refer to that document as the BEBR, the Bureau 3 of Economic and Demographic Research? 4 Α No, I don't. 5 Q Okay. Thanks. 6 Does FPL assist BEBR in the development of its 7 population forecasts? 8 Α Yes, for several years, we have provided them 9 a number of customers by county. And also, beginning 10 around 2009, we have provided them estimates -- or the 11 number of what we call low-usage customers. These are 12 customers that are using less than around 200 kilowatt 13 hours a month. And they are indicative of empty homes 14 So, I'm sure that's why BEBR is in some cases. 15 interested in it. 16 Okay. Thank you. 0 17 So, in other words, we have used -- we have Α 18 provided input into their population projections. 19 Has the methodology used by IHS Global 0 20 Insights to prepare its estimates or projections of Florida population been made available for review in 21 22 this proceeding? 23 Α Yes -- oh, I'm sorry. What did you ask? Did 24 their -- their estimates or their methodology? 25 0 Their methodology.

1 Global Insight is -- base their Α No. 2 forecasting on proprietary econometric models. If they 3 provided their models publicly, there would be no point 4 in paying for it. 5 Q So, the information that -- the methodology is 6 publicly available? 7 Α No, their models are not publicly available. 8 Q Okay. 9 Α We do know that it's based on econometric 10 modeling, that it's consistent with the rest of their 11 economic forecast, and that they calibrate to the U.S. 12 Census numbers annually. 13 Has FPL reviewed the methodology used Q Okay. 14 by IHS Global Insight to prepare its estimates or 15 projections of Florida population? 16 Yes, we have reviewed the fact that they Α 17 calibrate annually to the U.S. Census. And that they 18 are consistent -- their population projections are 19 consistent with our economic projections. So, that 20 creates consistency. 21 Q So, just to clarify -- I'm not sure if I 22 caught that -- did you say that they -- FPL has reviewed 23 that methodology? 24 Α We have reviewed the methodology --25 0 Okay.

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1	A such as I explained it.
2	Q Okay.
3	A We don't have access to the inner workings of
4	their proprietary models.
5	Q Okay. Dr. Morley, I would like you, now, to
6	please turn to staff exhibit titled "demographic
7	estimating conference executive summary," which I
8	believe is 634.
9	A I'm there.
10	Q Okay. Great. I have just a couple of
11	questions on that.
12	Dr. Morley, do you recognize this exhibit as
13	an excerpt of a document prepared by the Florida Office
14	of Economic and Demographic Research?
15	A Yes.
16	Q Okay. Please look at to the bottom of the
17	page. Does this section indicate that the population
18	estimates developed by the U.S. Census Bureau continue
19	to be higher than the official state official
20	population estimate?
21	A Yes.
22	Q Okay. According to this document, is the U.S.
23	Census Bureau Florida population estimate as of
24	July 1st, 2015, higher than the official state estimate
25	by over 375,000 persons?

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1	A Yes.
2	Q Dr. Morley, I would like to, now, turn your
3	attention to the last exhibit here, Exhibit No. 634,
4	the titled "Making it" 635, excuse me. "Making
5	the housing unit method work" is the title on that one.
6	And if you could, please turn to Page 98 in that
7	document. And let me know when you're there, please.
8	And that's 98, as noted at the bottom of the page.
9	That's where the page numbers are.
10	A I'm there.
11	Q Okay. Great.
12	Does the first full paragraph, second
13	sentence, indicate that at the state level, BEBR
14	estimates were more accurate in three of four years
15	studied compared to the Census Bureau's estimates?
16	A I'm I'm going to ask you to repeat the
17	reference one more time. I apologize.
18	Q Sure. No. That's okay.
19	Let's see. The first full paragraph on
20	Page 98, the second sentence appears to indicate that,
21	at the state level, BEBR estimates were more accurate in
22	three of the four years studies compared to the Census
23	Bureau's estimates. Do you see that?
24	A I do.
25	Q Now, I would like to ask you a question about

1 BEBR's recent estimates of population from the year 2011 Has BEBR and EDR been less 2 through the year 2015. 3 accurate in its recent estimates of Florida population 4 than the U.S. Census Bureau? 5 Α There is no way to know that. And if I could 6 explain, the article that you provided for me, which is 7 Exhibit 635 --8 Q Yes. 9 Α It's -- it's comparing estimates for 10 And for clarity purposes, estimates refer population. 11 to the number of -- the population level for historical 12 periods as opposed to projections, which are for future 13 periods. 14 This article compares the accuracy of BEBR's 15 population estimates and Census Bureau's estimates 16 looking at specific years, which is the years that they 17 actually went out and took the census.

18 And the last time that happened was 2010. So, 19 there is no way of knowing until 2020, the next time 20 they actually take the census, which -- whether BEBR or 21 the Census Bureau's initial estimates provide -- prior 22 to their census count ended up being more accurate. 23 Is that clear? 24 0 Yes. 25 Α Thank you.

1 MS. HARPER: Thank you. We have no further 2 questions. 3 CHAIRMAN BROWN: Thank you. 4 Commissioners, any questions? 5 I just have one question for clarification. 6 On Page 27 of your direct testimony, it's regarding 7 plug-in electrical vehicles and FPL's service 8 territory. 9 THE WITNESS: Yes. 10 Thank you. CHAIRMAN BROWN: So, you provided 11 an estimate. I'm assuming that those estimates for 12 2020 -- you're estimating that more than 70,000 13 additional plug-in vehicles are projected, which 14 will contribute 333 gigawatts an hour net energy 15 How did you derive that? load. 16 THE WITNESS: Yes. We began with some 17 nationwide estimates for the number of plug-in 18 electric vehicles and came up with what was more 19 like a consensus by looking at a variety of 20 estimates. And then we also looked at the actual 21 number of plug-in electrical vehicles that we have, 22 at the time we did this, which was around mid-2015. 23 And then again, using the motor vehicle 24 information, we estimated the -- the share that was 25 actually in our service territory. So, we

1 basically grew our share of the electric-vehicle 2 population based on what's going to happen 3 nationally. 4 And then he had also estimates for the number 5 of miles each car is expected to drive and how many 6 kilowatt hours that translates to and so forth. 7 CHAIRMAN BROWN: And that 70,000 number -- is 8 that just for FPL's service territory or is that 9 for the entire state of Florida? 10 THE WITNESS: Just for us. Do you have data for the 11 CHAIRMAN BROWN: 12 entire state of Florida? 13 THE WITNESS: Yes, I believe it's part of our 14 process. We go nationally, state, service 15 territory. 16 CHAIRMAN BROWN: Do you know what that number 17 is? 18 THE WITNESS: I don't. I'm going to guess 19 probably twice, roughly. 20 CHAIRMAN BROWN: Do you know --21 I could probably tell you next THE WITNESS: 22 week, if you want. 23 CHAIRMAN BROWN: I'm just curious. And I'm 24 curious about how many additional charging stations 25 are incorporated into that number.

1 This doesn't include a forecast, THE WITNESS: 2 per se, of charging stations. The people with our 3 company who really monitor that have not really 4 seen a clear statistical relationship between the 5 charging stations and electric vehicles. So, our forecast for plug-in electric vehicles 6 7 does not really rely on a charging-station 8 projection. 9 CHAIRMAN BROWN: What would you say that that 10 is percentage-wise in terms of growth on an annual 11 basis? 12 It's pretty fast and -- if you THE WITNESS: 13 give me a moment, I would be happy to look it up, 14 but it's --15 CHAIRMAN BROWN: Could you? 16 THE WITNESS: Yes. 17 Indulge me. CHAIRMAN BROWN: 18 THE WITNESS: (Examining document.) 19 If you could do it pretty CHAIRMAN BROWN: 20 quickly --21 I'm pretty quick. THE WITNESS: I'm there. 22 I'm going. Okay. 23 CHAIRMAN BROWN: I'm getting harassed up here. 24 (Laughter.) 25 THE WITNESS: I'm just going to give you the

1	easiest numbers to look at. It was by the end
2	of 2015, it actually ended up being about 10,000.
3	And it's got to go up to more than it's
4	projected to increase to 80,000 by 2020. So, you
5	can think of that as an eight-fold increase.
6	CHAIRMAN BROWN: All right. Thank you.
7	Redirect?
8	MS. MONCADA: Yes.
9	REDIRECT EXAMINATION
10	BY MS. MONCADA:
11	Q Dr. Morley, I would like to discuss with you a
12	couple of exhibits that have been shown to you this
13	afternoon.
14	A Okay.
15	Q And I will start with No. 627, presented to
16	you by South Florida Hospital.
17	A (Examining document.) I have it.
18	Q Thank you.
19	Mr. Wiseman, in his questioning, asked, based
20	on the tables shown on Page 1 of 2 of FPL's response to
21	staff's third set of interrogatories, No. 73, whether
22	your forecasts have historically been too low. And you
23	said yes.
24	Do you remember that?
25	A If I said that, I was I misspoke.
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1 Q Can you clarify? 2 Α Yes. I apologize. It's the negative sign here indicates over-forecasting. And on average, we 3 4 have had more negative signs, more over-forecasting than 5 under-forecasting. 6 Q Thank you. 7 Mr. Wiseman also presented to you 8 Exhibit No. 629. 9 CHAIRMAN BROWN: 629? 10 THE WITNESS: I have it. 11 MS. MONCADA: Yes, ma'am, 629. 12 BY MS. MONCADA: 13 And he pointed you to the weather-normalized Q use per customer for the -- or the projections or the 14 15 forecasts for the years 2015 through 2018. 16 Do you recall that? 17 Α Yes. 18 And you told him that those were probably Q 19 based on either the 2014 or the 2015 ten-year site plan 20 forecasts? 21 Α Yes. 22 Remember that? Q 23 Have you reevaluated the NEL per-customer 24 model since that time? 25 Α Yes. And our forecast that we are proposing

1 in this case reflects an improved model with a much-2 improved forecasting variance. 3 Q And by variance, do you mean accuracy? 4 Α Yes. I believe on a year-to-date basis, based 5 on energy for load, it's within, I think, 0.5 percent. 6 Q Staff presented you with Exhibit No. 632. 7 Α Can you identify the document? 8 CHAIRMAN BROWN: It's NEL forecasting using 9 ten-year weather normalization. 10 THE WITNESS: Okay. Thank you. 11 It's the cooling-degree graph. MS. MONCADA: 12 THE WITNESS: Got it. Thanks. 13 BY MS. MONCADA: 14 You were asked by staff about the R-squared Q 15 coefficient for the 10-year and 20-year rolling averages 16 starting -- with the starting point being 2006. Do you 17 recall that? 18 Α Yes. 19 And you agreed with the staff that the 0 20 R-squared co-efficients for those -- for both the 21 10-year and 20-year rolling averages were similar at 22 about 87 to about 88 percent? 23 Α And as I noted, that was a very short Yes. 24 period of time which to calculate an R-square. My question is: Do you know if the variance 25 0

1	around the trend also is an important measure of the
2	relative values of the 10-year and 20-year rolling
3	averages for weather normalization?
4	A Yes.
5	Q And could you please comment on the variance
6	around the trend for those two time periods?
7	A Oh, I would expect the variance around the 20-
8	year to be much smaller since it's it tends to be
9	more stable.
10	Q Thank you.
11	Just a couple more quick questions.
12	OPC asked you earlier this morning about your
13	familiarity with the Bayesian-Schwartz principle.
14	A Yes.
15	Q Do you remember that?
16	A I do.
17	Q Is that a statistic that is used to measure
18	the accuracy of your NEL forecast or any NEL forecast?
19	A No. The measure of accuracy is how well the
20	forecast predicts weather-normalized actuals. And as I
21	mentioned earlier, our the forecast we're proposing
22	in this case has a very good weather-normalized variance
23	for this year. I think it's within 0.5 percent.
24	Q Thank you.
25	Earlier, you discussed with Mr. Moyle that
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1	some utilities outside of Florida do use do use ten
2	years as their weather-normalization period.
3	Do you recall that?
4	A Yes. And as I mentioned, I think it's a
5	minority of utilities nationally.
6	Q Thank you. Thank you for that clarification.
7	Those utilities outside of Florida are they
8	subject to the same climate or weather conditions that
9	are experienced in the FPL territory?
10	A I'm sure they are not. I think that in
11	Florida is probably the only area within the 48 states
12	that's really subtropical. And that's probably
13	particularly true of our system, which is really
14	centered in South Florida.
15	Q Mr. Wiseman took you through a series of
16	exhibits that showed you the forecast or FPL's forecast
17	of winter peak demands based on a non-weather-normalized
18	basis.
19	A Yes.
20	Q Do you recall that?
21	A I do.
22	Q Are you aware of any utility that doesn't use
23	weather normalization for purposes of forecasting?
24	A No. That's standard industry practice.
25	Q Okay. And you also discussed with, I think,
L	

1 both Ms. Csank and Mr. Moyle that FPL is a summer-2 peaking utility -- or perhaps it could have been 3 Mr. Wiseman, but it was -- it was one of them. 4 Do you recall that? 5 Α Yes. 6 0 Does FPL use the winter peak for any purpose 7 in its system planning? Yes, it's -- it's part of our system planning. 8 Α 9 Our need tends to be driven more by the summer peak, but 10 it's definitely part of our long-term load forecast. 11 Earlier this morning, Mr. Moyle asked 0 Okay. 12 you whether you were an expert in this case. Do you 13 recall that? 14 I do. Α 15 How long have you been in the field of load 0 16 forecasting? 17 Α When I started with the company 33 years ago, 18 I actually started as an assistant economist in the 19 load-forecasting area. And I can't say I have been with load forecasting continuously for 33 years, but my 20 21 experience does go back aways. 22 MS. MONCADA: Thank you. 23 And I don't have any further questions, but 24 wanted to make one observation. There was some --25 a question posed to Dr. Morley regarding who could Premier Reporting

1 speak to, if anyone, in this case, load conc- --2 critical load pockets, I believe it was. 3 And Witness Kennedy yesterday evening was 4 asked questions related to transmission 5 constraints. And if that's what Ms. Csank was 6 referring to, those questions were referred --7 referred by Witness Kennedy to Mr. Miranda. 8 CHAIRMAN BROWN: Okay. Noted. 9 MS. MONCADA: Thank you. 10 All right. Let's get to the CHAIRMAN BROWN: 11 exhibits now. 12 FPL? 13 MS. MONCADA: FPL would move Exhibits 75 14 through 79. 15 Any objection to moving CHAIRMAN BROWN: 16 Exhibits 75 through 78? Seeing none, we'll move 17 Exhibits 75 through 78 into the record. 18 MS. MONCADA: It's 79, Madam Chair. Ι 19 apologize if I was unclear. 20 CHAIRMAN BROWN: 79 is Barrett's. 21 MS. MONCADA: Oh, I -- oh, I'm sorry. My 22 mistake. 23 CHAIRMAN BROWN: That's why I changed it for 24 you. All right. 25 (Whereupon, Exhibit Nos. 75 through 78 were Premier Reporting

1	admitted into the record.)
2	CHAIRMAN BROWN: So, we let's go to Public
3	Counsel now.
4	MS. CHRISTENSEN: Yes, Office of Public
5	Counsel would move 616 through 618.
6	CHAIRMAN BROWN: Seeing any objections?
7	MS. MONCADA: Yes, Madam Chair.
8	CHAIRMAN BROWN: Okay.
9	MS. MONCADA: I apologize. One of the
10	exhibits and I'm having trouble shuffling
11	through these papers right at this moment. But it
12	was an excerpt from one one of the Commission's
13	orders
14	CHAIRMAN BROWN: It was
15	MS. MONCADA: The Okeechobee need
16	determination.
17	CHAIRMAN BROWN: That was Exhibit 617?
18	MS. MONCADA: 617, yes, ma'am.
19	Two things; first, the Commission has already
20	said it would officially recognize all of the
21	orders that are indexed.
22	CHAIRMAN BROWN: We do.
23	MS. MONCADA: So, I would say there was no
24	need for this exhibit.
25	And secondly, it is a misleading excerpt. And

1 so, I -- I would ask that, if you do admit any --2 any part of the order, that it be complete. 3 CHAIRMAN BROWN: Uh-huh. Uh-huh. OPC? 4 MS. CHRISTENSEN: Well, I would, obviously, 5 object to the characterization it was misleading. 6 CHAIRMAN BROWN: Okay. 7 It was obviously excerpted MS. CHRISTENSEN: 8 for my cross examination. And I, of course, have 9 no objection to either taking official recognition 10 of the order in the Commission's practice, the full 11 order, which can be cited by both parties. 12 Okay. Well, that -- that --CHAIRMAN BROWN: 13 I mean, you know, if -- we MS. CHRISTENSEN: 14 can either move it in or we can just take an 15 official recognition. I'm amenable to the --16 CHAIRMAN BROWN: I appreciate that. 17 So, FPL, do you have any objection to 616 and 18 618? 19 No other objections. MS. MONCADA: 20 CHAIRMAN BROWN: Okay. We'll move 616 and 618 21 into the record. And we'll take official 22 recognition of that order and its completion. So, 23 we're not moving that in. 24 (Whereupon, Exhibit Nos. 616 and 618 were 25 admitted into the record.)

1 CHAIRMAN BROWN: Hospitals, you've got a few. 2 Yes, Madam Chair, I would move MR. WISEMAN: 3 the admission of 619 through 631. 4 CHAIRMAN BROWN: Okay. No objections? That 5 helps a lot. 6 We'll move 619 to 631 into the record. 7 (Whereupon, Exhibit Nos. 619 through 631 were 8 admitted into the record.) 9 CHAIRMAN BROWN: Then we've got staff, 632 10 through 635 into the record. Staff? 11 Yes, we would like to move 632 MS. HARPER: 12 through 635 into the record, please. 13 Do you have objections, FPL? CHAIRMAN BROWN: 14 Not really an objection; just an MS. MONCADA: 15 observation. Question whether the exhibits, when 16 they're put into the record, are scanned in black 17 and white or if they are scanned in color. If they 18 are scanned in color, I would like an opportunity 19 to provide a color copy of the graph just for 20 purposes of clarity. It shows the lines better. 21 Staff, I think that's a --CHAIRMAN BROWN: 22 Yes, we'll find out. MS. BROWNLESS: 23 CHAIRMAN BROWN: -- reasonable request. 24 We'll find out. Sounds like a MS. HARPER: technical question, but we'll do our best. 25

1 CHAIRMAN BROWN: All right. We will move into 2 the record 632 through 635. 3 (Whereupon, Exhibit Nos. 632 through 635 were 4 admitted into the record.) CHAIRMAN BROWN: Would you like to excuse your 5 6 witness at this time? 7 MS. MONCADA: Yes, please. 8 CHAIRMAN BROWN: We'll excuse you, Dr. Morley. 9 We'll see you next week. 10 THE WITNESS: Thank you. 11 CHAIRMAN BROWN: Thank you. 12 MS. HELTON: Madam Chairman, can we clarify 13 which exhibit that was that you would prefer to 14 have in color just so we can track that easier? 15 MS. MONCADA: 632. 16 CHAIRMAN BROWN: All right. At this time, 17 FPL, can you call your next witness. 18 Yes, we will. Mr. Barrett. MR. BUTLER: 19 CHAIRMAN BROWN: Thank you. 20 (Discussion off the record.) 21 COMMISSIONER EDGAR: We are back on the 22 record. 23 MR. BUTLER: Would you -- sorry. The witness 24 has not been sworn. 25 COMMISSIONER EDGAR: Well, then, let's take Premier Reporting

1	care of that.
2	If you would, stand with your right hand.
3	Whereupon,
4	ROBERT E. BARRETT, JR.
5	was called as a witness, having been first duly sworn to
6	speak the truth, the whole truth, and nothing but the
7	truth, was examined and testified as follows:
8	COMMISSIONER EDGAR: Thank you.
9	DIRECT EXAMINATION
10	BY MR. BUTLER:
11	Q Good afternoon, Mr. Barrett. Would you please
12	state your name and business address for the record.
13	A Robert E. Barrett, Jr did you get that?
14	Robert E. Barrett, Jr., 700 Universe Boulevard, Juno
15	Beach, Florida.
16	Q Okay. By whom are you employed and in what
17	capacity?
18	A I'm the vice president of finance for Florida
19	Power & Light Company.
20	Q Have you prepared and caused to be filed 47
21	pages of prepared direct testimony in this proceeding?
22	A Yes.
23	Q Okay. Do you have any changes or revisions to
24	your direct testimony to make at this time?
25	A No, I do not.

1	Q Subject to the adjustments addressed in
2	exhibits KO-19 and KO-20, if I asked you the questions
3	contained in your direct testimony, would your answers
4	be the same?
5	A Yes.
6	MR. BUTLER: Madam Chair, I would ask that
7	Mr. Barrett's prepared direct testimony be inserted
8	into the record as though read.
9	CHAIRMAN BROWN: We'll insert Mr. Barrett's
10	direct prefiled testimony into record as though
11	read.
12	(Prefiled direct testimony inserted into the
13	record as though read.)
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	I. INTRODUCTION
Q.	Please state your name and business address.
A.	My name is Robert E. Barrett, Jr. My business address is Florida Power &
	Light Company, 700 Universe Boulevard, Juno Beach, Florida 33408.
Q.	By whom are you employed and what is your position?
A.	I am employed by Florida Power & Light Company ("FPL" or the
	"Company") as Vice President of Finance.
Q.	Please describe your duties and responsibilities in that position.
A.	I am responsible for FPL's financial forecast, analysis of financial results,
	corporate budgeting, resource assessment and planning, and load forecast
	activities.
Q.	Please describe your educational background and professional
	experience.
A.	I have a Bachelor of Business Administration degree from the University of
	Miami, 1982, with a major in Finance. I received a Master of Business
	Administration from Florida International University in 1985. I have been
	employed by FPL, or its affiliate NextEra Energy Resources, since 1982 and
	have held a variety of positions of increasing responsibility including:
	Financial Analyst; Manager of Financial Forecasting; Director of Quality,
	Planning and Analysis; Director of Corporate Planning; Director of Investor
	Relations; Vice President of Business Development for NextEra Energy

23 Resources; and my current position as Vice President of Finance for FPL. As

1		FPL's Vice President of Finance, I have overall responsibility for developing
2		the operations and maintenance ("O&M") budget, the capital expenditure
3		budget, and the total company per books financial forecast. I was the witness
4		who sponsored the financial forecasts that FPL presented in FPL's last two
5		rate cases (Docket Nos. 080677-EI and 120015-EI) as well as the financial
6		forecast that FPL is presenting in this proceeding.
7	Q.	Are you sponsoring any exhibits in this case?
8	A.	Yes. I am sponsoring the following exhibits:
9		• REB-1 MFRs and Schedules Sponsored or Co-sponsored by Robert E.
10		Barrett, Jr.
11		• REB-2 2016 Planning and Budgeting Process Guideline
12		• REB-3 MFR F-5 Forecasting Flowchart and Models
13		• REB-4 MFR F-8 Major Forecast Assumptions
14		• REB-5 Plan and Actual Net Income 2013-2015
15		• REB-6 Net Income Adjusted for Reserve Amortization and Weather
16		• REB-7 FPL's Revenue Request – 2017 vs. 2016
17		• REB-8 Drivers of the Increase in Revenue Requirements for 2013-
18		2017
19		• REB-9 Summary of CPVRR Analysis for Peaker Upgrade Project
20		• REB-10 Summary of CPVRR Analysis for .05 Compressor Upgrades
21		• REB-11 Summary of CPVRR Analysis for Large Scale Solar Projects
22		• REB-12 FPL's Adjusted O&M Comparisons
23		• REB-13 FPL's Revenue Request 2018 vs. 2017

1 2		• REB-14 Summary of CPVRR Analysis for Transfer of Martin-Riviera Gas Lateral
- 3	Q.	Are you sponsoring or co-sponsoring any Minimum Filing Requirements
4	·	("MFRs") or schedules in this case?
5	A.	Yes. Exhibit REB-1 lists the MFRs that I am sponsoring or co-sponsoring.
6	Q.	Are you sponsoring or co-sponsoring any schedules in support of FPL's
7		request for the 2019 Okeechobee Limited Scope Adjustment ("2019
8		Okeechobee LSA") in order to address the additional revenue
9		requirements associated with the Okeechobee Clean Energy Center (the
10		"Okeechobee Unit")?
11	A.	Yes. Exhibit REB-1 also shows my sponsorship and co-sponsorship of the
12		Okeechobee Unit limited scope adjustment schedules.
13	Q.	Please relate the MFRs and schedules being submitted to the time periods
14		that they address.
15	A.	FPL is filing MFRs based upon the forecast process completed in early 2016.
16		FPL uses a 2017 Test Year as the basis for the revenue requirement
17		calculation of its 2017 Base Rate Increase and a 2018 Test Year for purposes
18		of the Subsequent Year Adjustment. Generally, the periods covered in FPL's
19		MFRs are a 2015 Historical Year, 2016 Prior Year, 2017 Test Year and 2018
20		Subsequent Year. FPL also has prepared the 2019 Okeechobee LSA
21		schedules, which follow the format of certain MFRs and show FPL's
22		proposed limited scope adjustment reflecting the Okeechobee Unit being
23		placed into service on June 1, 2019. These 2019 Okeechobee LSA schedules

show the base revenue requirements for the year ending May 31, 2020, the 1 2 anticipated first twelve months of operations for the Okeechobee Unit. Finally, FPL's filing reflects a four year proposal that would require the 3 Company to manage its operations without a general base rate increase for 4 5 2019 and 2020. What is the purpose of your testimony? 6 0. 7 The purpose of my testimony is to: A. 8 (1) Demonstrate the value to customers of FPL's four year rate proposal; (2) Explain the process FPL uses in the preparation and approval of the 9 10 financial forecast upon which the projected MFRs are based; 11 (3) Provide an overview of the general business conditions affecting the 12 forecast assumptions; (4) Explain the major cost drivers since 2013 that necessitate a base rate 13 increase effective January 1, 2017 (the "2017 Base Rate Increase"); 14 (5) Explain the cost drivers from 2017 to 2018 that necessitate a subsequent 15 year adjustment effective January 1, 2018 ("2018 SYA"); 16 (6) Discuss the 2019 Okeechobee LSA; and 17 18 (7) Explain the proposal to transfer the Martin-Riviera gas lateral to Florida 19 Southeast Connection. Please summarize your testimony. 20 Q. During the period of FPL's 2012 Rate Settlement (2013-2016) approved by 21 A. the Florida Public Service Commission ("FPSC" or "Commission") in Order 22 No. PSC-13-0023-S-EI, Docket No. 120015-EI, FPL has made significant 23

1 improvements in lowering base operating costs and at the same time has made 2 important investments in its infrastructure to support growth, strengthen or 3 "harden" the system to better withstand bad weather, improve reliability and 4 lower customer costs. Upon the expiration of the 2012 Rate Settlement at the 5 end of 2016, FPL's revenue requirements continue to increase, such that FPL 6 will not be able to maintain adequate earnings in 2017 and beyond without 7 rate relief. Accordingly, FPL is requesting a 2017 Base Rate Increase, 2018 SYA and 2019 Okeechobee LSA. The final component of our proposal is to 8 forgo a general base rate increase for 2019 and 2020, if our requested relief is 9 granted, despite continued expected increases in 2019 and 2020 base revenue 10 requirements. Collectively, these rate adjustments and FPL agreeing to forgo 11 general base rate increases in 2019 and 2020 is referred to as FPL's four year 12 rate proposal. This four year rate proposal provides long term rate stability 13 14 and predictability for customers, regulatory efficiency, and is expected to produce total residential customer bills that grow roughly in line with inflation 15 16 over the four year period. It will also allow the Company to focus on continuing to improve service delivery and value to our customers. 17

18

19 The MFRs filed in this proceeding have been prepared according to FPL's 20 rigorous, established planning/forecasting process, relying on inputs from 21 internal and external subject matter experts, processed through financial 22 models widely used in the industry, and with sufficient review and approval to 23 ensure their reliability for use in setting rates in this proceeding.

The general business conditions affecting the forecast assumptions are characterized by continued inflation-related increases and modest growth. As explained in FPL witness Morley's testimony, FPL expects to add nearly 220,000 new service accounts for the period 2014 through 2017. FPL's investment plans must account for this expected growth in our customer base.

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Though inflation generally has been moderate by historical standards in recent years, cumulatively, general inflation is still expected to have added 6.3% to the cost of goods and services as measured by the Consumer Price Index ("CPI") for the period 2014 through 2017.

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FPL's proposed 2017 Base Rate Increase is needed to address increased 12 revenue requirements since 2013, the test year last used for establishing base 13 The primary drivers of the change in revenue requirements are: (1) 14 rates. capital investment initiatives that support storm hardening, increased 15 16 reliability, and system growth, which provide long-term economic benefits to customers, and ensure regulatory compliance; (2) the increase resulting from 17 FPL's 2016 depreciation study; (3) the impact of the amortization of the 18 Reserve Amount authorized by the 2012 Rate Settlement not available in the 19 2017 Test Year; (4) the impact of inflation and customer growth; (5) the 20 change in the weighted average cost of capital; (6) revenue growth that 21 22 partially offsets the growth in base revenue requirements; (7) productivity 23 gains that also partially offset the growth in base revenue requirements; and

(8) growth in FPL's wholesale business which reduces the amount of revenues 1 2 needed from retail customers. As calculated on FPL witness Ousdahl's 3 Exhibit KO-3, absent a rate increase in 2017, FPL's projected earned return on 4 equity ("ROE") falls to 7.88%, substantially below FPL's cost of equity as discussed by FPL witnesses Hevert and Dewhurst. 5 6 7 FPL's proposed 2018 SYA reflects the increase in base revenue requirements from 2017 to 2018. The primary drivers of this increase are: (1) capital 8 9 investment initiatives that support storm hardening, increased reliability, and system growth, and ensure regulatory compliance; (2) the impact of inflation 10 and customer growth; (3) changes to the weighted average cost of capital; and 11 (4) revenue growth that partially offsets the growth in base revenue 12 requirements. As calculated on FPL witness Ousdahl's Exhibit KO-3, without 13 an increase in revenue requirements in 2018, FPL's earned ROE is projected 14 to fall by more than 100 basis points from the 2017 appropriate allowed ROE 15 of 11.50%. With no rate increase in 2017 and 2018, FPL's ROE in 2018 is 16 projected to be 6.95%, substantially below an appropriate return as discussed 17 by FPL witnesses Hevert and Dewhurst. 18

19

FPL also is requesting a 2019 limited scope adjustment to recover the first twelve months of revenue requirements for the Okeechobee Unit, which is projected to go into commercial operation on June 1, 2019. The requested 2019 Okeechobee LSA would become effective when the Okeechobee Unit

begins commercial operation. The 2019 Okeechobee LSA uses the projected
 revenue requirements associated with the plant and is based on the
 Commission determination of need for the plant in Order No. PSC-16-0032 FOF-EI.

5

6 In the need proceeding for the Okeechobee Unit, FPL demonstrated that the 7 plant was the most cost-effective option for providing needed generation in 8 2019 and it is projected to be more fuel efficient than the overall system prior 9 to its addition to the fleet. Consistent with those projections, the impact of the 10 2019 Okeechobee LSA is expected to be partially offset by immediate fuel 11 savings for customers. FPL intends to seek approval in the 2018 fuel cost 12 recovery proceeding for fuel factors in 2019 that would reflect those savings coincident with the projected in-service date of the Okeechobee Unit. FPL 13 14 expects that other cost increases and additional investment unrelated to the 15 Okeechobee Unit will exert downward pressure on FPL's earnings in 2019 and beyond; however, FPL is not seeking a base rate increase at this time to 16 recover any of those other costs. 17

18

FPL's base rate proposal supports the investments FPL has made and must continue to make to keep customer bills low over the long term. These investments will also improve system reliability, enhance storm resiliency and increase the use of clean and efficient generation technologies. For example, the base revenue requirements of these investments are expected to be

1		partially offset with savings in the fuel portion of customer bills roughly
2		\$140 million in 2020 alone – and are projected to grow over time FPL's four
3		year rate proposal provides the opportunity for customers to experience low,
4		predictable bills through 2020.
5		
6	II	. VALUE TO CUSTOMERS OF FPL'S FOUR YEAR PROPOSAL
7		
8	Q.	What is FPL's four year rate proposal?
9	A.	FPL's four year rate proposal includes the 2017 Base Rate Increase of \$866
10		million, 2018 SYA of \$262 million and 2019 Okeechobee LSA of \$209
11		million, together with FPL's commitment to forgo any further general base
12		rate increases until at least January 2021 if those three requested rate increases
13		are approved.
14	Q.	Why is FPL proposing a four year package of rate proposals in this
15		petition?
16	A.	Over the last 17 years, FPL has operated under five multi-year settlement
17		agreements. It has been FPL's experience that these multi-year agreements
18		have produced substantial value for customers through bill stability and
19		certainty and have allowed the Company to focus on delivering a superior
20		level of service on a more cost-efficient basis. These multi-year agreements
21		have offered regulatory economy and efficiency as well in that the
22		Commission, its staff, intervening parties and the Company have been able to
23		avoid the significant time and resources required in more frequent general

- 1 base rate proceedings.
- 2 Q. What value does this four year proposal offer to customers?

3 A. The Company's four year proposal offers customers base rate stability and certainty at least until January 2021, and is expected to produce total 4 5 residential customer bills that grow roughly in line with inflation from today through 2020 (based on current fuel curves), which is likely to keep FPL's 6 7 customers' bills among the lowest in the state. It maintains the same protections for customers that they currently enjoy regarding Commission 8 9 oversight of the Company's earnings. Additionally, it provides a four year period of regulatory certainty allowing management to continue its focus on 10 improving the Company's performance in service delivery and realizing 11 12 additional efficiencies in its operations, rather than participating in annual base rate cases, thus creating strong alignment between the Company and its 13 14 customers.

15

16

III. FORECASTING AND MFR PREPARATION PROCESS

17

18 Q. What role did you play in the development of FPL's forecast?

A. As previously stated, I have overall responsibility in my role as FPL's Vice
President of Finance for developing the O&M budget, the capital expenditure
budget, and the total company per books financial forecast. As part of this
responsibility, guidance was provided to the business units to ensure that
corporate assumptions were followed. I am also a member of the budget

review committee ("Review Committee"). Key members of the Review
 Committee, in addition to me, are the FPL President and Chief Executive
 Officer; the Senior Vice President, Finance and Chief Financial Officer; and
 the Vice President, Controller and Chief Accounting Officer. The Review
 Committee is responsible for reviewing the forecasts to ensure reasonableness
 and completeness for planning purposes.

7 Q. What forecast years have been included in this filing?

8 FPL has provided forecast years 2016, 2017 and 2018 for use in this A. 9 proceeding. Based upon the expiration of the term of the 2012 Rate 10 Settlement on December 31, 2016, the Company is proposing that new rates 11 be effective January 1, 2017, at a level sufficient to cover the Company's 12 revenue requirements in 2017. FPL proposes that 2017 be the Test Year in this proceeding, in order to best reflect the Company's revenues, costs and 13 14 investment during the year in which those new rates are proposed to go into 15 effect. The 2016 plan year is included as the Prior Year, consistent with the 16 Commission's filing requirements.

17

FPL also is proposing a subsequent year adjustment, which will allow for new rates effective January 1, 2018, at a level sufficient to cover the Company's revenue requirement in 2018. Accordingly, FPL has filed all necessary MFRs for calendar year 2018 to support the 2018 SYA by showing the Company's projected financial position in that year. FPL also has submitted 2019 Okeechobee LSA schedules in support of FPL's requested limited scope adjustment for the Okeechobee Unit. Those schedules address the base revenue requirements for the Okeechobee Unit for the twelve month period from June 1, 2019, through May 31, 2020, which coincides with the anticipated first year of operation for the project.

5

6

Q. Please summarize the process used to develop the forecasts underlying FPL's filing in this docket.

7 A. FPL follows a rigorous and long standing process in the development and 8 approval of its O&M and capital expenditures budgets, financial forecasts and 9 MFRs. Beginning in 2013, FPL incorporated into the planning process a step 10 that is specifically focused on generating and evaluating productivity and efficiency improvement ideas - an initiative known internally as Project 11 12 Momentum. Although already an industry leader in cost management, FPL 13 saw an opportunity to do even better. Every business unit is engaged in developing, evaluating and proposing ideas that are expected to provide 14 15 ongoing customer benefits that would be implemented over the succeeding 24 16 These benefits primarily result from streamlining of processes, months. deployment of technology to enable automation and other actions that are 17 18 focused on significant improvements in operating efficiency. As a result of 19 this effort in 2013, 2014 and 2015, FPL has been able to produce significant O&M savings that have directly reduced the revenue increase needed in this 20 21 request by \$175 million as reflected on Exhibit REB-8. As FPL witness Reed demonstrates, FPL has been best-in-class in non-fuel O&M cost performance 22 among all peer groups since 2013. All of these projected savings are fully 23

reflected in the forecasts in this filing. Understandably, FPL has experienced diminishing incremental levels of savings from each Project Momentum cycle since 2013, primarily because many of the highest-impact opportunities for savings already have been identified and are being implemented; however, the cumulative impact of these efforts has been significant.

6

The next step in the planning process was the development and approval of 7 the Company's planning and budget assumptions. These include assumptions 8 9 for inflation, customer and load growth, and new service accounts. These assumptions were prepared by various subject matter experts, reviewed and 10 11 approved by me, and ultimately evaluated and approved by the Review Committee. Once approved, these assumptions, together with detailed budget 12 instructions, were issued to the operating and staff units of the Company in the 13 14 FPL 2016 Planning and Budgeting Process Guidelines ("Planning Process 15 Guidelines"). (See Exhibit REB-2).

16

The 2016 planning process resulted in the 2016 O&M and capital budgets, the O&M forecasts for 2017 and 2018, and the forecasted capital expenditures for 2017 through 2020. All business units entered their forecast for O&M and capital into FPL's SAP system at the work breakdown structure ("WBS") level. Each standalone project or activity is required to have a unique WBS element which maps all activities and costs to the required Federal Energy Regulatory Commission ("FERC") Uniform System of Accounts.

1 Using the assumptions and Planning Process Guidelines, each of the major 2 business units prepared a budget presentation that described their business unit 3 objectives and goals, key initiatives and specific business unit level 4 assumptions, as well as a preliminary funds request to support those business 5 In September 2015, business unit executives discussed their objectives. 6 budget presentations with the Review Committee in detailed, individual 7 sessions. These sessions offered these executives the opportunity to present 8 their plans and funding requests, and receive feedback from the Review 9 Committee. The open forum format employed in this session allowed for 10 Review Committee collaboration and challenge.

11

Upon completion of these individual sessions with each business unit and the Review Committee, there were subsequent follow-up discussions to resolve items raised during the individual review sessions. Final approvals were made in late 2015. Accordingly, the final plans/forecasts approved by FPL's Review Committee reflect the Company's current and best assessment of the business environment in the 2017 Test Year as well as for the 2018 Subsequent Year.

19 Q. How were forecasts other than O&M and capital expenditures 20 developed?

A. Concurrent with the development of the detailed O&M and capital
expenditure budgets, other key components of the financial forecast were
developed, including the energy sales and revenue forecasts as well as

1		forecasts of other base revenues. The energy sales forecast is the subject of
2		FPL witness Morley's direct testimony. The sales and revenue forecasts were
3		reviewed and approved for use in the financial forecast by FPL's Review
4		Committee. Subsequent to approval by the Review Committee, the energy
5		sales and revenue forecasts were updated and approved in January 2016 to
6		account for the Company's most recent official fuel projections. These
7		updates are described in further detail by FPL witness Morley.
8		
9		Other inputs into the financial forecast were prepared and provided by other
10		subject matter experts. These inputs include taxes other than income taxes,
11		various income tax items, non-clause fuel and capacity charges, miscellaneous
12		below-the-line income and expense items, various working capital items and
13		financing plans. These inputs were collectively reviewed and approved by me
14		with the resulting comprehensive forecast reviewed and approved by the
15		Review Committee.
16	Q.	How are all of the various inputs combined into a consolidated financial
17		forecast?
18	A.	All of the above mentioned items were provided as inputs into FPL's
19		Financial & Regulatory Information System ("FRI"). FRI is a utility financial
20		forecast and regulatory model developed by Utilities International Inc. ("UI")
21		that is widely used in the industry and was implemented at FPL in 2014. Prior
22		to 2014, FPL utilized an earlier version of the UI software to develop its
23		financial forecast. FPL has used the UI platform for financial forecasting and

in support of the preparation of certain MFR schedules for more than 15 years,
 including the MFRs that supported FPL's rate requests in Docket Nos.
 001148-EI, 050045-EI, 080677-EI and 120015-EI as well as the present
 proceeding.

Based on the assumptions and inputs mentioned above, the FRI model 6 7 calculated the remaining expense items including depreciation, interest, and Allowance for Funds Used During Construction ("AFUDC"). FRI produces 8 9 balance sheet and income statement detail at the level necessary for the development of jurisdictional separation factors and the Cost of Service 10 11 Study. A key element of the FRI model is a common data repository ("CDR") where all data inputs as well as calculated outputs are housed for use in both 12 the financial forecasting and regulatory reporting processes. The completed 13 financial forecast was then reviewed and approved by the Review Committee 14 and is the source of forecast information for the MFRs filed in this 15 proceeding. 16

17

5

As previously mentioned, once the forecast in FRI is complete, it is stored in the CDR. The CDR provides data validation and control routines to ensure consistency of data between the financial forecasting and regulatory analysis processes within FRI. Additionally, the system produces exception reports, financial data output validations and MFR control reports to verify the accuracy and consistency of MFRs.

1	The balance sheet and income statement detail from FRI is used to develop
2	forecasted regulatory results (i.e., total company per book net operating
3	income ("NOI"), rate base, and capital structure) in the same manner as it
4	does for historical regulatory amounts included in the Earnings Surveillance
5	Report ("ESR"). As described by FPL witness Deaton, these regulatory
6	results are used in developing jurisdictional separation factors, which are then
7	transferred back to the CDR, so FPSC jurisdictional adjusted NOI, rate base
8	and capital structure can be calculated within the forecasting module.

10 The jurisdictional adjusted results for NOI, rate base and capital structure are 11 then utilized to develop the Cost of Service Study. The Cost of Service Study 12 calculates the revenue requirements at the individual rate class level and is the subject of the direct testimony of FPL witness Deaton. The same tool that is 13 used to create many of the MFRs also provides for MFR data integrity and 14 15 control. All MFRs were reviewed and approved by the originating business Exhibit REB-3 contains a 16 unit and the MFR sponsors and co-sponsors. flowchart of the forecasting process and models. 17

Q. Has FPL followed 'the same process for developing all forecast years,
including the 2017 Test Year and 2018 Subsequent Year as it did for the
20 2016 plan year?

A. Yes. As described above, FPL prepares forecasts of O&M expense for the
plan year plus two additional years at an activity level. All three years (2016,
2017 and 2018) are prepared at a monthly level of detail.

Capital expenditure forecasts are prepared for the plan year, 2016, plus four additional years, 2017 through 2020, at an activity (i.e., project) level of detail. All five years are prepared at a monthly level of detail. Additionally, the capital expenditures forecast for all five years is the basis of the related external financial disclosure in the Company's 10-K and 10-Q filings with the Securities and Exchange Commission ("SEC") and is subject to an internal Sarbanes-Oxley review and approval process.

8

9 Though all years are prepared with the same level of business detail and 10 diligence, the plan year typically is subject to more intense review as it forms 11 the basis for operating and financial plans for the coming year. However, for 12 the planning process conducted during 2015, the 2017 and 2018 periods 13 received the same level of close scrutiny by the Review Committee as did the 14 2016 plan year in anticipation of its use in this proceeding.

15 Q. How did FPL develop the forecasted amounts for the 2019 Okeechobee 16 LSA?

A. The 2019 Okeechobee LSA reflects the projected base revenue requirements
for the first twelve months of operation of the Okeechobee Unit. The cost
assumptions used in developing the base revenue requirements for the 2019
Okeechobee LSA are based on the Commission need determination in Order
No. PSC-16-0032-FOF-EI. The base revenue requirements reflect the firstyear return on and of the capital investment in the Okeechobee Unit along
with all non-fuel operating costs and taxes. The method for calculating the

base revenue requirements reflected in the 2019 Okeechobee LSA is the same
as used in the Generation Base Rate Adjustments ("GBRA") in prior filings.
The schedules filed in support of the 2019 Okeechobee LSA are in the form of
all the MFRs necessary to demonstrate the development of those base revenue
requirements.

6 Q. What are the major assumptions that FPL used in developing its 7 forecast?

8 A. The major assumptions used by FPL in developing its forecast are listed in
9 MFR F-8, which is my Exhibit REB-4.

10 Q. Have FPL forecasts been accurate in the past?

A. Yes. As shown on Exhibit REB-5, on average, FPL's actual net income
results have varied by about 0.5% from plan over the past three years,
indicating that FPL's process for planning is highly effective in predicting
future financial results and can be relied upon in a rate setting procedure.

15

16 The overall accuracy of the net income forecast is due in part to the fact that there are always offsetting variances, including weather, that cause some 17 18 variability in the underlying components of the forecast, but tend to provide offsets in the determination of net income. Under the 2012 Rate Settlement, 19 one additional factor - amortization of the Reserve Amount - tends to 20 mitigate variability in many of the underlying components of the forecast, 21 primarily weather. Excluding the impact of the reserve amortization and 22 variations in weather, FPL's forecast of net income has been within 23

1 approximately 1% on a straight average, and 2% on an absolute average, of its 2 planned net income for 2013-2015, as seen on Exhibit REB-6. 3 Does the Company's forecast of revenue requirements in 2017 and 2018 **Q**. 4 provide a reasonable basis for evaluating the Company's projected 5 deficiency? 6 Yes. FPL's plans/forecasts are the products of a rigorous process involving a A. 7 multi-year planning horizon and have proven to be accurate. The total 8 company per book plans/forecasts for 2016 Prior Year, 2017 Test Year and 9 2018 Subsequent Year were developed, reviewed, and ultimately approved in 10 late 2015, and the subsequent MFRs were developed and approved in early 11 2016. The assumptions and process used in developing these plan/forecasts 12 are robust and reasonable, and the plans/forecasts can be relied upon for rate 13 setting. 14 15 IV. **OVERVIEW OF GENERAL BUSINESS CONDITIONS** 16 Please describe the general business conditions affecting the underlying 17 **Q**. 18 assumptions in this forecast. 19 Of the many metrics that FPL tracks in developing its business and investment A. plans, two of the most important are customer growth and the impact of 20 inflation on the goods and services the Company procures to serve customers. 21 22 The general business conditions affecting the forecast assumptions are characterized by continued inflation-related increases and modest growth. As 23 explained in FPL witness Morley's testimony, for the period 2014 through 24

1		2017, FPL expects to have added nearly 220,000 new service accounts and
2		will have invested in infrastructure to provide service to them.
3		
4		Inflation generally has been moderate by historical standards in recent years.
5		Cumulatively, general inflation is still expected to have added 6.3% to the cost
6		of goods and services as measured by the CPI for the period 2014 through
7		2017.
8		
9		While inflation and growth in our customer base have placed upward pressure
10		on FPL's operating costs, FPL projects that the non-fuel O&M expense in
11		2017 actually will be lower than the amount incurred in 2013. The primary
12		driver of the lower operating costs is Project Momentum.
13		
14		V. DRIVERS OF 2017 BASE RATE INCREASE
15		
16	Q.	What is the total amount of FPL's requested 2017 Base Rate Increase and
17		how is it calculated?
18	A.	FPL's requested base revenue increase for 2017 is \$866 million and is
19		determined as the difference between FPL's projected net operating income of
20		\$1.618 billion and FPL's required net operating income of \$2.150 billion
21		multiplied by the revenue expansion factor of 1.63024. For further detail
22		regarding the calculation of these revenue requirements, please refer to FPL
23		witness Ousdahl's testimony.

- Q. Please explain why the 2017 Base Rate Increase is necessary, given that
 FPL earned an ROE of 10.96% in 2013, 11.50% for 2014 and 2015, and is
 projected to earn 11.35% in 2016.
- 4 A. FPL's revenue requirements have been increasing and will continue to 5 increase beyond the level reflected in 2013, which was the test year used in 6 FPL's last rate case. FPL was able to earn above the mid-point ROE of 10.5% 7 in 2013-2015 largely through significant reductions in O&M generated by Project Momentum, extraordinary weather that has resulted in higher sales 8 9 and hence revenues, increases in the allocation of costs to wholesale customers and the amortization of the Reserve Amount approved in the 2012 10 Rate Settlement. All of these elements were specific to that time period. 11
- 12

In 2013, absent the amortization of \$155 million of the Reserve Amount, 13 FPL's ROE would have been approximately 10.1% which is below FPL's 14 current authorized mid-point of 10.5%. In 2014, FPL's ROE benefited from 15 reductions in O&M due to Project Momentum as well as a large increase in 16 wholesale operations allowing for a significant shift of revenue requirements 17 to wholesale customers. In 2015, FPL's ROE benefitted from extraordinarily 18 favorable weather as well as further reductions in O&M due to Project 19 20 Momentum. The impact of weather alone contributed approximately 110 21 basis points to earned ROE in 2015. By definition, however, extraordinary weather is not the norm and cannot be counted on for continued high revenues 22 in 2016 and beyond; nor are rates set on the basis of abnormal weather. 23

FPL projects that it will be able to offset a portion of the projected increase in revenue requirements in 2016, assuming normal weather, by amortizing all of the projected remaining \$202 million of Reserve Amount. By utilizing all of the remaining Reserve Amount, FPL is projecting to earn an 11.35% ROE in 2016.

6

Exhibit REB-7 depicts the drivers of the increase in revenue requirements
from 2016 to 2017 which include the increased revenue requirements resulting
from capital investments, the absence of a reserve amortization mechanism in
2017, and the increase resulting from FPL's 2016 depreciation study. These
drivers demonstrate that a base rate increase is necessary to allow FPL to earn
an appropriate rate of return.

Q. What are the primary drivers of the net increase in revenue requirements in the 2017 Test Year relative to actual results for 2013, the last test year used for setting rates?

16 A. The primary drivers of the change in revenue requirements are depicted on 17 Exhibit REB-8 and are: (1) capital investment initiatives that support storm 18 hardening, increased reliability, and system growth, which provide long-term 19 economic benefits to customers, and ensure regulatory compliance; (2) the 20 increase resulting from FPL's 2016 depreciation study; (3) the impact of the 21 amortization of the Reserve Amount authorized by the 2012 Rate Settlement 22 but not available in the 2017 Test Year; (4) the impact of inflation and 23 customer growth; (5) the change in the weighted average cost of capital; (6)

1		revenue growth that partially offsets the growth in base revenue requirements;	
2		(7) productivity gains that also partially offset the growth in base revenue	
3		requirements; and (8) growth in FPL's wholesale business which reduces the	
4		amount of revenues needed from retail customers. Each of these drivers will	
5		be discussed individually, and they are summarized as follows:	
6			
7		Capital Initiatives	\$829 million
8		Depreciation Study	\$187 million
9		Loss of Reserve Amortization	\$175 million
10		Inflation and Customer Growth	\$145 million
11		Change in Weighted Average Cost of Capital	\$36 million
12		Other	\$12 million
13		Revenue Growth	(\$217) million
14		O&M Productivity (net of Costs to Achieve)	(\$175) million
15		Wholesale Cost Allocation	(\$126) million
16		TOTAL	\$866 million
17			
18	Q.	Please describe the Capital Initiatives that impa	act 2017 revenue
19		requirements.	
20	A.	For the period from 2014-2017, FPL's retail rate base is forecasted to increase	
21		approximately \$6.5 billion, primarily as a result of the investments made to	
22		improve reliability, upgrade the generation fleet, support system growth,	
23		strengthen or "harden" our infrastructure to better withstand bad weather, and	
1	ensure regulatory compliance. Exhibit REB-8 page 2 of 2 depicts the revenue		
--	---		
2	requirements in 2017 resulting from each of these capital initiatives.		
3			
4	Power Delivery Reliability		
5	Power Delivery will invest about \$1.9 billion from 2014 to 2017 to continue		
6	to provide superior reliability for our customers in a cost-efficient manner. As		
7	described by FPL witness Miranda, FPL will deploy innovative technology to		
8	further leverage our existing smart grid to prevent outages and reduce		
9	restoration time, thereby improving reliability and increasing customer		
10	satisfaction. Our Power Delivery reliability investments represent about \$232		
11	million of the revenue requirements increase in 2017.		
12			
10			
13	Generation Upgrades		
13	Generation Upgrades There are three specific generation upgrade projects that FPL is undertaking to		
14	There are three specific generation upgrade projects that FPL is undertaking to		
14 15	There are three specific generation upgrade projects that FPL is undertaking to provide cumulative present value revenue requirement ("CPVRR") benefits		
14 15 16	There are three specific generation upgrade projects that FPL is undertaking to provide cumulative present value revenue requirement ("CPVRR") benefits (i.e., lower costs) and improved reliability for customers. Together, these three		
14 15 16 17	There are three specific generation upgrade projects that FPL is undertaking to provide cumulative present value revenue requirement ("CPVRR") benefits (i.e., lower costs) and improved reliability for customers. Together, these three		
14 15 16 17 18	There are three specific generation upgrade projects that FPL is undertaking to provide cumulative present value revenue requirement ("CPVRR") benefits (i.e., lower costs) and improved reliability for customers. Together, these three projects represent about \$188 million of the base revenue increase in 2017.		
14 15 16 17 18 19	There are three specific generation upgrade projects that FPL is undertaking to provide cumulative present value revenue requirement ("CPVRR") benefits (i.e., lower costs) and improved reliability for customers. Together, these three projects represent about \$188 million of the base revenue increase in 2017. First, from 2015 through 2017, FPL will be investing nearly \$800 million to		
14 15 16 17 18 19 20	There are three specific generation upgrade projects that FPL is undertaking to provide cumulative present value revenue requirement ("CPVRR") benefits (i.e., lower costs) and improved reliability for customers. Together, these three projects represent about \$188 million of the base revenue increase in 2017. First, from 2015 through 2017, FPL will be investing nearly \$800 million to upgrade its gas turbine peaking fleet with new highly efficient combustion		

maintaining the reliability of FPL's critical peaking units given equipment 1 2 parts availability issues. FPL projects that these new combustion turbines will provide approximately 35% to 40% heat rate efficiency improvement 3 4 resulting in lower fuel usage and better air emission rates. The new units will also alleviate the replacement parts availability issue on the existing 45 year 5 6 old equipment. This project is expected to provide a CPVRR benefit to 7 customers of \$203 million over the operating life of the units (See Exhibit REB-9) and accounts for about \$92 million of the total requested base revenue 8 9 increase in 2017.

10

Second, from 2015 to 2017, FPL will have invested more than \$450 million to 11 upgrade the compressors on 26 combustion turbines in FPL's highly efficient 12 combined cycle fleet. As described in further detail by FPL witness Kennedy, 13 14 these upgrades will provide operational benefits such as greater generating efficiency (i.e., lower heat rate) and power output (i.e., more megawatts), 15 thereby generating overall fuel savings. As reflected on Exhibit REB-10, the 16 compressor upgrades are expected to provide customers with a CPVRR 17 benefit of approximately \$57 million over their operating life. This project 18 19 represents about \$46 million of the base revenue increase in 2017.

20

Third, FPL is investing approximately \$400 million in three large scale solar projects during 2015 to 2016 that will continue its strategy of advancing clean energy while keeping customers' bills low. When complete, these projects

1 will provide up to 224 megawatts (nameplate) of zero-emissions generation 2 while also providing significant fuel savings for our customers. The 3 evaluation of these large scale solar projects followed FPL's process of 4 assessing the system benefits and performing economic modeling to ensure 5 there is an expected net benefit to customers. The three sites have inherent 6 advantages, including land that was already owned or under option and 7 locations that are near existing transmission and substation infrastructure. In addition, these projects qualify for a 30% investment tax credit. FPL has 8 9 competitively bid components of the projects, including the panel supply contract and the engineering, procurement and construction contract. As 10 11 reflected on Exhibit REB-11, all of these advantages provide customer savings and lead to an expected customer CPVRR benefit of \$26 million. 12 13 This project represents about \$50 million of the base revenue increase in 14 2017, which is expected to be partially offset in 2017 with \$26 million in fuel 15 savings and environmental benefits. Note that the base revenue requirements 16 will decline over time while the fuel savings are expected to increase over 17 time.

18

19 It is expected that the impact on 2017 base revenue requirements for these 20 generation upgrades will be partially mitigated by reductions in 2017 fuel 21 revenue requirements of about \$66 million. Those fuel savings are expected to 22 grow over time while the base revenue requirements will decrease over time 23 providing net savings to customers.

1 <u>Capital Requirements for Growth</u>

2 Capital Requirements for Growth, in this analysis, represent the capital 3 revenue requirements associated with the power delivery infrastructure needed 4 to support the addition of new service accounts to the system. The total 5 increase to revenue requirements in 2017 related to system growth is \$184 6 million.

7

8 For the period 2014 through 2017, FPL estimates that it will add nearly 9 220,000 new service accounts as described in FPL witness Morley's 10 testimony. Revenue requirements to support system growth include the costs 11 of expanding the transmission and distribution infrastructure to serve the 12 growth in new service accounts.

13

FPL will have invested more than \$1.7 billion in distribution and transmission infrastructure to support system growth, changing load patterns and the addition of new service accounts over the 2014 to 2017 period. The expenditures incurred to support growth are explained by FPL witness Miranda.

19

20 Power Delivery Storm Hardening

FPL will invest approximately \$1.7 billion from 2014 to 2017 in its storm hardening program. As described by FPL witness Miranda, the Company has been executing its approved 2013-2015 storm hardening plan to strengthen its transmission and distribution infrastructure. As part of the 2016-2018 storm
hardening plan being filed contemporaneously with FPL's petition for a base
rate increase, FPL will continue to focus its hardening efforts on critical
feeders. Our Power Delivery storm hardening investment program represents
about \$175 million of the revenue requirements increase in 2017.

6

7

Regulatory Compliance

8 The Regulatory Compliance driver reflects an increase in base revenue 9 requirements of \$50 million for the period 2014 to 2017 related to investments and activities undertaken as required by state and federal governmental and 10 11 regulatory bodies. These include expenditures related to increased 12 compliance costs for North American Electric Reliability Corporation ("NERC") and FERC reliability matters, as well as relocation of our facilities 13 14 as required by state agencies and local municipalities. These areas represent 15 capital expenditures of \$325 million, and are discussed in detail by FPL 16 witness Miranda.

17

In addition, FPL will incur \$136 million of expenditures to comply with Nuclear Regulatory Commission ("NRC") requirements primarily related to the fire protection plan, containment sump performance and regulatory commitments made in order to obtain license renewal for St. Lucie and Turkey Point. These capital expenditures are further discussed by FPL witness Goldstein.

In total since 2013, investments that provide long term benefits to customers
 resulting in a compliant, stronger, more reliable and efficient infrastructure,
 represent about \$829 million of revenue requirements in 2017.

4 Q. Please explain the impact of the 2016 Depreciation Study and its effect on 5 2017 revenue requirements.

6 A. The Commission requires that all investor-owned utilities file a depreciation 7 study every four years. FPL's current depreciation rates are based on a 2009 study approved as part of Order No. PSC-10-0153-FOF-EI ("2010 Rate 8 9 Order"). The filing of a depreciation study in 2013 was deferred pursuant to the 2012 Rate Settlement. As described in further detail by FPL witnesses 10 11 Allis and Ferguson, FPL has made significant investments since the approval 12 of the last study in 2009, thus requiring an adjustment to FPL's current 13 depreciation rates. The impact of the proposed depreciation rates included in the 2016 Depreciation Study results in a system increase to base revenue 14 15 requirements of \$206 million and an increase in retail base revenue 16 requirements of \$195 million. This increase related to depreciation rates also 17 results in a modest reduction in rate base, providing a small reduction in 2017 18 revenue requirements of \$8 million. Therefore, the net increase to 2017 19 revenue requirements resulting from the revised depreciation rates is \$187 20 million.

Q. Please explain the impact of the amortization of the Reserve Amount and its effect on the 2017 revenue requirements.

23 A. The 2012 Rate Settlement allowed FPL to amortize up to \$400 million of

reserves, comprised of \$224 million of depreciation reserve surplus remaining 1 from the 2010 Rate Order and \$176 million of dismantlement reserves. 2 Together, this total of \$400 million was defined in the 2012 Rate Settlement 3 4 as the Reserve Amount. Amortization of the Reserve Amount is recorded as a credit to depreciation expense and a debit to the accumulated depreciation 5 reserve (i.e., an increase to rate base). The Company continues to have 6 flexibility in the timing of that amortization during the 2013 through 2016 7 settlement term so long as FPL's ROE does not fall below 9.50% or exceed 8 11.50%. In September 2015, the available Reserve Amount was reduced by 9 \$30 million, to \$370 million, as part of the Cedar Bay Transaction stipulation 10 and settlement agreement approved by the Commission in Docket No. 11 150075-EI, Order No. PSC-15-0401-AS-EI. 12

13

Flexibility is one of the key features of the 2012 Rate Settlement. For the 14 settlement period of 2013 to 2016, by amortizing the non-cash Reserve 15 Amount, the Company has been able to offset variability in operating costs 16 and revenues while continuing to invest in capital projects that provide long-17 term customer benefits and maintaining an appropriate earned ROE. As 18 discussed above, in 2013 FPL amortized \$155 million of the Reserve Amount 19 to enable it to earn just under an 11% ROE. In 2014, FPL benefitted from an 20 increase in wholesale activities and significant cost reductions allowing for the 21 reversal of some of the amortization utilized in 2013. 22 In 2015, FPL experienced above normal weather contributing increases to base revenues 23

and also continued to benefit from cost improvements, again allowing FPL to
reverse some of the amortization it had taken in 2013. Because FPL's revenue
plans are based on normal weather, FPL projects that it will need to amortize
all of the remaining Reserve Amount in 2016, approximately \$202 million,
which will enable it to earn an ROE of 11.35%.

6

7 When comparing the 2017 Test Year to 2013 actual results, the amortization of the Reserve Amount during the 2013 to 2016 settlement period affects the 8 2017 revenue requirements in two ways. First, the \$155 million reduction in 9 10 2013 revenue requirements from amortization of the Reserve Amount will no Second, the estimated \$370 million of 11 longer be available in 2017. 12 amortization that will have been utilized through 2016 adds to rate base and therefore increases revenue requirements in 2017 by \$20 million. The 13 combined effect of both of these impacts is that 2017 revenue requirements 14 15 are \$175 million higher than 2013.

Q. Please describe the Inflation and Customer Growth driver and explain its cumulative effect on the 2017 revenue requirements.

A. Inflation represents the increased costs for goods and services in 2017 compared to the cost of the same goods or services in 2013. Changes to the CPI since 2013, including the forecast through 2017, indicate that inflation will have added 6.3% to the cost of goods and services in 2017 relative to 2013. The forecast of CPI during the 2014 through 2017 period is derived from third party subject matter experts and is discussed in more detail by FPL 1 witness Morley.

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As noted by FPL witness Morley, FPL is projecting approximately 6.3% cumulative growth in total customers during the period 2014 through 2017. FPL will incur additional non-fuel base O&M costs associated with providing operational and administrative support to its growing customer base.

7

8 To be conservative, the calculation of the impact of inflation and customer 9 growth in this portion of the analysis has quantified only the impact on non-10 fuel base O&M. Clearly, inflation and customer growth have also had an impact on the cost of capital goods and services but those impacts have not 11 12 been quantified here. The impact of growth on capital investments was 13 discussed earlier. The impact of base O&M inflation and customer growth 14 over the 2014 to 2017 period on 2017 revenue requirements is estimated to be 15 \$145 million. Refer to Exhibit REB-12 for the calculation of inflation and 16 customer growth over the 2014 to 2017 period.

17 Q. Please explain the Difference in Weighted Average Cost of Capital and its
18 effect on the 2017 revenue requirements.

A. The 2017 requested rate of return is 0.04% higher than the 6.57% actual
earned rate of return reflected in the December 2013 ESR. The increase in the
weighted average cost of capital is driven by the required increase in ROE and
a modest decrease in customer deposit balances, partially offset by an increase
in the level of deferred taxes. As described by FPL witness Dewhurst, FPL is

1

Deferred taxes increased from 20.3% of the capital structure in 2013 to 22.7% in the 2017 Test Year, primarily as the result of the continued availability of bonus depreciation on eligible new investments in infrastructure. Deferred taxes have a 0% cost basis in the capital structure, so the increased proportion of deferred taxes lowers the weighted average cost of capital. In total, the net effect of the items mentioned above results in increased revenue requirements of \$36 million.

10 Q. Please describe the impact of Revenue Growth and its effect on 2017 11 revenue requirements.

As discussed by FPL witness Morley, FPL is projected to have higher retail 12 A. sales in 2017 than 2013, resulting in an increase in retail base revenues and a 13 14 corresponding decrease in revenue requirements of \$196 million. Other base 15 revenues are projected to have increased by \$21 million, resulting in a corresponding decrease to revenue requirements. The overall impact of 16 17 increases to retail revenues is a decrease of FPL's revenue requirements in 18 2017 by \$217 million.

19 Q. Please describe the impact of FPL's productivity initiatives on 2017 20 revenue requirements.

A. FPL is projecting a reduction in revenue requirements of \$175 million when
 comparing the Company's projected 2017 base O&M to a benchmark level of
 base O&M in 2017. The benchmark used in this analysis begins with 2013

actual expenditures as the base year and follows the Commission benchmark 1 2 approach, as reflected on MFR C-41, to calculate a 2017 benchmark level of O&M. See exhibit REB-12 for the calculation. This reduction in base O&M 3 relative to the benchmark is comprised of \$217 million of projected cost 4 savings, partially offset by \$42 million in revenue requirements associated 5 6 with technology investments that will enable FPL to achieve these significant 7 savings. Project Momentum is the main catalyst that has contributed to FPL's tremendous success in lowering its operating costs since the last base rate 8 9 case. This has allowed FPL to continue to provide superior service to its customers at a lower O&M cost in 2017, adjusted for inflation and customer 10 growth, than it cost to perform those same activities in 2013. FPL embarked 11 on Project Momentum from a position of strength; having a non-fuel O&M 12 per kWh cost position previously in the top decile of all utilities. The 13 improvements made through Project Momentum resulted in FPL being best-14 in-class among the benchmarked Straight Electric Group since 2013, and 15 FPL's performance in 2017 is projected to be even better than 2013. FPL 16 witness Reed further discusses FPL's cost performance. 17

18

19 The productivity improvements that support this cost position are evident 20 across the Company and support FPL's on-going initiative to keep O&M 21 expenses down, in order to save our customers money and improve service. 22 The efforts of FPL's Nuclear business unit have reduced 2017 revenue 23 requirements when compared to 2013 despite increases due to inflation. As

1		discussed in the testimony of FPL witness Goldstein, this is primarily the
2		result of the Nuclear Continuous Improvement Process, which engages
3		employees to develop and implement solutions to operate more efficiently
4		without compromising safety.
5		
6		The Human Resources business unit, largely through successful management
7		of the Company's benefits program and costs, has been able to reduce
8		nominal revenue requirements by approximately \$26 million since 2013. The
9		Company's successful cost control strategy has included a variety of plan
10		design initiatives as outlined in FPL witness Slattery's testimony.
11		
12		Throughout the rest of the organization, business units have been able to find
13		efficiencies to manage costs to fully offset the impact of customer growth and
14		inflation. These ongoing productivity improvements enable FPL to mitigate
15		inflation-related increases and help keep FPL's costs among the lowest in the
16		industry.
17	Q.	Please describe the impact on 2017 revenue requirements due to the
18		increase in FPL's wholesale business.
19	A.	From 2014 through 2017, FPL has been able to increase the amount of
20		business it provides to wholesale customers. FPL's ability to increase its
21		wholesale sales is beneficial to retail customers as FPL is able to spread its
22		costs over a larger customer base and thereby reduce the percentage of costs
23		allocated for cost recovery to its retail jurisdiction. This allows FPL to

1		optimize the utilization of its assets and reduce the cost of the facilities that
2		are primarily constructed, operated and maintained (including associated
3		overheads) for the benefit of retail customers. As described by FPL witness
4		Deaton, the cost of service study performed for 2017 allocated a higher
5		percentage of rate base, revenue and operating expenses to wholesale
6		customers as compared to 2013. The higher allocation to wholesale customers
7		is projected to reduce the 2017 revenue requirements by \$126 million.
8		
9		VI. DRIVERS OF 2018 SYA
10		
11	Q.	What is the total amount of FPL's requested 2018 SYA?
12	A.	FPL's requested base revenue increase for 2018 is \$262 million. For further
13		detail regarding the calculation of these revenue requirements, please refer to
14		FPL witness Ousdahl's testimony.
15	Q.	Please explain why the 2018 SYA is necessary.
16	A.	FPL's revenue requirement increases significantly in 2018, and as reflected on
17		FPL witness Ousdahl's Exhibit KO-3, without a subsequent year adjustment,
18		FPL's ROE is expected to drop more than 100 basis points putting it below
19		the bottom of the range established for 2017 (i.e., below 10.50% if the
20		Company's request of 11.50% is granted). Assuming FPL's 2017 request is
21		granted in full, the 2018 SYA reflects only the incremental revenue need in
22		2018 in order to achieve a projected ROE equal to the requested mid-point of
23		11.50%. The drivers of the increase in revenue requirement from 2017 versus

1 2018 are depicted in Exhibit REB-13.

2 Q. What are the primary drivers of the net increase in 2018 revenue 3 requirements?

A. FPL's retail rate base is forecasted to increase approximately \$1.3 billion,
primarily as a result of the investments made to harden our infrastructure to
better withstand bad weather, support system growth, improve reliability and
ensure regulatory compliance. Exhibit REB-13 page 2 of 2 depicts the
revenue requirement in 2018 resulting from each of these capital initiatives.

9

10 The primary drivers of the increase in revenue requirements in 2018 are: (1) 11 capital investment initiatives that support storm hardening, increased 12 reliability, and system growth, and ensure regulatory compliance; (2) the 13 impact of inflation and customer growth; (3) an increase in the weighted 14 average cost of capital; and (4) revenue growth that partially offsets the 15 increase in revenue requirements. Each of these drivers will be discussed 16 individually, and they are summarized as follows:

17

18	Capital Initiatives	\$223 million
19	Inflation and Customer Growth	\$47 million
20	Change in Weighted Average Cost of Capital	\$31 million
21	Revenue Growth	<u>(\$39) million</u>
22	TOTAL	\$262 million

1Q.Please describe the Capital Initiatives that impact 2018 revenue2requirements.

A. FPL continues to invest in projects that support system growth and provide
long term customer benefits such as O&M cost savings, increasing system
efficiency, fuel and emissions savings and improved system reliability.

6

7 During 2018, as discussed by FPL witness Miranda, the Company will invest 8 approximately \$870 million to continue to strengthen its infrastructure to 9 better withstand bad weather, which results in a 2018 revenue requirement of 10 \$95 million. In addition, FPL will incur approximately \$280 million in order 11 to continue to provide superior reliable service to our customers through the 12 continued use of innovative technology to reduce outages and restoration 13 time. These reliability investments increase the 2018 revenue requirement by 14 \$43 million.

15

16 Capital Requirements for Growth, in this analysis, represents the revenue 17 requirements associated with the power delivery infrastructure needed to 18 support the addition of new service accounts to the system. During 2018, as 19 described in further detail by FPL witness Morley, FPL projects to add 20 approximately 74,000 new service accounts within its territory. In order to 21 support this growth, FPL will incur approximately \$570 million of capital 22 expenditures to expand the transmission and distribution infrastructure to 23 support the growth. This results in an increase of \$76 million in revenue

- 1 requirements for 2018.
- 2

FPL also projects an increase in base revenue requirements of \$9 million for
the period 2017 to 2018 related to investments and activities undertaken as
required by state and federal governmental and regulatory bodies.

6 Q. Please describe the Inflation and Customer Growth driver and the impact
7 on 2018 revenue requirements.

A. As described previously, inflation represents the increased cost of goods and services in 2018 as compared to 2017. The CPI projection for 2018 indicates that goods and services will cost 2.6% more relative to 2017. In addition, FPL is projecting a 1.5% growth in its customer base in 2018. The impact of inflation and customer growth on O&M in 2018 results in a \$47 million increase in revenue requirements.

14 Q. Please explain the increase in the Weighted Average Cost of Capital and
15 its effect on the 2018 revenue requirements.

A. The 2018 weighted average cost of capital is 0.10% higher than the 2017
weighted average cost of capital. The difference is primarily attributable to an
increase in the long-term cost of debt, partially offset by a slight increase in
the proportion of the capital structure comprised of deferred taxes which have
a 0% cost. The increase in the weighted average cost of capital is projected to
increase the 2018 revenue requirements by \$31 million.

- 22
- 23

2		requirements.
3	A.	Retail base revenue resulting from increased sales reflects modest growth
4		resulting in a decrease in revenue requirements of \$38 million. Other base
5		revenues also increased by \$1 million. The overall impact results in a
6		reduction in 2018 revenue requirements of \$39 million.
7		
8		VII. THE 2019 OKEECHOBEE LSA
9		
10	Q.	Why is FPL requesting the 2019 Okeechobee LSA?
11	A.	The Okeechobee Unit is expected to go into service in mid-2019 and therefore
12		is unaffected by the revenues received per the 2017 Base Rate Increase and
13		2018 SYA. The 2019 Okeechobee LSA will be limited to the revenue
14		requirements associated with the Okeechobee Unit, and the cost assumptions
15		used in developing the base revenue requirements for the 2019 Okeechobee
16		LSA are based on the Commission need determination in Order No. PSC-16-
17		0032-FOF-EI. This proposed treatment is analogous to the GBRA rate
18		increases FPL has received on several of its recent power plant additions.
19		
20		Accordingly, FPL has filed the information for the 2019 Okeechobee LSA
21		that is required per Rule 25-6.0431, F.A.C., Petition for a Limited Proceeding,
22		and is proposing to begin recovering the first-year revenue requirements when
23		the Okeechobee Unit goes into service. FPL will request that its 2019 fuel

Please describe the impact of Revenue Growth on 2018 revenue

1

Q.

cost recovery factors also be reduced as of June 1, 2019 to best match
 recovery of the limited scope adjustment with its associated fuel savings. This
 rate change synchronization is analogous to that used for each of the last
 several gas-fired combined cycle units the Company has placed into service.

5

6

О.

What is the impact on the projected ROE in 2019 due to the 2019 Okeechobee LSA?

7 The 2019 Okeechobee LSA is designed to preserve FPL's opportunity to earn A. at the mid-point of its requested ROE of 11.50% for the Okeechobee Unit 8 after the project goes into service. As determined in FPL's last rate case, 9 Order No. PSC-13-0023-S-EI, Docket No. 120015-EI (issued January 14, 10 11 2013), and affirmed by the Florida Supreme Court (Citizens of the State of 12 Florida vs. Florida Public Service Commission, 146 So. 3d 1143 (Fla. 2014), with respect to the GBRA increases for the Cape Canaveral Energy Center, 13 Riviera Beach Energy Center, and the Port Everglades Energy Center, the 14 base revenue increases are by definition "mid-point seeking," i.e., they cannot 15 drive the Company's earned ROE above its authorized mid-point. The 2019 16 Okeechobee LSA works in exactly the same fashion. FPL expects that other 17 18 cost increases and additional investment during the period following the inservice date of the project will exert downward pressure on FPL's earnings, 19 but as part of the four year proposal described previously, FPL it is not 20 seeking a rate increase at this time to recover any of those other costs. 21

22

VIII. TRANSFER OF THE MARTIN-RIVIERA GAS LATERAL

2

3	Q.	Please	describe	the	facilities	referred	to	as	the	Martin-Riviera	Gas
4		Latera	l ("MR-R	V La	teral").						

A. The MR-RV Lateral is an approximate 38-mile long, 20" diameter, natural gas
pipeline originating at the Martin Next Generation Clean Energy Center
("Martin Plant") located in Martin County and terminating at the Riviera
Beach Clean Energy Center ("Riviera Plant") in Palm Beach County. The
pipeline is dedicated to providing natural gas to the Riviera Plant.

10 Q. How are the base revenue requirements of the MR-RV Lateral currently 11 being recovered from retail customers?

A. The MR-RV Lateral was included in the total cost of the Riviera Plant that
went into commercial operation on April 1, 2014. Accordingly, the base
revenue requirements for the MR-RV Lateral were included in the
Commission-approved GBRA for the Riviera Plant implemented on April 1,
2014 and are currently being recovered from retail customers through base
rates.

18 Q. Please describe the proposed transaction involving the MR-RV Lateral.

A. FPL is proposing to transfer the MR-RV Lateral and all related equipment,
working capital and operations, to its FERC-regulated affiliate, Florida
Southeast Connection ("FSC") at net book value on the transaction date,
currently contemplated to be May 1, 2017. FSC is the owner and operator of
a 126-mile natural gas pipeline interconnected with the Sabal Trail pipeline at

the Central Florida Hub in Osceola County and terminating at the Martin Plant, and is the party with whom FPL has a long-term gas transportation agreement commencing on May 1, 2017, the day on which FSC's pipeline is expected to go in-service. FSC would contract with FPL to provide firm gas transportation from the Martin Plant to the Riviera Plant in the quantities and other operating characteristics currently available to FPL through its ownership of the MR-RV Lateral.

8 Q. Why is a transfer of the MR-RV Lateral to FSC in the interest of FPL 9 customers?

As reflected on Exhibit REB-14, the transaction would be achieved at an 10 A. overall net savings to FPL customers. Preliminary estimates suggest a 11 CPVRR savings of \$3 million over the life of the contemplated FPL-FSC 12 13 Contract, with customer savings starting in year one of the transaction. Secondly, the transaction provides risk mitigation for FPL's customers as all 14 15 operating costs are the responsibility of FSC and FPL is guaranteed a fixed 16 tariff rate. Finally, FPL customers benefit from the annual resetting of fuel clause factors because the tariff reflects declining revenue requirements and 17 the fuel clause factors will be adjusted each year to reflect that decline. 18

19 Q. What is the Commission being asked to approve in this proceeding?

A. FPL requests that the Commission approve the conceptual framework for the
 transfer of the MR-RV Lateral from FPL to FSC in this proceeding. The
 economic analysis on Exhibit REB-14 reflects current assumptions regarding
 revenue requirements of the MR-RV Lateral implicit in FPL's MFRs filed in

this proceeding. The Commission's decision on the various issues in this
 proceeding may alter the resulting revenue requirements effective May 1,
 2017.

4 Q. Please describe the process by which the proposed transaction would be 5 reflected in customers' rates.

- 6 A. If the Commission approves this conceptual approach, FPL would file a 7 petition in early 2017 that would confirm the cost-effectiveness of the 8 transaction and seek approval to implement a simultaneous change in base 9 rates and fuel charges. Specifically, following FERC approval of a negotiated 10 transportation agreement between FPL and FSC, FPL would file a petition 11 requesting approval to simultaneously lower base rates through a Pipeline 12 Base Rate Reduction ("PBRR") and increase fuel clause factors to recover the 13 transportation charges that FPL would pay to FSC for the MR-RV Lateral 14 under the transportation agreement. The effective date of these proposed 15 changes to rates would be based on the date of transfer of the MR-RV Lateral. 16 It is expected that the net adjustment would be a reduction to the total amount 17 paid by FPL's customers and FPL would proceed with the transaction only if 18 that is the case. The amount of the reduction would be documented in the supporting exhibits to FPL's petition. FPL proposes to implement the PBRR 19 20 as a percentage reduction in base rates for every rate class consistent with how 21 FPL has implemented GBRA increases.
- 22 Q. Does this conclude your direct testimony?
- 23 A. Yes.

1	BY MR. BUTLER:
2	Q Mr. Barrett, do you have exhibits that were
3	identified as REB-1 through REB-14 attached to your
4	prepared direct testimony?
5	A Yes.
6	MR. BUTLER: Okay. Madam Chair, I would note
7	that those have been pre-identified as Exhibits 79
8	through 92.
9	CHAIRMAN BROWN: Noted.
10	MR. BUTLER: And
11	CHAIRMAN BROWN: And staff, at this time
12	MS. JANJIC: Yes.
13	EXAMINATION
14	BY MS. JANJIC:
15	Q Good evening or good afternoon,
16	Mr. Barrett.
17	A Good afternoon.
18	Q Have you reviewed Staff Exhibit 579?
19	A I have.
20	Q It is my understanding that FPL provided an
21	amended response to OPC's second set of interrogatories,
22	No. 105; is that correct?
23	A That's correct, yes.
24	Q Did you prepare the exhibits listed under your
25	name, including the amended response, which is
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ſ

1 discussed, or were they prepared under your supervision? 2 Α Yes, they were. 3 0 Are these exhibits true and correct to the 4 best of your knowledge and belief? 5 Α Yes. 6 Would your responses be the same today as when 0 7 you prepared them? 8 Α Yes. 9 Are any portions of your listed exhibits 0 10 confidential? If so, can you tell me which ones? 11 Yes. Let's see. Staff Exhibit 460. Α It's 12 OPC's first set, No. 3, Attachment 3. 13 CHAIRMAN BROWN: Okay. 14 THE WITNESS: Okay. And Staff Exhibit 492, 15 AARP's third set, No. 74. 16 CHAIRMAN BROWN: Okay. 17 MS. JANJIC: All right. Thank you. 18 THE WITNESS: Thank you. 19 CHAIRMAN BROWN: That was 74. No. 74. 20 Staff, proceed. 21 MR. BUTLER: Are you done? 22 Yes, we're complete. MS. JANJIC: Thank you. 23 CONTINUED DIRECT EXAMINATION 24 BY MR. BUTLER: 25 Mr. Barrett, would you please provide a 0

1	summary of your direct testimony.
2	A Yes.
3	Madam Chair and Commissioners, thank you for
4	the opportunity to speak with you today.
5	FPL's 2012 settlement agreement has benefited
6	customers by allowing the company to focus on
7	operations, reduce base operating costs, and
8	consistently maintain the lowest typical bill in the
9	state.
10	With that agreement due to terminate at the
11	end of 2016, FPL filed a four-year rate proposal that
12	seeks a base-revenue increase in 2017 of 866 million; a
13	subsequent-year base-revenue increase in 2018 of
14	262 million; and a limited-scope adjustment in 2019 of
15	209 million, when the Okeechobee Clean Energy Center
16	enters service.
17	FPL has agreed to forego a general base-rate
18	increase until at least 2021 if our requested relief is
19	granted. This four-year rate proposal would provide
20	long-term rate stability for customers, regulatory
21	efficiency, and is expected to produce total residential
22	customer bills that grow roughly in line with inflation
23	over the four-year period.
24	My direct testimony in this case is focused on
25	five fundamental issues; the values to customers of

1 FPL's four-year rate proposal; the reasonableness of 2 FPL's financial forecasts and its reliability for 3 setting base rates; the cost drivers behind our request; 4 the necessity of a step increase for the recovery of the 5 cost of the Okeechobee Clean Energy Center; and the 6 company's proposal to save customers money by 7 transferring its Martin-to-Riviera gas lateral to the 8 Florida Southeast Connection.

9 First, FPL has a long history of operating 10 under multi-year settlement agreements. The stability 11 and certainty provided by those agreements have allowed 12 FPL to focus on delivering a superior level of service 13 to its customers while also attaining best-in-class, 14 non-fuel 0 & M cost performance, and lower customer 15 bills offering an unrivaled value proposition to our 16 FPL's current four-year proposal would allow customers. 17 the company to continue the successful strategy.

18 Second, the financial forecasts used in 19 preparing the 2017 and 2018 MFRs is reasonable for 20 setting FPL's rates. As the vice president of finance 21 for FPL, I oversee the development and approval of the 22 company's budgets. And I can assure you the process is 23 rigorous.

It includes the input of subject matter
experts on all major assumptions as extensively reviewed

prior to its approval by management. The company's forecast has a good track record of accuracy and, accordingly, is very reliable for use by this Commission in setting rates.
Third, Exhibit REB-8, on the boards behind me,

6 illustrates the major drivers of the company's increased
7 revenue requirements beginning in 2013, the year base
8 rates were last set, and running through 2017, the test
9 year in this proceeding.

10 The principal factors or drivers that have 11 increased our costs are capital improvements to improve 12 system reliability and efficiency, strengthen our 13 infrastructure, and support system growth, inflation, 14 customer growth, increases in depreciation expense and 15 the impact of reserve amortization.

16 At the same time, FPL has been able to 17 significantly reduce its operating costs over this 18 period. As a result of streamlining processes, 19 deploying technology to enable automation and other 20 actions focused on operating efficiency, FPL has reduced 21 its revenue requirements by \$175 million in January of 22 2017, as seen on the O & M productivity bar. 23 Similarly, continued capital investments in 24 infrastructures, the primary driver of the need for 25 262 million in incremental revenues, reflected in our

1 subsequent-year adjustment.

Fourth, my testimony explains why the company's requested 209-million step increase for the Okeechobee Unit in mid-'19 is necessary and appropriate. FPL proposes this step increase occur at the time the plant is placed in service to provide for the base revenue requirements for the first 12 months of its operation.

9 The Okeechobee plant has been approved by the 10 Commission and is expected to be placed in service in 11 mid-2019. It's projected to be more fuel-efficient than 12 the overall system, and will generate immediate fuel 13 savings for our customers.

FPL is also proposing that the step increase coincide with the corresponding reduction and fueladjustment factors so that customers receive the proper price signals when the Okeechobee plant goes into service.

19 Finally, my testimony seeks Commission 20 approval of the framework to transfer the FPL Martin-to-21 Riviera gas lateral pipeline to the Florida Southeast 22 Connection. The transaction is structured to provide 23 customer savings --24 30 seconds. CHAIRMAN BROWN: 25 -- through the life of the pipeline. Α It would

1	mitigate the risk of FPL's customers because all
2	operating costs would be the responsibility of FSC.
3	In conclusion, under the four-year 2012
4	settlement agreement, FPL has kept customer bills among
5	the lowest in the state and focused on further improving
6	its operating efficiency and productivity.
7	The four-year rate proposal that we are now
8	requesting will enable us to continue to provide that
9	value to customers through the end of the decade.
10	Thank you.
11	CHAIRMAN BROWN: Thanks, Mr. Barrett.
12	(Transcript continues in sequence in Volume
13	12.)
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24	
25	

1	CERTIFICATE OF REPORTER
2	STATE OF FLORIDA)
3	COUNTY OF LEON)
4	I, ANDREA KOMARIDIS, Court Reporter, do hereby
5	certify that the foregoing proceeding was heard at the
6	time and place herein stated.
7	IT IS FURTHER CERTIFIED that I
8	stenographically reported the said proceedings; that the
9	same has been transcribed under my direct supervision;
10	and that this transcript constitutes a true
11	transcription of my notes of said proceedings.
12	I FURTHER CERTIFY that I am not a relative,
13	employee, attorney or counsel of any of the parties, nor
14	am I a relative or employee of any of the parties'
15	attorney or counsel connected with the action, nor am I
16	financially interested in the action.
17	DATED THIS 25th day of August, 2016.
18	
19	\bigcap
20	
21	Jame
22	ANDREA KOMARIDIS
23	NOTARY PUBLIC COMMISSION #EE866180 EXPIRES FEBRUARY 09, 2017
24	EAFIRES FEDRUARI US, ZUI/
25	