BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

In the Matter of:

DOCKET NO. 20190015-EG
COMMISSION REVIEW OF NUMERIC CONSERVATION GOALS (FLORIDA POWER & LIGHT COMPANY).
_____/

DOCKET NO. 20190016-EG
COMMISSION REVIEW OF NUMERIC CONSERVATION GOALS (GULF POWER COMPANY).
_____/

DOCKET NO. 20190017-EG
COMMISSION REVIEW OF NUMERIC CONSERVATION GOALS (FLORIDA PUBLIC UTILITIES COMPANY).
_____/

DOCKET NO. 20190018-EG
COMMISSION REVIEW OF NUMERIC CONSERVATION GOALS (DUKE ENERGY FLORIDA, LLC).
_____/

DOCKET NO. 20190019-EG
COMMISSION REVIEW OF NUMERIC CONSERVATION GOALS (ORLANDO UTILITIES COMMISSION).
_____/

DOCKET NO. 20190020-EG
COMMISSION REVIEW OF NUMERIC CONSERVATION GOALS (JEA).
_____/

DOCKET NO. 20190021-EG
COMMISSION REVIEW OF NUMERIC CONSERVATION GOALS (TAMPA ELECTRIC COMPANY).
_____/

VOLUME 4
PAGES 638 through 773

PROCEEDINGS:	HEARING
COMMISSIONERS PARTICIPATING:	CHAIRMAN ART GRAHAM COMMISSIONER JULIE I. BROWN COMMISSIONER DONALD J. POLMANN COMMISSIONER GARY F. CLARK COMMISSIONER ANDREW GILES FAY
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PLACE:	Betty Easley Conference Center Room 148 4075 Esplanade Way Tallahassee, Florida
REPORTED BY:	ANDREA KOMARIDIS Court Reporter
APPEARANCES:	(As heretofore noted.)

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I N D E X

WITNESSES

EXHIBITS

NUMBER:		ID	ADMITTED
325	OUC's Response to Staff's first set of ROGS, No. 11	660	666
326	OUC Response to staff's first set of ROGS, No. 2	662	666
327	OUC's Response to SACE 5th set of ROGS	662	666
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328	OUC Response to SACE POD 16, Achievable Screening OUC Tab Res Screening	718	746
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330	OUC's response to staff's first interrogatory, Nos. 7 and 8	721	746
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332	OUC Response to staff's 11th set of ROGS Excerpt No. 93	724	746
333	OUC Response to SACE first RFA, Nos. 1-17	728	746
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P R O C E E D I N G S

(Transcript follows in sequence from Volume 3.)

CHAIRMAN GRAHAM: Mr. Wright, you are up.

MR. S. WRIGHT: Thank you, Mr. Chairman.

The Orlando Utilities Commission calls Bradley E. Kushner.

Thank you, Mr. Chairman.

EXAMINATION

BY MR. S. WRIGHT:

Q Good morning, Mr. Kushner.

A Good morning.

Q Please state your name and business address.

A My name is Bradley Kushner. My business address is 2465 Southern Hills Court, Oviedo, Florida 32765.

Q Mr. Kushner, have you previously taken the witness' oath to tell the truth in these proceedings?

A Yes, I have.

Q Are you the same Bradley E. Kushner who prepared and caused to be filed in this docket, 20190019, direct testimony consisting of 12 pages?

A Yes.

Q Do you have any changes or corrections to that testimony?

A No.

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

A Yes, they would.

MR. S. WRIGHT: Thank you.

Mr. Chairman, I respectfully request that Mr. Kushner's testimony be entered into the record as though read.

CHAIRMAN GRAHAM: We will enter Mr. Kushner's direct testimony into the record as though read.

(Whereupon, Witness Kushner's prefiled direct testimony was inserted into the record as though read.)

IN RE: COMMISSION REVIEW OF NUMERIC CONSERVATION GOALS FOR ORLANDO UTILITIES COMMISSION, DOCKET NO. 20190019-EG

DIRECT TESTIMONY OF BRADLEY E. KUSHNER

ON BEHALF OF ORLANDO UTILITIES COMMISSION

I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your name and business address.

A. My name is Bradley E. Kushner, and my business address is 2465 Southern Hills Court, Oviedo, Florida 32765.

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

A. I am employed by nFront Consulting LLC ("nFront") as an Executive Consultant.

Q. Please describe your duties and responsibilities in that position.

A. My responsibilities include project management and project support for various projects for electric utility clients. These projects include integrated resource plans, power supply studies, power supply requests for proposals, demand-side management/conservation reports, and other regulatory filings.

Q. Please summarize your educational background and your employment experience.

A. I received my Bachelor of Science degree in Mechanical Engineering from the University of Missouri-Columbia in 2000 and my Master of Business Administration degree from Emporia State University in 2013. I have nearly 20 years of experience in the engineering and consulting industry. I have experience in the development of integrated resource plans, ten-year site plans, Demand-Side Management and energy conservation plans, and other capacity planning studies for clients throughout the United States. Utilities in Florida for which I have worked include JEA, Florida Municipal Power Agency, Kissimmee Utility Authority, Orlando Utilities Commission ("OUC"), Lakeland Electric, Gainesville Regional Utilities ("GRU"), Reedy Creek Improvement District, Tampa Electric Company, and the City of Tallahassee. I have performed production cost modeling and economic analysis, and otherwise participated in six need determination dockets that have been filed on behalf of Florida utilities and approved by the Florida Public Service Commission ("PSC"). I have also testified before the PSC in power plant need determinations and Conservation Goal proceedings.

Q. Please summarize your experience relating to energy conservation and electric system planning.

A. I have worked extensively on electric system planning and energy conservation projects over the past 19 years. Of particular relevance to my testimony in this case, I have prepared the Ten-Year Site Plans ("TYSPs") for OUC and have also prepared OUC's Annual Conservation Reports on Demand-Side Management and Conservation Programs since the early 2000s. I have also provided testimony supporting the petitions of OUC and JEA in prior dockets before the Commission for setting these utilities' energy conservation and demand reduction goals pursuant to the Florida Energy Efficiency and Conservation Act ("FEECA"). These goals are referred to herein as a utility's "FEECA Goals."

Q. Please summarize your experience testifying in regulatory proceedings.

A. I have filed testimony and testified on many occasions before utility regulatory commissions, including testimony to the PSC in the following proceedings:

1. 2009 FEECA Goals Dockets for OUC and JEA;
2. Gainesville Renewable Energy Center (GREC) need determination;
3. Greenland Energy Center need determination;
4. Cane Island Unit 4 need determination;
5. Treasure Coast Energy Center Unit 1 need determination; and
6. Stanton Energy Center Unit B need determination.

Q. Are you testifying as an expert in this proceeding? If so, please state the area or areas of your expertise relevant to your testimony.

A. Yes. I am providing both factual and expert testimony regarding OUC's avoided costs, fuel price and energy cost projections, and carbon dioxide ("CO_2") compliance cost projections.

Q. Are you sponsoring any exhibits with your testimony?

A. Yes. I am sponsoring the following exhibits:

Exhibit No. ___ [BEK-1] Resume' of Bradley E. Kushner;

Exhibit No. ___ [BEK-2] Summary of Avoided Unit Costs; and

Exhibit No. ___ [BEK-3] Carbon Regulation Compliance Costs.

II. PURPOSE AND SUMMARY OF TESTIMONY

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

A. I have been engaged by OUC to provide information in support of OUC's analyses of the technical, economic, and achievable potential related to OUC's proposed FEECA Goals for the 2020 through 2029 period that shall be established in this docket. Specifically, my testimony discusses OUC's avoided capital and operating cost information for future power plants, projected energy costs, and projected costs and prices associated with anticipated CO_2 regulation. These projections were furnished to Nexant and

used in Nexant's analyses of the technical, economic, and achievable potential for energy conservation, peak demand reductions, and demand-side renewable energy resource development for OUC.

Q. What issues do you address in your testimony?

A. Relative to the issues identified in Appendix A to the PSC's Order Establishing Procedure, Order No. PSC-2019-0062-PCO-EG ("OEP"), my testimony relates to and supports OUC's testimony and positions on Issues 1, 3, 4, 5, 8, 9, and 10.

Q. Please summarize the main conclusions of your testimony.

A. OUC has no avoided generating capacity costs over the ten-year period from 2020 through 2029 for which FEECA Goals are to be set in this proceeding. OUC's next generation need is estimated to arise in 2032, following expiration of the Stanton A purchase power agreement ("PPA"). The energy costs and avoided unit costs that were furnished to Nexant for its analyses of the technical, economic, and achievable conservation potential for OUC were prepared under my supervision and direction, and these values are appropriate, reasonable, and as accurate as is practicable for projections over the full analysis period, which is from 2020 through 2049. The projected CO_2 compliance costs used by OUC and Nexant for its analyses of OUC's

FEECA Goals potential are based on estimates prepared and used by Florida Power & Light Company ("FPL") and Duke Energy Florida ("DEF"), respectively, and these projections are appropriate and reasonable for this purpose.

III. OUC'S AVOIDED GENERATING CAPACITY COSTS

Q. Please describe OUC's plans for adding electric generating capacity, including both the timing and type or types of OUC's planned generation additions over the period 2020 through 2049.

A. OUC currently has sufficient generating resources to meet its projected reserve requirements through 2031. Accordingly, OUC does not project any need for additional generating resources within the ten-year horizon for the conservation goals to be set in this proceeding, and OUC does not plan to add any generating capacity, either via construction or via PPAs, during this period. This is consistent with OUC's 2018 TYSP and also with OUC's 2019 TYSP, which was filed with the Commission on April 1, 2019.

As discussed previously in my testimony, OUC's next projected capacity requirements are primarily due to the expiration of the existing Stanton A PPA, and thus for purposes of this docket, OUC has assumed that new gas-fired combined cycle ("CC") capacity would be added to maintain reserve margin requirements beginning in 2032. OUC has made no commitment and

has no definitive plan to construct this generating unit, but for purposes of the cost-effectiveness analyses that are necessary in this docket, the CC unit is being considered OUC's avoided unit. In the event OUC were to move forward with construction of this type of generating unit, OUC would likely need to make the decision to do so in the 2026 to 2028 timeframe to allow sufficient time for permitting, licensing, engineering, procurement, and construction.

Q. Does OUC have any avoided generating capacity costs, including either or both self-owned generation additions or power purchase agreements, over the period 2020 through 2029, i.e., the ten-year time horizon for the goal-setting process in this docket?

A. No. As noted above, OUC's next generating resource addition is projected to be in 2032, and OUC has no avoidable generating capacity costs before that time.

Also as noted above, OUC does project a need for additional capacity to maintain reserve margin requirements beginning in 2032, and OUC has accordingly assumed the construction of a combined cycle unit in 2032 for purposes of the cost-effectiveness analyses that are required in the goal-setting process. The costs for this "avoided unit" are presented in my Exhibit No. ___ [BEK-2], and these avoided cost values were also provided to and

used by Nexant in its analyses of the Economic Potential and Achievable Potential for peak demand reductions, energy efficiency savings, and demand-side renewable energy savings by OUC.

IV. OUC'S ENERGY COSTS AND FUEL PRICE PROJECTIONS

Q. Please describe OUC's energy costs over the period 2020 through 2049.

A. OUC's energy costs over the analysis period used in the Economic Potential and Achievable Potential studies prepared by Nexant were prepared under my supervision and direction. The GenTrader® production cost simulation model was used to produce optimized, least-cost generation projections based on the assumed fuel prices and reasonable assumptions regarding unit performance and availability for OUC's generating resources. GenTrader® is a widely used, proprietary power generation production cost model developed by Power Costs, Inc. that optimizes a utility's power production over a defined time period based on available generation units with defined characteristics together with the utility's loads, fuel prices, fuel positions, power contracts, and fuel supply transportation constraints.

OUC's projected natural gas prices are based on a combination of New York Mercantile Exchange ("NYMEX") futures prices for natural gas and projections provided by PIRA Energy Group ("PIRA"), adjusted for delivery to OUC's delivery points. OUC used 100% NYMEX projections through

September 30, 2020, projections based on a 50/50 average of NYMEX and PIRA from October 1, 2020 through September 30, 2022, and projections based entirely on those provided by PIRA Energy Group for the remainder of the study period.

OUC's projected coal prices are based on projections by Energy Ventures Analysis, Inc. ("EVA") for use by OUC as well as recent offers from coal suppliers of Illinois Basin coal.

Q. In your opinion, are the energy costs furnished to and used by Nexant in its analyses of OUC's FEECA Goals potential appropriate for this purpose?

A. Yes, the energy costs are appropriate and as accurate as could reasonably be expected for projections over the analysis period for FEECA Goals potential. OUC's fuel price projections, which represent key foundational input data for any long-term power cost production simulation, are based on reputable, recognized, and widely used industry sources, NYMEX and PIRA. OUC's production cost model is GenTrader®, a widely used and recognized power production cost model. Finally, OUC's unit-specific characteristics and load forecasts used in the GenTrader® power cost simulations are the same, continuously vetted input data that OUC uses for its TYSPs. I have responsibility for compiling and reviewing the data and information

presented in OUC's TYSPs, and I also review OUC's load forecasts and unit specifications as part of my TYSP work. Accordingly, based on my direct and continuous familiarity with this information, as well as my experience with similar information for other utilities, it is my strong opinion that these projections are consistent with industry standards and fully appropriate for OUC's planning purposes and for Nexant's cost-effectiveness analyses of DSM potential.

Q. Did OUC and Nexant utilize any sensitivity cases of projected fuel prices in their analyses of technical, economic, and achievable conservation potential for OUC?

A. Yes. OUC developed sensitivity cases that reflect energy costs that are 25 percent higher and 25 percent lower than those associated with the base case fuel price projections. Nexant performed sensitivity analyses for economic and achievable potential using the same plus/minus 25 percent sensitivities.

V. OUC'S CARBON REGULATION COMPLIANCE COSTS

Q. How did OUC analyze potential carbon regulation costs in its evaluation and analyses of conservation potential for this FEECA Goals docket?

A. I should begin my testimony on this point with the qualification that no carbon regulations that would apply or impose costs on OUC yet exist, and thus there is substantial uncertainty surrounding any such programs and their

potential impacts on OUC's costs. Such uncertainties include the timing or starting date of any carbon regulatory program, the format or mechanism that such a program or programs might take (e.g., mandatory emission limits, a cap-and-trade allowance system like that applied to regulation of sulfur dioxide, or a carbon tax system), and of course, the levels of any potential allowance costs or carbon emissions taxes.

Given these uncertainties, OUC decided that the most reasonable way to address carbon regulatory costs in its FEECA Goals analyses is to use an average of the values prepared and used in these proceedings by FPL and DEF, and accordingly, OUC used the FPL-DEF average CO_2 compliance cost value, expressed in dollars per ton of CO_2 emitted as shown in Exhibit No. ___ [BEK-3]. The timing of CO_2 regulation, and associated CO_2 emissions prices, is consistent with what FPL and DEF used in their CO_2 compliance cost sensitivity analyses. This consistency is also consistent with the PSC's directive (in the OEP for the 2019 FEECA Goals dockets) for consistency among FEECA utilities that elect to evaluate a regulated CO_2 sensitivity.

VI. CONCLUSIONS

Q. Please state the main conclusions of your testimony.

A. OUC utilized a sound and widely used production cost model, GenTrader®, and fuel prices developed by widely used and respected analytical companies and resources to develop estimates of fuel prices and generating costs that were used in the Economic Potential and Achievable Potential analyses developed by Nexant in evaluating potential energy conservation and demand and energy reductions for OUC.

OUC's analysis of OUC's projected peak demands and available generating resources indicates that no additional generating capacity is expected to be needed before 2032. Further, Nexant's analyses show that, for all practical purposes, there are no meaningful Achievable Potential savings for Energy Efficiency, Demand Reduction, or demand-side renewable energy measures for OUC. Accordingly, I support OUC's position as presented in OUC witness Kevin M. Noonan's direct testimony that the Commission should not establish any FEECA Goals for OUC in this proceeding.

Q. Does this conclude your direct testimony?

A. Yes, it does.

BY MR. S. WRIGHT:

Q Mr. Chairman, I'll note -- Mr. Kushner, you -- you also prepared and caused to be filed three exhibits with your testimony.

A That is correct, Exhibits BEK-1 through BEK-3.

MR. S. WRIGHT: Thank you.

And Mr. Chairman, I'll note for the record at this time that those have been assigned Exhibit Nos. 47 through 49 in the staff's comprehensive exhibit list, and we'll move them in when it's time.

CHAIRMAN GRAHAM: Okay.

BY MR. S. WRIGHT:

Q Mr. Kushner, please present a brief summary of your testimony to the Commissioners.

A My name is Bradley Kushner. I'm an executive consultant with nFront Consultant, LLC, and I'm testifying on behalf of the Orlando Utilities Commission, or OUC.

My testimony addresses the avoided costs, fuel price, and energy-cost projections and carbon-dioxide-compliance cost projections reflected in OUC's cost-effectiveness evaluations performed by Nexant as part of this docket.

OUC does not have any avoided-capacity costs

during the ten-year time horizon for which goals will be established in this docket. OUC's next need for capacity is projected to occur in the year 2032.

For purposes of this docket, OUC has assumed that new natural-gas-fired combined-cycle capacity would be added in 2032. OUC has made no commitment and has no definitive plan to construct this generating unit, but for purposes of the cost-effectiveness analysis in this docket, the new combined-cycle is being considered OUC's avoided unit.

The capital costs and fixed operating and maintenance costs for this avoided unit were provided to and used by Nexant in its cost-effectiveness evaluations.

The overall approach to develop energy costs used in this docket is appropriate, as OUC has relied on an industry-accepted production-cost model and reputable and recognized industry sources for fuel-price projections.

OUC used a combination of New York Mercantile Exchange, or NYMEX, futures prices for natural gas and projections provided by the PIRA Energy Group, or PIRA.

OUC's projected coal prices are based on projections by Energy Ventures Analysis, or EVA, as well as recent offers from suppliers of Illinois Basin Coal.

Under my supervision and direction, OUC's energy costs were developed using the gen-trader production cost model. OUC developed sensitivity cases that reflect energy costs that are 25 percent higher and 25 percent lower than those associated with the base-case fuel-price projections. And Nexant performed sensitivity analyses using these sensitivities.

Although there are currently no regulations on carbon dioxide, or CO2, emissions that would apply to or impose costs on OUC, OUC considered a sensitivity that reflects the same CO2 compliance costs on a dollar-per-ton basis, as used by Florida Power & Light and Duke Energy Florida, in their current FEECA proceedings.

Nexant's economic and achievable-potential analyses indicate that there are no meaningful achievable-potential savings for energy efficiency, demand reduction, or demand-side renewable-energy measures for OUC.

As such, I support of OUC's position, as presented in OUC Witness Kevin M. Noonan's direct testimony, that this Commission should not establish any FEECA goals for OUC in this docket.

Thank you.

MR. S. WRIGHT: Mr. Chairman, we tender Mr. Kushner for cross-examination.

CHAIRMAN GRAHAM: Thank you.

Welcome, Mr. Kushner.

THE WITNESS: Thank you.

CHAIRMAN GRAHAM: OPC.

MS. FALL-FRY: No questions.

CHAIRMAN GRAHAM: FIPUG.

MR. MOYLE: No questions. We're not a party to OUC.

CHAIRMAN GRAHAM: Sounds good to me.

Kelley.

MS. CORBARI: No questions.

CHAIRMAN GRAHAM: SACE.

MR. LUEBKEMANN: Good morning. We've got a couple.

EXAMINATION

BY MR. LUEBKEMANN:

Q Good morning, Mr. Kushner.

A Good morning.

Q Could I direct your attention to OUC's responses for staff's first set of interrogatories, No. 11.

A Yes.

MR. LUEBKEMANN: This is an excerpt of Staff Exhibit 194, but we can also mark it as 325.

CHAIRMAN GRAHAM: We'll mark it as 325,

correct.

(Whereupon, Exhibit No. 325 was marked for identification.)

BY MR. LUEBKEMANN:

Q Mr. Kushner, you sponsored the interrogatory response for No. 11?

A Correct.

Q And this question is asking about the discount rate used for cost-effectiveness for OUC's studies?

A Yes.

Q And that discount rate was used -- the discount rate used was 6.5 percent?

A That is correct.

Q And that represents the weighted cost of capital?

A Yes.

Q Or the weighted average cost of capital.

OUC used that 6.5 percent weighted average cost of capital as the discount rate for RIM, TRC, and PCT --

A Correct.

Q -- test analyses.

A Yes.

Q Thank you.

If I could direct your attention to OUC

response to staff's first ints., No. 2.

A Okay.

Q You sponsored the answer for Interrogatory No. 2?

A I did.

Q And in this interrogatory, OUC was asked about its natural-gas fore- -- natural-gas price forecasts?

A Can you repeat the question?

Q Sure. This interrogatory was asking about OUC's natural-gas price forecasts.

A Recent -- previous natural-gas price forecasts, yes.

Q Certainly.

Directing your attention to your response, for five years now, OUC had an average error rate of 98 percent?

A That's correct.

MR. LUEBKEMANN: If I could direct your attention to Exhibit, 0UC's responses to staff's fifth set of interrogatories -- and I'm sorry. Could I go ahead and mark the last exhibit as 326? It's -- it's a -- also an excerpt of staff 194.

CHAIRMAN GRAHAM: Which one is this?

MR. LUEBKEMANN: That is the OUC response to staff's first interrogatories, No. 2.

CHAIRMAN GRAHAM: All right. That's 326.

(Whereupon, Exhibit No. 326 was marked for identification.)

MR. LUEBKEMANN: So, now we are looking at OUC's responses to SACE's fifth set of interrogatories. This is an excerpt of staff's 214. We can mark it as 327.

CHAIRMAN GRAHAM: Okeydoke.

(Whereupon, Exhibit No. 327 was marked for identification.)

BY MR. LUEBKEMANN:

Q Mr. Kushner, you sponsored the answers for Interrogatories 98 through 105?

A That's correct.

Q Thank you.

You state the -- this is looking at Interrogatory No. 98. You state: The load forecast provided by OUC to Nexant for use in the MPS did not assume that there would be no additional adoption by customers of any energy-efficiency measures above baseline codes and standards.

A That's correct. There's additional context in the response, but that's an accurate statement.

Q Okay. That additional context, you also state that: The load forecast includes assumptions for energy

efficiency and saturation, relating to heating, cooling, and other end-uses.

A Correct.

Q And you further state: The forecast is also based on historical energy usage data that reflects some historical adoption of naturally-occurring, i.e., without the a utility-funded program, energy-efficiency measures that were more efficient than those required by codes and standards.

A Correct.

Q Because the load forecast OUC supplied to Nexant includes historical energy-usage data -- including, quote -- this is now looking at No. 99 -- historical adoption of measures, appliances, and equipment that were more efficient than required by then-applicable codes and standards when they were implemented, end quote.

The resulting forecast, quote, "Will reflect some adoption of measures that are more efficient than required by codes and standards in the future."

A I'm sorry. Did you say you jumped to the response in No. 99?

Q Yes, that's correct.

A Where in the response to No. 99 is it?

Q I'm looking at Page 5 of the excerpt.

A Okay.

Q And that's the second half of the paragraph at the top of the page.

A Okay. I see it.

I didn't catch the question. I'm sorry.

Q I'll -- I'll repeat my question. Because the load forecast OUC supplied to Nexant includes historical energy-usage data, including historical adoption of measures, appliances, and equipment that were more efficient than required by-then applicable codes and standards when they were implemented, the resulting forecast will reflect some adoption of measures that are more efficient than are required by codes and standards in the future.

A Correct.

Q OUC's load forecast assumes that some people may adopt above energy-efficienc- -- above code energy-efficiency measures, even in the absence of a utility-sponsored DSM program.

A Yes.

Q And OUC does not contend that the load forecast provided to Nexant assumed its customers would adopt zero additional energy-efficiency measures above baseline codes and standards during the next ten years?

A I think there was a double negative. Is there

a way you could rephrase that question? I'm sorry.

Q I'm going to borrow from yours here -- it is not OUC's contention that the load forecast utilized by Nexant in this proceeding assumed that OUC's customers would adopt zero additional efficiency measures above baseline codes and standards over the next ten years?

A Correct.

Q That was your answer. Okay.

Finally, OUC does contend the load forecasts supplied to Nexant are accurate?

A As accurate as -- as they can be. They're based on sound, reliable processes that have consistently been approved by the Public Service Commission in its review of ten-year site plan. So, yes.

MR. LUEBKEMANN: Thank you, Mr. Kushner. No further questions.

CHAIRMAN GRAHAM: Staff.

MS. WEISENFELD: Staff has no questions.

CHAIRMAN GRAHAM: Commissioners.

Redirect, Mr. Wright.

MR. S. WRIGHT: Mr. Chairman, if I understand it, 327 is going to be admitted in its entirety. Then I would not need any redirect because the answers, in their entirety, speak for themselves.

CHAIRMAN GRAHAM: Okay.

MR. S. WRIGHT: So --

CHAIRMAN GRAHAM: I have no problem with that.

MR. S. WRIGHT: And we have no objection to 327 coming in. It's our answers.

CHAIRMAN GRAHAM: So, you have no other redirect.

MR. S. WRIGHT: Correct.

CHAIRMAN GRAHAM: Okay. What other exhibits do you have, Mr. Wright?

MR. S. WRIGHT: 47, 48, and 49, Mr. Chairman.

CHAIRMAN GRAHAM: Is there no objections to entering 47, 48, and 49? Then we'll enter those into the record.

(Whereupon, Exhibit Nos. 47 through 49 were entered into the record.)

CHAIRMAN GRAHAM: SACE?

MR. LUEBKEMANN: We would move to enter 325 through 327 into the record.

CHAIRMAN GRAHAM: We will enter 325 through 327, seeing no objections, into the record.

(Whereupon, Exhibit Nos. 325 to 327 were entered into the record.)

CHAIRMAN GRAHAM: Mr. Wright, your next witness.

MR. S. WRIGHT: Thank you, Mr. Chairman. OUC calls Kevin M. Noonan.

Mr. Chairman, I -- I apologize for the delay, but I really would like to give my full attention to what's going on with Mr. Noonan, so I'd like to wait until the documents are passed out, if I may.

CHAIRMAN GRAHAM: Sure.

MR. S. WRIGHT: Thank you.

CHAIRMAN GRAHAM: Mr. Wright?

MR. S. WRIGHT: Thank you, Mr. Chairman.

EXAMINATION

BY MR. S. WRIGHT:

Q Good morning, Mr. Noonan.

A Good morning.

Q Please state your name and business address for the record.

A Kevin M. Noonan, 100 West Anderson Street, Orlando, Florida 32801.

Q Thank you.

Mr. Noonan, have you previously taken the witness' oath to tell the truth in these proceedings?

A I have.

Q And are you the same Kevin M. Noonan who prepared and caused to be filed in this docket, No. 20190019-EG, direct testimony consisting of 42

pages?

A I have.

Q Did you also cause to be filed an errata sheet with a correction to your prefiled testimony on August 8th, 2019?

A I did.

Q Other than the change made in the errata sheet, which I note for the record is -- is referenced in the prehearing order, do you have any other changes or corrections to your direct testimony?

A I do not.

Q If I were to ask you the questions contained in your prefiled direct testimony today, would your answers be the same?

A Yes.

MR. S. WRIGHT: Mr. Chairman, I ask that Mr. Noonan's direct testimony be entered into the record as though read.

CHAIRMAN GRAHAM: We'll enter Mr. Noonan's direct testimony into the -- into the record as though read.

(Whereupon, Witness Noonan's prefiled direct testimony was inserted into the record as though read.)

ERRATA SHEET

DIRECT TESTIMONY

WITNESS: KEVIN NOONAN

PAGE #	LINE #	CHANGE
11	18	Change "40" to "33"

IN RE: COMMISSION REVIEW OF NUMERIC CONSERVATION GOALS FOR ORLANDO UTILITIES COMMISSION, DOCKET NO. 20190019-EG

DIRECT TESTIMONY OF KEVIN M. NOONAN

ON BEHALF OF ORLANDO UTILITIES COMMISSION

I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your name and business address.

A. My name is Kevin M. Noonan, and my business address is Orlando Utilities Commission, Reliable Plaza at 100 West Anderson, Orlando, Florida 32801.

Q. By whom are you employed, and in what position?

A. I am employed by the Orlando Utilities Commission ("OUC") as Director of Legislative Affairs.

Q. Please describe your duties and responsibilities in that position.

A. I am responsible for developing and implementing OUC's political engagement strategy with state and local elected officials, as well as other key government officials and policymakers. I work towards achieving passage of OUC sponsored legislation while also guiding and advising the organization on other proposed legislation and regulations that may impact OUC. I attend hearings, committee meetings, and council meetings and provide appropriate responses when necessary. I prepare proposed

legislative recommendations and advise on processes that may lead to policy development. I also prepare summary papers to advise OUC leadership and internal stakeholders on key legislative and regulatory matters for state and local activities.

Q. Please describe your educational background and professional experience.

A. I received a Bachelor of Science degree in Economics from Florida State University, a Master of Science in Urban and Regional Planning from Florida State University, and a Certificate in Management from Rollins College. I am a government relations, metering, sustainability and customer service professional with more than 24 years of experience in developing innovative government outreach and customer focused programs. In my career with OUC, my work on customer service and sustainability has included more than four years (2009-2013) of service as OUC's Director of Conservation & Renewables. In this role, I developed and implemented all of OUC's new customer conservation and education programs, including electric demand-side management and energy conservation efforts. My work included managing customer rebates and efficiency incentives for residential and commercial customers, including solar thermal and solar photovoltaic ("PV") rebate programs, as well as coordinating with other OUC departments on large-scale renewable energy projects.

Q. Are you testifying as an expert in this proceeding? If so, please state the area or areas of your expertise relevant to your testimony.

A. I am testifying both as to factual information regarding OUC and also as an expert on energy conservation policy issues, including OUC's proposals that the Florida Public Service Commission ("PSC") not establish any separate goals for OUC in these proceedings for energy conservation, peak demand reduction, or demand-side renewable energy development, because any such goals would not be cost-effective for OUC's general body of ratepayers. In addition, any such mandatory goals are unnecessary for OUC to continue its long-standing practices of implementing highly successful and beneficial energy conservation and renewable energy initiatives for the benefit of its customers and Florida as a whole.

Q. Are you sponsoring any exhibits to your testimony?

A. Yes. I am sponsoring the following exhibits:

Exhibit No. ___ [KMN-1] Resumé of Kevin M. Noonan;

Exhibit No. ___ [KMN-2] Description of OUC's Existing DSM Programs that Contribute Towards Meeting OUC's Current FEECA Goals; and

Exhibit No. ___ [KMN-3] Estimated Bill Impact for 1,000 kWh per Month Residential Customer.

II. PURPOSE AND SUMMARY OF TESTIMONY

Q. What is the purpose of your testimony in these proceedings?

A. I am testifying on behalf of OUC in Florida Public Service Commission ("PSC") Docket No. 20190019-EG, which is titled In re: Commission Review of Numeric Conservation Goals for Orlando Utilities Commission. This docket is one of seven essentially identical dockets, consolidated for hearing and administrative purposes, in which the PSC will establish goals for OUC and six other electric utilities that are subject to the Florida Energy Efficiency and Conservation Act ("FEECA") for the goal-setting period 2020 through 2029. These will include goals ("FEECA Goals") for improving energy efficiency, controlling and reducing the growth of electric energy consumption, reducing the growth of weather-sensitive peak electricity demands, and encouraging the development of demand-side renewable energy resources. The other utilities subject to FEECA are Duke Energy Florida ("DEF"), Florida Power & Light Company ("FPL"), Florida Public Utilities Company ("FPUC"), Gulf Power Company ("Gulf"), JEA (formerly named Jacksonville Electric Authority), and Tampa Electric Company ("Tampa Electric" or "TECO"), and I refer to this group, including OUC, as the "FEECA Utilities" in my testimony.

My testimony describes OUC, our service area and unique customer base, our existing generation, transmission, and distribution facilities, and our load

and usage characteristics. My testimony also summarizes the history and current status of OUC's highly successful energy conservation programs, including the processes that OUC follows in developing these measures and programs. My testimony provides an overview of the processes by which potential energy conservation, peak demand reduction, and demand-side renewable energy measures (collectively referred to as "DSM measures" or "DSM programs" herein) were evaluated by Nexant, Inc. ("Nexant"), for potential implementation and setting goals for OUC. Nexant is the consulting firm engaged by the FEECA Utilities to prepare studies of the Technical Potential, Economic Potential, and Achievable Potential energy conservation for these utilities; my testimony includes a summary of the information developed and furnished to Nexant by OUC and the respective roles of Nexant and OUC in the processes and analyses that support OUC's recommendations in this case.

Finally, my testimony presents OUC's specific recommendations regarding goals for energy conservation, demand reduction, and demand-side renewable energy development, including testimony addressing all of the specific issues identified by the PSC's Order Establishing Procedure for these proceedings.

Q. Please summarize the main conclusions of your testimony.

A. OUC continuously evaluates and implements DSM measures, including measures that reduce peak demands, reduce energy consumption, and encourage demand-side renewable energy measures. OUC's track record of DSM and renewable energy achievements is substantial and excellent. Even without specifically mandated goals, OUC will continue to develop and implement energy conservation programs and measures, and demand-side and supply-side renewable energy measures, based on the specific characteristics of OUC's system and customer base, in the best interests of OUC customers. These OUC efforts will, as they have for decades, result in significant energy conservation and renewable energy achievements for the benefit of our customers, the Greater Orlando community, and Florida as a whole.

For these FEECA Goals proceedings, OUC joined the other six FEECA Utilities in engaging Nexant to develop estimates of the Technical Potential, Economic Potential, and Achievable Potential for energy efficiency (conservation) savings, peak demand reductions, and demand-side renewable energy measures for OUC. The Technical Potential is a high-level estimate of the maximum possible amounts of demand reductions and energy savings that could be realized if every conceivable measure were implemented by every customer who could physically do so, without regard

to cost or any other real-world constraints. Economic Potential and Achievable Potential estimate what energy savings may be attained under more realistic economic assumptions. Nexant's analyses show that there is significant Technical Potential for summer and winter peak demand reduction (measured in megawatts, or "MW" and abbreviated as "DR") and energy reduction (measured in gigawatt-hours, or "GWH" and abbreviated as "EE," for Energy Efficiency) from DSM measures in OUC's service area.

Nexant analyzed Achievable Potential DSM savings for OUC using the Rate Impact Measure ("RIM") cost-effectiveness test, which tests whether the utility's general body of ratepayers, i.e., those who do not participate in a DSM program, will see higher rates and bills as a result of a given DSM measure or program, and the Total Resource Cost ("TRC") test. Because of OUC's focus on customer impacts, OUC strongly supports using the RIM test as the primary cost-effectiveness test for setting goals in these dockets.

Applying the RIM test, Nexant's analyses show that there are no DSM measures – no DR measures and no EE measures – for the Residential usage sector that are cost-effective to OUC"s general body of ratepayers. Nexant's Achievable Potential analyses also show that there are no DR measures for the Non-Residential usage sector (i.e., commercial and industrial customers) that offer Achievable Potential for energy or demand savings for OUC. The

sole Non-Residential sector EE measure that passes the RIM test would provide negligible EE savings: a ***total*** of ***6,000 kilowatt-hours*** over the ten-year goal-setting period, or about 600 ***kilowatt-hours*** per year from 2020 through 2029. This amount of savings is truly negligible: it is less than the amount of electricity used by a single residential customer in a month. Nexant's analyses of Achievable Potential savings from demand-side renewable energy measures, which included solar photovoltaic, battery storage, and combined heat and power ("CHP") measures, showed that none of those measures passed the RIM test.

Accordingly, I conclude that the PSC should set goals of zero for OUC through this proceeding. Even so, my testimony also demonstrates that the PSC can be fully assured that OUC will continue to offer various energy conservation and renewable energy initiatives for the benefit of our customers and for Florida as a whole.

III. OUC & OUR SYSTEM

Q. Please describe OUC and its governing structure.

A. OUC is governed by a five-member governing board, known as the OUC Commission. All members must be OUC customers, and at least one member must live outside the Orlando city limits. The Mayor of Orlando serves as an ex officio member of the OUC Commission; the other four

members may serve up to two four-year terms. All members of the OUC Commission serve without compensation.

The OUC Commission sets the rates and establishes the policies governing OUC's service and operations. OUC's board meetings are open to the general public and customers are permitted to participate in OUC Commission meetings in accordance with Chapter 286, Florida Statutes ("F.S.").

Q. Please describe OUC's service area and physical operations, including OUC's generation and other power supply resources, transmission system, and distribution facilities.

A. OUC's retail electric service area covers approximately 248 square miles and includes the City of Orlando, portions of unincorporated Orange County, and portions of Osceola County. In addition, OUC and the City of St. Cloud ("St. Cloud") have an interlocal agreement under Chapter 163, F. S. (the "Interlocal Agreement"), pursuant to which OUC serves the entire electric service requirements of St. Cloud and operates its electric generation, transmission and distribution systems. While St. Cloud is a legally separate municipal electric utility, consistent with our obligations pursuant to the Interlocal Agreement, OUC treats the St. Cloud load and customers as part of OUC's retail obligations for planning and energy conservation purposes.

OUC's generating facilities include owned interests totaling approximately 197 MW of simple cycle combustion turbine ("CT") and 476 MW of combined cycle ("CC") capacity fueled by natural gas, 775 MW of capacity fueled by coal, and 60 MW of nuclear generating capacity.

Additionally, OUC has a firm power purchase agreement ("PPA") for approximately 340 megawatts ("MW") of the Stanton A gas-fired combined cycle unit; this capacity is actually owned by Stanton Clean Energy, LLC. The contract runs through December 2031. OUC also has two contracts to purchase solar power from existing facilities at the Stanton Energy Center, one for 6 MW and one for 13 MW. In addition, OUC has contracts in place to purchase 18 MW of landfill gas capacity and utilizes additional landfill gas to offset coal generation from Stanton Energy Center Units 1 and 2.

OUC's transmission system includes 31 substations interconnected through approximately 335 miles of 230 kV, 115 kV, and 69 kV transmission lines. OUC has a total of 22 interconnections with FPL, DEF, KUA (Kissimmee Utility Authority), KUA/FMPA (Florida Municipal Power Agency), Lakeland Electric, Tampa Electric, and TECO/Reedy Creek Improvement District. Additionally, through the Interlocal Agreement, OUC is responsible for planning, operating and maintaining St. Cloud's four substations, 55 miles of transmission lines, and three interconnections.

OUC's distribution system includes approximately 2,055 circuit miles of distribution lines, excluding service laterals, and appurtenances including transformers, switchgear, capacitors, and protective devices to serve our customers.

Q. Please describe OUC's customer base and OUC's current load and usage characteristics.

A. OUC currently serves approximately 242,000 electric customer accounts, including approximately 211,000 electric residential customers, 25,000 electric commercial customers, 5,700 electric industrial customers, a small number of customers to whom OUC provides street and highway lighting service, and a similarly small number of other public authorities to which OUC provides service.

More than 50 percent of OUC's residential customers (including those in St. Cloud) live in multi-family residences, and most of these are rental units. Additionally, a significant number of single-family residences served by OUC are renter-occupied. Approximately 40 percent of OUC's residential customers have household incomes less than $35,000, which is approximately 1.4 times the Federal Poverty Level for a family of four. (For reference, households qualify for food stamps if their income are up to 2.0 times the Federal Poverty Level.) The fact that so many of OUC's residential

customers are low-income and renters presents special challenges to the effective implementation of DSM measures and programs for OUC, and particularly for this potential target population. Briefly, low-income customers simply do not have the discretionary income to pay the customer's cost to participate in a DSM program, and renters have little, if any, control over such expenditures and investments by their landlords. Even if renters have the discretionary income and the ability to make efficiency improvements, they have little incentive or opportunity to do so since they do not own the property. These factors significantly limit the potential for OUC to implement residential DSM measures and programs. Tenant-occupied commercial properties experience the same dilemma when it comes to investing in energy efficiency improvements to property they do not own.

The average usage per OUC residential customer is currently approximately 12,200 kilowatt-hours ("KWH") per year, or about 1,000 KWH per customer per month.

Q. Please describe OUC's current and projected retail and total peak demand and energy consumption.

A. OUC is a summer-peaking utility. OUC's 2018 system peak demand of 1,537 MW occurred in September 2018 and included St. Cloud as well as wholesale sales to Vero Beach, Winter Park, Lake Worth, Bartow, and FPL.

OUC's peak retail demand was approximately 1,330 MW. OUC's 2018 total retail sales (consisting of sales to residential, commercial, and industrial customers) were approximately 6,563 Gigawatt-hours ("GWH"), and our Net Energy for Load ("NEL") was approximately 7,998 GWH.

To provide a frame of reference for the goal-setting period through 2029, OUC's most current Ten-Year Site Plan ("TYSP") for 2019 shows that system peak demand, including wholesale supply obligations, is projected to increase from 1,537 MW in 2018 to approximately 1,596 MW in 2028. OUC currently projects that it will not have any long-term committed wholesale supply obligations in 2028. OUC's total system NEL is projected to increase from 7,998 GWH in 2018 to approximately 8,173 GWH in 2028. Our retail energy load over the same period is projected to increase from 6,563 GWH in 2018 to about 7,437 GWH in 2028. Our average usage per residential customer account is projected to decline over this period, from about 12,200 kWh per customer per year in 2018 to about 11,400 kWh per customer per year in 2028.

Q. Please provide a brief discussion of how the "Base Case" forecast of OUC's customers, winter and summer demands, and energy requirements (Net Energy for Load) was developed.

A. The basis for the projections of OUC's demand and energy requirements that Nexant used in its analyses were projections from OUC's 2017 Ten-Year Site Plan ("TYSP") and supporting information regarding number of customers and customer usage data. The 2017 TYSP data and information were used by the FEECA Utilities (except for FPUC, which does not file a TYSP) because these data were the best information, and the only comparable information, available when Nexant was engaged and began its analyses, which was in late 2017. OUC's demand and energy projections in its 2017 TYSP were (and still are) based on a set of sales, energy, and demand forecast models each year to support its budgeting and financial planning process as well as long-term planning requirements. In preparing the forecasts, OUC uses internal records, company knowledge of the service territory and customers, and economic projections. OUC draws on outside expertise and resources, including Itron (a nationally recognized utility load forecasting firm) and regularly meets with other utility load forecasting experts.

As explained in the testimony of Jim Herndon, Nexant used OUC's data in developing more detailed estimates of peak demands and energy usage for different segments of the Residential and Non-Residential customer sectors, and then aggregated those to develop projected system peak demands and energy loads, which were then used in analyzing Technical Potential. For

OUC, Nexant used data for the Residential, General Service, and General Service-Demand rate classes.

IV. OUC'S DSM PROGRAMS AND RENEWABLE ENERGY ACHIEVEMENTS

Q, Please describe and discuss OUC's current DSM programs, including information regarding current and historical customer participation rates and cumulative energy (GWH or MWH) and peak demand (kW or MW) savings.

A. OUC currently offers the following programs that contribute towards meeting OUC's current FEECA goals.

Residential Duct Repair/Replacement Rebate Program
Residential Ceiling Insulation Upgrade Rebate Program
Residential Window Film/Solar Screen Rebate Program
Residential ENERGY STAR® Windows Rebate Program
Residential Efficient Electric Heat Pump Rebate Program
Residential New Home Rebate Program
Residential Efficiency Delivered Program
Commercial Efficient Electric Heat Pump Rebate Program
Commercial Duct Repair/Replacement Rebate Program
Commercial Window Film/Solar Screen Rebate Program
Commercial Ceiling Insulation Upgrade Rebate Program

Commercial Cool/Reflective Roof Rebate Program

Custom Incentive Rebate Program

Indoor Lighting Billed Solution

LED Street Lighting Upgrade

Exhibit No. ___ [KMN-2] provides a description of each of these programs, as well as calendar year 2018 and cumulative participation rates and cumulative energy and peak demand savings for each program since the current FEECA goals were established (i.e. 2015 through 2018).

Q. Please discuss how OUC's current and potential future DSM programs are affected by building code requirements, e.g., the Florida Building Code, as it relates to energy efficiency requirements for residential and other buildings.

A. In general, more stringent building code requirements result in more efficient buildings, thereby reducing the potential for cost-effective DSM programs as there is less opportunity to incentivize or achieve demand and energy reductions.

Q. Please discuss how OUC's current and potential future DSM programs are affected by changes in appliance efficiency standards.

A. In general, increased appliance efficiency standards reduce the potential for cost-effective DSM programs because as federal appliance standards

increase and appliances become more efficient, there is less opportunity to incentivize or achieve demand and energy reductions. For example, if air conditioners were subjected to more stringent efficiency standards, e.g., a seasonal energy efficiency ratio ("SEER") of 15.0, then no utility would be able to justify a DSM program that provided a rebate for any unit with a SEER below 15.0, even though the utility might previously have been offering rebates for units with a SEER of 14.0.

Q. Please describe OUC's existing demand-side renewable energy programs.

A. OUC is actively working to provide opportunities for its customers to participate in solar projects and programs. These initiatives include Solar Photovoltaic (PV) Net Metering, the Solar Aggregation Program (referred to as the OUCollective Solar Program), and the Solar Thermal Program. Customers who participate in the Solar PV Program or the OUCollective Solar Program receive the benefit of net metering, which provides the customers with a monthly credit on their utility bills for energy produced in excess of what the home or business can use. Any excess electricity generated and delivered by the solar PV systems back to OUC's electric grid is credited at the customer's full retail electric rate. Customers who take part in the OUCollective Solar Program are able to reduce installation costs by leveraging economies of scale to drive down the costs for PV systems. Under

the OUCollective Solar Program, customers have access to installations for a fixed (discounted) price that has been vetted by OUC, and from a contractor that has been vetted by OUC. Residential customers participating in the Solar Thermal Program receive a rebate of $900 for installing a solar hot water system. Federal incentives, such as the investment tax credit, are available to eligible customers to help minimize costs of solar PV and solar thermal systems. As of March 12, 2019, under the OUCollective Solar Program, 50 contracts have been signed, representing a total of approximately 655 kW.

Q. Please describe OUC's existing supply-side renewable energy programs, investments, and initiatives.

A. To further facilitate development of solar energy, OUC supported Orange County in its efforts to obtain a $2.5 million grant from the Florida Department of Environmental Protection to install a 1 MW solar array on the Orange County Convention Center. The project "went live" in May 2009 and is currently producing clean, green power. In 2008, Orlando was designated a "Solar American City" by the U.S. Department of Energy (DOE). The ongoing partnership between OUC, the City and Orange County received $450,000 in funding and technical expertise to help develop solar projects in OUC's service area that can be replicated across the country.

In 2009, OUC and clean energy company Petra Solar teamed up to launch the first utility pole-mounted solar PV system in Florida. Ten of Petra Solar's SunWave™ intelligent PV solar systems have been installed on OUC utility poles along Curry Ford Road. Together the panels can generate up to 2 kW, about enough to power a small home. The innovative solar panel demonstration project is expected to help enhance the smart grid capabilities and reliability of the electric distribution grid. Petra Solar worked in collaboration with the University of Central Florida in developing the pole-mounted approach to clean energy generation. The SunWave™ systems not only turn street light and utility poles into solar generators, but they also communicate with the electric grid and can offer smart grid capabilities. The systems can improve grid reliability through real-time communications between solar generators in the field and the utility control center. In addition, the systems enhance electric distribution grid reliability through a host of capabilities such as voltage and frequency monitoring and reactive power compensation.

During 2010, OUC invested $100,000 in an educational partnership with the Orlando Science Center to build a 31 kW PV array atop the Science Center's observatory. The system provides about 42,660 kilowatt-hours (kWh) of electricity per year, or enough power to serve about four homes. The PV installation not only provides green power to the Science Center but also an

educational experience on the science of solar energy for the thousands of children who visit the center each year.

OUC has added additional solar to its fleet of natural gas, coal, solar, and landfill gas generation already on-site at the Stanton Energy Center. The Stanton Solar Farm, constructed in partnership with Duke Energy, was brought online in late 2011 and produces about 6 MW – enough to power about 600 homes. The first Stanton Solar Farm consists of more than 25,000 modules featuring solar panels with a patented single-axis tracking system design that can withstand Category 4 hurricane winds while increasing electricity output by 30 percent. OUC purchases 100 percent of the output of this installation, which was the first solar farm in Orange County, for 20 years.

In 2013, OUC built the first Community Solar Farm in Central Florida. This innovative project allowed customers to "buy a piece of the sun" and receive the benefits of solar without having to install it on their own buildings. The 400 kW system sold out in six days and had a total of 39 customers sign up. The American Public Power Association ("APPA") awarded OUC the 2015 Energy Innovator award on June 9, 2015, for its groundbreaking Community Solar Farm program.

In 2015, OUC signed a 20-year PPA for approximately 9 MWac of solar energy from a second solar farm at the Stanton Energy Center. Brought on-line in 2017, the Kenneth P. Ksionek Solar Farm will provide enough electricity to power 2,100 homes. Only one other utility in the nation has placed panels over a coal ash byproduct landfill at a power plant. This solar farm is the latest addition to OUC's Community Solar program.

OUC has committed to be the largest participant in the Florida Municipal Solar Project, one of the largest municipal-backed solar projects in the United States. Approximately 900,000 solar panels will be installed on three solar sites expected to be built in Osceola and Orange Counties. Total electricity output will be 223.5 MW, which is enough energy to power 45,000 average Florida homes. Each solar site is designed to generate 74.5 MW of energy. OUC will be purchasing 108.5 MW of solar capacity from the project through Power Purchase Agreements.

In February 2017, OUC installed an innovative floating solar array on a water retention pond at its Gardenia Operations Center. The 31.5 kW pilot project is the first in Florida to send power directly to the grid. Comprised of 100 panels mounted on floats it produces enough energy to power five homes. This design appeals to developers who want to invest in solar but do not want to cut down trees or use valuable land resources. Also, OUC is evaluating

performance gains in energy production as a result of the increased reflectance and cooling effect of the water. More than 9,000 potential sites within Orange and Osceola counties have been identified where floating solar may be a viable option.

In August of 2018, OUC completed the addition of a new solar test site at its Pershing Operations Center. This test site will allow OUC to study and test a variety of solar panels and tilt angles. OUC will also collect weather data from the site to compare with the solar production data. These studies will allow for OUC to determine how to make future solar installations the most efficient. The peak capacity for this test array will be approximately 24 kW depending on the number of solar panels that are being tested at any given time. All of the electricity produced by the array will be supplied back to the grid. In 2018, the test array produced 5,414 kWh.

OUC is further showcasing solar energy by installing high-visibility solar sculptures (or "solar trees"), like the structures seen at Camping World Stadium and the Orange County Convention Center. OUC has also invested in solar on utility poles and has been an area leader in installing utility-scale projects atop the Orange County Convention Center and the Stanton Energy Center. Additionally, OUC has deployed multiple solar mobile device

charging stations at LYNX bus shelters to power up electronic devices while passengers are waiting.

V. ANALYSES OF OUC'S DSM POTENTIAL

Q. Please summarize how the Technical Potential, Economic Potential, and Achievable Potential for energy conservation and demand reductions for OUC were developed.

A. OUC joined with the other six FEECA Utilities to engage Nexant to prepare analyses of the Technical Potential for DSM achievements for all seven FEECA Utilities. Additionally, OUC engaged Nexant to perform the Economic Potential screening and Achievable Potential analysis for OUC. The Technical Potential analyses estimate the maximum amount of energy savings and peak demand reductions that could be achieved if every customer technically capable of implementing a measure were to do so, regardless of cost, customer acceptance, or any other constraints or considerations, including availability and cost-effectiveness to either the customer or the utility. The Economic Potential analysis is a screening step in the overall analytical process in which each potential measure is evaluated using the RIM cost-effectiveness test and the TRC cost-effectiveness test to determine whether it would be appropriate to consider potential savings from each measure as part of a utility's achievable DSM potential. The RIM test measures the benefits of a measure to a utility's customers who do not

participate in the measure; if a measure has a RIM benefit-to-cost ratio greater than 1.0, then that measure has net positive benefits to the utility's non-participating customers. The TRC test measures the net costs of a DSM program as a resource option, including both participant costs and utility costs and real resource cost savings, but without customer bill savings or incentive payments. If a measure has a TRC benefit-to-cost ratio greater than 1.0, then that measure is deemed to have net positive benefits. More detail regarding Nexant's analyses is provided in the testimony of Jim Herndon.

Further analyses and considerations, including customer acceptance, customer payback, general market availability of equipment and vendors to install it, and other factors are applied to determine a utility's Achievable DSM Potential. The utility's actual goals are ultimately determined by considering Achievable Potential in light of other resource options and practical considerations.

Q. What were OUC's and Nexant's respective roles in preparing the Technical, Economic, and Achievable Potential analyses of DSM measures for OUC?

A. For these analyses, OUC prepared and provided to Nexant OUC-specific input data needed for these analyses. Nexant also developed a great deal of input data and program information as part of its engagement with the

FEECA Utilities, and Nexant was responsible for preparing the Technical Potential, Economic Potential, and Achievable Potential analyses and corresponding results for DSM measures for OUC.

Q. Are the data and information prepared by OUC and used by Nexant appropriate and reliable?

A. Yes. The information prepared by OUC and furnished to Nexant is the same reliable information that OUC uses in making its system planning decisions and in preparing its annual Ten-Year Site Plans and other reports to the PSC.

Q. In developing its estimates of Technical Potential, Economic Potential, and Achievable Potential, how did Nexant and OUC address and consider the "free riders" issue, i.e., the fact that some customers would implement a given energy conservation measure even if there were no economic incentive offered for them to do so?

A. OUC and Nexant followed the analytical framework previously approved by the PSC and evaluated free ridership in three scenarios: a "base case" scenario in which the maximum allowable incentive was determined as the amount necessary to make the measure cost-effective to a participating customer based on a two-year payback to the customer, including the incentive; a shorter free rider exclusion period of one year; and a longer free rider exclusion period of three years.

Q. How were the costs and benefits to customers who do not participate in a program – i.e., "non-participating customers" or the "general body of ratepayers" developed and estimated?

A. Nexant developed the cost and benefit values used in the RIM analyses, which evaluates cost-effectiveness to the utility's general body of ratepayers, including the avoided cost, fuel price, rate, carbon regulation, and administrative costs furnished by OUC, and also using the costs of implementing measures developed and calculated by Nexant.

Q. How did Nexant analyze the impacts of free riders on the cost-effectiveness of DSM measures?

A. Nexant prepared its base case cost-effectiveness analyses using a two-year free-ridership screen, which reasonably assumes that a customer who would experience positive net benefits from a self-financed measure with a simple payback of two years or less would implement the program anyway, i.e., without any utility-provided incentive. Nexant also prepared free rider sensitivity analyses using a one-year free ridership screen and a three-year screen. Using the shorter screen results in incrementally more participation in utility-incentivized measures and thus more potential conservation, while the longer screen results in less. The base case two-year free ridership screen has been used by the PSC since 1994, and the one-year and three-year

sensitivity cases are the same as sensitivities considered in prior FEECA Goals dockets, including those in the most recent 2013-2014 cycle.

Q. Do you agree that Nexant's Technical Potential analysis for OUC accurately represents the population of available DSM measures and the technically possible energy savings and peak demand reductions available from the measures analyzed?

A. With the qualifications that I did not perform these studies and that I did not review every component calculation of Nexant's analyses, I would say that Nexant's analyses cover the waterfront of available DSM measures, and that Nexant's estimates of technically possible energy savings and demand reductions from such measures make sense to me based on my general knowledge of DSM measures and OUC's system.

VI. OUC'S PROPOSED FEECA GOALS

Q. Once Nexant calculated the Achievable Potential energy efficiency and peak demand reduction amounts for OUC, what did OUC do with that information?

A. Nexant calculated the Achievable Potential energy efficiency, peak demand reduction, and demand-side renewable amounts for OUC using both the RIM and TRC cost-effectiveness metrics. The next step in developing any goals is for the utility to consider these results and develop its own goals, and where

appropriate FEECA Goals, for such measures based on the utility's unique circumstances.

Q. What did OUC conclude with respect to proposed FEECA Goals for OUC?

A. Based on Nexant's results and our knowledge of OUC's unique customer base and specific circumstances, OUC concluded that it would not be appropriate or in the best interests of OUC's general body of ratepayers to establish any energy efficiency, peak demand reduction, or demand-side renewable energy goals for OUC for the period 2020-2029. Therefore, OUC proposes that the PSC set goals of zero for OUC with respect to residential, commercial, and industrial energy efficiency and peak demand reduction measures, and for demand-side renewable energy systems, pursuant to FEECA. In reaching this decision, we considered the following:

1. None of the Residential sector DSM measures evaluated by Nexant pass the RIM test for summer or winter peak demand reductions or for EE savings for OUC.

2. Nexant found zero MW of commercial/industrial DR Achievable Potential for OUC.

3. The energy savings associated with the one RIM-cost-effective EE measure in the Non-Residential sector – an exterior lighting controls measure - are truly negligible: a total of roughly 6,000 kWh over the entire 2020

through 2029 FEECA goal-setting period, or an average of approximately 600 kWh per year, which is less electricity than a single residential customer uses in one month. These results indicate that OUC's general body of ratepayers would likely be worse off – required to pay more for the measures than the economic benefits realized – if goals were set based on any of those measures.

4. Nexant's analyses concluded that for OUC, there are no cost-effective Achievable Potential savings available from demand-side renewable measures, including solar PV, battery storage, and combined heat and power ("CHP") systems.

5. The negative RIM benefit-to-cost results for the vast majority of the 278 measures studied by Nexant have special weight for OUC's consideration of the welfare of our customers, because of the relatively high proportions of low-income households and renters whom we serve.

6. OUC has consistently pursued and implemented demand-side conservation and renewable energy measures that best meet the needs of our customers while fulfilling Florida's energy conservation policies. In fact, my Exhibit No. ___ [KMN-2] shows that OUC's DSM programs, carefully selected and implemented by OUC based on our unique circumstances, have consistently exceeded the FEECA Goals that the PSC established for OUC in the previous FEECA goal-setting docket.

7. Allowing OUC to continue to develop and implement energy conservation programs and measures, and demand-side and supply-side renewable energy measures, based on the specific characteristics of OUC's system and customer base, is in the best interests of OUC customers and will result in significant energy conservation and renewable energy achievements for the benefit of the Greater Orlando community and Florida as a whole.

Q. What are the estimated impacts on a typical residential customer's bill if OUC were to implement goals based on the Achievable Potential goals for OUC using the RIM test and the TRC test, respectively, for each year from 2020 through 2029?

A. If OUC were to implement goals based on the Achievable Potential measures and goals following the RIM test, there would be no residential bill impacts because the goals would be set at zero as requested by OUC. If OUC were to implement goals based on the small number of measures that pass the TRC test, for a typical 1,000 kWh per month residential customer, the estimated base rate impacts begin at 0.4 percent in 2020 and increase to a cumulative impact of 10.6 percent in 2029. Exhibit No. ___ [KMN-3] provides the estimated annual percentage increases in residential base rates for measures that pass the TRC and Participant tests.

Q. Should the PSC establish goals for OUC for summer and winter peak demand (MW) reductions by residential customers in this proceeding?

A. No. Since no residential peak demand reduction (DR) measures have positive RIM benefit-cost ratios, the PSC should not establish goals for OUC for residential summer or winter peak demand reductions. Stated differently, OUC's FEECA Goal for residential demand reductions should be zero.

Q. What goals for reducing energy consumption (GWH) through energy conservation measures by residential customers is OUC proposing in this proceeding?

A. Zero. Since no residential energy efficiency (EE) measures have positive RIM benefit-cost ratios, the PSC should not establish goals for OUC for residential energy efficiency savings.

Q. What goals for summer and winter peak demand (MW) reductions by commercial and industrial customers is OUC proposing in this proceeding?

A. Zero. Nexant found zero MW of commercial/industrial DR Achievable Potential for OUC. Therefore, the PSC should not establish goals for OUC for commercial/industrial summer or winter peak demand reductions.

Q. What goals for reducing energy consumption (GWH) through energy conservation measures by commercial and industrial customers is OUC proposing in this proceeding?

A. Zero. Although there is one commercial/industrial EE measure that has a positive RIM benefit-to-cost ratio, Nexant estimates that this measure – an exterior lighting controls measure – would provide truly negligible energy savings: a total of ***6,000 kilowatt-hours*** over the entire ten-year goal-setting period, or about 600 kWh per year, which is less than the amount of electricity used by a single residential customer in a month. Setting a goal other than zero based on this minuscule savings estimate would be inappropriate and unreasonable.

Q. What goals for encouraging the development of demand-side renewable energy systems is OUC proposing in this proceeding?

A. Zero. Nexant evaluated the Achievable Potential for demand-side renewable measures by evaluating solar PV, battery storage, and CHP measures. Since none of these measures showed positive RIM benefit-cost ratios, the PSC should not establish goals for OUC for demand-side renewable energy measures .

Supply-Side Efficiency and Conservation

Q. Please describe any supply-side energy conservation and efficiency measures or programs implemented by OUC.

A. OUC continually monitors the efficiency of its generation, transmission, and distribution systems, including both equipment and operations, and studies potential improvements in all three functions that show promise for cost-effectively improving the overall energy efficiency and cost-effectiveness of delivering power to OUC's customers. For example, OUC recently completed installation of variable frequency drives on Stanton Unit 2 to improve efficiency while operating at low load levels and is planning on similar upgrades to Stanton Unit 1 during 2020 as well as additional efficiency improvements for Stanton Unit 2 during 2019.

Q. How are these supply-side efficiency and conservation measures reflected or incorporated into OUC's planning processes?

A. OUC's planning processes utilize the most current data and information available from our operations in our planning processes. Thus, whenever a supply-side efficiency improvement or energy conservation measure is implemented, the efficiency gains of that program start showing up in the data that is used in succeeding planning cycles and analyses.

Q. How does the presence and implementation of these supply-side conservation and efficiency measures affect potential savings from energy conservation programs?

A. Any improvement in the efficiency of our power supply and energy delivery systems naturally and inherently reduces the amount and value of savings available from reducing peak demand or incremental energy use on OUC's system. For example, an improvement in power production efficiency, e.g., a lower heat rate at a generator, reduces the amount of fuel required to deliver any given amount of power to customers, which results in less avoided-cost value from any conservation measure. Similarly, any reduction in energy output, which might include lower heat rates in production or improved transformation efficiency (lower line losses) on the transmission and distribution systems, needed to deliver service will result in a reduction in our marginal energy costs to serve, which correspondingly reduces the value of avoiding any energy that might otherwise be demanded by customers.

Q. Is OUC proposing that the PSC set any goals for supply-side conservation and efficiency measures for OUC in this proceeding?

A. No. OUC naturally recognizes the potential benefits of supply-side energy conservation measures as well as the requirements and policies set forth in FEECA. For example, Section 366.82(2), F.S., encourages energy "efficiency investments across generation, transmission, and distribution as

well as efficiencies within the user base." Section 366.82(3), F.S., requires the PSC to evaluate the potential of "supply-side conservation and efficiency measures" in developing goals. OUC believes that any supply-side conservation and efficiency goals for OUC are unnecessary and potentially counter-productive. OUC continuously monitors the energy efficiency of all aspects of its supply-side functions, i.e., generation, transmission, and distribution, and implements cost-effective modifications and improvements as appropriate.

Demand-Side Renewable Energy Systems

Q. Is OUC proposing any goals pursuant to FEECA for the development and encouragement of demand-side renewable energy systems?

A. No. As is the case with the vast number of measures evaluated for possible energy efficiency and peak demand reductions, no demand-side renewable energy system measures passed the RIM test, and accordingly, OUC proposes that the PSC set no FEECA Goals, or goals of zero, for demand-side renewable system measures. However, this proposal is only with respect to the establishment of specific, mandatory FEECA Goals. As discussed earlier in my testimony, OUC strongly supports renewable energy, particularly both demand-side and supply-side solar energy systems, and OUC is in the process of expanding its already substantial initiatives using

both demand-side and supply-side solar, as well as using landfill gas to provide power for OUC's customers.

Q. Please discuss how OUC's proposed goals will encourage the development of demand-side renewable energy systems and resources.

A. Since OUC is proposing that its numeric FEECA Goals for peak demand reduction, energy reduction, and demand-side renewable energy systems be set at zero, the technical answer to this question is that OUC's proposed "zero goals" will not directly encourage the development of demand-side renewables on OUC's system.

However, as discussed earlier in my testimony, the relevant facts are that OUC has in place and will continue to provide significant opportunities for its customers to participate in solar projects and programs that are outside the scope of numeric FEECA Goals, and OUC also has in place and will continue to expand its extensive supply-side solar power initiatives.

Q. Are OUC's proposed goals based on an adequate assessment of the full technical potential of all available demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy systems, pursuant to Section 366.82(3), F.S.?

A. Yes.

Q. Do OUC's proposed goals adequately reflect the costs and benefits to customers participating in the measure, pursuant to Section 366.82(3)(a), F.S.?

A. Yes. Nexant's Participant Test analysis adequately and reasonably reflect the costs and benefits to customers who might participate in the DSM measures and programs studied.

Q. Do OUC's proposed goals adequately reflect the costs and benefits to the general body of ratepayers as a whole, including utility incentives and participant contributions, pursuant to Section 366.82(3)(b), F.S.?

A. Yes. Nexant's Participant Test and Rate Impact Test analyses adequately and reasonably reflect the costs and benefits to the general body of ratepayers as a whole, including consideration of utility incentives and participant contributions.

Q. Do OUC's proposed goals adequately reflect the need for incentives to promote both customer-owned and utility-owned energy efficiency and demand-side renewable energy systems, pursuant to Section 366.82(3)(c), F.S.?

A. Yes. Nexant's analyses are based on reasonable and thorough analyses of incentives at different levels for the potential DSM measures studied.

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

A. Yes. There are no costs currently imposed on OUC or other Florida utilities by any state or federal carbon dioxide or GHG emissions regulations, and there is no state or federal requirement currently in place that establishes any such compliance costs with a known implementation date or magnitude. Recognizing and respecting the ongoing public concerns regarding climate change and the potential imposition of such GHG regulations, Nexant's RIM, TRC, and Participant test analyses for OUC are based on reasonable – and possibly conservatively high – estimates of the future costs of state and federal regulations applicable to GHG emissions. Even with these assumptions, Nexant's analyses conclude that (a) only one of the EE measures studied (a commercial/industrial exterior lighting measure) passes the RIM test, and that measure would provide negligible energy savings as discussed previously in my testimony; (b) there are no Achievable Potential savings available to OUC from DR measures; and (c) there are no cost-effective Achievable Potential savings for OUC from demand-side renewable energy systems, including solar PV, battery storage, and CHP systems.

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

A. The PSC should base any goals that it establishes for OUC on the RIM test, indicating that any required measure must be cost-beneficial to OUC's general body of ratepayers, particularly since the PSC does not have rate setting jurisdiction over municipal utilities. The PSC should also consider the Participant test, such that any measure that passes RIM must also be cost-beneficial to a participating customer.

Q. Do OUC's proposed goals appropriately reflect consideration of free riders?

A. Yes. OUC's proposed zero goals appropriately reflect the fact that no DSM measures pass the RIM test when evaluated using the two-year free-ridership screen that the PSC has used since 1994. Moreover, Nexant's one-year free rider exclusion sensitivity analyses show that even with this more DSM-favorable assumption, there are no RIM-cost-effective summer or winter peak demand reductions and that the amount of EE savings is minimal – 10,000 kWh per year (a total of 100 MWh) over the ten-year goal-setting period from 2020 through 2029.

Q. What residential summer and winter megawatt (MW) and annual gigawatt-hour (GWh) goals should be established for OUC for the period 2020-2029?

A. Zero. The PSC should establish goals of zero for OUC for residential summer and winter MW and energy efficiency savings.

Q. What commercial/industrial summer and winter megawatt (MW) and annual gigawatt-hour ("GWh") goals should be established for OUC for the period 2020-2029?

A. Zero. The PSC should establish goals of zero for OUC for commercial/industrial summer and winter MW and energy efficiency savings.

Q. What goals, if any, should be established for OUC for increasing the development of demand-side renewable energy systems, pursuant to Section 366.82(2), F.S.?

A. The PSC should not set any goals for OUC to increase its development of demand-side renewable energy systems. None of the demand-side renewable energy measures evaluated by Nexant, including solar PV, battery storage, and CHP measures, passed the RIM test for OUC. As described above, OUC has already implemented and operates substantial demand-side renewable energy initiatives, including both solar PV and solar thermal water

heating measures, as well as substantial supply-side initiatives using solar and landfill gas renewable energy technologies.

VII. CONCLUSIONS

Q. Please summarize the main conclusions of your testimony.

A. OUC has a proven track record of implementing effective and successful DSM programs and both demand-side and supply-side solar power initiatives. OUC is in the best position to implement DSM, EE, and renewable energy measures that will best meet the needs of OUC's customers, the Orlando community, and the State as a whole, and accordingly, OUC's request that the PSC set zero FEECA Goals for OUC is well-founded in fact and is in the public interest.

OUC's request is bolstered by several conclusions of the Nexant Market Potential Study for OUC. First, Nexant's RIM test results show that no Residential sector measures pass the RIM test and that the single RIM-cost-effective EE measure identified for the Non-Residential (commercial/industrial) sector would provide at most negligible benefits. Nexant's analyses further conclude that there are no Achievable Potential savings available to OUC from DR measures, and that there are no cost-effective Achievable Potential savings for OUC from demand-side

renewable energy systems, including solar PV, battery storage, and CHP systems.

OUC's record of developing and implementing significant amounts of both demand-side and supply-side solar power initiatives is widely recognized and respected.

The PSC should set zero goals for OUC, and in so doing, the PSC can rest fully assured that OUC will continue to aggressively serve and promote the energy conservation and renewable energy goals and policies of FEECA.

Q. Does this conclude your direct testimony?

A. Yes, it does.

BY MR. S. WRIGHT:

Q Mr. Noonan, did you also prepare and cause to be filed with your testimony three exhibits numbered at the time KMN-1 through KMN-3?

A Yes.

MR. S. WRIGHT: Mr. Chairman, I note for the record those have now been marked as Exhibits 50, 51, and 52, in the staff's comprehensive exhibits list, and we'll move those in at the appropriate time.

CHAIRMAN GRAHAM: Sounds good.

MR. S. WRIGHT: Thank you.

Mr. Chairman, I have a -- a slightly unusual matter to take up at this time. In prepar- -- one of OUC's interrogatory responses that has already been admitted into evidence as part of Exhibit 200 was discovered by our team, last night, in preparing for Mr. Noonan's testimony today, to contain some errors. They were -- somebody copied the wrong numbers into the wrong cells, resulting in the wrong information being presented.

We simply want to make this right. And accordingly, earlier today, I distributed to parties in our docket and to staff, copies of the corrected documents in red-line form so everybody

could see exactly what's going on.

We will file it probably tomorrow, just considering the realities of today. And I have distributed -- I'd like to just verify with Mr. Noonan that it is what it is and then ask you to mark it as an exhibit. And this is per consultation with staff.

CHAIRMAN GRAHAM: Let's do that in your redirect.

MR. S. WRIGHT: Yes, sir.

BY MR. S. WRIGHT:

Q Mr. Noonan, please present a brief summary of your testimony to the Commissioners.

A Thank you.

Good afternoon. My name is Kevin Noonan, and I'm director of legislative affairs for the Orlando Utilities Commission. OUC is a municipal utility that provides service in the City of Orlando, parts of Orange County, City of St. Cloud, and parts of Osceola County. We serve approximately 242,000 electric customers.

Over 50 percent of our residential customers live in multi-family residences, many of which are rental units. In addition, approximately one-third of our residential customers have a household income of less than $35,000. These factors create some special

challenges for OUC when delivering our conservation programs.

OUC joined the other FEECA utilities and engaged Nexant to prepare studies of the technical, economic, and achievable potential for energy conservation. We provided extensive load- and customer-forecast information as well as system and avoided-cost information to support Nexant's own data and analyses.

These efforts culminated in Nexant's mark- -- market-potential study for OUC. That study includes analyses of the technical, economic, and achievable potential for the energy conservation applied to 248 unique energy-efficiency measures and more than 4,000 permutations of those measures.

Nexant's market-potential study indicates the results of cost-effective analyses for these measures using the rate-impact measure, total resource costs, and participant tests. Nexant's analyses concludes that no energy-efficiency measures for residential applications pass the RIM test.

For commercial applications, only one energy-efficiency measure passed the RIM test, and that measure would provide only negligible savings. There are no cost-effective achievable-potential savings for -- to OUC from demand-reduction measures, and there are no

cost-effective achievable potential savings available to OUC for demand-side renewable-energy systems.

OUC has consistently exceeded our FEECA goals and will continue to develop and implement energy conservation, demand reduction, and demand-side renewable measures, as well as supply-side solar and other renewable-energy initiatives, based on OUC's unique characteristics, local knowledge of our system and customer base, and the changing circumstances in energy markets, technology, and our customer population.

Nexant's results, along with OUC's proven track record of energy conservation and support for solar and other renewable energy lead us to conclude that the PSC should set OUC's goals at zero for this proceeding.

Allowing OUC to implement programs and measures developed locally and determined by OUC's board, as it has done successfully for years, will serve the state's policies set forth in FEECA and meet the needs of OUC's customers better and more effectively than if OUC were required to comply with mandatory goals based on the measures that are not cost- -- cost-effective.

Thank you.

MR. S. WRIGHT: Mr. Chairman, OUC tenders

Mr. Noonan for cross-examination. Thank you.

CHAIRMAN GRAHAM: Okay.

Mr. Noonan, welcome.

THE WITNESS: Thank you.

CHAIRMAN GRAHAM: OPC.

MS. CHRISTENSEN: Good morning -- or good afternoon.

EXAMINATION

BY MS. CHRISTENSEN:

Q Good afternoon, Mr. Noonan. I just have a few questions for you. Is it correct that OUC is proposing no DSM measures be set for the utility at this point -- no goals?

A Yes.

Q Okay. And is it also correct that approximately 40 percent of OUC's residential customers are low-income customers?

A Yes.

Q Okay. And would it also be correct that OUC does not have specific low-income DSM programs?

A That would not be correct. We do have a low-income program --

Q Okay.

A -- for our customers.

Q And is it OUC's intention, then, to continue

with that low-income program?

A Yes, it is.

Q And would it also be correct to say that that low-income program did not pass the RIM test?

A That is true.

Q And does that low-income program that you're referring to -- does that include payback of less than two years?

A That program for our customers does have a payback of less than two years.

Q Okay. Do those current low-income programs produce DSM megawatt savings?

A They do.

Q Okay. Would you agree that the megawatt savings associated with the DSM programs should be added to the two- -- 2020 to 2029 DSM goals?

A No.

MS. CHRISTENSEN: I have no further questions.

CHAIRMAN GRAHAM: Okay. FDACS.

MR. MOYLE: No questions.

MS. CORBARI: No questions.

CHAIRMAN GRAHAM: SACE.

MR. LUEBKEMANN: Thank you, Commissioner.

We've got a few.

EXAMINATION

BY MR. LUEBKEMANN:

Q Good afternoon, Mr. Noonan.

A Good afternoon.

Q If I could direct your attention to exhibit, OUC's response to SACE's POD 16, "Achievable screening_ OUC," tab res screening?

CHAIRMAN GRAHAM: We'll give that Exhibit No. 2 -- 328.

MR. LUEBKEMANN: Thank you, Commissioner -- sorry. Thank you, Chairman.

(Whereupon, Exhibit No. 328 was marked for identification.)

BY MR. LUEBKEMANN:

Q Mr. Noonan --

A Yes.

Q OUC received this document from Nexant as part of its study of energy-efficiency potential for OUC?

A Yes.

Q Looking at this column marked "Program costs" -- that represents the administrative costs for each measure?

A Yes.

Q Put differently, that is the amount of money it takes OUC to administer an efficiency program for a given measure divided by the number of times that

measure is implemented?

A Those are the program costs that Nexant provided using their analysis. We use them as our resource for providing the program costs. They may or may not be equal to what our actual internal program costs are for administration, but for the purpose of the analysis, those were the program costs used.

Q Okay.

A The administrative costs, I'm sorry.

Q And that would represent a per-unit cost?

A Yes, it appears to be per unit.

Q So, for instance, for the measure CFL13-watt, there is a 27-cent administrative cost per light bulb?

A Yes.

Q And in comparison, for the measure, solar pool heater, there is a $1,169 administrative cost per heater?

A Yes.

Q For the measure two-speed pool pump, there is a $120 administrative cost per pump?

A Yes, that was the administrative cost per the -- or the cost provided by Nexant.

Q And for the variable-speed pool pump, there is the $365 administrative cost per pump?

A Yes.

Q Thank you.

If I could direct your attention to exhibit -- OUC response to SACE Rog 21 from SACE's first set of interrogatories?

CHAIRMAN GRAHAM: Give it No. 329.

MR. LUEBKEMANN: Thank you, Mr. Chairman.

(Whereupon, Exhibit No. 329 was marked for identification.)

BY MR. LUEBKEMANN:

Q Looking at Interrogatory No. 21, did you sponsor this answer?

A Yes.

Q And this question is asking for every reason supporting the use of the two-year screen as the appropriate message -- method for addressing free-ridership?

A Yes, it does.

Q OUC's explanation does not include any reference to any survey, study, or other quantitative evaluation of the efficacy of the two-year screen?

A We did not conduct any surveys.

Q You are not aware of any survey -- or any study, rather, suggesting the two-year payback screen is the best method to eliminate free-ridership and DSM programs?

A Could you repeat that one -- one more time, please.

Q Sure. Are you aware of any studies suggesting the two-year payback screen is the best method to eliminate free-ridership in DSM programs?

A I am not.

Q Are you aware of any studies suggesting that a flat two-year payback screen is an appropriate method to eliminate free-ridership from a DSM program?

A No.

Q If I could direct your attention to Exhibit -- OUC's response to staff's first interrogatory, Rogs No. 7 through 8, from staff's first set of interrogatories.

CHAIRMAN GRAHAM: We'll give it Exhibit 330.

MR. LUEBKEMANN: Thank you.

(Whereupon, Exhibit No. 330 was marked for identification.)

BY MR. LUEBKEMANN:

Q Mr. --

A Could you repeat -- could you repeat that one more time? I may be out of order.

Q Ab- -- absolutely. This is OUC's response to staff's first interrogatories, Nos. 7 and 8. Ideally, it's the next one in the list.

A I have a copy now. Thank you. It was missing from my packet.

Q Sorry about that.

A No worries.

Q We did our best.

Once you've had a second to review, could you confirm that you sponsored the answers for Interrogatories 7 and 8?

A I did.

Q And with respect to free-ridership, OUC -- I'm quoting from seven: OUC did not consider any other methodologies in this proceeding, other than the two-year payback screen.

A Correct. We did do the one- and three-year sensitivity analyses, like many of the other utilities did.

Q Thank you.

If I could now direct your attention to exhibit, OUC's response to staff's fifth set of interrogatories, excerpt of No. 58.

A Yes.

MR. LUEBKEMANN: I believe this would be Exhibit 331.

CHAIRMAN GRAHAM: That is correct.

MR. LUEBKEMANN: Thank you, Mr. Chairman.

(Whereupon, Exhibit No. 331 was marked for identification.)

BY MR. LUEBKEMANN:

Q Mr. Noonan, you did not sponsor this response.

A I did not.

Q Could I ask you a question about it?

A (Indicating.)

Q Thank you.

A Yes.

Q This interrogatory is asking about how OUC has evaluated the success of its programs, despite not using any evaluation, measurement, and verification methods, such as customer surveys and historic trends?

A Which -- which question are you specifically referring to?

Q I -- I'm sorry. This is Interrogatory No. 58.

A 58. Okay. I'm -- I'm with you now.

Q OUC's answer is that it has not used any measure -- any evaluation measurement and verification-research methods to evaluate its programs, including the efficacy of the two-year screen, at estimating free-ridership?

A Correct.

MR. LUEBKEMANN: Thank you. We -- we can get off that one.

If I could direct your attention now to exhibit, OUC's response to staff's 11th set of interrogatories, excerpt of Interrogatory No. 93. I believe this would be Exhibit 332.

CHAIRMAN GRAHAM: 332, correct.

MR. LUEBKEMANN: Thank you, Mr. Chair.

(Whereupon, Exhibit No. 332 was marked for identification.)

BY MR. LUEBKEMANN:

Q Mr. Noonan, you did sponsor this response?

A Yes, I did.

Q Thank you.

And in your answer, you state that OUC has not conducted a customer survey to assess the percent and number of free-rider customers participating in OUC's DSM programs?

A We have not.

Q Nor has OUC solicited bids from third parties to conduct the same?

A We have not.

Q Thank you.

Do you have a copy of your testimony with you?

A I do.

Q Great. If I could direct your attention to Page 28 of your direct testimony, on Line 7 to 10, you

state that: OUC concluded that it would be not -- that it would not be appropriate or in the best interest of OUC's general body of ratepayers to establish any energy-efficiency, peak-demand reduction, or demand-side renewable-energy goals for the O- -- for OUC for the period 2020 to 2029?

A Yes.

Q And you base this conclusion on the fact that no measures passed the RIM test for residential, and only one energy-efficiency measure passed the RIM test for the commercial -- commercial side?

A Yes.

Q You also suggest on Page 29, Lines 3 through 6, that ratepayers would, quote, likely be worse off, required to pay more for those -- the measures than the economic benefits realized if, quote -- if goals were set based on any of those measures.

A Yes.

Q But you also note that OUC has, quote, consistently exceeded the FEECA goals, end quote, set forth by the PSC in the 2014 docket?

A Yes.

Q I would like to turn to your Exhibit KMN-2, and look at Table 6. This is Page 11 of 15 of KMN-2.

A Could you repeat the page number again,

please?

Q Sure. This would be in your exhibit, KMN-2, and it will be Page 11 of 15.

A Yes.

Q So, in fact, this table shows that, through 2018, Orlando Utilities Commission has achieved 94.9 gigawatt hours of cumulative energy savings under the 2014 goals?

A Yes.

Q And that's in comparison to the 3.74 gigawatt hours that was set by the Commission during the 2014 proceeding?

A Yes.

Q So, allowing for math, this chart indicates that, from 2015 to 2018, OUC exceeded the PSC's approved goals by over 25 times?

A That's correct.

Q Okay. Let's turn to Page 25 -- or excuse me -- 35 of your testimony. Orlando Utilities Commission proposes the PSC should set no goals for demand-side renewable-energy systems over the next ten years?

A Yes.

Q And just to clarify, demand-side renewable-energy systems -- we're talking about rooftop solar,

here.

A Yes.

Q Among other things, the FEECA statute directs the PSC to set goals for each utility to, quote, encourage development of demand-side renewable-energy resources?

A Yes, it does.

Q On Page 36 of your testimony, your testimony indicates that, quote, OUC's proposed zero goal will not directly encourage development of demand-side renewables on OUC's system? This is at Lines 8 through 10.

A Yeah, setting the goal at zero will not directly encourage the development of demand-side renewables on OUC's system; however, the programs that we currently do have in place encourage the placement of demand-side renewables on our customers' rooftops.

Q Sure, but -- but redirecting your attention to my question --

A Uh-huh.

Q The goals for the FEECA proceeding will not directly encourage that result.

A Correct. We do it outside of those goals.

Q If I could now direct your attention to exhibit, OUC's responses to SACE's first RFA, Nos. 1 through 17?

CHAIRMAN GRAHAM: Exhibit No. 333.

MR. LUEBKEMANN: Thank you, Mr. Chairman.

(Whereupon, Exhibit No. 333 was marked for identification.)

BY MR. LUEBKEMANN:

Q And if I could direct your attention to your answer for request for Admission No. 11?

MR. S. WRIGHT: Mr. Chairman, just for clarity, these are admissions by OUC, not Mr. Noonan's answers.

CHAIRMAN GRAHAM: Okay.

THE WITNESS: Yes.

MR. S. WRIGHT: Mr. Chairman, I'm -- I'm sorry. Can I ask that Mr. -- that you -- ask that Mr. Luebkemann repeat his pending question?

CHAIRMAN GRAHAM: Said --

MR. S. WRIGHT: I just want to make sure I got the right number of the -- of the admission he's asking about.

MR. LUEBKEMANN: Yes, we were --

MR. S. WRIGHT: Thanks.

MR. LUEBKEMANN: We were just going to No. 11.

MR. S. WRIGHT: Thank you.

MR. LUEBKEMANN: No question yet.

MR. S. WRIGHT: Okay.

MR. LUEBKEMANN: But here it comes.

BY MR. LUEBKEMANN:

Q It says here that Orlando's average residential usage is 1,000 kilowatt hours per month at an electric rate of 10.6 cents per kilowatt hour yielding an average bill of $106?

A Yes, that's correct.

Q And for comparison, the national average residential usage is 866 kilowatt hours at a rate of 12.89 cents per kilowatt hour, yielding a total bill of $111.67?

A Yes.

MR. LUEBKEMANN: I'd like to turn to Exhibit, 2000- -- 2017 average residential monthly bill from EIA data, to which you have -- UOC -- OUC cites for those national numbers. I believe this would be Exhibit 334.

CHAIRMAN GRAHAM: We'll give it 334.

MR. LUEBKEMANN: Thank you, Mr. Chairman.

(Whereupon, Exhibit No. 334 was marked for identification.)

BY MR. LUEBKEMANN:

Q Looking at this table, this appears to be listing the state level consumption and -- and rates?

A Yes.

Q But as a -- a state city, Washington, D.C., is the only city on this list?

A I can't find it on the list, but I'll -- I'll take your word for it that it's the on- -- oh, District of Columbia?

Q Yes.

A Okay.

Q Pardon my phrasing.

A Yes, I see that.

Q So, comparing OUC, a -- a city-based utility, to Washington, D.C., this document shows that D.C. residents pay a higher electricity rate than OUC customers?

A It shows that the average price, or cents per kilowatt hour, is higher than what is paid by OUC customers; 12.94 cents per kilowatt hour versus our 10.6.

Q And in fact, that higher rate is even higher than the national average, which was 12.89 cents per kilowatt hour?

A It appears that the rate in the District of Columbia is slightly higher than the national average.

Q And this same chart shows that those same D.C. residents pay lower monthly electricity bills than to OUC customers because the average D.C. residential

cust- -- consumption is nearly 30 percent lower than it is for OUC customers?

A I'll have to take your word on the math that the -- the 746 is about -- maybe a little bit closer than 25 percent, but it is -- it is lower.

Q And so, you would agree that the D.C. residents pay lower bills than do OUC residents, on average, despite the difference in that rate?

A Because of the lower consumption by the residents in the District of Columbia, yes, their bill, overall, is lower than that paid by OUC.

Q If I could return your attention to the request for admission. We're going to go to No. 17: Orlando Utilities Commission denies that its customers are more concerned about their total monthly electric bills than the electricity rates underlying those bills?

A Yeah, we have not surveyed our customers to determine where their -- where their answer lies to that question, whether it's rates or total bill.

Q OUC is a municipal power company?

A Yes, we are.

Q And that means that Orlando Utilities Commission does not report to any shareholders or investors?

A The citizens of Orlando are our shareholders.

So, we report to the -- the customers we serve. So, if you want to put it that way, they're our -- they're our shareholders in a -- in a sense.

Q Okay. But the Orlando Utilities Commission denies, in Request for Admission No. 15, that, quote, having the average customer lower their electricity bills is good.

A (Examining document.) We're really in no position to determine an answer to that question, based on the individual wants and needs of customers. You know, putting comfort over affordability -- we're not in a decision to determine that. So, for some customers, that might be true; for others, it might be completely the opposite.

Q And Orlando Utilities Commission, looking at Request No. 16, further denies that having low-income customers lower their electricity bills is good?

A Again, that's -- you know, that's a decision that each of them -- that's up to them to make, based on their personal preferences.

MR. LUEBKEMANN: Thank you very much, Mr. Noonan. No further questions.

CHAIRMAN GRAHAM: Okay. Staff?

MS. WEISENFELD: Thank you, Mr. Chairman. Staff has just a few questions.

EXAMINATION

BY MS. WEISENFELD:

Q Good afternoon, Mr. Noonan.

A Good afternoon.

Q Ashley Weisenfeld with Commission staff.

For my first line of questions, I'll be referring to an excerpt from Exhibit 194, which is OUC's response to staff's first set of interrogatories, specifically No. 7. You should have a copy in the folder that was handed out to you. Please just let me know when you get there.

A I'm good. Thank you.

Q Okay. Great.

Just to confirm, did OUC use a two-year payback screening to account for free riders in this proceeding?

A Yes, we did.

Q Okay. Great.

And can you please explain why OUC believes that the two-year payback screening is the best method to address free-ridership?

A We feel that it's reasonable that -- that most people, when faced with an investment that has less than a two-year payback would do that on their own. It's looking like almost a 50-percent return on their

investment, if it pays back in two years, very generous. We also feel that it follows prior precedent used by the Public Service Commission in other -- in other dockets.

Q Thank you, Mr. Noonan.

For my second line of questions, I'll be referring to an excerpt from Exhibit 197, which is OUC's response to staff's third set of interrogatories, specifically No. 54. Can you let me know when you get there?

A I'm good. Thank you.

Q Okay. Great.

Isn't it true that the Commission does not have the authority to set OUC's rates, as it is a municipal utility?

A I just want to clarify, you're talk- -- you're referring to the Public Service and not the Orlando Utilities Commission.

Q Yes, the Public Service Commission.

A Correct.

Q Okay. And to confirm, is it correct that OUC is proposing zero goals?

A That is true.

Q Okay. And to confirm, is it correct that OUC is proposing zero goals, yet intends to continue its existing FEECA programs?

A Yes, we are.

Q Can you please explain why OUC intends to continue its programs if no measures are found to be cost-effective?

A This is -- this is part of the issue, I think, the municipal utilities have, in that, you know, we really take a lot of our direction from the local level, from our board. And the mayor of Orlando serves on our board, so there's a lot of community input and political will to provide those programs to our customers. It's very important to them.

You know, Orlando has goals to be the greenest city in the southeast, and we realize -- and OUC is a partner and committed to helping them achieve those goals. And for that reason, we're going to -- you know, we'll -- we'll wind up keeping a lot of the programs that we have.

At this point, we're just -- you know, we don't want to be constrained by any -- any goals set by the Public Service Commission that might force us to do one program over another. We like to have the flexibility and local control and let our board make those decisions for us.

MS. WEISENFELD: Staff has no further questions. Thank you, Mr. Noonan.

CHAIRMAN GRAHAM: Are you saying you don't want for us to hold you back? Is that what I heard?

Redirect.

MR. S. WRIGHT: Commissioners, have no questions?

CHAIRMAN GRAHAM: No.

MR. S. WRIGHT: Thank you. Thank you.

Mr. Chairman, at this time, I would like to take up the matter that I started to address a minute ago.

CHAIRMAN GRAHAM: The correction?

MR. S. WRIGHT: Yeah. Bear -- bear with me one second -- here we go -- oh, no, there's another --

CHAIRMAN GRAHAM: OUS --

MR. S. WRIGHT: Yes, sir.

CHAIRMAN GRAHAM: OUC correction to Exhibit 200?

MR. S. WRIGHT: Yes, sir, and this -- this is relevant to some cross questions that I want to follow up on.

CHAIRMAN GRAHAM: We'll give it Exhibit No. 335.

MR. S. WRIGHT: Thank you, Mr. Chairman.

(Whereupon, Exhibit No. 335 was marked for identification.)

EXAMINATION

BY MR. S. WRIGHT:

Q Mr. Noonan, you're -- you're aware of a prior -- are you aware of a prior discovery response that asked about the number of customer-owned solar systems that were interconnected with OUC, are you not?

A Yes, I am.

Q And in preparing for your appearance here today, did -- did you and we discover that there were some errors in the prior answer?

A Yes, there appear to be a scrivener's error in putting together one of the -- one of the charts.

MR. S. WRIGHT: Thank you.

Mr. Chairman, as I said earlier, we discovered this last night and, to try to make it right, especially since the prior interrogatory answer to staff's No. 66 is already in evidence, we wanted to correct it.

And accordingly, we've now got before you and the parties Exhibit 335, which is the correction, and it does show the corrections in red-line form so everybody can see what's going on.

CHAIRMAN GRAHAM: Okay.

MR. S. WRIGHT: Okay.

BY MR. S. WRIGHT:

Q So, with the corrections, Mr. Noonan, what's the approximate number of residential PV program participants or in- -- installations, on OUC's system as of May 31, 2019?

A 1,138.

Q Could -- do you have -- not have a copy of this?

A I was going off some notes. I do not have a copy in front of me.

Q She's handing -- thanks.

A And now I do. Oh, I'm sorry. 1509.

Q Thanks.

And the number of commercial -- tot- -- total number of commercial participants?

A 29.

Q Thank you.

You were asked some questions by Mr. Luebkemann regarding OUC's plans, proposals, that -- that we would have no goals for demand-side renewable-energy measures for the goal-setting period, correct?

A Yes.

Q So, you got 1500-odd participants already?

A Yes, we do.

Q Have -- has OUC paid any incentives or rebates towards those installations?

A On the PV program, no, we have not.

Q Thank you.

A We have a -- we have net metering that pays the full retail rate for those customers that are putting energy back onto the grid, and we also have programs that are designed to -- a program called OUC Collective Solar that's designed to help customers that are interested in putting solar on their homes, that's gone through and pre-vetted vendors and pricing for them to make that experience a lot easier for them.

Q Has the number of installations been growing over the last three years?

A Yes, it has.

Q And that's with no incentives, correct?

A That's with no incentives.

Q I would like you to look, please, at what's been marked for identification as, I believe, Exhibit 333, the -- OUC's responses to SACE's first requests for admissions.

A (Examining document.) Yes.

Q I'd like to ask you to turn to Request for Admission No. 15, about which Mr. Luebkemann questioned you.

A Yes.

Q I'd like to ask you simply to -- to read the request for admission and then read the entire response of OUC, for the record.

A The request for admission was: Please admit that having the average customer lower their electricity bills is good.

And our response was that -- this is kind of -- this is vague and ambiguous. The request for admission provides no context or any consideration of the consequences of the customer of lowering his or her electric bill.

The request for admission offers no consideration as to why -- as to how or why a customer is assumed to lower the bill, nor what sacrifices that customer might have to make to achieve lower bills, such as reduced comfort, reduced value to the customer, that they would have otherwise realized by using purchased electricity.

Q Thank you.

And I'm going to ask you to repeat that brief exercise with respect to Request for Admission No. 16, about which Mr. Luebkemann also questioned you.

A The request was: Please admit that having low-income customers lower their electricity bills is

good.

Again, we said that: This was a vague and ambiguous question. The request for admission provides no context or any consideration of the consequences to the customer of lowering his or her electric bill. The request for admission offers no consideration as to how or why a customer is assumed to lower the bill, nor what sacrifices a customer might make to achieve -- to achieve those bills such as reduced comfort and reduced value that they would have otherwise realized through using purchased electricity.

Q Thank you.

Ms. Christensen asked you a couple of questions about O- -- about whether OUC has a low-income program. Do you recall her questions?

A Yes.

Q And you responded, I believe, that OUC does have a specific low-income program, correct?

A Yes, we do.

Q Please describe that program.

A OUC's low-income program is called Efficiency Delivered. It is a program that offers a bundle of energy-efficiency measures to low-income customers. It's traditionally offered to our customers by first starting with an energy audit that makes

recommendations; what improvements can be made to the home. It's, then, followed up by a contractor coming out and putting a -- a price quote together for that program.

And for customers that make less than $40,000, OUC covers 85 percent of the cost, up to $2,000. So, up to $1,700 would be covered by OUC towards that project. The remaining amount, we allow the customer to put on their bill, interest-free, over the course of a year.

Q So, if a customer participated in that program and -- and took the full $2,000 benefit, would the customer have to lay out any cash of his, her -- his, her, or its own?

A There's no cash out of pocket for the customer participating in this program.

Q I want to clarify a point that came up in response to a question that was asked to you by Ms. Christensen, representing the citizens. I think you said that OUC's approximate percentage of customers that are low-income is about 40 percent.

I think you might have a different answer in your testimony. Can you help us out with that?

A In the testimony, we say that -- based on census data, that about 33 percent of our customers have incomes of less than $35,000. There's -- there's a

variety of -- of different ways to define what low-income is, depending on what measures you're looking at. We use the $35,000 mark and census information to determine what we considered low-income.

Q Mr. Luebkemann asked you a question about administrative costs that were used in Nexant's analyses. Do you recall those questions?

A Yes.

Q Did you play any role in developing those costs?

A I did not.

Q If you know, why did OUC ask Nexant to develop those costs in -- in this proceeding?

A We were trying to utilize Nexant's experience in providing their services in -- in multiple states for multiple utilities. So, we could use their general knowledge on what those overall administrative costs were because we did not have them individually for all the measures that were tested.

Q In response to a question, I think, by Mr. Luebkemann, possibly also by staff, you stated that OUC did not conduct any type of customer surveys regarding free-ridership. Do you recall that -- those questions?

A Yes.

Q Why -- why didn't OUC conduct such surveys?

A We felt that the two-year payback for free riders was -- was reasonable. Like I mentioned before, a -- an almost-50-percent return on an investment seems reasonable that a -- a person would take that on their own without needing an incentive.

It's also, you know, been prior precedent of the Public Service Commission to use that two-year payback screen.

Q Just want to make clear for the record something I think you said some in response to a question asked to you by Ms. Weisenfeld, regarding OUC's response to staff's Interrogatory No. 54. Do you happen to have that response handy? It was an answer to an interrogatory within staff's third set.

A Yes.

Q There are a number of programs and other items, energy surveys in particular, listed there, correct?

A Yes, there are.

Q And is this what OUC intends to continue offering, even if the Public Service Commission sets zero goals?

A Yes, it is.

Q Are there any programs that OUC intends to

discontinue if the PSC sets zero goals?

A There is one program that we would probably discontinue. It's our outdoor lighting, LED-retrofit program. I don't believe it's on this list, but that is one program that OUC has nearly completed. Almost every streetlight in our service territory has been replaced from high-pressure sodium to LED. And that program will be wrapping up in the near future.

I think they're going back through individual neighborhoods and picking the onesie, twosie lights that were missed when we went through the first time.

Q So, is it not on the list because it's completed?

A It -- it is not on the list because it will probably be completed by the time this -- this goal-setting moves forward.

MR. S. WRIGHT: Thank you very much.

That's all the redirect I have, Mr. Chairman.

CHAIRMAN GRAHAM: Exhibits.

MS. CORBARI: Mr. Chairman, may -- just a procedural clarification, there seem to be a few matters that Counsel, I think -- think just jumped the gun, discussed some matters in Mr. Noonan's rebuttal testimony. I just wanted to ensure that the parties will be able to ask questions of

Mr. Noonan on those matters in rebuttal.

CHAIRMAN GRAHAM: Yes.

MR. S. WRIGHT: Yeah, he'll be back on rebuttal testimony.

MS. CORBARI: Thank you.

CHAIRMAN GRAHAM: Exhibits.

MR. S. WRIGHT: We would move Exhibits 50, 51, 52, and 335.

CHAIRMAN GRAHAM: 50, 51, 52 and 335. If there's no objections, we'll enter those into the record.

(Whereupon, Exhibit Nos. 50, 51, 52, and 335 were entered into the record.)

CHAIRMAN GRAHAM: SACE?

MR. LUEBKEMANN: Thank you, Mr. Chairman. We would move to enter Exhibits 300- -- 328 through 334 into the record.

CHAIRMAN GRAHAM: If there's no objections, we'll enter 328 through 334 into the record.

(Whereupon, Exhibits Nos. 328 through 334 were admitted into the record.)

CHAIRMAN GRAHAM: And I think that's all the exhibits for this witness.

MR. S. WRIGHT: Thank you. And may he be excused from his appearance as a direct witness?

CHAIRMAN GRAHAM: Yes, sir.

MR. S. WRIGHT: Thank you.

CHAIRMAN GRAHAM: JEA, you have your first witness.

MR. PERKO: Yes, Mr. Chairman. JEA calls Mr. Donald Wucker.

May I proceed?

CHAIRMAN GRAHAM: Sure.

EXAMINATION

BY MR. PERKO:

Q Good afternoon, Mr. Wucker. Were you sworn at the beginning of the hearing yesterday?

A Yes, I was.

Q And could you please, for the record, state your name and business address?

A Yes. My name is Donald Wucker. I'm at 22 West Church Street in Jacksonville, Florida 32202.

Q Mr. Wucker, by whom are you employed and in what capacity?

A I'm employed by JEA, and I help manage the demand-side management portfolio.

Q And did you cause to be filed prefiled direct testimony consisting of 16 pages in Docket No. 20190020?

A That's correct.

Q And do you have any changes or corrections to

that testimony?

A The only change I have is the zip code was incorrectly listed. I believe it's 32302, and I believe it's 32202.

Q And other than that single correction, if I were to ask you the same questions today, would your answers be the same?

A Yes, they would.

MR. PERKO: Mr. Chairman, at this time, I'd ask the prefiled direct testimony of Mr. Wucker be inserted into the record as if read.

CHAIRMAN GRAHAM: We'll insert Mr. Wucker's prefiled direct testimony into the record as though read.

(Whereupon, Witness Wucker's prefiled direct testimony was inserted into the record as though read.)

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY OF DONALD P. WUCKER

ON BEHALF OF

JEA

DOCKET NO. 20190020-EG

APRIL 12, 2019

Q. Please state your name and business address.

A. My name is Donald P. Wucker. My business address is 21 West Church Street, Jacksonville, Florida ~~32302~~. 32202 - AK

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

A. I am employed by JEA. My current responsibility is DSM Portfolio Management. Over the past 15 years my duties have progressed to include DSM Measure and Program Analysis and serving as a key strategic guiding resource on related industry and market initiatives. Additionally, I proactively anticipate expected changes in corporate planning and act to identify, incorporate and document changes as needed.

Q. Please summarize your educational background and professional experience.

A. I hold a Bachelor of Science in Mechanical Engineering from the University of Florida. I am an actively licensed Professional Engineer (PE) in the State of Florida. I also held a PE license in the states of Louisiana and Alabama, which are currently inactive. With more than 35 years in the energy industry, my experience includes the design of building mechanical systems such as heating, ventilation, air conditioning, refrigeration and plumbing systems for domestic, commercial and industrial applications. I have also been

involved with a wide variety of energy retrofits including both as an engineer and as a contractor. For the past 15 years I have been given increasing responsibility for the development and implementation of JEA's DSM programs. I submitted pre-filed direct testimony on behalf of JEA when the Commission last established DSM goals for JEA in Docket No. 20130203-EM.

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

A. The purpose of my testimony is to discuss (1) how JEA is governed; (2) recent trends in JEA's system load growth; and (3) JEA's proposed DSM goals and the process used to develop them. My testimony includes discussion related to JEA's existing conservation and DSM programs, how the base load forecast was developed, how supply-side efficiencies are incorporated into JEA's planning process, and how JEA's proposed goals encourage demand-side renewable energy systems.

Q. Are you sponsoring any exhibits to your testimony?

A. Yes. Exhibit No. __ [DPW-1] is a copy of my resume. Exhibit No. __ [DPW-2] presents JEA's existing Florida Energy Efficiency and Conservation Act (FEECA) goals. Exhibit No. __ [DPW-3] presents a list of the DSM and conservation programs included in JEA's existing DSM Plan. Exhibit No. __ [DPW-4] summarizes the historical participation in JEA's existing FEECA DSM programs. Exhibit No. __ [DPW-5] presents the results of Nexant's economic and achievable potential analysis for JEA. Exhibit No. ___ [DPW-6] presents a summary of JEA's marketing and educational activities. Exhibit No. ___ [DPW-7] presents analysis of the estimated average bill impacts on residential customers.

Q. How is JEA governed?

A. JEA is a municipal electric utility governed by a Board of Directors consisting of seven members appointed by the Mayor of the City of Jacksonville and approved by the City Council. The Board of Directors sets the rates and policies governing JEA's operations. The JEA operating budget requires City Council approval. JEA's board meetings are open to the general public and ratepayers are permitted to participate in board meetings. JEA's Board of Directors sets policies consistent with the best interest of JEA's customers and community.

Q. Please describe JEA's service territory.

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

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

A. JEA serves approximately 466,000 customers. JEA's customers are approximately 88 percent residential. Approximately 35 percent of Jacksonville's population lives in households whose income is less than twice the Federal Poverty Level ($33,820 for a family of 2). Any impacts on rates resulting from implementation of DSM measures would have a disproportionate impact on low income customers. Furthermore, rental customers have less control over energy conservation efforts than homeowners.

Q. Please discuss how JEA's loads have changed since the last goal setting in 2014.

A. JEA's load growth has increased over the past 5 year period. JEA experienced an increase of approximately 1.22 percent in net energy for load (NEL) and approximately 9.1 percent in net firm peak demand since the last potential study was performed. JEA's

average annual growth rates over the next 10 years are projected to be low at approximately 0.57 percent (NEL), 0.61 percent (winter peak demand) and 0.40 percent (summer peak demand).

Q. What are JEA's existing FEECA goals based on?

A. The Public Service Commission (Commission) set goals for JEA in 2014, based on a Settlement Agreement of the parties. *See* Order No. PSC-14-0696-FOF-EU. The Settlement Agreement recognized the role of the municipal utility's governing body to determine the appropriate level of investment in conservation programs and associated rate impacts. JEA's existing FEECA goals are presented in Exhibit No. ___ [DPW-2].

Q. What cost-effectiveness test or tests are appropriate for setting JEA's goals under FEECA.

A. Section 366.82, Florida Statutes (F.S.), requires the Commission to consider, among other things, the costs and benefits to the participating ratepayers as well as the general body of ratepayers as a whole, including utility incentives and participant contributions. However, Section 366.82 does not dictate which cost-effectiveness test must be used to establish DSM goals. In 2014 (Order No. PSC-14-0696-FOF-EU), the Commission determined that the Participant test is appropriate for calculating the costs and benefits to the customers participating in the energy savings and demand reduction measures. The Commission further determined that consideration of both the Rate Impact Measure (RIM) and Total Resource Cost (TRC) tests is necessary to reflect the benefits and costs incurred by the general body of ratepayers as a whole, including utility incentives and participant contributions.

Because the RIM test ensures no impact to customers' rates, it is particularly appropriate in establishing DSM goals for municipal utilities, such as JEA. Local governing is a fundamental aspect of public power. It provides the necessary latitude to make local decisions regarding the community's investment in energy efficiency that best suit our local needs and values. Local decisions are based on input from citizens who can speak out on electric power issues at governing board meetings. Accordingly, as the Commission has recognized in prior proceedings, it is appropriate to set goals based on RIM, but to defer to the municipal utilities' governing bodies to determine the level of investment in any non-RIM based measures. See *In re: Adoption of Numeric Conservation Goals and Consideration of National Energy Policy Act Standards (Section 111),* Order No. PSC-95-0461-FOF-EG (April 10, 1995).

Q. Please describe JEA's current FEECA demand-side management programs.

A. Exhibit No. __ [DPW-3] includes a summary of the DSM and conservation programs included in JEA's existing Commission-approved DSM Plan.

Q. What is the historic participation rate of JEA's current FEECA demand-side management programs?

A. Exhibit No. __ [DPW-4] presents the historic participation rates in JEA's current FEECA demand-side management programs

Q. What are the cumulative kilowatt (kW) and kilowatt hour (kWh) savings associated with JEA's current FEECA demand-side management programs?

A. JEA has exceeded all its FEECA goals for both the Residential and Commercial/Industrial Sectors. The cumulative values from 2015 through 2018 are as follows:

- Residential Winter Peak megawatt (MW) Reduction is 9.0 MWs
- Residential Summer Peak MW Reduction is 13.0 MWs
- Residential gigawatt hour (GWh) Energy Reduction is 29.8 GWhs
- Commercial/Industrial Winter Peak MW Reduction is 0.1 MWs
- Commercial/Industrial Summer Peak MW Reduction is 2.3 MWs
- Commercial/Industrial GWh Energy Reduction is 6.4 GWhs

Q. Have JEA's current demand-side management programs been impacted by building code and appliance efficiency standards?

A. Yes. Building codes and appliance efficiency standards have and continue to become more stringent, increasing the minimum efficiency requirements for buildings and appliances. As building codes become more stringent and appliance efficiency standards increase, the incremental cost to achieve the next level of efficiency typically outweighs the savings/benefits over the life cycle of the measure.

Q. Has JEA taken any action to increase the level of customer awareness of, and participation in, conservation and DSM programs?

A. Yes. JEA uses numerous approaches to promote customer awareness and participation in conservation and efficient products. Exhibit No. __ [DPW-6] presents a summary of JEA's marketing and educational activities.

Q. How did JEA evaluate DSM measures for this proceeding?

A. JEA joined a collaborative (the Collaborative) with the other Florida Energy Efficiency and Conservation Act (FEECA) jurisdictional utilities to engage a single contractor (Nexant) to evaluate DSM measures in each of the utilities' service areas. Nexant identified DSM measures and evaluated the technical, economic, and achievable potential for DSM in JEA's service area.

Q. Based on the results of that evaluation, what is JEA proposing as its FEECA goals?

A. As discussed in the Market Potential Study report attached to the direct testimony of Jim Herndon, Nexant's economic analysis indicated that there are no cost effective RIM measures. Accordingly, JEA is proposing goals of 0 MW of summer and winter peak demand and 0 GWh of annual energy reductions for residential, commercial, and industrial customer classes.

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

A. As described in the direct testimony of Jim Herndon and the Market Potential Study attached to his testimony, Nexant developed a list of DSM measures for consideration based on the 2014 Technical Potential Study, Nexant's DSM measure library, and discussion with the FEECA utilities.

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

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

Q. What were Nexant's responsibilities with regard to JEA?

A. As more fully described in the direct testimony of Jim Herndon and the Market Potential Study attached to his testimony, the FEECA utilities retained Nexant to analyze the technical potential for energy efficiency, demand response, and demand side renewable energy across residential, commercial, and industrial customer classes. For JEA, Nexant also conducted the economic screening for the economic and achievable scenarios and analyzed economic potential and achievable potential based on the passing measures.

Q. How has JEA's Technical Potential Study been updated and modified, including any measures eliminated or added compared to the 2014 Technical Potential Study?

A. Rather than updating and modifying JEA's 2014 Technical Potential Study, Nexant performed a complete and extensive new analysis of technical, economic, and achievable potential for energy efficiency, demand response, and demand-side renewable energy measures for the 2020-2029 time period. The analysis included 278 energy efficiency, demand response, and demand-side renewable energy measures. The measures analyzed as well as a comparison to the 2014 measures list are included in the direct testimony of Jim Herndon.

Q. Did JEA's Technical Potential Study include any changes associated with changes to the building code or appliance efficiency standards?

A. Yes. As detailed in the Market Potential Study attached to the direct testimony of Jim Herndon, Nexant considered current and planned Florida building codes and federal equipment standards for baseline equipment in performing its analysis.

Q. How was JEA's Base Case forecast for customer winter and summer demand and annual energy for load developed?

A. In performing its analysis, Nexant utilized the 2020 load forecast from JEA's 2017 Ten-Year Site Plan, the most recent ten-year site plan available at the time the analysis began.

Annually, JEA develops forecasts of seasonal peak demand, net energy for load (NEL), interruptible customer demand, DSM, and the impact of plug-in electric vehicles (PEV). JEA removes from the total forecast all seasonal, coincidental non-firm sources and adds sources of additional demand to derive a firm load forecast.

JEA's load forecast utilized 10 years of historical data (2007 to 2016) which captured the pre-2008/09 economic downturn, the 2008/09 economic downturn, and the post-recession recovery. Using this shorter period allowed JEA to capture the more recent trends in customer behavior, energy efficiency and conservation, with these trends captured in the actual data and used to forecast projections.

JEA normalizes its historical seasonal peaks using historical maximum and minimum temperatures. JEA then develops the seasonal peak forecasts using multiple regression analysis of normalized historical seasonal peaks, normalized historical and forecasted residential, commercial and industrial energy for winter/summer peak months, heating degree hour for the 72 hours leading to winter peak and cooling degree hours for the 48 hours leading to summer peak.

JEA's residential energy forecast was developed using multiple regression analysis of weather normalized historical residential energy, total population, median household

income, total residential premise ID from JEA's data warehouse and JEA's residential electric rate.

The commercial energy forecast was developed using multiple regression analysis of weather normalized historical commercial energy, commercial inventory square footages, total population and gross product.

The industrial energy forecast was developed using multiple regression analysis of weather normalized historical industrial energy, total number of industrial employment and total retail sales product for existing industrial accounts. JEA then layered in the estimated energy for new industrial customers to the forecasted industrial energy. JEA's forecast also considered lighting energy demand and PEV peak demand.

Q. How are supply-side efficiencies incorporated in JEA's planning process?

A. JEA continually monitors the operation of its generating units and determines methods to utilize and/or modify the system in the most efficient manner. A recent example of improvements to the efficiency of supply-side resources is advanced gas path additions and compressor modifications that JEA is completing on the Brandy Branch combustion turbine units 2 and 3.

Q. How do supply-side efficiencies impact demand-side management programs?

A. Improvements to the efficiency of supply-side resources (i.e. lower operating costs) should reduce the cost-effectiveness of DSM programs, all else being equal.

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

A. Yes. As detailed in the direct testimony of Jim Herndon and the Market Potential Study attached to his testimony, Nexant performed an adequate assessment of the technical potential of demand-side and supply-side conservation and efficiency measures, including demand-side renewable energy systems. Drawing upon its recognized expertise, Nexant utilized its state-of-the art model to comprehensively analyze the full technical potential of energy efficiency, demand response, and demand-side renewable energy technologies.

Q. Ultimately, how many DSM measures were identified for analysis?

A. 278 DSM measures were identified and included in the analysis.

Q. How was economic potential defined and estimated for this study?

A. Economic potential was determined for JEA by Nexant as discussed in the direct testimony of Jim Herndon and Market Potential Study attached to his testimony.

Q. How did the analysis account for free-riders?

A. In addition to the economic screening based on the RIM and TRC tests, measures that demonstrated simple payback periods of less than 2 years with no incentive applications were excluded from the RIM and TRC portfolios and screened from the achievable potential analysis. Sensitivity evaluations were performed in order to evaluate the impact of shorter (1 year payback) and longer (3 year payback) free-ridership exclusion periods in accordance with the minimum testimony requirements set forth in the Commission's

Order Consolidating Dockets and Establishing Procedure (Order No. PSC-2019-0062-PCO-EG, issued February 18, 2019).

Q. How was JEA's achievable potential for the 2020-2029 period determined?

A. Achievable potential was determined for JEA by Nexant as discussed in the direct testimony of Jim Herndon and Market Potential Study attached to his testimony.

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

A. Nexant's analysis determined that there is no achievable potential for residential or non-residential energy efficiency for JEA based on the RIM test. Under the TRC test, savings potential for residential customers is 11 MW summer peak, 10 MW winter peak, and 86 GWh. For non-residential customers, the savings potential is 23 MW summer peak, 14 MW winter peak, and 176 GWh. Again, however, the RIM test in the appropriate test for evaluating achievable potential for municipal utilities such as JEA.

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

A. Nexant's analysis determined that there is no achievable potential for residential or non-residential energy efficiency for JEA based on the RIM and TRC tests.

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

A. Nexant's analysis determined that there is no achievable potential for demand-side renewable energy systems for JEA based on the RIM and TRC tests.

Q. Did JEA's analysis take into consideration the costs and benefits to customers participating in the measure, pursuant to Section 366.82(3)(a), F.S?

A. Yes. The analysis performed by Nexant for JEA is based on forecasts of achievable potential that are driven primarily by measure-level assessments of cost-effectiveness to customers. Specifically, customer cost-effectiveness is assessed using the Participant Test, where benefits are calculated based on customer bill savings and costs are based on participant costs of acquiring and installing the energy efficiency measure (net of utility program incentives). Both the participant benefits and participant costs are assessed on present value basis over the life of the measure.

Q. Did JEA's analysis take into consideration the costs and benefits to the general body of ratepayers as a whole, including utility incentives and participant contributions, pursuant to Section 366.82, F.S.?

A. Yes. Nexant's analysis of achievable potential for JEA included consideration of the costs and benefits to the general body of ratepayers as a whole, including utility incentives and participant contributions, through use of the RIM and Participant tests.

Q. Did JEA's analysis of potential DSM measures consider the need for incentives to promote both customer-owned and utility-owned energy efficiency and demand-side renewable energy systems pursuant to Section 366.82, F.S.

A. Yes. Nexant's analysis comprehensively analyzed customer-owned energy efficiency measures and none were found to be cost-effective for JEA under the RIM test. JEA's load forecast reflects the impacts of net metering associated with customer-owned rooftop solar photovoltaic (PV) systems, and this load forecast was used as the basis for the cost-effectiveness analysis performed by Nexant for this Docket. As such, incentives

to promote customer-owned demand-side renewable energy system are adequately reflected in JEA's proposed goals. Utility-owned energy efficiency and renewable energy systems are supply-side issues.

Q. How do JEA's proposed goals encourage the development of demand-side renewable energy systems?

A. Nexant fully considered demand-side renewable energy systems and found no achievable potential for these measures. Therefore, JEA is not proposing goals associated with demand-side renewable energy systems.

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

A. Yes. There are currently no costs imposed by State and Federal regulation on the emissions of greenhouse gases. While there is much speculation on the potential for greenhouse gas emissions regulation, it would be inappropriate to establish DSM goals that would increase customer rates based on speculation related to yet-to-be defined potential regulations of emissions of greenhouse gases.

Q. Did JEA's analysis use an appropriate methodology in the consideration of free riders?

A. Yes. The screening criteria used by Nexant were based on simple payback to the customer (2 years or less) and were designed to remove measures from the achievable potential forecasts that exhibit the key characteristic most associated with high levels of free-ridership in utility rebate programs, i.e. measures with naturally high levels of cost-

effectiveness to the customer. The sensitivity of total achievable potential to this particular screening criterion was tested using alternative simple payback screening values (1 year and 3 years). In addition to this screening step, the naturally occurring analysis performed in estimating achievable potential represents an estimate of the amount of "free riders" that are reasonably expected to participate in the particular program offering simulated. In this sense, the payback-based screening criteria were implemented to develop portfolios with necessarily low free-ridership levels, and within the achievable potential forecasts for those portfolios, the forecasting methodology produces explicit estimates of the expected level of free-ridership within those programs.

Q. Please discuss the economic and achievable potential for residential and commercial/industrial winter and summer demand and annual energy savings for the base fuel forecast, including the effects of free ridership, but not any costs associated with carbon dioxide emissions, for both RIM-based and TRC-based evaluations.

A. Exhibit No. __ [DPW-5] summarizes the results of Nexants's economic and achievable potential analysis for JEA for both RIM-based and TRC-based evaluations.

Q. Please provide an estimate of the average residential customer bill impact for the RIM-based and TRC-based achievable portfolios.

A. There is no residential customer bill impact for the RIM-based achievable portfolio, as there are no DSM measures that pass the RIM test for JEA. Exhibit No. __ [DPW-7] presents the analysis of the estimated bill impacts on residential customers for the TRC-based achievable portfolio. As shown in Exhibit No. __[DPW-7], the estimated

residential bill impact of the TRC-based achievable portfolio would be approximately 2.5 percent by 2029.

Q. Does this conclude your testimony?

A. Yes it does.

BY MR. PERKO:

Q And Mr. Wucker, are you also sponsoring, with your direct test- -- prefiled direct testimony Exhibits that have been labeled DPW-1 through DPW-7?

A I know it's DPW-6. I -- I'm not certain about seven.

Q If you could, check, please.

A Okay. Yes, I'm sorry. It was on the back of six. Got it. Sorry.

Q So, you are sponsoring Exhibits --

A Correct.

Q -- DPW-1 through DPW-7?

A Correct.

MR. PERKO: And just for reference, Mr. Chairman, those have been premarked on the staff's comprehensive exhibit list as Exhibit Nos. 53 through 59.

CHAIRMAN GRAHAM: Duly noted.

BY MR. PERKO:

Q Mr. Wucker, do you have any changes or corrections to those exhibits?

A No, I don't.

Q Have you prepared a summary of your prefiled direct testimony?

A Yes, I have.

Q Would you please provide that to the Commission at this time?

A Okay. Good afternoon, Commissioners. My name is Donald Wucker. I am a registered professional engineer in the state of Florida, and I'm responsible for the planning and management of JEA's DSM portfolio.

My testimony focuses on three areas: First, how JEA is governed; trends affecting cost-effectiveness of JEA -- of DSM for JEA; and JEA's proposed goals.

JEA is a municipal utility governed by a board of directors appointed by the mayor of the City of Jacksonville and appointed by our city council. The board of directors sets our rates and policies governing JEA's operations.

As a municipal utility, JEA does not earn a rate of return. We exist to provide reliable services to our community. JEA's operating budget is subject to review and approval by our council.

JEA's board meetings are open to the general public, and ratepayers are invited to participate in board meetings. Through the local governance of JEA's board of directors, it is empowered to set policies consistent with the best interest of JEA's customers and the community.

So, that leads me to trends. JEA's load

growth has increased modestly since our last filing. JEA's average annual energy and demand growth rates over the next ten years are projected to be approximately 0.5 percent annually and -- and are on the decline.

Additional trends influencing cost-effectiveness include lower fuel prices, lower supply-side system costs, more-stringent codes and standards, and deeper market penetration of efficient products, i.e., fewer inefficient products connected to the grid, which leads me to our proposed goals.

While these trends are beneficial to ratepayers, they result in reduced cost-effectiveness of demand-side measures. The findings of JEA's market potential analysis indicates there are no achievable savings for energy-efficiency, demand reduction, or demand-side renewable-energy measures for JEA when considering the participant and RIM test.

JEA urges the Commission to remain consistent with its past principles of managing upward pressure on rates and preventing cross-subsidies by establishing JEA's FEECA goals at zero, as it's done in the past.

As to this -- as to local governance, this will provide JEA's board flexibility to determine the appropriate level of investment in non-DSM measures based on our community's needs and values.

Thank you.

CHAIRMAN GRAHAM: Thank you.

BY MR. PERKO:

Q Mr. Wucker, does that complete your summary?

A Yes, it does.

MR. PERKO: At this time, Mr. Chairman, we tender the witness for cross-examination?

CHAIRMAN GRAHAM: OPC.

MS. CHRISTENSEN: Yes, I just have a few questions.

EXAMINATION

BY MS. CHRISTENSEN:

Q Good afternoon, Mr. Wucker.

A Good afternoon.

Q JEA has a low-income residential DSM programs; is that correct?

A Yes.

Q And as your summary just stated, JEA is proposing no DSM goals for this goal proceeding; is that also correct?

A That's correct.

Q Okay. Your low-income program in- -- include programs that would not pass RIM; is that right?

A It includes measures that would not pass.

Q Okay.

A Yes.

Q And would some of those DSM measures also include less than a two-year payback?

A Oh, yes.

Q Okay. Is JEA planning on retaining these low-income measures and programs?

A JEA is planning on continuing its low-income efforts, yes.

Q Okay. And in the current DSM program for low-income customers, does that produce DSM megawatt savings?

A Yes, it does provide capacity -- is that what you're asking, capacity savings?

Q Correct.

A Yes.

Q Are you -- it produces megawatt savings on your load growth, correct?

A Yes.

Q Okay. And would you agree that the megawatts associated with the DSM program for low-income customers should be added to the 2020-through-2029 DSM goals?

A No, I would not --

Q Okay.

A -- agree with that.

MS. CHRISTENSEN: I have no further questions.

Thank you.

CHAIRMAN GRAHAM: Mr. Moyle.

MR. MOYLE: No questions.

CHAIRMAN GRAHAM: Ms. Wynn.

MS. WYNN: No questions.

CHAIRMAN GRAHAM: Kelley?

EXAMINATION

BY MS. CORBARI:

Q Good morning, Mr. Wucker. Just a few questions. You mentioned you project a load growth of slightly one-half of 1 percent; is that correct?

A Yes.

Q Is that for the -- planning out for the next ten years?

A Yes, I believe it is.

Q Thank you -- per year?

A I believe it's per year, an annual number, correct.

Q And as a municipal, the Commission does not set JEA's rates, correct?

A Say that again?

Q As a municipal, the Commission does not set JEA's rates; is that correct?

A That is correct.

Q And JEA recently is looking to sell the

utility.

A Well, I don't know that we're looking to sell. We're doing some exploratory invitation-to-negotiate-type work. I can't say that we're look- -- that we are going to sell. I don't really know that.

Q Explore the opportunity.

A They want to see the value. As the community, it's the right of the community, I think, to look at that.

Q If JEA were to be purchased by a private entity, the Commission would set JEA's rates.

A I would assume that to be correct. I don't know how that would work, though, in the time period.

Q So -- if that occurred during the next -- prior to the next FEECA proceeding --

CHAIRMAN GRAHAM: I think we need to stay clear of the subject, especially because the witness is under oath. Let's move on to something else other than the potential sale.

MS. CORBARI: I was going to get to the cost recovery of having zero goals, but I'll -- I'll finish. Thank you.

CHAIRMAN GRAHAM: Okay. Thank you.

SACE, I think we're close enough to take a lunch break, but suggestion before we break for

lunch -- it seems like there's a lot of the same stuff here, as far as interrogatories and things along that line. You may want to speak to the attorney from JEA to see if he's willing to stipulate a lot of these things before we have to go through, just so you can get it into the record.

MR. LUEBKEMANN: Thank you, Mr. Chairman. We'll speak.

CHAIRMAN GRAHAM: And also, with Kushner as well.

MR. LUEBKEMANN: Okay. Thank you.

CHAIRMAN GRAHAM: All right. I have five minutes 'til 1:00, with the clock in the back. We'll be back here at 2:00. Let's take a break.

(Transcript continues in sequence in Volume 5.)

CERTIFICATE OF REPORTER

STATE OF FLORIDA)
COUNTY OF LEON)

I, ANDREA KOMARIDIS, Court Reporter, do hereby certify that the foregoing proceeding was heard at the time and place herein stated.

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

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

DATED THIS 22nd day of August, 2019.

ANDREA KOMARIDIS
NOTARY PUBLIC
COMMISSION #GG060963
EXPIRES February 9, 2021