

IN RE: STEVEN MCINALL-TERMINATION OF EMPLOYMENT
AGREEMENT WITH JEA

SWORN STATEMENT
OF
STEVEN MCINALL

DATE TAKEN: Wednesday, July 8, 2020
TIME: 9:00 a.m. - 12:57 p.m.
PLACE: 21 West Church Street
Jacksonville, Florida

REPORTED BY: Heather M. Thomas,
Court Reporter

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19
20
21
22
23
24
25

I N D E X

WITNESS: STEVEN MCINALL

EXAMINATION

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1 STEVEN MCINALL,
2 having been produced and first duly sworn as a witness,
3 testified as follows:

4 THE WITNESS: Yes, I do.

5 EXAMINATION

6 BY MR. WEDEKIND:

7 Q Would you please state your name and address
8 for the record?

9 A Steve McInall, M-C-I-N-A-L-L. My address is
10 626 Grampian, G-R-A-M-P-I-A-N, Highlands Drive in
11 St. Johns, and that's 32251.

12 Q Mr. McInall, you understand that you are
13 currently on administrative leave as an employee of
14 JEA --

15 A Yes.

16 Q -- correct?

17 And this interview is being conducted as part
18 of an investigation to determine whether there exists
19 grounds for your termination for cause; right?

20 A Correct.

21 Q You have been provided with a statement of
22 rights, the Garrity form; correct?

23 A I've seen it, yes.

24 Q Did you execute the Garrity form?

25 A I have not.

1 Q Okay.
2 MR. BLEDSOE: Not for this proceeding. He
3 executed one for the earlier interview.

4 BY MR. WEDEKIND:

5 Q Okay. We need to get that handled. I don't
6 have a copy of it with me. I've seen it. We will have
7 it printed.

8 A Okay.

9 Q And you will sign it. I will sign it.
10 Mr. McElroy has already signed it. And that will
11 provide evidence that this interview today is being
12 taken at JEA's direction, subject to your termination
13 for cause if you fail to cooperate, which provides you
14 with the Garrity protection.

15 So everything that you say today is deemed to
16 be protected under Garrity, and you cannot be criminally
17 prosecuted for anything that you say today.

18 A Okay.

19 Q Okay. All right. As part of today's
20 interview, you have the duty as a JEA employee to answer
21 all of my questions completely and honestly. What I
22 mean by that is that if there's any information that you
23 think is relevant or important for me to know related to
24 the questions that I'm asking, even if it isn't
25 directly, precisely responsive to my questions, I would

1 So to the extent that you either don't hear
2 clearly or you can't understand what I'm trying to say
3 because of this mask or for any other reason, I'd ask
4 that you just ask me to repeat or restate my question.
5 I'll be happy to do that.

6 A Great. Thank you.

7 Q Finally, because we do have a court reporter
8 here taking a transcription of today's conversation, I
9 would ask that you work with me not to talk over one
10 other, so that I will ask a question and I'll allow you
11 to finish your answer before I ask my next one, and I
12 would ask that to the best that you can, please wait
13 before you begin your answer to my question until I've
14 finished it.

15 I sometimes have an issue with pausing in the
16 middle of a question, which can be -- can complicate
17 that, and so I'll work very hard to get my questions out
18 in a way that you can answer them.

19 Can you do that?

20 A Yes.

21 Q Okay. Can you please provide me with all of
22 the cell phone numbers that you have used during the
23 last two years.

24 A (904) 312-0739 is the only number.

25 Q Okay. Same question for email addresses.

1 ask that you provide me with that information. And, of
2 course, all the information that you provide is expected
3 to be the truth.

4 A Okay.

5 Q Today is not a deposition. I know that it
6 looks like one, but it's not. This is an interview, and
7 the Rules of Civil Procedure do not apply to today's
8 interview. So I might ask questions in a form that your
9 attorney would otherwise find objectionable. He doesn't
10 have the right, like he would in a deposition, to object
11 to the form of my questions.

12 But I would ask you and him that if any of the
13 questions I ask are confusing to either of you in any
14 way, for purposes of clarity, I would ask that you help
15 me better frame my questions so that we can get to the
16 truth today.

17 Can you do that?

18 A Yes.

19 Q Great. Thank you.

20 And I'll also say we're wearing masks here
21 today because of concerns about the coronavirus. So it
22 might make it difficult for you to either hear or
23 understand the questions that I ask, and it might be
24 hard for our court reporter to understand anybody that's
25 talking today.

1 A As far as work email or --

2 Q Any work email addresses that you have and any
3 personal email addresses that you've used in the last
4 two years.

5 A So mcinsg@jea.com is the work email. And
6 SMcInall -- first initial, last name -- @gmail.com and
7 also @bellsouth.net.

8 And I've got another just forwarding address.
9 It's the StevenMcInall@alum.mit.edu, but it just
10 forwards it to the Gmail or the JEA account, and so for
11 subscriptions or newsletters, I like to use that one so
12 that it went to both.

13 Q Understood.

14 In connection with your work for JEA, did you
15 ever receive work-related emails to your personal email
16 accounts?

17 A No.

18 Q As part of your work for JEA, did you ever
19 conduct any JEA-related work on your cell phone via
20 either calling or texting?

21 A Yes, I would imagine I did.

22 Q Texting was a part of your work life?

23 A Yes. Yes.

24 Q Other than text messaging through the text
25 app, did you use any other apps to communicate with

1 other members of the SLT?

2 A There was that GroupMe app that was basically

3 a group chat, and it went out to all the SLT members.

4 And that was used by all the SLT members to share things

5 that had happened in their areas and get reactions.

6 And it was really -- I don't think it was so

7 much for conducting business as much as keeping people

8 up to date. For instance, if there had been a pipe

9 break, Deryle Calhoun would send out, we've got a pipe

10 break at X location. And Kerri would chime in with

11 something about, you know, we'll get a press release or

12 we'll work with the media to -- department to notify

13 people about that.

14 So it was really just to, I think, get

15 everybody, you know, on the same page. And then a lot

16 of people used it for just sharing articles of common

17 interest. You know, if there was a particular news item

18 that somebody felt newsworthy, then it would get shared

19 and then have reactions to it.

20 That GroupMe app was used in order for all the

21 messages to be properly memorialized.

22 Q Were there any other apps other than GroupMe

23 that you ever used in connection with your work on the

24 SLT?

25 A No.

1 Q Before we get into the real nuts and bolts of

2 my questions, I wanted to provide you with an

3 opportunity to say anything that you wanted to go ahead

4 and have on the record.

5 I just want to let you know I'll also provide

6 you with the same opportunity at the end of today's

7 interview, and so this is just a chance for you to say

8 anything on the record that you want to say.

9 A I do have a statement, but I was going to save

10 it for the end.

11 Q Very good.

12 All right. What did you do to prepare for

13 today's interview?

14 A I talked with my lawyers. I reviewed my prior

15 testimony from January 2nd. I listened to your

16 presentation to the Special Investigative Committee. I

17 watched my presentation to the Special Investigative

18 Committee.

19 I reviewed some of our previous ten-year site

20 plans downloaded from the Public Service Commission

21 website as well as their 2019 review of the ten-year

22 site plans. And just kind of caught up on industry

23 trends on challenges facing the utility industry, the --

24 looked at a McKinsey report for 2019 of just their

25 overall predictions, utility outlook.

1 I looked at the annual energy outlook 2020.

2 Realized I hadn't really kind of dove into that yet. So

3 that's a U.S. government production.

4 MR. NUNN: That's the one published by the

5 Energy Information Agency?

6 THE WITNESS: Yes. Correct.

7 BY MR. WEDEKIND:

8 Q Anything else?

9 A As far as preparation, that's really -- that's

10 really it.

11 Q Other than your attorney, did you speak with

12 anybody else?

13 A I've spoken with other SLT members, but not

14 about -- not about preparation for the testimony, just,

15 you know, really catching up, see how they're doing.

16 Interested in when people are testifying or if. Up

17 until a week or so ago, you know, nobody had really been

18 scheduled. We hadn't heard anything.

19 So, you know, just everybody trying to keep

20 informed. And I spoke with probably most of them at one

21 point or another.

22 Q Did you speak with Melissa Dykes?

23 A I spoke with Melissa -- the day Paul let us

24 all go, she had called to offer, you know, just

25 condolences and understanding. And then I communicated

1 with her, I think, by either text just to line her up as

2 a future reference.

3 Q How about Ryan Wannemacher?

4 A I actually spoke with Ryan for the first time

5 since he left Sunday night, and it's because I needed a

6 number for my final statement. I thought asking him

7 would be easier than trying to look it up and

8 everything.

9 Q What do you mean final statement?

10 A My -- my -- what I was going to say at the end

11 of this.

12 Q Okay.

13 A It was -- it was what was the net present

14 value of the St. Johns River Power Park deal.

15 Oh, can I add in? The other thing I looked at

16 in preparation for today was going back through prior

17 board meetings just to look at what presentations I had

18 made since Aaron had been CEO, just getting that

19 straight in my head.

20 Q Did you speak with Mr. Zahn?

21 A I have not spoken with Mr. Zahn.

22 Q Since his termination?

23 A Since his termination.

24 Q Why did you go back and look at the JEA board

25 meetings at which you presented during Mr. Zahn's

1 tenure?

2 A I was just interested to see what information

3 I presented to the board.

4 Q Did the information during Mr. Zahn's tenure

5 as CEO of JEA have a different form or importance than

6 other information that you would have previously

7 provided to the board?

8 A No. But I assumed it was going to be the

9 focus of this discussion. And, of course, I wasn't an

10 SLT member prior to that.

11 Q Did you have -- have you had any

12 communications with Herschel Vinyard?

13 A No, I have not.

14 Q Lynne Rhode?

15 A No, I have not.

16 Q What was the title of your last position at

17 JEA?

18 A The last one before this one or this one?

19 Q The one that you currently hold.

20 A Vice president and -- vice president and chief

21 of energy and water planning.

22 Q My understanding is that was a combination of

23 two prior roles; is that right?

24 A It was formed -- it really came from three

25 different areas. The energy planning came from the

1 energy group, or the former electric group. Water

2 planning came out of the water department. And then

3 the -- it also included real estate and economic

4 development, and that came from the facilities group as

5 far as -- as far as real estate and economic development

6 came from what Mike Hightower used to do and then

7 Herschel was doing, and that was mixed in with the real

8 estate to make that a director-level position rather

9 than a manager when I had to replace the leadership in

10 that department.

11 Q Who were the previous employees who had

12 responsibility for those three areas?

13 A Before I took over?

14 Q Yes.

15 A Okay. So -- all right. So on electric, John

16 Coarsey and I shared the electric planning. John had

17 the transmission and distribution planning. I had the

18 generation planning as well as fuels and byproducts.

19 When I started the new position, generation

20 planning got moved under John, and fuels and byproducts

21 stayed in the energy side. So those people didn't come

22 with me.

23 On the water side, the planning director was

24 Raynetta Marshall. She had left a couple months into my

25 tenure, and I had to -- so I replaced her with Rob

1 Zammatoro, Z-A-M-M-A-T -- either another A or maybe an

2 O -- R-O. It auto populates before I have to get that

3 far.

4 And on the real estate side, Donald Burch was

5 the manager of real estate. And Jordan Pope did the

6 economic development and government relations. And then

7 Donald retired, and I kind of poached Jordan from

8 Mike Hightower, and he brought the economic development

9 portion with him into the real estate group.

10 Q So Jordan is a direct report of yours?

11 A My three direct reports were John Coarsey, Rob

12 Zammatoro, and Jordan Pope, yes.

13 Q Are you familiar with the

14 City of Jacksonville's RFP to provide long-term

15 strategic planning advisory services that was put out

16 for bid in December of 2017?

17 A The City of Jacksonville's?

18 Q Yes.

19 A Not really, no.

20 Q Okay. Were you involved in that work in any

21 way?

22 A Not that I recall.

23 Q Do you know anybody who was at JEA?

24 A Was that related to the prior sale?

25 Q It was related to a prior discussion about

1 privatization in 2018.

2 A Yeah, I was the director at that time, and,

3 you know, I -- I don't recall who, if anybody, was

4 involved with that.

5 Q When did you move from the director level to

6 the SLT level?

7 A January 2019.

8 Q As a director, did you either attend or watch

9 board meetings?

10 A Yes. If I had an item going before the board,

11 I'd be there. And, typically, we would watch the board

12 meetings remotely from our desks if we didn't have an

13 item.

14 Q Do you happen to remember watching the board

15 meeting from May 2018 in which the board discussed

16 privatization?

17 A Was that the -- just to refresh the timeline,

18 was the Aaron appointment in April 2018 as interim?

19 Q Yes.

20 A I probably did watch that board meeting. I

21 was out of town for the April board meeting.

22 Q Do you remember the board issuing an order for

23 JEA employees to stop working on privatization at the

24 May 2018 board meeting?

25 A If I don't remember it from that meeting, I

1 remember that that was discussed later, yes.
 2 Q Okay. Are you aware of any JEA employees
 3 exploring privatization after May 15th, 2018, but before
 4 July 23rd, 2019?
 5 A So the interpretation, as I recall, from Aaron
 6 and the upper echelon leadership was after the -- I
 7 think it was the June board meeting, but whenever the
 8 Scenario 1 and Scenario 2 were presented and were both
 9 kind of rejected and the request went out to find -- you
 10 know, show us something different.
 11 At that point there was -- there was some
 12 discussion about what are the other options, and
 13 privatization was one of them. So certainly before the
 14 July 23rd meeting -- you know, the information at the
 15 July 23rd meeting couldn't have been there without some
 16 discussion about privatization leading up to it.
 17 But I don't recall anything specifically being
 18 discussed, authorized, worked on prior to -- prior to
 19 that Scenario 2 rejection.
 20 Q At the July 29 board meeting -- or excuse me,
 21 the June 29 board meeting?
 22 A Right.
 23 Q Okay. Was it ever implied by anyone else or
 24 inferred by you that all of the long-term strategic
 25 planning work that was being done by McKinsey and other

1 members of the SLT was in preparation for a push to
 2 privatize JEA?
 3 A Implied or inferred?
 4 Q Implied by anyone or inferred by you.
 5 A So I think -- I think there was a -- because
 6 sale had been in the news -- you know, it had been
 7 discussed under Paul's tenure. It was really the reason
 8 that Paul ended up leaving and -- and then Aaron coming
 9 in.
 10 You know, I think there was always sort of a
 11 nagging thought that, you know, was this leading to a
 12 sale, but -- or a sale discussion. Not necessarily a
 13 sale, but a sale discussion.
 14 And, you know, so I don't think -- when
 15 Scenario 2 was rejected and we looked at a sale option,
 16 it wasn't a surprise. Certainly the Scenario 2
 17 discussion was, I thought -- would have been very
 18 onerous, would not have been good for the community, and
 19 I was happy to have an alternative to discuss and to
 20 defer any further discussion of Scenario 2.
 21 Q Well, that was the whole point of Scenario 2;
 22 right?
 23 A Yeah. I think it was, yeah.
 24 Q To drive a discussion towards Scenario 3?
 25 A Yes. That -- you know, that was certainly --

1 you know, we worked diligently to work through
 2 Scenario 2, and I think had Scenario 3 not been
 3 authorized that, you know, Scenario 2 would have been
 4 invoked or more heavily investigated. So, you know, it
 5 was a real possibility at that time.
 6 Q After Scenario 3 was rejected by the JEA
 7 board, did it begin implementing Scenario 2?
 8 A When Scenario 3 was rejected back in
 9 December 2019?
 10 Q Yes.
 11 A No. Because at that time Aaron had also been
 12 dismissed. New leadership was in place. You know,
 13 there was no consensus for what the next step was. And
 14 the board at that time was not in a position to really
 15 change directions.
 16 Q There's been a lot of discussion about the
 17 different mechanisms by which JEA does its planning.
 18 And I know that you've talked about this before, but I
 19 think it would be helpful for me if you would walk
 20 through a couple of different planning mechanisms that
 21 JEA has historically used.
 22 So the things that come to my mind -- and
 23 please supplement if I'm wrong -- are the ten-year site
 24 plan, which is filed on an annual basis with the Public
 25 Service Commission; the IRP, which is done on about --

1 as far as I know, about a decade basis.
 2 And who is the IRP filed with?
 3 A IRP is only filed if there's -- if there's a
 4 licensing decision that comes out of the IRP. The 2012
 5 IRP, for instance, was never filed with anybody.
 6 Q And that was the last one that was done in
 7 advance of this most recent IRP that's been worked on?
 8 A Right. Right. Which was completed, the --
 9 you know, the final draft in February.
 10 Q Of 2020?
 11 A Of 2020.
 12 Q And the other long-term strategic planning
 13 work that was being spearheaded by McKinsey?
 14 A Correct.
 15 Q Was there any other type of planning mechanism
 16 that JEA has used in the last ten years?
 17 A Well, there's the integrated water resource
 18 plan, which has -- there's one currently underway, and
 19 one was completed maybe back in 2014 or 2015, and that
 20 was patterned after the electric integrated resource
 21 plan as far as looking at future trends areas and really
 22 trying to identify what the -- what the long-term
 23 assets, capital investments, were going to be needed to
 24 support the community in the future.
 25 Q Did the ten-year site plan and the IRP focus

1 on water?

2 A No. Those were electric only.

3 Q So the IWRP would be a water companion of the

4 IRP, which is on the electric side?

5 A Right. Right.

6 Q Are there any other planning documents or

7 processes that JEA has used?

8 A So the finance people have got their

9 projections that they use at the rating agencies which

10 are not necessarily based on any of the formal planning

11 documents.

12 The plans as far as projections over a

13 five-year period are reflected in the annual disclosure

14 report that goes out, and that goes out to the rating

15 agencies. And that's -- well, it gets posted on EMMA,

16 which is the essential data site for municipal financial

17 filings.

18 And there had been previous strategic

19 forecasts and investigations. I know Deloitte had done

20 something a few years ago. I'm not as familiar with the

21 work that they did. And before that, there had been,

22 I'm sure, strategic consultants come in and come up with

23 something.

24 MR. NUNN: Could you speak to the market

25 potential reports that are filed with the Public

1 Service Commission?

2 THE WITNESS: Is that the FEECA filings?

3 MR. NUNN: Uh-huh.

4 THE WITNESS: So those are filed every five

5 years, I believe. The customer group does those.

6 I believe they get some information from the

7 ten-year site plans from other departments. But

8 I -- my group wasn't involved in those filings at

9 all, so I really can't speak to the content.

10 There's sort of a back-and-forth relationship

11 with -- the FEECA would pull information from ours,

12 but then once they identified their energy

13 efficiency targets and what they expected to hit,

14 that would then come forward, and over the next

15 five years that's what would be used in the

16 ten-year site plan.

17 So it's not quite a circular reference, but

18 the documents kind of reference each other.

19 BY MR. WEDEKIND:

20 Q So that I understand, the ten-year site plan

21 and the FEECA filings would mirror each other in terms

22 of the data it represented?

23 A For at least that first year of the overlap.

24 And I say mirror each other, but by that I just mean we

25 would get the information about energy efficiency from

1 the group that's preparing the FEECA. So the

2 information they provided us in that year that they're

3 doing the FEECA should be consistent with their FEECA

4 filing.

5 But, you know, my group didn't really have any

6 say in the FEECA filing. And the -- and I believe they

7 would look at our overall projections for growth and for

8 net energy per load and would use that in their

9 information. So the groups would work together, but

10 certainly each product was independent, you know, of the

11 other.

12 Q But they would utilize information from the

13 others. So the ten-year site plan would utilize

14 information from the FEECA filings, and the FEECA

15 filings would utilize information from the ten-year site

16 plan?

17 A Right. And that's the distinction I'm trying

18 to draw is that I don't know for sure that the ten-year

19 site plan drew information from the FEECA filing but got

20 that information from the group that prepared the FEECA

21 filing.

22 Because certainly, if it's not a year that

23 there's a FEECA filing going in, the energy efficiency

24 or demand side management goals can change year to year

25 within that five-year FEECA period based on what the

1 actuals were the year before.

2 Q I understand that clarification.

3 My point is only that there was an effort by

4 JEA to have a consistent presentation of data between

5 its ten-year site plan and its FEECA filings?

6 A I believe so. But like I said, I -- you know,

7 I'm not as familiar with what the FEECA filing is, so I

8 can't really say that definitively.

9 Q It's my understanding -- going back now,

10 focusing on the ten-year site plan and the IRP.

11 It's my understanding that the purpose of

12 those documents is to attempt to forecast demand for

13 electric power in the future?

14 A So that is true for the ten-year site plan.

15 Q Okay. How about for the IRP?

16 A The IRP takes its baseline forecast from the

17 ten-year site plan. It doesn't develop its own -- its

18 own forecast. It then looks at scenarios of where --

19 that would modify or change that forecast.

20 So the ten-year site plan is fairly static.

21 It looks at -- you know, it's doing a regression

22 analysis. So you're looking at your 10 or 12 or 15

23 parameters historically and what was the load that year,

24 and based on that develop your aggression equation.

25 And then, looking at other people's

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1 projections of those parameters -- so say the state has
2 estimates for Duval County population growth. So that's
3 one number from an external source. Moody's has
4 estimates for, you know, what the economic -- what the
5 interest rate is going to be, what the economy is going
6 to be.

7 All those factors go in, and then you get the
8 output like -- kind of assuming that if everything was
9 the same as it was before and these numbers change here,
10 here's your net energy per load in that case.

11 So then the IRP takes that baseline and looks
12 at multiple different scenarios, some which impact the
13 demand, some which don't. But it will look at good
14 economy, poor economy, high natural gas prices, low
15 natural gas prices, different things like that.

16 Because what we're trying to do with the IRP
17 is -- because there's -- if there's a decision to be
18 made, which is what triggers an IRP -- the decision that
19 we're looking at for this IRP was how do we replace
20 Northside 3. That's 500 megawatts of natural gas that
21 is approaching retirement, and it needs to be replaced
22 somehow; what's the best way to replace that.

23 And we want to make sure that replacement
24 power is the best option across as many different
25 scenarios as possible. So it might not be the absolute

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1 best, but it might be the best -- it might be like
2 second best in four out of five scenarios and best in
3 one, and overall that makes it the most resilient
4 solution, because the one thing we don't know is what's
5 going to happen in the future.

6 So that -- so the -- that's the purpose of the
7 IRP is to drill more down into the technology. I look
8 at the IRP as more than a counterpoint to the planning
9 document as the first step in the licensing process.

10 Because once the IRP says, yeah, you need a new combined
11 cycle, then the next step is to start working on a need
12 for power application with the PSC. And they're going
13 to ask why do you think you need this combined cycle.
14 And the answer is going to be the IRP demonstrated that
15 that was the most robust solution for our need driven by
16 the retirement of this other unit.

17 Q Based on the baseline forecasts contained in
18 the ten-year site plan?

19 A Right. So that's the jumping off point, but
20 then the IRP does look at modification to that. But
21 those aren't forecasts in and of themselves. They're
22 sort of -- they're just what-ifs; what if the economy
23 tanked; what if the economy was fantastic; you know, so
24 what if demand got a lot higher; what if it got lower.

25 So those are kind of in there to create

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1 bookends to create a confidence level that that solution
2 is appropriate across the widest range of solutions.
3 (Discussion off the record.)
4 (Connected to conference call.)
5 MR. NUNN: May I ask a question about the
6 scenarios? Is there a document at JEA that sets
7 forth the scenarios that should be contained in an
8 IRP --
9 THE WITNESS: No.
10 MR. NUNN: -- generation resource guidelines
11 document from approximately 2012?
12 THE WITNESS: No. They really varied based
13 on -- based on when we're doing it. If -- and
14 there's scenarios and then there's sensitivities
15 within each scenario. There generally are the
16 variations around economy, so, you know, inflation
17 rate, discount rate. Fuel is always a big
18 variable, relative fuel prices.
19 The scenarios in the 2019-2020 IRP aren't the
20 same as the scenarios in 2012. Really that's --
21 those are developed in concert with the consultants
22 and with -- you know, with our groups. So just --
23 there's a cost benefit there too.
24 You'd like to look at every possible scenario,
25 but that takes time and money, and the more

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1 variations you run, the more consulting time it
2 takes. So you really try to winnow it down to as
3 few as possible, and it also makes the comparison
4 at the end, you know, a little more
5 straightforward.

6 The 2012 IRP, for instance, the final outcome
7 was let's not really do anything right now. At
8 that time the best answer was more nuclear, which I
9 think compared to more nuclear, let's not do
10 anything seems like a pretty good decision at this
11 point.

12 So no, there's not a planning document that
13 spells out for the IRP what the -- what those
14 scenarios should be.

15 BY MR. WEDEKIND:

16 Q When you're looking at scenarios, you talked
17 about a winnowing down. Are the most likely scenarios
18 the ones that are ultimately selected for inclusion
19 within the IRP?

20 A Not necessarily. The ones that kind of give
21 the most -- the most variety. So if the two or three
22 most likely scenarios kind of sit on top of each other
23 as far as, you know, what the expected -- you know,
24 where the demand or total fuel prices, whatever, come
25 in, then they're not really -- it really doesn't help to

1 have those.

2 You'd rather have one that's almost a

3 caricature of a scenario that's going to be like, you

4 know, that's crazy high or that's crazy low. So you get

5 a wide range.

6 Just as an example, so we had a -- in the 2012

7 IRP, we had a poor economy scenario that showed flat to

8 negative growth, and then looking back at that compared

9 to what actually happened, reality came in below that.

10 And that was a scenario that we thought was a bookend on

11 the low side, and then, you know, reality was lower.

12 So you don't always get it -- get those

13 bookends to actually reflect what's going to happen

14 because, again, they're all projections.

15 Q But the goal, I think, as I understood it,

16 though, is to use the best data that you have in order

17 to determine the most resilient solution to a pending

18 issue, which is a lack of capacity?

19 A Right. Right. Yes, that's a -- yeah.

20 Q And then, again, the baseline forecast that

21 you begin your scenario planning with is data derived

22 from the ten-year site plan?

23 A Right, as far as the growth. And then, of

24 course, the ten-year site plan only goes for ten years.

25 The IRP might go for 30, and it's typically just a

1 linear extrapolation from the end.

2 So -- and I should point out the other big

3 discrepancy with the IRP and the ten-year site plan is

4 the IRP really talks in dollars, so this solution set

5 where we retire this unit and replace it with these two

6 or three things and here's the cost for that over the

7 next 30 years, and then alternatives, like what if we

8 replace it with this other set or this other set or this

9 other set.

10 There's no dollars anywhere in the ten-year

11 site plan. You know, the PSC doesn't care how much it

12 costs as long as it's cost-effective for your customers.

13 But the ten-year site plan isn't the way you communicate

14 with the PSC, here's the relative cost for something.

15 You know, that's through the whole licensing process

16 and -- of which the IRP is the first step.

17 Q Did JEA internally prepare the ten-year site

18 plans?

19 A Yes.

20 Q And I think I understood that JEA engages an

21 outside consultant to assist in the preparation of the

22 IRP?

23 A Correct.

24 Q And I think it's Brad Kushner, or at least it

25 historically has been?

1 A It is. Brad did the 2012 IRP when he was at

2 Black & Veatch and most recent IRP with his new company,

3 nFront.

4 Q You talked about the difference between the

5 reports, including the financial component in the IRP.

6 That's because it is used to justify an investment

7 decision?

8 A Correct.

9 Q And the ten-year site plan is simply

10 forecasting load?

11 A Forecasting load and reporting on addition,

12 subtractions to the generating stack. So again -- so

13 once the IRP identifies here's -- so, for instance, so

14 Northside 3 is going to go away, let's say, in 2027.

15 The IRP would then identify what is going to replace it.

16 Then that information would then roll back into the next

17 ten-year site plan, where our generating stack, we would

18 show a reduction of 500 megawatts in 2027, and an

19 addition of -- suppose we were doing a new combined

20 cycle -- 550 megawatts in 2027.

21 And, you know -- or if we're going to do a

22 smaller unit with -- maybe we had 200 megawatts earlier.

23 So that would all be reflected in the tables showing

24 we -- you know, because the purpose of the ten-year site

25 plan is not necessarily -- it's not just to show what

1 the forecast is; it's to show the next step, which is

2 that we have adequate generation capacity to meet that

3 demand plus the reserve margin that's required, which is

4 15 percent.

5 Q And so like the FEECA filings with the

6 ten-year site plan, the IRP report and the ten-year site

7 plan also are consistent with one another? The data

8 within them are consistent? They have different

9 purposes, but the data within them are generally

10 consistent?

11 A Yes.

12 Q Was the data within the ten-year site plan and

13 the IRP that was being worked on by JEA and Mr. Kushner

14 in 2019 utilized by McKinsey in its strategic planning

15 process?

16 A So the IRP that we did started with the 2018

17 ten-year site plan, because that's when it started. And

18 we didn't -- the 2019 and 2018 ten-year site plans were

19 not drastically different, so there was no need to

20 update the IRP for that change.

21 The McKinsey work was going in parallel to the

22 IRP. They were going on at pretty much the same time,

23 and their -- we shared with McKinsey what we had, but I

24 don't -- you know, up to the time, but I don't think

25 there was necessarily a concerted effort to match the

1 IRP and the McKinsey reports.
 2 They -- I think they were probably
 3 inconsistent in a few areas, particularly -- you know,
 4 McKinsey was more aggressive on solar adoption and, you
 5 know, load defection.
 6 But, you know, I will point out the final
 7 McKinsey reports did show a new combined cycle in about
 8 the same time frame as the IRP was showing.
 9 Q I have an email from you. I'm sure you've
 10 seen it before. I think it's from December 2019 when
 11 you state that you tapped the brakes on the IRP --
 12 A Yeah.
 13 Q -- in order to synthesize it or make it --
 14 alignment, I think maybe was your word, with the
 15 McKinsey report.
 16 A So it wasn't necessarily to align with the
 17 McKinsey report. What -- and I believe that was the one
 18 to Chris Garrett?
 19 Q I'll find it. It's in here. But continue.
 20 A So with the IRP as the first step of the
 21 licensing process, part of that is -- and I believe I
 22 covered this in prior depositions -- part of that is
 23 testifying that the -- this new unit -- because it's a
 24 \$550 million or \$530 million unit that we're -- that
 25 we're talking about that -- yeah, Jasen Hutchinson.

1 (Exhibit Number 1 was marked for
 2 identification.)
 3 MR. BLEDSOE: Can you identify that for the
 4 record so we know what you're looking at?
 5 MR. WEDEKIND: I've just handed Mr. McInall
 6 Exhibit 1, which is an email from him to Jeanie
 7 Gillespie and Jasen Hutchinson dated December 20,
 8 2019. It's in response to a public records
 9 request.
 10 And it says, "We don't have a draft or final.
 11 I tapped the brakes on it to try to get some
 12 alignment with the McKinsey work. Attached is an
 13 updated presentation on the study from March. Let
 14 me know if you want further materials. We're
 15 expecting to get a draft final in January."
 16 BY MR. WEDEKIND:
 17 Q I don't know -- what is a draft final? That
 18 sounds --
 19 A It's.
 20 Q -- contradictory.
 21 A Well, it's the last draft before -- you don't
 22 expect any more changes. So you've already gone through
 23 all your edits. But until there's really a need for a
 24 submittal, you know, you don't need a final.
 25 Q So why would you -- the question really right

1 now is why would you change the IRP in order to align it
 2 with the McKinsey work?
 3 A Well -- and that's the clarification is -- so
 4 the McKinsey work was going to wrap up, and I wanted to
 5 make sure that they weren't going to be contradictory.
 6 And at this point, in December 2019, the -- so the ITN
 7 process had been going -- had been going, and once we're
 8 in the ITN process and there was potential for a sale,
 9 really our resource plan, our -- was almost going to be
 10 moot, because whatever we came up with would have
 11 reflected our system.
 12 So clearly the answer is going to be different
 13 if we're -- if we had been bought by another utility
 14 that we could interconnect with. So if TECO or FPL or
 15 somebody had purchased us, the IRP would have been, you
 16 know, really a moot point -- moot at that point.
 17 So the McKinsey work, they -- the earlier
 18 drafts I had seen, there was a lot of pushback on a new
 19 combined cycle. And as I stated, there was -- it's a
 20 big budget item, \$530, \$550 million.
 21 McKinsey was -- earlier on was showing a lot
 22 of solar, a lot of storage. We had looked at those
 23 as -- at least in screening evaluations in the IRP, and
 24 for a -- for replacing a 500-megawatt gas unit that we
 25 would be losing, the IRP was showing a combined cycle

1 was the -- was the best option. And so, you know, I was
 2 championing we need the combined cycle, we need the
 3 combined cycle.
 4 In the end, the reports from McKinsey
 5 reflected a combined cycle in more or less the same
 6 timing. So, you know, I was successful as far as
 7 getting them to -- and I don't have kind of their
 8 internal deliberations. But I was pleased to see when
 9 the -- when the later McKinsey work came out that a
 10 combined cycle was part of -- part of the future.
 11 I remember the -- there was the meeting at UNF
 12 where McKinsey had their storyboards or plateaus or
 13 tableaus, and really people were -- were broken up into
 14 different groups kind of cross-functional, so it wasn't
 15 like all the electric people over here. People were all
 16 mixed together, and essentially just voting on what we
 17 thought we should do in the future.
 18 And everybody was voting for solar and
 19 batteries, and nobody -- and the only people voting for
 20 combined cycle were electric people, because we
 21 understood the difference between capacity and energy
 22 and the cost between natural gas and batteries.
 23 So -- and, you know, I think a lot of this was
 24 videotaped, so I don't know if there's footage of it.
 25 But when each of the groups reports out, I had gotten up

1 and basically, you know, gave an impassioned plea for
2 why we needed a combined cycle, and to the point of
3 having everybody in electric who voted for the combined
4 cycle, raise your hand, and everybody, you know -- and
5 all the electric people did, just to demonstrate that,
6 you know, the people that should know the best about
7 what was needed all thought that was the way to go, even
8 though the room as a whole were like two-thirds or
9 three-quarters in favor of a different option.

10 Q So who was giving you pushback on the combined
11 cycle that you were championing?

12 A Really it was -- it was just -- at the time,
13 you know, McKinsey kept coming in with these scenarios
14 showing, you know, what I thought were extreme levels of
15 solar. And to the point of, you know, once you look at
16 above the 250, that we're adding another 300, 400
17 megawatts, and then, you know -- you know, I had already
18 gone through siting, trying to find locations for those
19 first five plants.

20 I don't want to put more solar plants out in
21 that same area. So I know that's pushing it more
22 expensive real estate or further away real estate, and
23 then you're talking about transmission. And the -- you
24 know, so I -- I don't know what kind of interactions
25 were going on, but I do know that in the end, it did

1 reflect the combined cycle.

2 Q Was Mr. Zahn one of the people pushing back
3 against the combined cycle?

4 A I don't recall him directly pushing back. He
5 certainly was a big proponent of solar and batteries.
6 He wanted us to be in the solar business. And it might
7 not be a bad idea. I just didn't think it was going to
8 be cost-effective for us to do what somebody else could
9 do more cheaply.

10 Q Do you think that Mr. Zahn understood the
11 differences between the benefits of a combined cycle
12 versus solar?

13 A I'm not sure that he did, no.

14 Q Why do you say that?

15 A I think -- I think in general, in -- on the
16 finance side, energy is energy. So if you've got
17 100,000 megawatt hours from something, it didn't
18 matter -- you know, when you look at the spreadsheet of
19 where the energy comes from, whether or not it's firm
20 capacity or not firm capacity or if it's dispatchable or
21 if there are transmission limitations in bringing it in,
22 those don't show up in the spreadsheet.

23 So if you're -- the system's real easy to
24 design with a spreadsheet, because you just put in
25 energy source A, B, C, D, and as long as you get the

1 total -- but then when you add in the limitations and
2 the constraints on the system and actually try to make
3 it an operable system, that's when it gets complicated.

4 Q So you don't think that Mr. Zahn had an
5 understanding of how to run an operable electrical
6 system?

7 A I -- you know, I -- I really can't say what he
8 knew or didn't know, but I -- I don't think he
9 appreciated all the intricacies.

10 Q Because his focus was on other things?

11 A Again, I don't want to speak to what his focus
12 was or wasn't on.

13 Q How about McKinsey? Did the fact that they
14 continued to present you with assumptions that included
15 extreme levels of solar lead you to believe that they
16 didn't really understand your business?

17 A So McKinsey's got a lot of really smart
18 people. I think -- I think they certainly had people
19 who understood our business. And whether or not those
20 were the people who were always working on our project,
21 I -- I don't think so.

22 I noticed as time went on, the people we were
23 working with just got younger and younger. You know, I
24 don't think -- you know, I think McKinsey is a great
25 like proving ground for future executives. People go

1 there, you know, with their advanced degrees from Ivy
2 League schools and, you know, go through the fire for
3 three to five years and then go on. So there are very
4 few like experienced people there.

5 It seemed like as the project went on, we
6 became less of a priority, and, you know, the younger --
7 and they were willing to learn, but a lot of times it
8 felt like we were teaching them the electric industry.

9 Q Did it ever seem like McKinsey was including
10 assumptions that were designed to reach a predetermined
11 goal?

12 A It's really hard to say. I think their
13 assumptions reflected their worldview. Looking at some
14 of the research I did in preparation for this, just
15 looking at McKinsey, kind of global outlook for energy
16 in 2020, and they're very bullish on solar. They're --
17 you know, it's the same assumptions that we saw in --
18 they have here as far as like grid parity of 2025.

19 So I think that it just -- whatever models
20 they have -- and, of course, you know, their economic
21 models are probably very highly protected and
22 proprietary -- that's what they show.

23 So I can't say that they were working towards
24 a predetermined conclusion as much as their process and
25 their assumptions reflected their overall corporate

1 worldview.
2 Q And their worldview didn't necessarily match
3 your view of JEA's business, or the realities of JEA's
4 business?

5 A Correct.

6 MR. NUNN: You spoke to the view of grid
7 parity. Do you think that's consistent with what
8 the industry believes as a whole?

9 THE WITNESS: I don't think it's -- I don't
10 think it's that different. I think -- and I said
11 before, I think it's aggressive. But if I had to
12 pick a grid parity point, I'd be looking more in
13 the early 2030s. And I think there's -- there's
14 research and articles out there to support either.

15 I think '25 is -- '25 is on the early side.
16 '27 with storage, again, I think it's a bit early.
17 But, you know, we're talking a 5-year difference,
18 and if you're looking at a 30-year plan and
19 deciding what --

20 So we'll look at Greenland, the -- or the new
21 combined cycle. So if a new combined cycle is
22 going to start in 2027 and that's the same as the
23 grid parity point for batteries and storage, then
24 that should be a concern, because clearly you're
25 not going to have the carbon load with battery --

1 solar and batteries. You're -- so if there's any
2 kind of carbon tax, you know, that's going to
3 impact your economics on your combined cycle plan.

4 And the worst possible outcome would be to
5 build a \$500 million plant, finish it in 2027 at
6 the same time that batteries and storage become
7 cheaper, and now you're -- essentially you've got a
8 unit there that you probably do use, but you have
9 to shut something else down because now you're busy
10 replacing with batteries and storage.

11 So getting that timing right really is -- you
12 know, it -- it's sort of fundamental to the plan or
13 dilemma. You know, what is -- in a time of
14 transition. You know, back in the days where
15 you're adding capacity and having to just plan when
16 you had a plan to make sure that you've got all
17 the -- enough capacity to meet your demand, it was
18 a lot easier. You're just looking at do I want a
19 simple cycle, or a combined cycle, or a coal plant.
20 And, you know, different set of math.

21 But now, where you're fundamentally changing
22 from fossil fuel base to renewable base, you know,
23 it's -- it's quite different. And getting that
24 timing right is literally a half-billion-dollar
25 decision. So it's worth taking some extra time to

1 make sure you get it right.

2 And that's the thing too with -- you know, if
3 McKinsey had come back and said, no, we really
4 think batteries and storage are going to be late --
5 you know, late '20s at the earliest, then I think
6 we would have had to go back and take a closer look
7 at the IRP and say do we really want to go in and
8 is this what we want to do.

9 And the Public Service Commission has been
10 pushing back on people coming in with more gas.
11 They're concerned about the ability to get gas to
12 the Peninsula. Jacksonville has a good location as
13 far as multiple pipelines, not having quite that
14 same concern, but still it's very -- we'll reach a
15 point of we can't get -- we can't get more gas down
16 here. I think it's already over 60 percent natural
17 gas, and projections are going up like 85 percent
18 natural gas. So that's -- gas interruption has
19 become a very big concern of maintaining power
20 supply to the state.

21 So, you know, with all those things, being
22 able to say that, yes, we looked at this, it's not
23 the best option -- and I remember at the -- at the
24 UNF meeting, one of the -- you know, we're always
25 compared to FPL and how much solar FPL is doing.

1 And I'd point out the reason they're doing that
2 much solar is because they've already put in so
3 much natural gas. They've got all these 15-,
4 1,800-megawatt combined cycle units all over the
5 state. So they've got that baseload natural gas
6 generation that they can ramp up and down, which
7 lets them accommodate all the solar that they want
8 to put in, now that solar has gotten cheap enough
9 to warrant it.

10 So, you know, there's just a lot of things
11 going on. And particularly with this tapping the
12 brakes, I know I had spoken with Melissa, because
13 when the decision kind of got made was when Aaron
14 was at a Jax Chamber event, and he was talking
15 about maybe not needing a combined cycle and doing
16 batteries and storage instead.

17 And I told Melissa, look, we're not -- again,
18 looking at the IRP as the first step in the
19 licensing process. I said, you know, we all need
20 to be behind this as the decision for us going
21 forward. It's a half a billion dollars. We
22 can't -- we can't be this is what we want to do
23 today but maybe we're going to change our minds.

24 So as far as the McKinsey work kind of being
25 reflected in what Aaron was saying and there

1 needing to be alignment before we went to the PSC
2 and certainly there needing not to be a question
3 about are we going to be our own entity or not, you
4 know. So, you know, it didn't make sense to rush
5 through the IRP and finish it.

6 Now, as soon as, I'll say the dust settled,
7 you know, took the brakes off, IRP got wrapped up
8 late January, early February, so the draft final is
9 out there. It's on the internal website, you know,
10 so I'm sure you guys have a copy of it. And, you
11 know, it reflects a new combined cycle.

12 BY MR. WEDEKIND:

13 Q So let me unpack that just a little bit.

14 A Sure.

15 Q And I'm going to paraphrase based on my
16 understanding of what you just said.

17 The utility doesn't want to be the last
18 utility to ever build a combined cycle plant because,
19 like you said, it's a half-billion-dollar investment?

20 A Correct.

21 Q And that's why the -- getting the IRP right is
22 so important?

23 A Yes.

24 Q And so the scenarios that are used to inform
25 the decision recommended by the IRP are absolutely

1 critical --

2 A Sure. Yes.

3 Q -- in developing --

4 A Yeah. Yeah.

5 Q -- your most resilient answer to the problem
6 that you're facing?

7 A Right.

8 MR. NUNN: In that regard, my prior
9 question -- I want to make sure that I give you a
10 chance to -- make sure you understood my question.

11 There is a document at JEA called Generation
12 Resource Planning Principles and Guidelines, and
13 it's dated November 12th, 2012.

14 Are you familiar with that?

15 THE WITNESS: It was a plan -- it's a
16 guideline document in the generation planning
17 group, yes.

18 MR. NUNN: And on Page 6 of that document
19 under the principles, it provides that for the
20 objective to forecast the most probable future
21 demands along with reasonable low and high growth
22 scenarios, generation resource planning will, under
23 B, produce a base case forecast from one of the
24 forecasting methods that best represents JEA's most
25 probable outlook.

1 Was that the baseline forecast that was in the
2 IRP?

3 THE WITNESS: So the IRP used the ten-year
4 site plan forecast, which is the most likely or
5 really the -- yeah, so that -- you know, that's the
6 kicking off point. And that's produced every year.

7 I haven't looked at that document in a long
8 time.

9 BY MR. WEDEKIND:

10 Q So you start there and then you run your
11 scenarios based on the base case, and then you derive
12 from your scenario planning the most resilient solution
13 to the capacity issue?

14 A Right. So the -- so the variations from the
15 base case can impact either demand or the cost of the
16 power to meet that demand, so if you're -- if what
17 you're fluctuating is the fuel prices. So -- yeah.

18 But, you know, the base case is the taking off
19 point and should represent the most likely scenario.

20 Q Was the IRP, when it was finalized, changed to
21 reflect any of the work that McKinsey had done?

22 A No, it wasn't.

23 Q And the IRP is the document that JEA and the
24 PSC are all going to rely on when making this
25 \$500 million investment decision?

1 A Correct.

2 Q And not the McKinsey strategic planning?

3 A That's my understanding.

4 Q I just want to go back to one thing you said
5 about your conversation with Ms. Dykes about the
6 comments that Mr. Zahn made at the meeting. The
7 comments that he was making were inconsistent with the
8 recommendation contained in the preliminary IRP --

9 A Right.

10 Q -- right?

11 A The drafts that we've seen -- that would have
12 been about in the same time frame as that March 2019
13 update that -- that's referenced here.

14 Q And you're complaining to Ms. Dykes saying,
15 look, we can't go to the PSC with recommending a
16 combined cycle plant when our CEO is out there telling
17 the world that we're moving into solar?

18 A Correct.

19 Q Do you know whether or not the forecasting
20 contained in the IRP and the ten-year site plan are
21 consistent with the work that was done by McKinsey?

22 A My understanding is they kicked off from the
23 same point from that 2018 ten-year site plan forecast,
24 but then they -- they kind of broke it down and then
25 changed -- modified components based on their

1 assumption.

2 Q And the assumptions that were being used by

3 McKinsey were different than the assumptions that JEA

4 was using in the IRP?

5 A Yes.

6 Q How were they different?

7 A All right. So -- and again, you know, it's --

8 so the ten-year site plan -- it's kind of just easier to

9 talk to because that's where the forecast came from.

10 There's assumptions there about -- and this is

11 just one example of where they differ. Like I don't

12 have enough granularity on the McKinsey forecast to know

13 where all the differences were.

14 But the -- our solar adoption, for instance,

15 is kind of based on the historical trend and then what

16 we see in the future. So right now it's kind of -- it's

17 a flat, slightly increasing adoption rate.

18 McKinsey had, I think, like a .1 percent of

19 customers installing solar up until 2025, and then that

20 went to -- I don't know, something like a half a

21 percent. So it took a jump from 2025 until some other

22 point in the future, maybe '27, '28 when batteries

23 caught up, and then it went up to like 1, 1.2 percent.

24 So as a result, their -- the lost revenue and

25 lost megawatt hours to solar increased a lot more than

1 our model did.

2 Now, you know, it's a different assumption.

3 It's not right or wrong. And, you know, with all of

4 these things in there, they ended up over the next ten

5 years showing an 8 percent decrease in sales, which is

6 actually -- you know, including FPU, is what we'd seen

7 over the past ten years.

8 So it's hard to say, however it got there,

9 that's -- you know, that's wrong, because, heck, it just

10 happened. So it was at least plausible. You know, it

11 could have happened.

12 And I don't know if this is the right time to

13 kind of insert into it. One of my concerns with our

14 electric demand and losing load is the increase in

15 natural gas usage by customers. Most of the new

16 neighborhoods are natural gas neighborhoods. There's a

17 30 to 50 percent decrease in per-customer sales for a

18 natural gas home compared to an electric home.

19 If you layer a photovoltaic roof on top of

20 that, a solar photovoltaic, then their consumption could

21 be 15, 20 percent of a similarly sized all-electric

22 home, you know, without solar on the roof. So, you

23 know -- and that's now.

24 And the gas companies are starting to push

25 natural gas heat pumps, which would take away the AC

1 load, which is most of what our electric sales are in

2 the summertime. And you see natural gas generators, you

3 know, in certain neighborhoods go in, and every fifth or

4 sixth house -- and granted, those are in FPL territory,

5 because their reliability up here is a little, you

6 know -- in some of the big storms they've been slower to

7 get reconnected.

8 But, you know, there is a strong potential for

9 the ability for people to go off grid, you know, even in

10 an urban setting. You know, I don't think that's been

11 fully reflected in -- you know, in anybody's analysis.

12 Our issue is we don't know how many of our

13 customers have natural gas. It's not a -- it's not a

14 parameter that we keep track of. And we've tried to --

15 started trying to track that. So, you know, it's -- it

16 kind of -- you know, that concern kind of gave me the

17 flexibility to say, okay, you know, this is a little

18 aggressive on this, on solar, but it's not really

19 picking up all this natural gas issue. So I think there

20 is room on that downside for this -- for this to be

21 closer to -- closer to what might happen.

22 MR. NUNN: Do you recall an email that you

23 sent in October 2018 to members of the financial

24 planning group in which you explained that natural

25 gas would primarily impact new customer growth as

1 opposed to existing customers?

2 THE WITNESS: I don't recall that email, but

3 that sounds right. I mean the natural gas --

4 natural gas is more easily installed in new

5 neighborhoods. It kind of dovetailed into one of

6 the things I was trying to push us for, which was

7 getting into the natural gas business to the point

8 of being able to look at putting in gas lines in

9 existing neighborhoods at the same time as we put

10 in reclaim or put in -- or did a septic tank

11 phaseout in that area.

12 Because one of the big differences between the

13 natural gas vendor, you know, Peoples Gas and us is

14 we have an obligation to serve. They can

15 cherry-pick what neighborhoods they want to go to

16 or not. So as far as, you know, ease of

17 installation, consumption, that is typically newer

18 neighborhoods.

19 Now, they have just spent a bunch of money in

20 existing neighborhoods -- Avondale, San Marco --

21 upgrading their existing facilities, replacing

22 80-year-old lines with new lines. So, you know,

23 they'll go where they think they can make a profit.

24 BY MR. WEDEKIND:

25 Q Is JEA legally constrained from getting into

1 the natural gas business?
2 A Well, I'm not a lawyer, and I think the answer
3 to that question depends on who you ask or the charter,
4 the JEA charter, says we're allowed to be in natural
5 gas.

6 TECO signed a territorial agreement with FPU
7 when they -- when TECO installed the line to go to one
8 of the combined unit power plants, and that territorial
9 agreement, which was filed with the PSC, gives FPU the
10 right to Nassau County except for one or two of the
11 combined heat and power plants, and TECO gets the right
12 to Duval County.

13 And I know they've pointed to that as evidence
14 of their unique right to be the provider in Duval
15 County, in addition to which they've got the current
16 franchise from the city.

17 So, to answer your question, yes and no.

18 Q It wouldn't take a charter change in order to
19 get into -- for JEA to get into the natural gas
20 business?

21 A No, it would not.

22 Q And the City of Jacksonville could decide to
23 grant JEA the franchise to provide natural gas within
24 Duval County?

25 A They could. I don't know what that does --

1 that we thought were going to happen as much as, you
2 know, the baseline is the most likely, but then apart
3 from that, we're looking at like caricatures of
4 potential futures that will give us that kind of spread
5 so we don't just have four lines on top of each other
6 but actually have some definition between them.

7 Q And so that I understand, the load erosion
8 case, is that -- would that be considered the worst-case
9 scenario?

10 A Yes.

11 Q And would you equate that to Status Quo 2 in
12 the McKinsey scenario planning?

13 A My big takeaway from Status Quo 2 was more of
14 the -- what happened to JEA as far as rate increases,
15 cuts to employees and service level and, you know -- and
16 I don't recall that Scenario 2 had -- whether it had
17 load decrease as part of that scenario or not.

18 You know, certainly just looking at the
19 numbers, so you've got 1 percent per year for ten years
20 decline, so compounded, that's maybe an 11 percent
21 decline over ten years. So compared to the McKinsey
22 forecast of an 8 percent decline over the next ten
23 years, so their forecast is a little more optimistic
24 than this load aversion case. So their forecast would
25 have fit within this.

1 how the territorial agreement, you know, works out,
2 since that's -- that's their -- you know, I don't know
3 how that works out.

4 (Exhibit Number 2 was marked for
5 identification.)

6 BY MR. WEDEKIND:

7 Q Okay. I'm handing you Exhibit 2. This is the
8 preliminary IRP from March of 2019. I'm going to ask
9 you to turn to Page 12. I kind of opened it up there
10 for you.

11 These are the Scenario Matrix that this
12 particular IRP was looking at.

13 Who came up with these particular scenarios?

14 A So these are really collaborative. So nFront
15 was the consultant, and then they would work with our
16 group, my generation planning group, and the finance
17 people, and the environmental department, and, you know,
18 what are your concerns we're looking at and get all the
19 input, and then really come up with a table like this.

20 And then, you know, at this meeting we would
21 have looked at this and kind of agreed to it, like okay,
22 this -- these look like they're, you know, realistic,
23 but, as I said, bounding.

24 You know, we weren't necessarily looking for
25 four realistic scenarios as much as -- or four scenarios

1 Q The other three scenarios forecasted slightly
2 increasing net energy requirements; correct?

3 A Yes.

4 Q Who was involved in the decision to pump the
5 brakes on this particular report?

6 A So that was Melissa and I, and, you know, I
7 passed it down to -- again, you know, it was going a
8 little more slowly than we had planned to start with.
9 So hitting the brakes on it, you know, or just slowing
10 it down a little bit, again, you know, that was because
11 of Aaron's comments.

12 And we didn't talk to him about it, but I
13 talked to Melissa and I said, look, he's either got to
14 stop saying that or we're going to have a problem.

15 And she said, he's not going to -- he's not
16 going to stop saying that.

17 So I told her, well, I want to slow down on
18 the IRP.

19 She said, go ahead, you know. And my hope was
20 to bring the McKinsey report in line with where we were.
21 And that's where we ended up. McKinsey ended up calling
22 for the new combined cycle, which really, you know,
23 regardless of the -- of the forecast -- and the forecast
24 isn't the output of the IRP; it's the input and then
25 variations around it are just there for creating

1 bookends.
 2 So eventually McKinsey called for a new
 3 combined cycle, which, you know, is where we ended up,
 4 the same place we ended up with for the IRP. And then
 5 certainly once -- as I said, once the ITN was in play
 6 and there was a question about ownership or
 7 consolidation with somebody, the IRP was -- was
 8 interesting from a point of view of here's what we
 9 identify we need for our system, but if we're going to
 10 mix with somebody's system, it would not have been the
 11 time to take this to the PSC.
 12 Q Do you remember in October 2018 a presentation
 13 made by Kerri Stewart and ICF about electrification?
 14 A Was that at a board meeting?
 15 Q Yes.
 16 A Yeah, I recall that.
 17 Q Did you assist in the preparation of the
 18 materials for that board meeting?
 19 A I may have gotten a look at them beforehand,
 20 but, no, I did not.
 21 Q Okay. ICF was very bullish on
 22 electrification, as you recall; is that right?
 23 A Yes.
 24 Q Okay. In fact, its representative, David
 25 Pickles, said that JEA's electrification flexibility

1 gave it an advantage over its competitors.
 2 Do you remember that?
 3 A Not specifically, but ...
 4 Q Do you remember Mr. Vinyard's presentation
 5 about the limitations imposed -- or the constraints
 6 imposed on JEA from a legal perspective?
 7 A I remember him giving that presentation. I
 8 don't recall all the details of it.
 9 Q Do you remember him ever telling the board
 10 that JEA was constrained to pursue electrification?
 11 A I don't remember that specifically, but I'm
 12 sure it's on the ...
 13 Q If he had represented to the board or provided
 14 the board a chart that had electrification in a red
 15 square that said "legally constrained," would you agree
 16 that that would have been a misrepresentation?
 17 A Yeah. You know, I don't know what his basis
 18 for that would have been.
 19 Q On September 10th, 2018, you --
 20 A Can I point something out on electrification?
 21 Q (Nods head.)
 22 A So, you know, there are some pretty bullish
 23 estimates for electrification availability. I also know
 24 that there's new LNG facilities in town that the
 25 Jacksonville Transportation Authority had made a big

1 investment to go into compressed natural gas buses. So
 2 there's a lot of competition, you know, for the
 3 transition from diesel or gasoline. It's not just
 4 electrification that's on the table.
 5 And I know we had given JAXPORT a grant or a
 6 rebate or whatever for the electrification of some of
 7 their big cranes, and those cranes -- the usage on those
 8 cranes never met the required amount in order to justify
 9 the money that we had granted them, so they owed us a
 10 pretty sizable refund, almost around a million dollars,
 11 a little less, maybe.
 12 And as a result, since JAXPORT is notoriously
 13 cash poor, they did give us a piece of property just
 14 north of the Talleyrand -- or Buckman plant out in
 15 Talleyrand. And that was the -- but the entire basis
 16 for that transfer of the property from JAXPORT to JEA
 17 was because, you know, an electrification effort had
 18 been made and the usage never matched what the
 19 projections were or what the contractual obligations
 20 were, and as a result we got a piece of property
 21 instead.
 22 So, you know, I do think electrification
 23 projections, like most projections, need to be taken
 24 with a grain of salt.
 25 (Exhibit Number 3 was marked for

1 identification.)
 2 BY MR. WEDEKIND:
 3 Q I'm handing you what's been marked as
 4 Exhibit Number 3. This is an email by which you sent
 5 Juli Crawford a copy of the presentation materials to
 6 ICF -- or the ICF presentation materials.
 7 Below that, on September 10th, Vicki Nichols
 8 thanks you for your helpful feedback on the
 9 presentation. It says, "We made some key additions and
 10 it set a tone for further alignment with forecasts and
 11 financial performance."
 12 What does that mean?
 13 A I really don't remember. You know, Vicki
 14 probably asked me to look at it. I would have made some
 15 comments, and it would have been on the -- I'm pretty
 16 sure on the JEA section of it, not so much on the ICF
 17 section.
 18 Q What further alignment with forecasts and
 19 financial performance was she referring to?
 20 A Probably -- you know, I really -- let's see.
 21 This would be October -- September?
 22 Q September 2018.
 23 A Probably the McKinsey, but I can't be sure.
 24 You would have to ask Vicki.
 25 Q So you take this presentation and you forward

1 it to Juli Crawford on September 10th, 2018?

2 A Yeah.

3 Q Your email says, "Good luck working this in
4 with your 'gloom and doom' presentation."

5 Was Juli Crawford working with McKinsey in
6 September 2018?

7 A She would have been involved with McKinsey.
8 Again, I was the director then, as was -- as was she --
9 or she was a manager at that point.

10 Q What were you referring to when you're talking
11 about the gloom and doom presentation that she was
12 working on?

13 A Probably McKinsey or the slide showing the
14 8 percent reduction.

15 Q Yeah. So the Status Quo --

16 A Yeah.

17 Q -- 2 Scenario --

18 A Right.

19 Q -- was --

20 MR. NUNN: Just to correct that. I think it's
21 the status quo scenario.

22 THE WITNESS: Status quo --

23 BY MR. WEDEKIND:

24 Q Status quo, yeah.

25 So at least as of September 2018, at the

1 BY MR. WEDEKIND:

2 Q We were talking about the McKinsey strategic
3 planning process.

4 The first document I want to show you is dated
5 December 17th, 2018. I'm going to jump a little bit
6 chronologically. But this is a document entitled
7 Building a Strategic Framework for JEA: Work Plan.
8 This is prepared by McKinsey, and it walks through what
9 McKinsey's proposing to do.

10 On Page 3 of that document it talks about
11 aligning on base case financial forecast. First
12 question is, because the ten-year site plan and the IRP
13 already are aligned on the base case financial forecast,
14 why is there a need for McKinsey to deviate from that?

15 A So neither the ten-year site plan nor the IRP
16 are financial forecasts.

17 Q It's just a load forecast?

18 A Just a load forecast.

19 Q Got it. Okay.

20 And then so what they've -- the way that they
21 plan to do that is by, under their bullet points,
22 "Pressure test and validate JEA forecast with an
23 internal model." And apparently their internal model is
24 called powerIQ + TETRIS.

25 Are you familiar with the powerIQ and TETRIS

1 director level it was already understood that the status
2 quo presentation was intended to be a doom and gloom
3 scenario?

4 A Well, whether it was intended to be or that's
5 what the numbers were showing, I certainly -- I fancy
6 myself as a bit of a whiz, so I can't say that, you
7 know, that was necessarily what -- you know, certainly
8 not what -- it's how the numbers were looking, not so
9 much what the -- what the intent of them was to be.

10 And I think my intent here was to say this
11 certainly -- as you noted, electrification tells a
12 different story and the potential for electrification
13 tells a different story.

14 Q So the import, I think, of what you're saying,
15 "good luck working this into your 'gloom and doom'
16 presentation," is that this ICF presentation is
17 inconsistent with the status quo scenario that McKinsey
18 was working on?

19 A Yeah, that --

20 Q And it would have been hard for Ms. Crawford
21 to reconcile those two?

22 A Yeah.

23 (Discussion off the record.)

24 (Recess taken from 10:45 a.m. to 10:50 a.m.)

25

1 modeling?

2 A No. The only TETRIS I know is that little
3 block-shaped thing.

4 Q And then under -- to the right of that it
5 says, "Deliverables. Fully vetted financial forecasts
6 for base case/business as usual and extreme but
7 plausible alternative scenarios."

8 What kind of extreme but plausible alternative
9 scenarios was McKinsey going to be developing?

10 A Do you know where that -- when that
11 presentation was --

12 Q It's dated December 17th, 2018.

13 A Yeah.

14 Q (Indicates.)

15 A Can I see a copy of it or --

16 Q (Tenders.)

17 A Thanks.

18 MR. WEDEKIND: Just for the record, we'll go
19 ahead and mark that as Exhibit 4.

20 (Exhibit Number 4 was marked for
21 identification.)

22 MR. BLEDSOE: And, Lee, everything you're
23 showing him is in my stack of material?

24 MR. WEDEKIND: Except for that document.

25 MR. BLEDSOE: Okay. Can I just get a set from

1 the court reporter after we're finished, because
 2 you're going out of order here, so I can't keep up.
 3 MR. WEDEKIND: Yes.
 4 THE WITNESS: You know, this presentation
 5 doesn't look familiar to me. This looks more like
 6 a McKinsey planning document, and at this point, I
 7 would have still been a director. If I was in a
 8 meeting that covered this, I was on my phone and
 9 wasn't paying attention.
 10 But this -- you know, this kind of
 11 breakdown -- most of the McKinsey meetings I was in
 12 were more technical, talking about more the
 13 details. Certainly some of these figures, like
 14 this one showing the screening going down, these
 15 were -- I've seen certain of these slides, maybe,
 16 but not this presentation.
 17 So I don't really know what the -- what
 18 their -- what they considered their extreme
 19 scenario.
 20 BY MR. WEDEKIND:
 21 Q Okay.
 22 A Sorry.
 23 Q That's okay.
 24 As part of the meetings that you were involved
 25 in with McKinsey, did you talk about the assumptions

1 that they were relying on in developing their opinions?
 2 A So most of our meetings with McKinsey, at
 3 least, you know, early on and certainly, I think, up
 4 through December, they were gathering data from us. So
 5 we would meet with them, and they would just ask us
 6 questions and ask us questions about the system, about
 7 our assets, about different things.
 8 And would have different meetings with --
 9 they'd meet with the generation planning group. They'd
 10 meet with the transmission planning group, which at that
 11 time I wasn't a part of. They'd meet with finance.
 12 They'd meet with everybody individually and gather
 13 information and then went away and melded it all
 14 together.
 15 And then it was later where they would come
 16 back and start trying to fine-tune things that -- you
 17 know, that they shared a little bit about what they --
 18 what their assumptions were. But it really wasn't
 19 until -- until there were a lot of questions being asked
 20 about why -- you know, what are the underlying
 21 assumptions behind this McKinsey forecast that I got any
 22 detail about how they had gotten there.
 23 In general, it was understood that they
 24 were -- had more aggressive assumptions about -- about
 25 solar -- about electrification too, about EV adoption.

1 So it wasn't just negative stuff; they also had higher
 2 EV adoption than most of our projections had.
 3 (Exhibit Number 5 was marked for
 4 identification.)
 5 BY MR. WEDEKIND:
 6 Q So I'm handing you Exhibit Number 5. This is
 7 an email from Melinda Fischer to Juli Crawford and Vicki
 8 Nichols. Its subject is JEA Status Quo, and it attaches
 9 some assumptions.
 10 And it says, "Juli, I apologize for the delay.
 11 Here is the assumptions we had put together. Please let
 12 me know if you have any questions regarding this."
 13 So if you look at the assumptions that were
 14 put together, in rooftop solar PV in note Number 3, it
 15 says, "High and extreme forecasts based on 25 percent
 16 and 40 percent growth rate used in the 2025 solar PV
 17 impact study."
 18 What do you think about those assumptions?
 19 A I think those are pretty -- those are pretty
 20 high.
 21 Q Do you know of anybody who's in the industry
 22 that is using those type of assumptions for its
 23 planning?
 24 A Not that I know of, but that's not -- you
 25 know, I haven't really done a lot of study on what other

1 people's rooftop assumptions are. The --
 2 Q In your opinion, those -- the percentages
 3 forecasted 25 percent and 40 percent growth rate rooftop
 4 solar are high?
 5 A I mean, you know, until pretty recently,
 6 rooftop solar was doubling almost every year, so that's
 7 about 100 percent growth rate. As that number gets
 8 larger, the -- you know, the percentage increase slows
 9 down. And certainly our policy change back in 2018,
 10 slow -- kind of moderated -- you know, I'll say
 11 flattened the curve a little bit.
 12 Q Is that the net metering policy?
 13 A The distributed generation and battery
 14 incentive program changed. Those changes. So there's
 15 still an increase every year, but it's not -- it's not
 16 that same doubling every year.
 17 You know, I do think those are on the high
 18 side, but this -- you know, this didn't come out of my
 19 group, and I don't -- it doesn't even look like it went
 20 to me, so ...
 21 Q Those are from the finance group?
 22 A Melinda was in the customer solutions group.
 23 This is Vicki Nichols' group.
 24 Q Okay.
 25 A Going to Juli in the finance group.

1 Q That's what I mean. They're being provided to
 2 the finance group.
 3 A Right.
 4 Q For Juli -- because this happened the day
 5 after you sent the earlier emails. So clearly Juli
 6 Crawford was working on her doom and gloom presentation?
 7 A And this is -- right. So she had the
 8 electrification piece of it, which was --
 9 Q Right.
 10 A -- that, and now she's trying to work in all
 11 the components to come up with the presentation.
 12 Q Right. And for the status quo?
 13 A For the status quo.
 14 MR. WEDEKIND: All right. So that is
 15 September 2018. I'm going to move forward slightly
 16 to October 2018.
 17 Let's go off for just a second.
 18 (Discussion off the record.)
 19 (Exhibit Number 6 was marked for
 20 identification.)
 21 BY MR. WEDEKIND:
 22 Q I'm handing you Exhibit 6, which is a draft of
 23 what's titled, Disruptive Innovation Analysis, prepared
 24 by JEA.
 25 My first question is what do you know about

1 this document?
 2 A May I?
 3 Q Yes. (Tenders.)
 4 A I don't recall seeing this document before.
 5 Q Okay. So you weren't involved in the
 6 preparation of this particular document?
 7 A Not as I recall.
 8 Q Okay.
 9 A There are elements of it that are familiar
 10 from being in other presentations, such as this slide.
 11 They're not numbered, but, you know, this one shows up a
 12 lot.
 13 I was probably involved in some earlier
 14 iteration of at least this slide, because this upper
 15 curve here, this is the extrapolation of the previous
 16 growth curve, and one of the points of how we've lost
 17 sales is where we were expected to be based on
 18 extrapolation from, you know, year 2005-2006 time frame
 19 up to the present, and it's about a 30 percent drop as
 20 to where we are compared to where earlier projections
 21 showed that we would have been.
 22 You know, this whole step thing, you know,
 23 these are the --
 24 MR. BLEDSOE: Excuse me. When you refer to
 25 something like this --

1 THE WITNESS: I'm sorry.
 2 MR. BLEDSOE: -- can you refer to it more
 3 specifically so the record will --
 4 THE WITNESS: Right. This positive electric
 5 market influences for JEA with step charts, those
 6 are -- those are finance -- finance metrics that
 7 are just -- that format is usually start with the
 8 base, add, add, add, here's your total, or add,
 9 subtract, subtract, subtract, here's your total.
 10 So ...
 11 BY MR. WEDEKIND:
 12 Q So let's look at Tab 1.
 13 A This one?
 14 Q Yes, the first tab.
 15 It says -- well, it's predicting a .8 percent
 16 compound annual growth rate -- or compound annual growth
 17 increase in customers, but an overall 11.6 percent
 18 decline in megawatt hour sales. And that's on Tab 2.
 19 Do you see that?
 20 A Right. So Tab 1 looks like it's stepping up
 21 to the 13,652 gigawatt hours as where growth would be
 22 based on these assumptions.
 23 And then -- and then Tab 2 looks like it's an
 24 alternate, where growth is slower, rooftop PV cuts into
 25 the market, so does energy efficiency and codes, getting

1 to a smaller number. So these are essentially bookends.
 2 Like here's -- Tab 1 is growth and Tab 2 is with
 3 disruption.
 4 Q This is -- Tab 2 shows, I think, the beginning
 5 of what will be a series of slides that discuss this --
 6 A Okay.
 7 Q -- same process.
 8 And so what we're going to do is watch how the
 9 numbers evolve from October 2018 to the final board
 10 presentation in 2019. So that's the first one.
 11 (Exhibit Number 7 was marked for
 12 identification.)
 13 BY MR. WEDEKIND:
 14 Q The second is Exhibit Number 7, which is
 15 actually the document that we had previously looked at.
 16 This version is in color, so it's a little bit easier to
 17 read.
 18 But this is -- well, another document
 19 generated by McKinsey. It's December 19 instead of
 20 December 17, so it's slightly different. But it's
 21 titled, JEA Demand Forecasting: Follow-up Discussion.
 22 And so Exhibit 7 -- have you ever seen
 23 Exhibit 7 before?
 24 A I don't believe so. It's marked as a
 25 preliminary working draft, and I don't remember ever

1 seeing a McKinsey presentation marked like that.
2 Q Okay. So if you look at the fourth page of
3 that document, it has a comparison between JEA's
4 assumptions and the assumptions that its proprietary
5 powerIQ analysis have generated on the same page. It's
6 a side-by-side comparison.

7 And if you look under the powerIQ analysis,
8 it's projecting a 1.78 percent compound annual growth
9 rate in customers as opposed to the prior document,
10 which JEA prepared, showing a .8 percent.

11 So McKinsey's powerIQ is more aggressive in
12 terms of the projected customer growth?

13 A I see that.

14 Q Okay. And then on -- if you go to the second
15 tab, it talks about McKinsey's next steps, and it says
16 that they're going to take the TETRIS model and apply
17 it. The TETRIS model hasn't happened yet. And it gives
18 you a breakdown of what the TETRIS modeling is and what
19 it isn't.

20 Did you ever have any involvement with
21 McKinsey in its TETRIS modeling? I think you said no
22 before.

23 A So they asked questions and I gave answers,
24 and what they did with it, you know, if it went into
25 powerIQ or TETRIS, I don't know.

1 described as The First Step in the Process. This is a
2 draft. It says that in big, red, bold font on the
3 front. And it says -- I'm going to hand this to you in
4 just a second.

5 But on the front it says, "Overall theme needs
6 to be similar to a pitch book."

7 What's a pitch book?

8 A So, you know, that's not utility parlance;
9 that's -- that's sales parlance. You know, so
10 they're -- sounds like they're saying it needs to be
11 formatted more for making a sales pitch.

12 Q We're trying to sell the audience on a story
13 contained within the book?

14 A That's what it sounds like.

15 Q All right. I've already flipped to Page 15 of
16 this particular Exhibit Number 8.

17 By the way, did you ever see that document
18 before as it was being developed by JEA?

19 A So they all look similar, because every
20 presentation has got this lightbulb on it. It was a
21 personal peeve of mine.

22 I don't think I ever saw this document. This
23 color on the -- on these note pages, this like rusty
24 red, is fairly striking, and it doesn't look familiar.

25 That being said, certainly, again, some of the

1 Q So you were an information provider to
2 McKinsey?

3 A Correct.

4 Q Did it ever go the other way? Did they ever
5 ask for your feedback on the results of the inputs that
6 you were providing?

7 A Once the results were more final --

8 Q Okay.

9 A -- they did come back and there was more of a
10 feedback loop. But even then, it was -- you know, there
11 was still a black box element to what they were doing,
12 from my perspective.

13 Q I understand.

14 Just so that we're clear, the black box is you
15 put inputs in and the black box spits out an output, and
16 you don't know how it converts the input to the output?

17 A Right. And then even when we give a tweak,
18 they would just take that and go away and come back with
19 a different number out of the black box.

20 Q You never saw how the sausage was made?

21 A No. No.

22 (Exhibit Number 8 was marked for
23 identification.)

24 BY MR. WEDEKIND:

25 Q Exhibit 8 is a draft Status Quo Baseline,

1 elements of it are common. I can see where -- you know,
2 where the inputs would have come from, where they --
3 like a lot of presentations, nothing starts from
4 scratch. They borrow from previous presentations.

5 So I think that's -- I have seen either the --
6 some of the inputs that got, you know, borrowed from to
7 create this and then also the later -- later iterations
8 of this when it was just status quo baseline and, you
9 know, everything was more -- was more settled.

10 I mean, this -- I'm looking at Page 10. This
11 is an iconic chart of consumptive use permit and water
12 planning. So this has been used many places.

13 Q And the goal of these exhibits is to show the
14 evolution of the data within the charts and the
15 presentations over a period of time, specifically from
16 October 2018 to --

17 A Sure.

18 Q -- ultimately the board's presentation.

19 So what I really want to focus on in this
20 Exhibit 8 is this data on Page 15. And you can look at
21 the assumptions in this chart and how it compares to the
22 previous assumptions from the October 2018 JEA work
23 product that came from the disruptive innovation
24 analysis.

25 So what was originally the disruptive

1 innovation analysis has now become the status quo
 2 baseline?
 3 A Uh-huh.
 4 Q Do you see that?
 5 A Yeah. Yep.
 6 Q So the assumptions in this chart, though, are
 7 now different, and you have a 2.5 percent increase in
 8 customers, but an overall 7 percent decline because of
 9 energy loss -- or energy efficiency and rooftop solar.
 10 Do you see that?
 11 A Yeah, I see that.
 12 Q And the assumptions, though, for each of those
 13 are different than the assumptions that were utilized in
 14 the disruptive innovation analysis in October 2018.
 15 A Yeah. Okay.
 16 Q So the first question is who is adjusting all
 17 of these assumptions as these reports evolve over time?
 18 A I don't know. You know, like I said, I
 19 haven't seen this, at least this version. This is
 20 from -- it's not dated.
 21 But this is -- based on the timeline you've
 22 got going, I think this is prior to my being on the
 23 senior leadership. So I don't know who was looking at
 24 this.
 25 Q Okay. I think that the date is January 10th,

1 2019.
 2 When did you say you came on to the SLT?
 3 A I said January 2019. So this could have been
 4 just before.
 5 Q Yeah. Okay.
 6 (Exhibit Number 9 was marked for
 7 identification.)
 8 BY MR. WEDEKIND:
 9 Q The next exhibit, Number 9 are -- you can keep
 10 that, because I want to compare them.
 11 This is the same basic graph, but from a few
 12 days later, and the assumptions have changed again. Do
 13 you see how the model is changing?
 14 This updated model shows a 4 percent decline
 15 due to a .4 terawatt increase in customer growth.
 16 Do you see that?
 17 A Yeah. I don't see how it's adding up to a
 18 different number, because all the numbers in between are
 19 the same. Well, I guess they've got this TBD here,
 20 non-solar DG.
 21 Q And you're pointing at the TBD in
 22 Exhibit Number 9?
 23 A Exhibit Number 9.
 24 Q So they just -- they're changing their
 25 assumptions --

1 A Yeah.
 2 Q -- all along the way?
 3 A Right.
 4 Q And one assumption, they don't even know what
 5 they're going to assume next, so it's just inserted as
 6 TBD?
 7 A Well, there's a category; it's non-solar DG.
 8 And it looks like it's supposed to be a negative, but
 9 the number at the far right here is higher than the
 10 number on the previous exhibit, Exhibit 8. So -- and
 11 all the other numbers are the same.
 12 Q So you go from a potential 7 percent drop in
 13 sales if you look at the titles --
 14 A To a --
 15 Q -- to a potential 4 percent drop --
 16 A Sure. Yeah.
 17 Q -- in sales?
 18 A I see that.
 19 (Exhibit Number 10 was marked for
 20 identification.)
 21 BY MR. WEDEKIND:
 22 Q Then hand you Exhibit Number 10, which is a
 23 draft. It says in the bottom right-hand corner it's
 24 dated February 21st, 2019. And the assumptions in the
 25 model have changed again. The language of -- the title

1 of the slide keeps changing, and now it -- the title
 2 says that the forecast shows energy efficiency and solar
 3 will drive down JEA sales by 8 percent.
 4 Do you see that?
 5 A I see that.
 6 Q Okay. And this is all the same data -- or
 7 excuse me. It's all the same chart, the same
 8 presentation of data, but all the data keeps -- within
 9 the chart keeps changing over time; right?
 10 A Right.
 11 Q Okay. If you go to the next page, Page 2 --
 12 A On Exhibit 16?
 13 Q Yes, sir -- well, excuse me. Exhibit 10. It
 14 should be a 10. I'm sorry.
 15 A It's a 10. Sorry.
 16 Q If you go to the next page, you'll see the
 17 title is that, "JEA sales are expected to fall by
 18 8 percent plus through 2030 despite a growing customer
 19 base."
 20 Right? Do you see that?
 21 A I see that.
 22 Q Okay.
 23 A Looks like it's the same numbers, just a
 24 different headline.
 25 Q The headline's changed; right? And so if you

1 go to Page 4, this is a -- well, if you look at Page 3,
2 you'll see the --

3 A The frog in the frying pan.

4 Q It's the frog presentation; right? So this is
5 an excerpt from the frog presentation, Page 4 of Exhibit
6 10.

7 And if you look at that, this is the board
8 presentation that was actually given in May of 2019.
9 I'm assuming that you remember that; correct?

10 A Yeah, yeah. We all saw the frog presentation
11 multiple times.

12 Q Yeah. So it's familiar to you.

13 So then if you look, it says, Status Quo
14 Energy Sales Projection. So all of this from
15 October 2018 to the frog presentation, you can watch the
16 data as it's evolved over time. This is the final
17 product that's presented to the board.

18 A And this is when -- this is the data that I
19 saw.

20 Q This is the data -- on the last page of
21 Exhibit 10 is the data that you saw.

22 A Well, which is the same as all this data.
23 This -- the final Exhibit 10, the data in there is --

24 Q And so -- but the model here is adjusted to
25 decrease the impact of customer growth but increase the

1 loss due to rooftop solar, right, which results in an
2 8 percent decline? That's what all of Exhibit 10
3 shows --

4 A Right.

5 Q -- right?

6 And that is the status quo scenario that's
7 presented to the board?

8 A Right.

9 Q Interestingly, if you look at the frog
10 presentation, they soften the language in Exhibit 10.
11 It says, "Energy efficiency and solar will drive down
12 JEA's sales."

13 But when you get to the frog presentation, it
14 says, "By 2030 JEA's customers may likely increase
15 16 percent and energy sales may likely fall by
16 8 percent."

17 What do the words "may likely" mean? Is that
18 a terminology that you use?

19 A It's not a terminology -- you know, it's not a
20 terminology I would use, and it doesn't have any real
21 scientific basis. The determination as to likeliness is
22 going to be based on the probability of the inputs. So,
23 you know, I really can't speak to the likelihood of
24 that.

25 Q Okay.

1 A You know, I will say that in general, the
2 trend didn't seem -- seem possible to me. It's, you
3 know, certainly -- you know, we've seen sales decline
4 over the past ten years. Another decline over the next
5 ten with all the challenges, with PV, with gas, with
6 energy efficiency, it's -- whether it's likely or not, I
7 don't know, but it's certainly not -- it's not
8 improbable.

9 Q Is that what you want your board making
10 permanent decisions on is information that's
11 theoretically possible, or do you want it to be the most
12 likely scenario?

13 A Ideally they should -- the board should
14 understand a baseline and then, you know, some
15 sensitivities around that; so here's what we think is
16 going to happen, here's the worst that could happen,
17 here's the best that could happen. And then what they
18 make their decisions on is up to them.

19 Q Do you feel like that all of that was
20 adequately explained to the board as part of the frog
21 presentation?

22 A I would say that the frog presentation was
23 reflective of a worldview, and whether that was -- where
24 that was originated from, I don't know. You know, we
25 were kind of led to believe that, you know, this is what

1 McKinsey says.

2 And like I said, McKinsey's got a lot of smart
3 people. I am open-minded enough to accept that -- I
4 don't know everything, and somebody else can have a
5 better idea.

6 And certainly, looking back at prior
7 projections for growth and how reality worked out, the
8 one thing all the projections have in common is that
9 reality came in much lower. There's almost no instances
10 where the ten-year site plan projected lower usage than
11 actually happened. You know, it's always well above
12 actual.

13 And that's why in 2014, the finance people
14 stopped using ten-year site plan as the basis for their
15 financial projections, just went with 12 million
16 megawatt hours flat, because they said they were tired
17 of explaining to the rating agencies why they missed
18 their projections.

19 Q I remember your testimony about that in front
20 of the Special Investigation Committee.

21 A Yeah. So ...

22 Q Was the ten-year site plan ever modified as a
23 result of the modeling that was produced as part of the
24 status quo presentation to the board?

25 A No.

1 Q Why not?

2 A So I looked at the ten-year site plan as, you

3 know, kind of tried and true technology. It's simpler

4 than -- than all of this. It's got very few buckets.

5 Like I said, it takes that regression analysis, looks at

6 a bunch of parameters to see how they relate to each

7 other in the past. The implicit assumption is that

8 relationship will continue in the future.

9 McKinsey is more sophisticated. They're

10 looking at not -- that relationship changing over time.

11 So in X number of years there's going to be a technology

12 change and this is going to happen, and that -- so

13 they've got all that modeled in.

14 So it is more sophisticated, but their

15 number's going to necessarily probably be lower. So my

16 number was conservative for planning purposes. If my

17 goal is to ensure that JEA has adequate resources to

18 meet all of its demand, then I'm going to use the higher

19 forecast.

20 Q I don't understand that.

21 A Okay. So the ten-year site plan is to -- is

22 to make sure that over the next ten years, JEA is going

23 to have enough generation capacity to meet all of its

24 demand.

25 Q Plus 15 percent?

1 A Plus 15 percent.

2 So if there are two forecasts and one says X

3 and the other one says 10 percent less than X, you know,

4 and this is based on the technology -- the methodology

5 we've used for years, I'm going to stick with X,

6 because, you know, I don't want to -- I don't want, you

7 know, use a new methodology that shows a lower capacity

8 or -- and capacity is really the primary focus of the

9 ten-year site plan.

10 It's not -- you know, it's not the total sales

11 or the total net energy for load. From an engineering

12 point of view, it's conservative to use the higher base

13 number because that way I'll make sure that I've got the

14 generation capacity that I need.

15 Q I understand everything that you just said.

16 (Exhibit Number 11 was marked for

17 identification.)

18 BY MR. WEDEKIND:

19 Q So my question -- I'm going to hand you

20 Exhibit 11. This is from the ten-year site plan.

21 And if you look at those numbers, the ten-year

22 site plan is based on assumptions of 1.3 percent

23 compound annual growth. The McKinsey status quo reports

24 include an assumption of 2.5 percent compound annual

25 growth. So McKinsey was assuming a more rapid increase

1 in your customers than the ten-year site plan.

2 If what you said about the ten-year site

3 planning being conservative was true, why didn't you

4 adopt the higher numbers from the McKinsey report,

5 unless you just felt like they were unreliable?

6 A So the McKinsey increase -- they're showing a

7 2 and a half percent increase in megawatt hours -- or

8 per gigawatts. This is actually in number of customers.

9 This, you know -- you know, 1.4 percent, whatever.

10 So I think these two columns, the

11 2 and a half -- the reduction in per capita energy use

12 and the CAGR, in the ten-year site plan world, these

13 are -- these are together.

14 So really, we're showing -- the annual average

15 growth rate in like 2019 was, I think, .6 percent. So

16 we're showing at that point a .6 percent increase in net

17 energy for load. And if you add these together, they're

18 actually showing a slight reduction.

19 So, again -- because one of the things they

20 did is break -- break apart and show, okay, here's

21 growth as it would be if all these -- if energy

22 efficiency wasn't already mixed into that. Ten-year

23 site plan doesn't separate those.

24 Q Why did they not follow the same formula as

25 the ten-year site plan?

1 A Because -- and I'll let -- you know, not to

2 speculate, but there -- they broke it up into more

3 pieces so they can show the impact of each component. I

4 think they were trying to be able to show the impact of

5 energy efficiency in particular.

6 And if you look at the ten-year site plan, we

7 project a separate energy efficiency going forward, but

8 there's nothing in the history, because we can't really

9 tell from usage if it was -- if it was just down, was

10 it, you know -- or was it down due to energy efficiency.

11 Q I'm sorry. Go ahead.

12 A Yeah, it's -- it's hard to separate out. We

13 just don't have the granularity on the data for that.

14 Q So what assumptions were made about energy

15 efficiency in connection with the ten-year site plan?

16 A We get a separate forecast from the

17 Customer Solutions Group, and I don't recall what they

18 are, but it's the -- there's an energy efficiency and

19 DSM -- and we only take credit for energy efficiency

20 that we stimulate, so via rebate programs, things like

21 that. That's -- you know, that's kind of following the

22 FEECA format.

23 This is taking credit for organic energy

24 efficiency as well. So building codes change and homes

25 get more energy efficient; that's reflected in here.

1 Q And when you say "here," you mean the
 2 McKinsey --
 3 A In the McKinsey report.
 4 We don't show them as energy efficiency in the
 5 ten-year site plan because we're not driving it.
 6 Q And so by not including it, it results in a
 7 more conservative approach, because you know it exists?
 8 A Right. And because it's -- the projections
 9 are driven by history, it's implicitly included in the
 10 history. It's the reason that the per capita
 11 consumption goes down 20 percent from earlier -- you
 12 know, for like 2010 through 2019.
 13 That's reflecting not just energy efficiency,
 14 but natural gas homes, you know, solar that's already
 15 been installed. So all of those things.
 16 You know, PV on somebody's roof doesn't look
 17 like generation to us; it just looks like less usage
 18 except for whatever they send back. So we only could
 19 really track a portion of their generation. It just
 20 looks like they're not using any energy during the
 21 daytime as far as the utility is concerned.
 22 Q All right. You mentioned John Coarsey
 23 earlier. He was a direct report of yours?
 24 A Yes.
 25 Q And you worked with him for a long time;

1 correct?
 2 A Right.
 3 Q Okay. He has some fairly unflattering things
 4 to say about the McKinsey report. Do you remember the
 5 email to that effect?
 6 A I don't remember the email, but I remember
 7 John's opinion about McKinsey.
 8 (Exhibit Number 12 was marked for
 9 identification.)
 10 BY MR. WEDEKIND:
 11 Q Okay. Why don't you describe what you
 12 remember about John's opinion of McKinsey.
 13 A So John is a transmission distribution guy,
 14 and the McKinsey people were a lot of things, but they
 15 were not transmission distribution people. So as far as
 16 how the -- how the grid operates, they didn't really
 17 have an appreciation for that.
 18 And -- and then certainly when higher and
 19 higher levels of solar are coming in, John's concern is
 20 how does -- how do they balance that; how do -- you
 21 know, how does the system still function with all that
 22 solar on it. So this in particular, this email --
 23 Q When you talk about "this," I just want to
 24 clarify. I just handed you Exhibit 12.
 25 It's an email at the top from you to Andrew

1 Grass, and it's forwarding comments made by other folks
 2 at JEA. And if you turn to the bottom of the second
 3 page, you see Mr. Coarsey's comments about it --
 4 A Yes.
 5 Q -- which was sent to you on December 2nd,
 6 2019.
 7 A Yes.
 8 Q So Mr. Coarsey says, "This entire PDF" -- and
 9 it attaches the McKinsey Strategic Plan-Complete Doc.
 10 Right? So he's talking about the McKinsey plan?
 11 A Yeah. Yeah.
 12 Q "This entire PDF, having been for the most
 13 part crafted with no input from my team seems to be the
 14 work of inexperienced consultants and financial people.
 15 This entire report seems to be more of a wish list put
 16 together by people who have little or no understanding
 17 of the critical technical hurdles most of this involves.
 18 The logic or lack thereof of comparing of JEA with other
 19 utilities that are completely different, and then
 20 drawing comparisons that by their nature are not
 21 completely accurate seems to be a recurring theme in
 22 this report. Comments below. I am forwarding to Matt
 23 and Russ to see if I am missing something."
 24 Do you disagree with any of Mr. Coarsey's
 25 comments there?

1 A I do not.
 2 Q So you share all of his opinions about the
 3 McKinsey report?
 4 A And that's why I forwarded it to McKinsey
 5 unedited.
 6 Q So if you look down at the very bottom, it
 7 looks to me like -- and I'm inferring here, so help
 8 me -- that you provided your own opinions which are
 9 highlighted on Page 4; is that right?
 10 Because it says, "Steve McNall, Energy and
 11 Water Planning. And then it provides a breakout of the
 12 page numbers of the McKinsey report, and then the
 13 comments to the right of each of those that are
 14 highlighted, I presumed from that that these are your
 15 comments?
 16 A So this wasn't an email from me. I think
 17 this -- so this would have been -- looks like somebody
 18 else's notes on -- from talking to me --
 19 Q So let me help. If you go to Page 3, it's an
 20 email from Shawn Eads to the SLT, copying the McKinsey
 21 folks.
 22 A Right.
 23 Q And it says, "SLT, McKinsey has finished their
 24 strategic plan. Here it is. Tell me what you think."
 25 And then it's got a list of people under it,

1 all the SLT members.
 2 And then the next email up the chain is from
 3 you to John Coarsey, Jordan Pope, and Bob Zammatoro, who
 4 are your direct --
 5 A My direct reports.
 6 Q -- reports; right?
 7 "FYI. Hope you had a great holiday."
 8 And so I inferred from that that these are
 9 your comments, but maybe not. Or maybe the comments
 10 that you made in connection with your -- the very first
 11 email in the chain on December 4th to Andrew Grass,
 12 because your comment on Pages 140 through 147 are "same
 13 as above," and I wonder if that meant same as above
 14 meaning same as John Coarsey's comments.
 15 A Yeah, I really don't recall -- you know, I'd
 16 have to look at the full document to see this. I recall
 17 that they were making -- and by "they," I mean
 18 McKinsey -- comparisons between us and other utilities,
 19 as John pointed out. And to the level of this other
 20 utility spends this much money per mile on maintenance
 21 and everything and JEA spends this much and they're
 22 different.
 23 It's like -- and it is really hard to compare.
 24 I mean, there's differences in -- you know, even
 25 differences in the kinds of trees around. So when we

1 get hit by a hurricane, we've got pine trees and live
 2 oaks coming down on lines. If somebody in the South
 3 gets hit by a hurricane, they get palm trees. It's much
 4 less of an impact. It doesn't have the same kind of
 5 height to start with.
 6 So, you know, kind of doing these things,
 7 there was a -- I remember on the water side there was a
 8 particular issue, and I -- where comparing our miles
 9 of -- our cost per mile of pipe to other utilities.
 10 And we're very a large water utility, and on
 11 the sewer side in particular, there's a lot of lift
 12 stations, a lot of pumping, so a lot more equipment that
 13 needs to be used and a lot more people to maintain that.
 14 So the comparison metrics don't always look
 15 attractive just, you know, A to B. You have to kind of
 16 break it down to not just mile of pipe, but per lift
 17 station or per some other metric that kind of separates
 18 out the fact that we just have to have more lift
 19 stations because our territory is so flat.
 20 If we were in the mountains, we'd put the
 21 sewer plant at the bottom and it would all just run
 22 downhill. You know, that's -- we don't -- you know, we
 23 don't have any hills to kind of utilize that way. So --
 24 Q Well, let me do this. And I appreciate
 25 everything you just said. I understand that.

1 I want to walk through these comments and just
 2 see -- just kind of line by line and see if you agree.
 3 A Sure.
 4 Q "Electric planning had virtually zero input
 5 into this," meaning the McKinsey report.
 6 Do you agree with that?
 7 A With this, yes. There were -- there were, you
 8 know -- and especially with regard to the -- talking
 9 about the transmission distribution line and things,
 10 the -- McKinsey just came in with these.
 11 And in this time frame, I believe what they
 12 were doing was looking for -- because this is within the
 13 ITN process. This in November-December 2019, so the ITN
 14 is well underway.
 15 These were feeding into the management
 16 presentation, and what they were trying to do is
 17 identify to the bidders, essentially -- so this is
 18 really no longer even for an internal audience. This is
 19 for -- this is identifying projects that bidders can do.
 20 And this is how it was explained to me.
 21 So -- because the IOUs -- investor-owned
 22 utilities -- looking for projects that were justifiable
 23 so they could do the work, earn a rate of return, and,
 24 you know, make a profit. So just this one is captured
 25 on the page here, it's conversion of -- you know, it's

1 overhead to underground conversion. That's been a topic
 2 of conversation for decades.
 3 Q And it's 4 million bucks a mile, give or take,
 4 and they estimated like 1 and a half or 2?
 5 A Right.
 6 Q Laughably wrong; right?
 7 My whole point in all of this is to say that
 8 the McKinsey report was used by members of the SLT to
 9 justify a sale. Now we're in the sale process. We're
 10 talking to bidders, and all of a sudden, the McKinsey
 11 report is being picked apart for a different
 12 presentation to a different audience. JEA's SLT is no
 13 longer talking to the board to get -- to convince them
 14 that we need to go sell ourselves. Now we're talking to
 15 our actual potential purchasers, and we're going to tell
 16 them the truth about what we think of the McKinsey
 17 report. That's what I read from all of this.
 18 Do you disagree with any of that?
 19 A Tell who the truth about the McKinsey report?
 20 Q The bidders in Atlanta when you're talking to
 21 them.
 22 A I don't think -- you know, because this is all
 23 still coming from McKinsey. So they're -- as I recall,
 24 there was no departure from the projection of, you know,
 25 overall sales when talking to the bidders from what was

1 told to the board.
 2 This is -- this is looking at specific
 3 projects that McKinsey felt would add value to a
 4 bidder -- you know, if a bidder felt there was a project
 5 they could do that was going to cost X and make them
 6 10 percent of X, because that's their rate of return
 7 that the PSC was to have, then that is value to the
 8 bidder that would be factored into -- into their price;
 9 like that they would know we're going to pay X, we're
 10 going to get so much of it back in -- you know, in a
 11 rate of return. So, you know --
 12 Q So what was their response to this? So you
 13 tell McKinsey all of our electric people think that
 14 you're inexperienced, you don't know what you're doing,
 15 and this is laughable. What was the response from
 16 McKinsey?
 17 A I honestly don't recall what their response
 18 was. But the management presentation was pretty well --
 19 you know, I think the presentation in Atlanta were the
 20 next week from this. They may have backed off of some
 21 of this, taken some of these out. I'd have to look at
 22 the management presentation.
 23 The -- and again, the management presentation
 24 was -- there was a lot of -- a lot of it was based on,
 25 you know, just like anything, old presentations and --

1 but a lot of it was developed and kind of presented to
 2 most of the SLT at the same time. You know, we were
 3 kind of given pieces that were applicable, and then I
 4 think this is -- this is when we finally were allowed to
 5 share it with the directors, so that's why -- you know,
 6 that's why John's expressing there wasn't any input
 7 from --
 8 Q From the director level?
 9 A -- from the director level up until that
 10 point.
 11 Q And we're in December of 2019?
 12 A December 2019. On this first station. They
 13 had input into the McKinsey planning documents prior to
 14 that.
 15 Q When did JEA stop using operations-based
 16 metrics and switch to financial-based metrics to guide
 17 its long-term planning?
 18 A So as far as the rating agencies, they
 19 switched in 2014.
 20 Q What about with the board?
 21 A Those are the same numbers that were shown to
 22 the board. Now, the ten-year site plan typically went
 23 to the board --
 24 Q Typically --
 25 A -- as well.

1 Q -- but it didn't in '19, did it?
 2 A It did not.
 3 Q Why not?
 4 A There was a lot going on, and the -- Aaron
 5 made the call -- or Aaron or Melissa, I forget which.
 6 But I -- if you go through emails, you'll find a draft
 7 presentation for the 2019 ten-year site plan that had
 8 been forwarded around and was -- the decision was made
 9 above me not to take it to the board.
 10 Q It was ready -- the ten-year site plan in 2019
 11 was ready to be presented --
 12 A Yes.
 13 Q -- to the JEA board?
 14 A Yes.
 15 Q But Aaron Zahn made the decision not to have
 16 it presented to the board?
 17 A Based on, you know, whatever else was on the
 18 agenda. Yeah.
 19 Q And instead something called a management case
 20 was presented?
 21 A Sounds about right.
 22 Q That's the first time that something called a
 23 management case had ever been presented to the JEA
 24 board; correct?
 25 A In my recollection.

1 Q I meant to ask you this earlier, but I want to
 2 talk just for a minute about your January interview.
 3 You said that you had gone back and read the
 4 transcript as you were preparing for today.
 5 A Yeah.
 6 Q Do you remember reading anything in your
 7 transcript or when you re-watched your presentation to
 8 the Special Investigation Committee that was either
 9 incomplete or needs supplementation or correction in any
 10 way?
 11 A Nothing substantial. There were maybe a
 12 couple typos where it showed up as "resilient" and I
 13 think I said -- would have said either, you know,
 14 "robust" or -- you know, just more of the -- you know,
 15 reflective of a different scenario approach; that they
 16 were looking for something that was -- was going to be
 17 able to withstand, you know, what actually happened and
 18 kind of fit the reality. We're kind of in the middle
 19 there somewhere. I don't recall anything -- any
 20 substantial corrections that need to be made.
 21 Q Even -- and with the benefit of hindsight now,
 22 you've had the opportunity to learn probably more than
 23 you knew at the time that you --
 24 A Yes.
 25 Q -- testified.

1 Did anything, based on information that you
2 have since learned, warrant a correction or a revision
3 of any of your prior comments?

4 A I didn't look at it from the point of view of
5 what I know now as much as what I knew then. Certainly,
6 you know, not having been privy to the genesis of these,
7 you know, I can't say it overly alarms me. The
8 presentations always change a lot.

9 Whether or not there was a -- you know,
10 whether there was already a goal in mind to kind of
11 foresee, I can't say. You know, I wasn't in those
12 meetings, so I don't know what the discussion was.
13 Yeah.

14 MR. WEDEKIND: Let's take a quick break.
15 (Recess taken from 11:54 a.m. to 12:02 p.m.)

16 BY MR. WEDEKIND:

17 Q In preparation for your testimony before the
18 Special Investigation Committee, who did you talk with?

19 A Let's see. That was early March. I would
20 have talked with Melissa, who was my supervisor at the
21 time, and I'm sure I consulted with my attorneys and
22 probably talked with my direct reports a little bit.

23 But really mostly Melissa.

24 Q What attorneys?

25 A These guys.

1 Q Okay. Mr. Bledsoe?

2 A Yes, Mr. Bledsoe.

3 Q Okay. I'm not going to ask about the content.

4 MR. BLEDSOE: Yeah. Actually, we had Ken
5 Wright and Sam Jacobson involved too. I was out of
6 town right before so --

7 BY MR. WEDEKIND:

8 Q Same law firm, though?

9 A Yeah.

10 Q Okay. Not OGC is my point.

11 MR. BLEDSOE: Okay.

12 A There were some discussions with OGC with -- I
13 think it was with Kyle Gavin at that time.

14 Q About the substance of your testimony?

15 A Yes. Yes. Just prep and things.

16 Q Okay. I know from your testimony that
17 Ms. Dykes was not a fan of our work, because you had
18 testified to that.

19 A I did.

20 Q What did -- what did she tell you? Did she
21 give you any talking points?

22 A There was a letter that she had prepared for
23 the board. I don't know if you got that --

24 Q I saw it.

25 A All right. It was pretty much that. The

1 chart in there showing the different projections and
2 the -- compared to actuals, and then the financial
3 projections, that was produced by myself and Juli
4 Crawford. I had the electric planning projection part
5 and she had the financial projection part.

6 So, you know, really a lot of the discussion
7 was around FPU and looking at the -- what had happened
8 with FPU. And really it's sort of a difference of
9 opinion there where I know you guys thought as a
10 wholesale contract, it's -- just exclude the whole
11 thing.

12 But the decline in the FPU load -- and
13 re-watching your testimony, you even mention that at the
14 end, pointed out that the FPU load had declined
15 substantially over time, I think, from 468,000 or so
16 megawatt hours in like '05 to like 152,000 in 2017, in
17 the final year. So -- and that was driven by the cogen
18 plants on the island by decreased load.

19 And looking at their -- at FPU's profile
20 was -- in the early days, they were a really good, solid
21 customer as far as high demand factor. With all the
22 cogen, they -- their demand off peak was dropping to
23 zero, so, you know, they weren't really the same -- the
24 same high load factor type customer that they used to
25 be.

1 But earlier in '05, '06, FPU represented like

2 3 and a half percent of our sales, and in '17 it was
3 down to 1 percent, a little over 1 percent. So there
4 had already been a big drop there driven essentially by
5 distribute generation.

6 So I think there's a fundamental -- you know,
7 we had thought that was part of the story of if you're
8 talking about losing sales to distribute generation,
9 whether it's, you know, at the home level or at the, you
10 know, commercial industrial level, it was part of the
11 story.

12 That, and the 2014 transition away from the
13 using ten-year site plan to using a forecast that
14 finance came up with, which was 10 million megawatt
15 hours flat.

16 And, you know, honestly, it was probably, for
17 their purposes, a better forecast, because -- for
18 financial purposes -- just like with a public company,
19 you want to kind of say what you think you're going to
20 make and then make a little more than that. Then you
21 beat expectations. If you say I'm going to make a
22 higher number and don't, you've missed expectations, and
23 there's an unfavorable reaction to it.

24 So it's -- you know, that departure happened
25 in 2014 when Paul was the CEO -- that's Paul McElroy --

1 and Melissa was the CFO.
 2 And, you know, so then it really goes down to
 3 was there or wasn't there an 8 percent drop over the
 4 past ten years. So, you know, based on what the FPU
 5 load was in the final year, I'd say there was either,
 6 you know, a 7 or 8 percent drop over that time period.
 7 And then McKinsey projecting a similar drop
 8 over the next ten, it doesn't -- you know, it's not --
 9 it's like it hasn't just happened. So, you know -- and,
 10 of course, obviously nobody anticipated COVID, but
 11 there's a -- you know, there's been a pretty sharp
 12 economic drop-off because of -- because of that.
 13 So that's almost like the -- you know, that
 14 theoretical unknown unknown. You don't know what you
 15 don't know and what's going to happen, but something's
 16 going to happen. You know, the last ten years it was
 17 the economic recession in -- from '08 to '10. There
 18 probably will be one, you know, in the next ten-year
 19 period too.
 20 So it's -- you hope that a reasonable annual
 21 growth rate -- you know, because the one reason now is
 22 based on -- you know, includes effects of the last
 23 recession, so -- and that's why it's down around half a
 24 percent per year. It's -- it's barely above flat.
 25 And looking at the numbers -- so if we're at

1 12 million megawatt hours a year, a half percent, which
 2 is the growth, is 60,000 megawatt hours. That's not
 3 much. You take -- we've got -- 4.8 million megawatt
 4 hours of that 12 is -- is residential. So a 1 percent
 5 decrease in residential load is 48,000 megawatt hours.
 6 That almost wipes out all your gain for the year.
 7 So the point being that half a percent per
 8 year is so close to flat that it doesn't take much to
 9 make it negative.
 10 Q So the issue, I think, that we brought up --
 11 one of the issues we brought up, is the quality of
 12 information being provided to the board. I'm not here
 13 to argue our position --
 14 A Okay.
 15 Q -- versus your position, because we could go
 16 back and forth, and ultimately the truth is that we
 17 might both be right. But --
 18 A Yeah.
 19 Q -- the issue really isn't so much who's right
 20 and who's wrong, but did the board have all that
 21 information when it was weighing the decisions that the
 22 board had to make. That's the real issue.
 23 So one of the issues that we raised -- I'm
 24 going to hand you Exhibit 13, which is a series of
 25 emails.

1 (Exhibit Number 13 was marked for
 2 identification.)
 3 BY MR. WEDEKIND:
 4 Q One of the issues that we identified was --
 5 that you just talked about was the ten-year site plan
 6 and its use as a -- for long-term strategic planning.
 7 And here in the series of emails that's identified as
 8 Exhibit 13, there's back-and-forth.
 9 In the first email you say, "Sarah" --
 10 Sarah Brody at McKinsey -- "I am trying to come with a
 11 comparison of the ten-year site plan and McKinsey
 12 forecasts. Did you start with our forecast? If so, the
 13 answer is whatever tweaks McKinsey made."
 14 And then her response is on the next page.
 15 "Hi, Steve. We started with the sales forecast from
 16 JEA. I assume this is the same as what's in the
 17 ten-year site plan. Then we made modifications -- based
 18 on joint McKinsey/JEA assumptions. EV growth, for
 19 example, was based partly on projected vehicle sales in
 20 the territory, from the planning team."
 21 So why is it that you and Sarah Brody are
 22 going back and forth about comparing the McKinsey report
 23 to the ten-year site plan in September of 2019?
 24 A Because we were getting questions about
 25 exactly this, about the difference between the McKinsey

1 report and the ten-year site plan.
 2 Q Okay. And those questions weren't just coming
 3 from us. In fact, they weren't coming from us at all at
 4 that point. I think the civic council had raised
 5 issues. Do you recall that?
 6 A I do, yeah.
 7 Q Do you remember rating agencies had also asked
 8 the same or similar question?
 9 A I don't recall that the rating agencies did,
 10 but, you know --
 11 Q Would it surprise you if you found out that
 12 the rating agencies did ask the same question?
 13 A It wouldn't surprise me, no.
 14 Q And you, as part of the ITN process, were
 15 tasked at least in part in responding to questions from
 16 bidders; right?
 17 A Once that opened up, yeah.
 18 Q And then some of the bidders actually asked
 19 the same question: Why is there a deviation from the
 20 ten-year site plan in the McKinsey materials that the
 21 bidders were provided. Right?
 22 A Right.
 23 Q So it's not just us.
 24 A No, no.
 25 Q The civic council, everybody -- and rating

1 agencies, these are the people whose sole job is to
 2 follow the utility industry are asking the same
 3 questions; right? So it's a good question to ask.
 4 A Right.
 5 Q And in September of 2019, it seems like you
 6 didn't know the answer to the question and worked with
 7 McKinsey to craft the answer to the question. And
 8 there's all this back-and-forth between you and
 9 Sarah Brody at McKinsey and others in which drafts are
 10 exchanged to explain these discrepancies.
 11 A Yep, I recall this.
 12 Q Yeah. Who tasked you with doing this?
 13 A Melissa.
 14 Q Why?
 15 A Well, she wanted to know, too, just why -- you
 16 know, why they were different --
 17 Q So in September of 2019, she didn't know the
 18 answer to the question?
 19 A Not in the level of detail that was needed to,
 20 you know, properly answer the question. Because, again,
 21 there was -- you know, I don't know if anybody had
 22 transparency into McKinsey's black box. So I know how
 23 our forecast was developed.
 24 Q "Ours" meaning the ten-year site plan?
 25 A Ten-year site plan. And was satisfied with

1 the result of the ten-year site plan because it was
 2 conservative for the purpose that it was intended for,
 3 you know, showing that we have adequate generation to
 4 cover the expected demand.
 5 McKinsey, you know -- and again, not being
 6 privy prior to all of the back-and-forth apparently when
 7 they came up with the forecast and all those tweaks, you
 8 know, so I needed information from Sarah to kind of
 9 break it down piece by piece as far as what the -- you
 10 know, where those differences were coming from.
 11 Q Who is Mary Guyton-Baker?
 12 A She was the manager of generation planning.
 13 Q Who did she report to?
 14 A She reported to John Coarsey.
 15 Q Who reported to you?
 16 A Who reported to me.
 17 Q Okay. I've got some undated text messages
 18 here --
 19 MR. NUNN: They're from September 23rd. I'm
 20 sorry.
 21 MR. WEDEKIND: Of 2019?
 22 MR. NUNN: Yes.
 23 BY MR. WEDEKIND:
 24 Q Okay. September 23rd, 2019.
 25 A Okay.

1 Q So same day that you're working with Sarah
 2 Brody on this. They're short, and they're between you
 3 and Ms. Baker.
 4 It says, "Stephanie said she sent the Moody's
 5 data to McKinsey in January."
 6 That must be January 2019. Do you know what
 7 that is, the Moody's data?
 8 A The Moody's data is the base economic dec that
 9 we purchase every year to construct the ten-year site
 10 plan.
 11 Q And she, Ms. Baker, replies, "Do you want us
 12 to do more? Do you want that email forwarded to you?"
 13 And you reply, "Yes, thanks. Looking at
 14 justifying the McKinsey numbers." And emoji. It
 15 doesn't have what the emoji is.
 16 A Probably an exasperated face.
 17 Q She says, "Enjoy. McKinsey can do that much
 18 easier."
 19 And your reply is, "I know. Going to get what
 20 we have and get with them."
 21 Right. So your job was to justify the
 22 McKinsey numbers?
 23 A So justify or explain. You know, really the
 24 job was to, you know, demonstrate how they got from our
 25 ten-year site -- or, you know, from the -- because we

1 start -- you know, because we start at the same place,
 2 essentially, you know, actual sales in 2018.
 3 So I know how we got to where we got, and the
 4 question was how did McKinsey get exactly to where they
 5 were. And it probably would have been easier to figure
 6 out with these presentations.
 7 But, you know -- and so McKinsey, I think,
 8 was -- they didn't want to just open up the model and
 9 say, you know, here's the equations. So they would
 10 just, you know, give me bits of information until I was
 11 either exhausted or satisfied.
 12 Q Did you ever become satisfied?
 13 A I think we got pretty close. The biggest
 14 difference seemed to be the -- their solar assumptions.
 15 That explained most of it.
 16 Q Which were much more aggressive?
 17 A Which were much more aggressive.
 18 Q And that you disagreed with?
 19 A Yes.
 20 Q Because I think that you've said that the grid
 21 parity date that was being used was 2024, and your
 22 opinion is that date should be at least in the early --
 23 A Early '30s.
 24 Q -- 2030s?
 25 A Yeah.

1 Q Okay. That would make from -- a 30-year
 2 long-term strategic planning --
 3 A Would not make much difference.
 4 Q But it would make a huge difference if you
 5 were using it to extrapolate data to try to justify a
 6 sale? Do you agree with that?
 7 A Would make a bigger difference, yes.
 8 Q How much bigger?
 9 A I can't say. I don't know. I've got a lot of
 10 numbers in my head; that's not one of them.
 11 Q Were you in meetings with the SLT in which
 12 Mr. Zahn utilized a whiteboard?
 13 A Yes.
 14 Q Was that frequent?
 15 A It was fairly common, yeah.
 16 Q Did anybody record the data that was on
 17 Mr. Zahn's whiteboards that was being discussed by the
 18 SLT?
 19 A It depends. I think sometimes there were
 20 people who would take a picture of it.
 21 Q What was Mr. Zahn's reaction to people who
 22 would take a picture of his whiteboard?
 23 A I never saw him have a reaction to it. I
 24 think in a lot of cases he was proud of his artwork and
 25 was happy they were taking a picture of it.

1 Q Did you ever see any whiteboards in which the
 2 PUP was drawn out?
 3 A I don't recall. If there was, it was just the
 4 overall sketch of the long-term incentive plan, you
 5 know, just what went to the board.
 6 Q Did you ever see a whiteboard with an overall
 7 sketch of the long-term incentive plan?
 8 A I don't recall, but that's as much detail as I
 9 ever really kind of saw on the PUPs.
 10 Q Did you ever see a whiteboard with any type of
 11 calculations with respect to the PUP?
 12 A No.
 13 Q Or allocation of performance units?
 14 A No.
 15 Q Did you ever tell anybody above you, so either
 16 Ms. Dykes or Mr. Zahn, about your concerns with the
 17 aggressive approach taken by McKinsey?
 18 A I believe I did have conversations with -- and
 19 possibly just in group conversations where Melissa or
 20 Aaron were present just expressing skepticism. I
 21 certainly wasn't bashful about either my opinion about
 22 the combined cycle plan or how aggressive the solar was.
 23 You know -- and, the grid parity was one
 24 thing, but then the -- their -- McKinsey's projections
 25 for how much solar to add to the grid was yet another,

1 and I thought those also were overly aggressive.
 2 Q Because of the reasons you had talked about
 3 earlier?
 4 A Right, the grid stability, the space, the --
 5 you know, being able to spread things out; transmission
 6 constraints. Just that whole difference between
 7 capacity and energy, and, you know -- and storage is the
 8 holy grail there that resolves a lot of the issues, but
 9 that pushes that parity point out quite a bit.
 10 And I think by the end, McKinsey had pushed
 11 out the parity on batteries and had decreased the amount
 12 of solar they were recommending as part of the strategic
 13 plan. So my fussing did bear some fruit.
 14 Q You sat through the board meetings at which
 15 the McKinsey presentations were provided; correct?
 16 A If I didn't, I was -- I watched them on closed
 17 circuit.
 18 Q Did anybody ever say or fail to say anything
 19 to the board that you would consider to be misleading?
 20 A Either say or failed to say?
 21 Q Yes.
 22 A You know, not -- not that I -- not that I
 23 specifically recall. You know, the -- I know we focused
 24 a lot on the projections and the McKinsey forecast. I
 25 think it may have been more balanced to present a wider

1 range of options.
 2 But, you know, I know -- you know, I didn't
 3 know the board as well, so I didn't know what the board,
 4 you know, was looking for. I'm reminded of Eisenhower's
 5 quote about ranges are for cattle; give me a number.
 6 So, you know, the conduit to the board was the
 7 CEO, and he's the one who had the relationship with the
 8 board and decided how things were going to be presented
 9 to the board. And the content.
 10 Q So Mr. Zahn had total authority to determine
 11 what information was going to be provided to the board
 12 and who was going to be presenting it?
 13 A Right. And, you know -- and case in point,
 14 the non-presentation of the ten-year site plan in 2019,
 15 you know, which was a document that -- had prepared and
 16 the ten-year site plan still went to the PSC, obviously.
 17 Q And the board had historically received a
 18 report from management about the ten-year site plan?
 19 A Right. There was no requirement to present it
 20 to them, but historically they had received that. Now,
 21 in 2018 it had been late. It was in June. But that's
 22 because there were a lot of things going on in April and
 23 May of 2018. So that kind of interrupted the normal
 24 flow where it usually went to the board either in March
 25 or April.

1 Q If the ten-year site plan had been presented,
 2 it would have provided additional information to the
 3 board from which it could ultimately make a decision
 4 about all of the different McKinsey scenarios that were
 5 being presented to it; correct?
 6 A Correct. Correct. I would have been
 7 answering those McKinsey versus ten-year site plan
 8 questions a few months earlier.
 9 Q And I believe earlier you testified that the
 10 first few scenarios by McKinsey were designed to drive a
 11 board decision to select Scenario 3, to consider
 12 nontraditional alternatives?
 13 A Right. Right. So status quo obviously
 14 wasn't -- you know, wasn't attractive. Status Quo 2 was
 15 Draconian. So I think that -- yes --
 16 Q So Scenario -- sorry. Go ahead.
 17 A The intent was Scenario 3, whichever way that
 18 ended up, to at least have that conversation outed. You
 19 know, at that point, you know, certainly I had no idea
 20 what any -- what the outcome of any of the bid process
 21 was going to be, so they could have come back around to
 22 Scenario 2.
 23 Q Did you ever talk to anybody about the co-op
 24 alternative?
 25 A No. No, I didn't.

1 Q Did you consider that to be a viable
 2 alternative?
 3 A I've certainly read information, including
 4 from yourself, that indicates that that was not a viable
 5 alternative. I'm not as familiar with the co-op model.
 6 You know, it doesn't surprise me that it's not --
 7 Q Viable?
 8 A Not viable, yeah.
 9 Q What about the IPO alternative?
 10 A Again, you know, that's -- I think the bankers
 11 were working on that. I don't know if anybody
 12 internally was working on the IPO alternative.
 13 Interestingly, one of the bidders started as
 14 a -- started as a muni up in Canada and had gone through
 15 an IPO process. So I didn't know that until they
 16 mentioned it in the presentation. So that was -- that
 17 was interesting.
 18 So, again, I think it depends on -- you know,
 19 there's a lot of variables there that I'm not just the
 20 expert on.
 21 Q You said earlier that you attended the Special
 22 Investigation Committee where Mr. Brost testified?
 23 A It was at the same one.
 24 Q Yeah. So you heard his testimony?
 25 A Yeah.

1 Q What did you think about his testimony? Did
 2 you hear anything that he testified to that you
 3 disagreed with?
 4 A Well, I didn't review Mike's testimony in
 5 preparation for this, so it's been a while. As I
 6 recall, the genesis or the upshot of Mike's argument was
 7 that JEA had been a great utility for the 35 years he
 8 worked there and there's no reason why it was going to
 9 change.
 10 And, you know -- you know, I worked for Mike
 11 for five years or six years, I guess. So, you know,
 12 Mike's a smart guy. I appreciate Mike.
 13 I think in general the utility industry is
 14 facing challenges now that they haven't been for the
 15 past 35 years, and I don't think what he said kind of
 16 acknowledged the fact that there are changes coming.
 17 There is -- you know, there is an increased ability for
 18 people to not use the utility.
 19 And, you know, I know he put a lot of weight
 20 on being able to grow the demand rate, and that solves a
 21 lot of the problems.
 22 You know, just as a complete aside, the big
 23 problem with the electric industry, you know, is the
 24 rate structure. So for residential, about 5 percent of
 25 the rate is fixed and 95 percent is variable, and on the

1 cost side, 70 percent of the costs are fixed and
 2 30 percent is variable. So if somebody does something
 3 to reduce their usage, they impact that 95 percent
 4 piece, and then the costs just go up for everybody else,
 5 you know, as that happens. And then as costs go up
 6 more, people decide they want to go over.
 7 So, you know, I think, you know, everything
 8 Mike said about how the utility's been and everything
 9 is -- you know, was absolutely true. I think going
 10 forward as far as the planning aspect, that was -- that
 11 is what he hit me for.
 12 Q What about the concept of decoupling rates?
 13 A As far as going to a demand rate?
 14 Q Yes.
 15 A I think it's absolutely necessary. I think
 16 that there's been a group working on it for a couple of
 17 years. There's a -- there's actually a beta test, you
 18 know, out in the field, a couple thousand people, you
 19 know, customers.
 20 And it's -- there's a couple hard things with
 21 it; you know, communication, getting people to
 22 understand how it works, and having it not adversely
 23 impact low-income customers, the 30 percent -- 30,
 24 40 percent of the customers that we have that are ALICE,
 25 the asset-limited income-constrained employed.

1 So there's just a big chunk of people that
2 are -- that their monthly JEA bill could be their
3 largest single monthly bill. And devising a rate that
4 fairly compensates the utility for what's provided while
5 not adversely impacting a very vulnerable class of
6 customers is really difficult. I'm glad it wasn't my
7 job.

8 Q What did Mr. Zahn think about demand pricing?

9 A I never did discuss it with him, because that
10 wasn't something that my group was working on.

11 Q So a group was working on it, just not your
12 group?

13 A Right. Right. It was the finance -- finance
14 and customer solutions, I think together, were working
15 on that.

16 Q Okay. Let's talk about EDF just for a second.

17 A Sure.

18 Q You were involved, as you mentioned earlier,
19 in the deal?

20 A Right.

21 Q And I think that you testified during your
22 last interview that Mr. Zahn came in and inserted a few
23 extra demands as part of the deal, including buyout
24 options?

25 A Right.

1 Q Why did he do that?

2 A He didn't say why he wanted it. He just
3 thought it would add value. Certainly, you know, I
4 can't think of any reason why we, as JEA, would want to
5 buy it out.

6 Q Right. But if an IOU were to acquire JEA, it
7 could exercise those buyout options in order to increase
8 its rate base, couldn't it?

9 A It could.

10 Q And so that would be a really good reason for
11 Mr. Zahn to want to insert those buyout options into the
12 EDF deal, wouldn't it?

13 A Yes, it would.

14 Q Did he ever suggest that to you?

15 A No. No.

16 Q Did you infer that on your own before I just
17 mentioned that to you?

18 A Yeah. Yeah. You know, not -- you know, I
19 hadn't really thought about it, you know, while it was
20 going on, but certainly once the ITN came up, it's like,
21 well, I guess, you know, that -- that kind of fit then,
22 because certainly that was well prior to any discussions
23 about a sale.

24 Q Right. So when did the EDF transaction
25 happen?

1 A The contract was signed in February 2019.

2 Q Okay. So --

3 A I think it went to the board in December 2018.

4 Q Okay. So at least in December 2018, Mr. Zahn
5 was structuring deals that would make no sense for JEA
6 but would make a lot of sense if JEA were to be sold to
7 an IOU?

8 A I think that's fair.

9 Q I want to talk about Plant Vogtle for just a
10 second. Are you familiar with Plant Vogtle?

11 A Yes, I am.

12 Just as an aside, Alvin Vogtle, who it was
13 named after, was the Southern Company CEO, and he was
14 the inspiration for the Steve McQueen character in
15 The Great Escape.

16 Q I did not know that. That's your --

17 A That's my tidbit for the day.

18 Q Your Jeopardy answer for the day.

19 A Yeah.

20 Q None of us would have gotten it except for
21 you.

22 Was the Vogtle PPA a reason to sell JEA?

23 A No.

24 Q Why not?

25 A Well, for one thing, the Vogtle PPA was

1 structured such that it could only be held by another
2 municipal. The loans, the --

3 Q The bond covenants?

4 A Yeah, the bond covenants. The -- I think
5 the -- was it the BABs, the build America bonds,
6 required that -- all the counter parties to be munis.

7 So the -- how Vogtle would fall in any sort of
8 transaction was definitely something that, you know, I
9 never heard a satisfactory answer to.

10 Q Would a sale have had any impact on the
11 ratepayers in terms of the Vogtle PPA?

12 A Depending on how they found to structure it.
13 I don't know. You know, there's --

14 Q So if the PPA were restructured in such a way
15 that JEA purchased a percentage increase in the megawatt
16 hours before a sale?

17 A Say that again.

18 Q So if JEA purchased a percentage interest in
19 Vogtle equivalent to the 206 --

20 A All right. So it converted to ownership?

21 Q (Indicates.)

22 A If they converted it to ownership?

23 Q Correct. And prior to a sale, and then JEA
24 was sold to an IOU, wouldn't that also, like the EDP
25 deal, have --

1 A EDF?
2 Q -- sorry -- EDF deal potentially have impacted
3 the purchaser's rate base?

4 A I mean, in that scenario, yeah. You know, I
5 can't imagine that Southern Company was going to agree
6 to any sort of a sale like that, nor -- nor MEAG,
7 because the whole structure of the deal was we get the
8 power for 20 years and then it goes back to MEAG as
9 their -- you know, as their community's growing to the
10 point where they need the power. So that -- that would
11 make the ITN process look easy.

12 Q But there would be a potential benefit to a
13 purchaser if JEA restructured the deal so that it had an
14 ownership interest in Vogtle?

15 A Yeah, if that purchaser could show that
16 purchase was prudent, which given the cost overruns at
17 Vogtle might be a bit of a stretch.

18 Q And that would have to be done before the PSC?

19 A As would anything with an IOU, yeah.

20 (Exhibit Number 14 was marked for
21 identification.)

22 BY MR. WEDEKIND:

23 Q I'm handing you Exhibit 14. This is an email
24 from Ryan Wannemacher to you dated August 15th, 2019,
25 and it's got, it looks like, billing codes for a bunch

1 of different people, including Number 1 at the very
2 bottom there, Holland & Knight, for strategic planning.

3 Why was Holland & Knight being paid under the
4 project for strategic planning? Do you know?

5 A I don't. You know, Holland & Knight was the
6 Vogtle attorney, so I don't know if they were providing
7 input on the whole Vogtle legal side. The -- yeah.

8 I think the facilities we used in Atlanta for
9 the presentations were at the Holland & Knight office,
10 so --

11 Q The ITN presentation?

12 A The ITN presentation, the management
13 presentation. I don't think they would have had a
14 separate code just for like, you know, letting us use
15 their building -- or their conference room.

16 But no, I don't know why Holland & Knight
17 would have been used other than a Vogtle-related ...

18 (Exhibit Number 15 was marked for
19 identification.)

20 BY MR. WEDEKIND:

21 Q Exhibit 15 is an email from you to
22 Randy Van Aartsen --

23 A Aartsen.

24 Q -- Aartsen -- from March 2019.

25 A Okay.

1 Q It relates to SQ2. If you go down and look at
2 Julio Romero's email to you. And you ask Randy -- you
3 forwarded Julio's email, and you asked Randy to look at
4 the attached with respect to natural gas sales. "Don't
5 send me anything. This is a what-if exercise."

6 What were you asking Randy to do here?

7 A So this whole effort that Julio was doing
8 was -- it was the whole new business line aspect. And
9 they were really trying to develop what revenue --
10 revenue estimates for new business lines.

11 I had started, and then Randy was working on
12 developing a pro forma -- and the finance people were
13 involved too -- for a new -- for a JEA natural gas
14 business. So if we took over the franchise from TECO.
15 And this was asking Randy to -- what kind of revenue or
16 entire business model would we see; you know, what are
17 the numbers looking like for that.

18 Q What did he come back to you with?

19 A We've got a -- there's a full pro forma. I
20 think it's, you know -- and again, it all depends on
21 assumptions, so -- and the big thing we don't have is
22 the knowledge of how many natural gas customers TECO has
23 in our territory. We don't know that number.

24 So made some estimates, you know, pretty much
25 backing up from TECO's payment to the City for the

1 franchise fee, which represents X percent of their
2 sales. Okay, therefore their sales were this. Make
3 some more assumptions about how much is from commercial
4 industrial and how much is residential, and came up with
5 like a 30,000-type number.

6 And then, all right, so if we had 30,000
7 residential customers and X number of commercial
8 industrial customers, and I think we worked it out -- it
9 was on the order of 5 to \$10 million a year, in that
10 range, and then growth assumptions on top of that.

11 So by the end of 10 or 15 years, you know --
12 because we were looking at being able to capture both
13 the new developments and also doing some backfitting
14 that TECO historically hasn't done in conjunction with
15 water projects.

16 There's other utilities that have water and
17 sewer and gas, and the gas is kind of in there with the
18 water and sewer because it's all pipes and it's all
19 underground.

20 So there are some synchronies that you can get
21 by having both of those -- both of those groups, so, you
22 know ... And we looked at other munis that have gas,
23 like GRU and City Utilities in Missouri, and then just
24 kind of sketched out here's how many people we need to
25 run it and how to -- pretty much a paper organization of

1 here's what it takes, here's what it would cost, and ran
 2 that through.
 3 And, you know, between the finance group and
 4 the fuels group, you know, all that information was --
 5 this was just trying to come up with a one-page
 6 sanitized -- because, as you can imagine, all the
 7 details about our plans for how to become a natural gas
 8 utility weren't something that we necessarily wanted
 9 TECO to have. So that's -- you know, because it kind of
 10 makes it easier to figure out what we're doing.
 11 Q I understand from your testimony that you're a
 12 proponent of getting into the natural gas business?
 13 A I am. I am.
 14 Q Did Mr. Zahn ever take any interest in that?
 15 A He was very interested in it. You know, he
 16 was -- he was for it. He never -- never got into the
 17 details on it. We never had a meeting to kind of go
 18 over where we were. I was -- I had started that when I
 19 was a director and I had the fuels department, and I was
 20 still interested in it as part of planning, but Randy
 21 didn't -- you know, didn't report to me anymore at this
 22 point. He was one of my reports as a director.
 23 So I kind of worked Caren in, and, you know,
 24 she kind of gave her blessing to, you know, go ahead and
 25 use the fuels group and chase this. But really, it's

1 all -- it's all just plans on paper right now.
 2 Pretty much it.
 3 MR. NUNN: Mr. McInall, you participated in
 4 the management presentations in Atlanta; is that
 5 correct?
 6 THE WITNESS: That's correct.
 7 MR. NUNN: And the management presentations
 8 were made on the basis of a prepared script; is
 9 that correct?
 10 THE WITNESS: That is correct.
 11 MR. NUNN: Did you prepare your portion of the
 12 script or was it -- or did others provide input
 13 into it?
 14 THE WITNESS: I prepared it.
 15 MR. NUNN: Okay. There is a statement that
 16 you make in the script, "Generally with flat" --
 17 "with fairly flat growth, around a half a percent
 18 annual average growth rate, new generation is not
 19 needed in the near future."
 20 Why would you mention a half percent growth
 21 rate when you were projecting an 8 percent decline
 22 in growth for 2030?
 23 THE WITNESS: Because that was my ten-year
 24 site plan number, and as far as any new generation,
 25 that would come from the site planning, not the

1 strategic planning.
 2 MR. NUNN: You mention that you read the 2019
 3 review of the ten-year site plans. Did you
 4 happen -- have you read the Florida Power & Light's
 5 2019 ten-year site plan?
 6 THE WITNESS: I have not read the whole thing,
 7 no. I would have looked at --
 8 MR. NUNN: Let me just read a short portion of
 9 it and get your reaction.
 10 "The energy efficiency variable is included to
 11 capture the impacts from major energy efficient
 12 codes and standards, including those associated
 13 with the 2005 National Energy Policy Act, the 2007
 14 Independence and Security Act, and savings
 15 resulting from the use of compact fluorescent bulbs
 16 and LEDs.
 17 The estimated impact from these codes and
 18 standards includes engineering estimates and any
 19 resulting behavioral changes. The impact of these
 20 savings began in 2005, and cumulative impact on net
 21 energy for loads is expected to reach 11,752
 22 gigawatts by 2028. This represents an
 23 approximately 8.4 percent reduction in what the
 24 forecasted net energy per load for 2028 would have
 25 been absent these codes and standards."

1 Do you have a reaction to that statement and
 2 that forecast versus the McKinsey forecast?
 3 THE WITNESS: So I'd probably need a little
 4 longer to digest that and compare. You know, as
 5 far as energy efficiency, I know empirically what
 6 we've seen is with all the energy efficiency, you
 7 know, and growth, they're pretty much offsetting
 8 each other. So that's why we have a half a percent
 9 per year growth rate.
 10 I think FPL also has a higher annual average
 11 growth rate than we do. You know, I have no reason
 12 to question FPL's numbers.
 13 MR. NUNN: Fair enough.
 14 You mentioned the economic recession. Do you
 15 recall the year that had the highest energy demand
 16 for JEA?
 17 THE WITNESS: I want to say '05, '06, kind of
 18 back then --
 19 MR. NUNN: I believe it was 2010.
 20 THE WITNESS: 2010, yeah.
 21 MR. NUNN: Do you know why that was?
 22 THE WITNESS: Why it was the highest?
 23 MR. NUNN: Yes. What was unusual about that
 24 year?
 25 THE WITNESS: Probably very cold or very hot.

1 MR. NUNN: Yes. It was the polar vortex
 2 year --
 3 THE WITNESS: Yes.
 4 MR. NUNN: -- in which we had a high number of
 5 degree days.
 6 And weather is the biggest variable from year
 7 to year in variations between megawatt hour sales
 8 demand; is that correct?
 9 THE WITNESS: Well, yes. It causes a lot of
 10 variation, and that's why our forecasts are done on
 11 a normalized -- a rather normal basis.
 12 MR. NUNN: Sure.
 13 So do you -- to your knowledge, did McKinsey
 14 incorporate any assumptions about the increase of
 15 degree days caused by climate change into its
 16 forecast?
 17 THE WITNESS: I don't know. I don't think
 18 they did.
 19 MR. NUNN: Okay. So I've finished with my
 20 questions. If you want to wrap up.
 21 MR. WEDEKIND: I don't have any further
 22 questions, but I know that you have a statement
 23 that you want to provide, so I want to give you the
 24 opportunity to do that now.
 25 THE WITNESS: All right. It won't take long.

1 And thank you for the opportunity.
 2 I have worked in various capacities at JEA for
 3 the past nine years. It has been my greatest
 4 professional pleasure to lead the groups that I
 5 have -- generation planning, fuels, byproducts,
 6 energy planning, water planning, and real estate
 7 and economic development.
 8 The people that I worked with at JEA are among
 9 the finest that I've ever known. I am proud of all
 10 that my teams have accomplished over the years:
 11 Implemented solar plans that added 27
 12 megawatts of utility scale solar and another 250
 13 megawatts of solar currently being developed.
 14 Led negotiations with FPL for the closure of
 15 Scherer Unit 4, and replacement with a power
 16 purchase agreement, saving JEA approximately \$200
 17 million NPV over 20 years and cutting CO2 emissions
 18 by a half a million tons annually.
 19 Part of the team that negotiated the closure
 20 of the St. Johns River Power Park. Identified and
 21 secured alternative power sources via power
 22 purchase agreement. Closure saved JEA customers
 23 \$450 million NPV.
 24 Reduced carbon dioxide emissions by over
 25 40 percent.

1 Launched the company-wide innovation forum,
 2 "Watts Up" to share initiatives across business
 3 lines.
 4 Investigated the integration of battery
 5 virtual power plants, reciprocating internal
 6 combustion engines, and utility-scale battery
 7 storage as methods to aid the increase in solar
 8 energy on the grid.
 9 Started the redevelopment planning of the
 10 former St. Johns River Power Park so that JEA and
 11 the City can benefit from this valuable resource.
 12 Planned for large-scale purified water system
 13 on JEA's south grid to offset future consumptive
 14 use permit challenges.
 15 Prepared fuel-hedging strategies to reduce
 16 fuel cost risk as part of a \$400 million annual
 17 fuel budget.
 18 And developed and implemented distributed
 19 generation and battery incentive programs.
 20 Through all of this, I have always acted
 21 ethically, impartially, fairly, and honestly. My
 22 greatest accomplishment at JEA was assembling the
 23 highly qualified team of individuals who worked for
 24 me and without whom I could not have accomplished
 25 anything. I wish them and all my former colleagues

1 all the best in the future.
 2 Do you want a copy of that?
 3 MR. WEDEKIND: It's in the record.
 4 THE WITNESS: Okay.
 5 MR. BLEDSOE: Do you want to make it an
 6 exhibit?
 7 MR. WEDEKIND: If you'd like, yes. That will
 8 be Exhibit Number 16.
 9 (Exhibit Number 16 was marked for
 10 identification.)
 11 THE WITNESS: Thank you.
 12 MR. WEDEKIND: No further questions. Thank
 13 you very much for your time.
 14 (Sworn statement concluded at 12:57 p.m.)
 15
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1 CERTIFICATE OF OATH
 2 STATE OF FLORIDA)
 3 COUNTY OF DUVAL)
 4 I, the undersigned authority, certify that
 5 STEVEN MCINALL personally appeared before me and was
 6 duly sworn.
 7
 8 WITNESS my hand and official seal this
 9 17th day of July, 2020.
 10
 11 _____
 12 Heather M. Thomas
 13 Court Reporter
 14 Notary Public-State of Florida
 15 My Commission No. GG 281865
 16 My Commission Expires 2/1/2023
 17
 18
 19
 20
 21
 22
 23
 24
 25

1 ERRATA SHEET
 2 DO NOT WRITE ON TRANSCRIPT-ENTER CHANGES HERE
 3
 4 IN RE: STEVEN MCINALL-TERMINATION OF EMPLOYMENT
 5 AGREEMENT WITH JEA
 6
 7 _____
 8 PAGE NUMBER LINE NUMBER CHANGE REASON
 9 -----
 10 -----
 11 -----
 12 -----
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 18 -----
 19 -----
 20 Under penalties of perjury, I declare that I have read
 21 my deposition and that it is true and correct subject to
 22 any changes in form or substance entered here.
 23 _____
 24 DATE NAME
 25

1 CERTIFICATE OF REPORTER
 2
 3 STATE OF FLORIDA
 4 COUNTY OF DUVAL
 5
 6 I, HEATHER M. THOMAS, Court Reporter and
 7 Notary Public, State of Florida, was authorized to and
 8 did stenographically report the foregoing proceedings;
 9 and that the transcript, pages 4 through 139, is a true
 10 and accurate record of my stenographic notes.
 11 I further certify that I am not a relative, or
 12 employee, or attorney, or counsel of any of the parties'
 13 attorney or counsel connected with the action, nor am I
 14 financially interested in this action.
 15 DATED this 17th day of July, 2020.
 16
 17 _____
 18 Heather M. Thomas
 19 Court Reporter
 20
 21
 22
 23
 24
 25

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89:11 125:8	137:9 138:15	312-0739 7:24	<hr/>	
134:17	2024 112:21	32202 2:4,8,11	7	
200 31:22	2025 40:18	32251 4:11	7 3:16 72:11,14	
134:16	49:19,21 67:16	3300 2:11	72:22,23 77:8	
2005 131:13,20	2027 31:14,18	34 3:13	79:12 105:6	
2005-2006 70:18	31:20 41:22	35 119:7,15	70 120:1	
2007 131:13	42:5	<hr/>	72 3:16	
2010 89:12	2028 131:22,24	4	74 3:16	
132:19,20	2030 80:18	4 3:6,14 64:19	78 3:17	
2012 20:4 27:11	82:14 130:22	64:20 78:14,15	79 3:17	
27:20 28:6	2030s 41:13	79:15 81:1,5	<hr/>	
29:6 31:1	112:24	92:9 96:3	8	
46:13	206 124:19	134:15 138:9	8 1:16 3:16 50:5	
2014 20:19	20s 43:5	4.8 106:3	55:22 61:14	
84:13 98:19	21 1:18	40 67:16 68:3	71:15 73:10	
104:12,25	21st 79:24	120:24 134:25	74:22,25 75:16	
2015 20:19	23rd 17:4,14,15	400 37:16	76:20 79:10	
2017 15:16	110:19,24	135:16	80:3,18 82:2	
103:16		41st 2:3	82:16 105:3,6	

From: McInall, Steven G. - VP & Chief Energy & Water Planning
Sent: Friday, December 20, 2019 10:08 AM
To: Gillespie, Jeanie M.
Cc: Hutchinson, Jasen C. - Mgr Corporate Records Compliance
Subject: RE: JEA IRP
Attachments: DRAFT JEA IRP Update_03212019_REV5.pptx

We don't have a draft or a final – I tapped the brakes on it to try to get some alignment with the McKinsey work.

Attached is an update presentation on the study from March.

Let me know if you want further materials. We are expecting to get a draft final in January.

Steve McInall. P.E.

Vice President, Energy and Water Planning
Direct: (904) 665-4309
Mobile: (904) 312-0739

From: Gillespie, Jeanie M.
Sent: Friday, December 20, 2019 9:06 AM
To: McInall, Steven G. - VP & Chief Energy & Water Planning
Cc: Hutchinson, Jasen C. - Mgr Corporate Records Compliance
Subject: FW: JEA IRP
Importance: High

Good morning Steve,

Can you please send me the new IRP as requested by OGC below. Last we discussed, you advised it is not complete, but they would like the draft if still not complete. Thanks so much!

Jeanie Gillespie

Public Records Compliance Specialist
Direct: (904) 665-7309



From: Hutchinson, Jasen C. - Mgr Corporate Records Compliance <hutcjc@jea.com>
Sent: Friday, December 20, 2019 9:02 AM
To: Gillespie, Jeanie M. <gilljm2@jea.com>



Subject: FW: JEA IRP
Importance: High

Can you help with this one? Thanks!

Jasen

From: Powell, Stephen <SPowell@coj.net>
Sent: Friday, December 20, 2019 8:53 AM
To: Hutchinson, Jasen C. - Mgr Corporate Records Compliance <hutcjc@jea.com>
Cc: Granat, Sean <SGranat@coj.net>; Garrett, Christopher <GarrettC@coj.net>; Teodorescu, Adina <Teodores@coj.net>;
Phillips, Jon <JPhillips@coj.net>; Harrell, Sonya <SonyaH@coj.net>
Subject: JEA IRP
Importance: High

[External Email - Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.]

Jasen,

We have been made aware of the existence of a document in progress since 2018 called an "Integrated Resource Plan." We're informed that it should have reached, at least, draft form by the summer of 2019. I believe this is a 40-year plan, but not sure.

Can you assist us in locating this document in its current form (including all prior drafts)?

Thank you,
Steve

Stephen J. Powell
Chief, Tort & Employment Litigation
Office of General Counsel
City of Jacksonville
117 West Duval Street, Suite 480
Jacksonville, FL 32202
904-255-5071
904-255-5120 (facsimile)
SPowell@coj.net

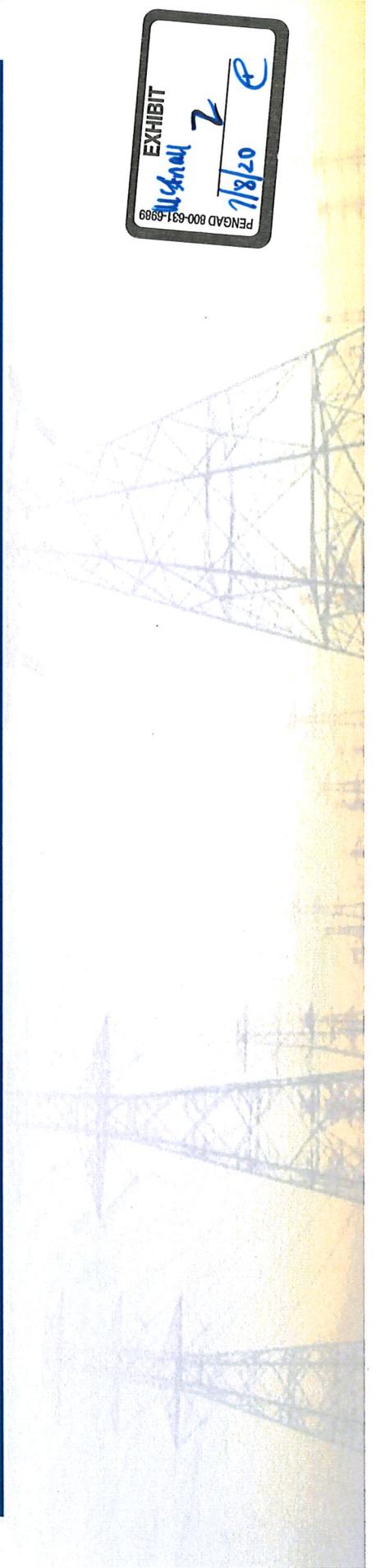
Disclaimer regarding Uniform Electronic Transactions Act (UETA) (Florida Statutes Section 668.50): If this communication concerns negotiation of a contract or agreement, UETA does not apply to this communication; contract formation in this matter shall occur only with manually-affixed original signatures on original documents.

Preliminary Results – Subject to Change



JEA Electric System Integrated Resource Plan (IRP)

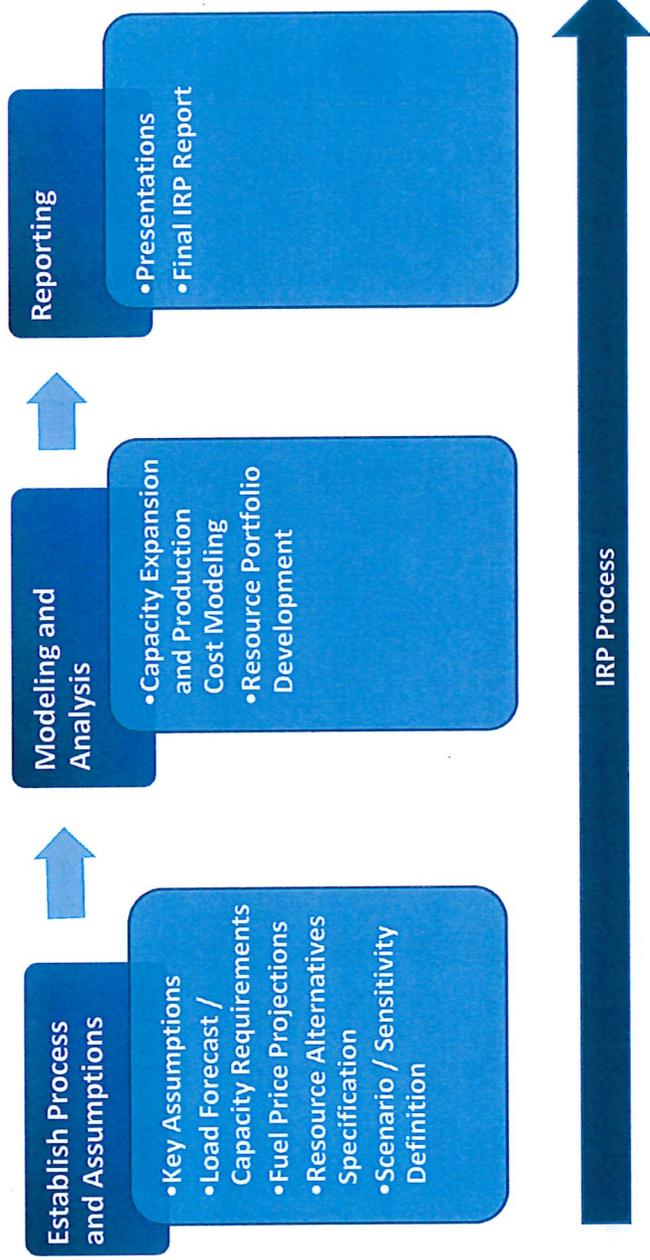
March 21, 2019



Introduction

- Brad Kushner, Executive Consultant, nFront Consulting LLC
 - Prior to nFront, Director of Electric System Resource Planning Services offering for Black & Veatch Management Consulting
 - Provided electric system resource planning services to JEA while with Black & Veatch since early 2000s, including:
 - 2011-2012 JEA Integrated Resource Plan
 - 2004, 2009, 2014, and current Florida Energy Efficiency Conservation Act (“FEECA”)

IRP Process



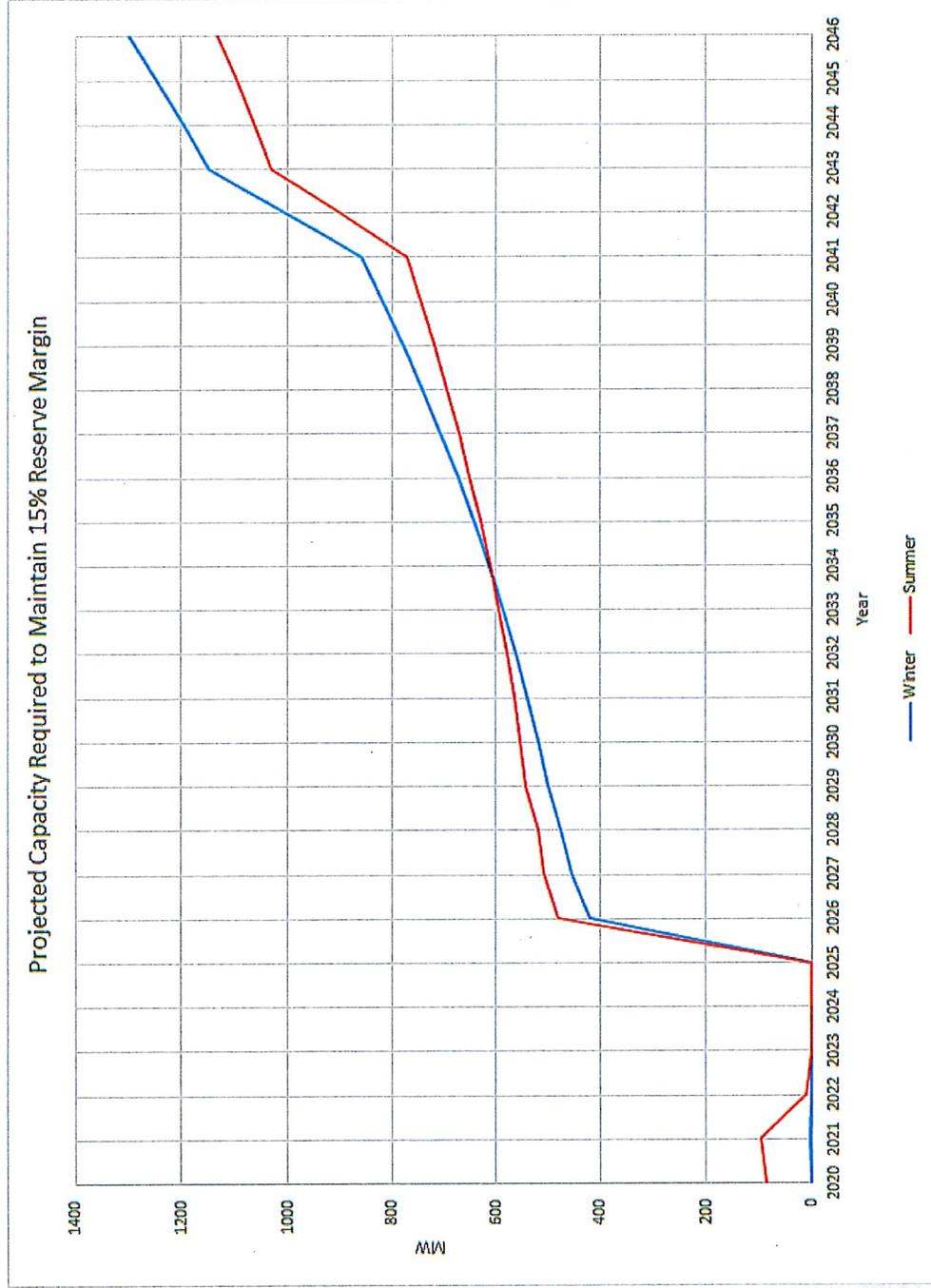
- Development of IRP is a complex process
- Intend to use base IRP expansion plan in current FEECA process
 - FEECA is undertaken every 5 years, and establishes JEA’s numeric conservation goals that are approved by the Florida Public Service Commission



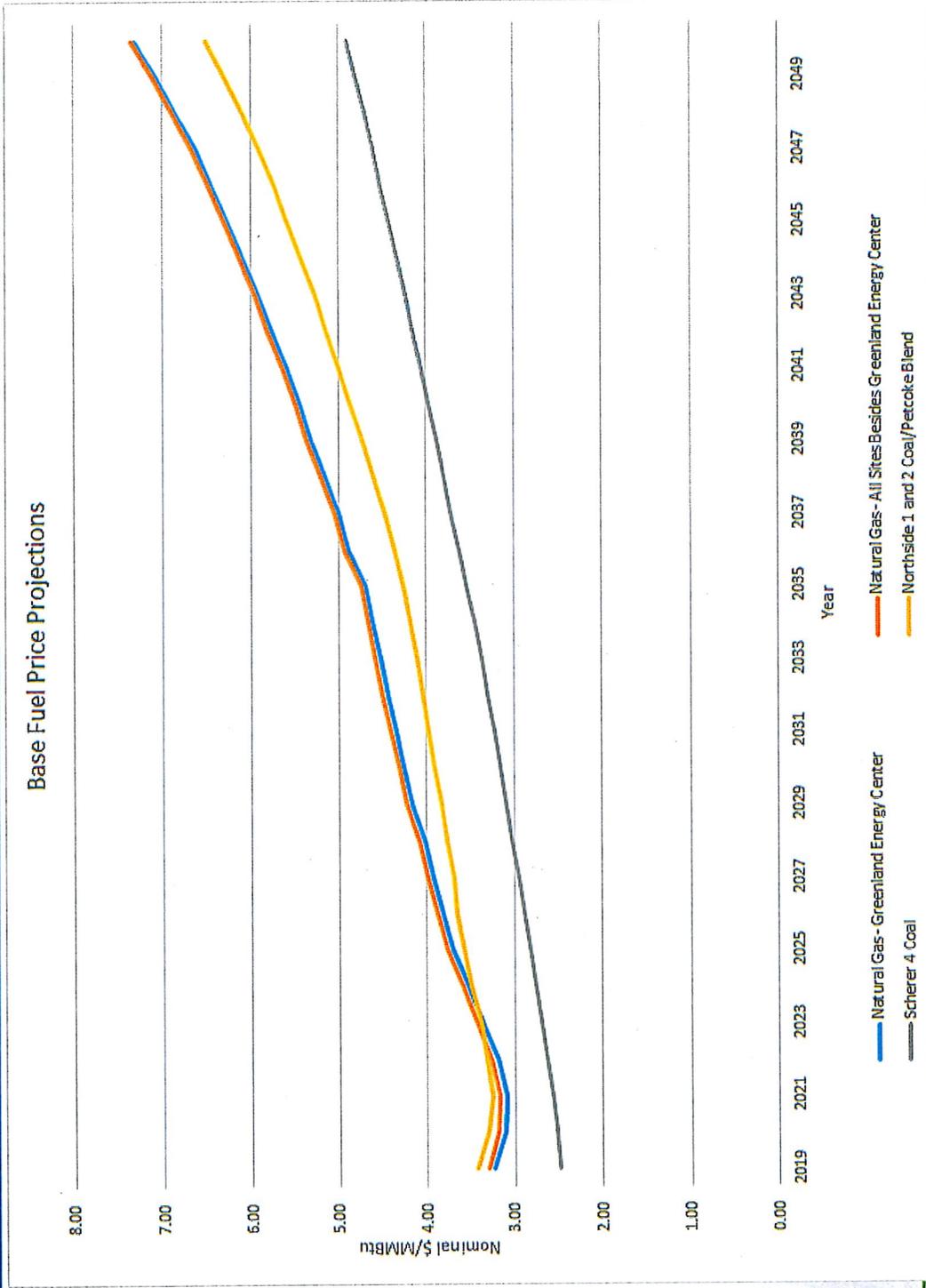
Baseline Assumptions



Projected Capacity Requirements



Fuel Price Projections



Supply-Side Options (following LCOE Screening – see subsequent slides)

	Utility Scale Solar PV		Combined Cycles				Reciprocating Engines	Simple Cycle Combustion Turbines		
	Solar PV w/o Storage (Note 1)	Solar PV w/ 4 Hours Storage (Notes 1, 2)	GE 7HA02 1x1	GE 7FA05 1x1	Greenland Energy Center 1x1 CC Conversion (Note 3)	Greenland Energy Center 2x1 CC Conversion (Note 3)		GE LMS100	GE 7FA05 SCCT	GE 7HA02 SCCT
Installed Cost (\$/kW based on full load average ambient output shown below)										
Capital Cost per kW (2018 \$)	723	1,503	893	1,183	1,781	1,594	1,434	1,068	476	485
Average Day Ratings										
Capacity (MW)	75	75	545	350	310	622	45	109	223	342
Heat Rate (HHV, Btu/kWh)	N/A	N/A	6,519	6,843	6,935	6,905	7,962	8,581	9,675	9,079
Summer Ratings										
Capacity (MW)	75	75	508	325	290	582	45	90	207	314
Heat Rate (HHV, Btu/kWh)	N/A	N/A	6,535	6,832	7,021	6,990	7,967	8,897	9,774	9,206
Winter Ratings										
Capacity (MW)	0 (at Winter Peak)	75	559	349	321	644	45	113	232	352
Heat Rate (HHV, Btu/kWh)	N/A	N/A	6,592	6,938	6,977	6,947	7,962	8,472	9,489	8,934
Variable O&M (2018 \$/MWh)	0	0	2.26	2.67	2.72	2.64	9.59	4.16	14.92	17.41
Fixed O&M (2018 \$/kW-year)	12.00	20.48	6.95	9.90	10.94	6.58	42.11	12.27	8.00	5.64

Notes:

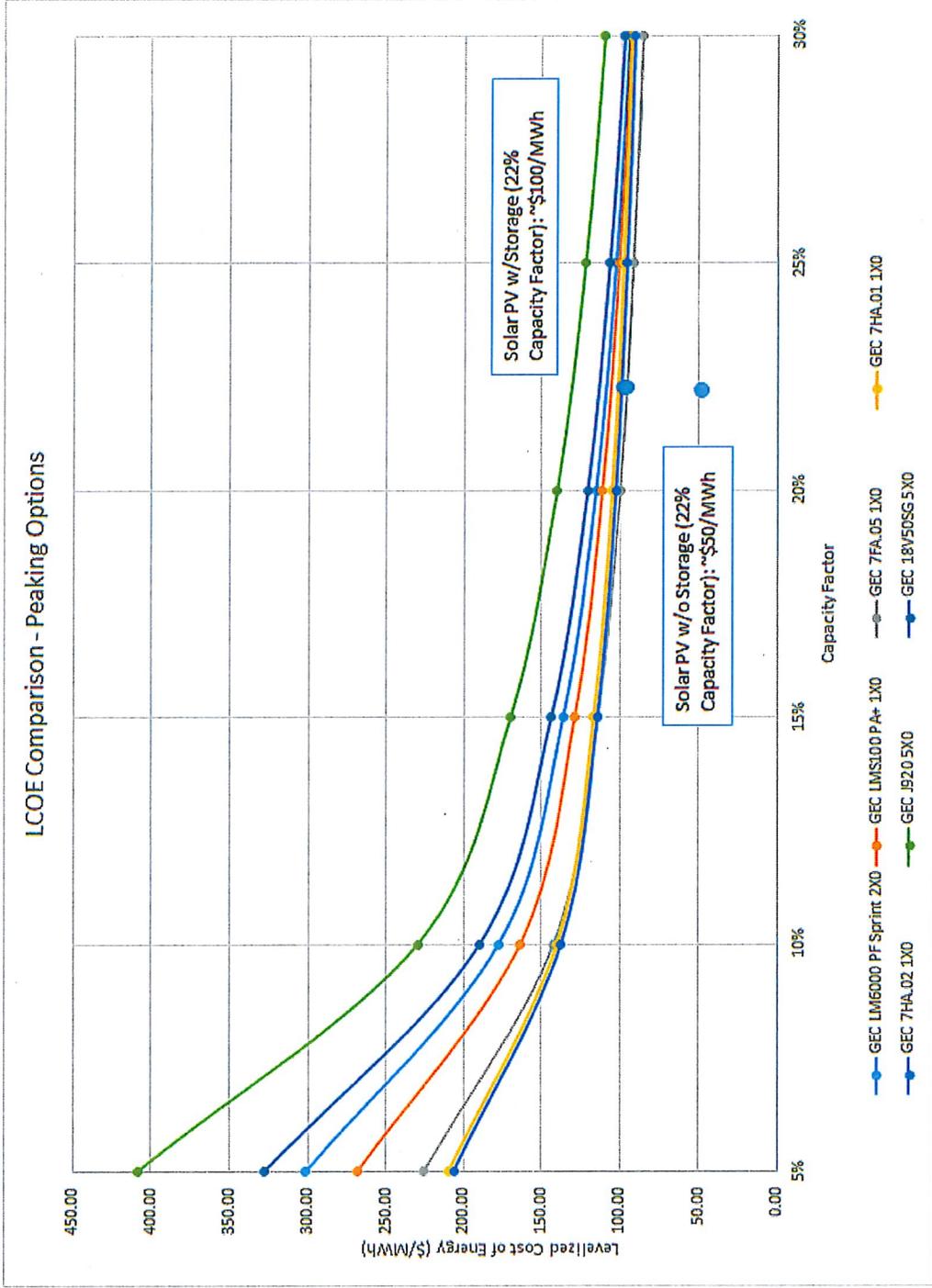
- (1). Capital Cost per kW for Solar PV w/o Storage and Solar PV with Storage do not reflect projected decline in costs; assumed to be 6% annually for 5 years. 30% Investment Tax Credit is not reflected but is accounted for in economic analyses.
- (2). Solar PV w/Storage does not include costs for battery capacity refreshes, which may be required over time to maintain storage capability.
- (3). Capital Cost per kW for Greenland Energy Center Combined Cycle Conversions reflect incremental capacity associated with conversions; Capacity and O&M shown reflect entire capacity of converted GEC Combined Cycles

Levelized Cost of Energy and Expansion Planning/Production Cost Modeling

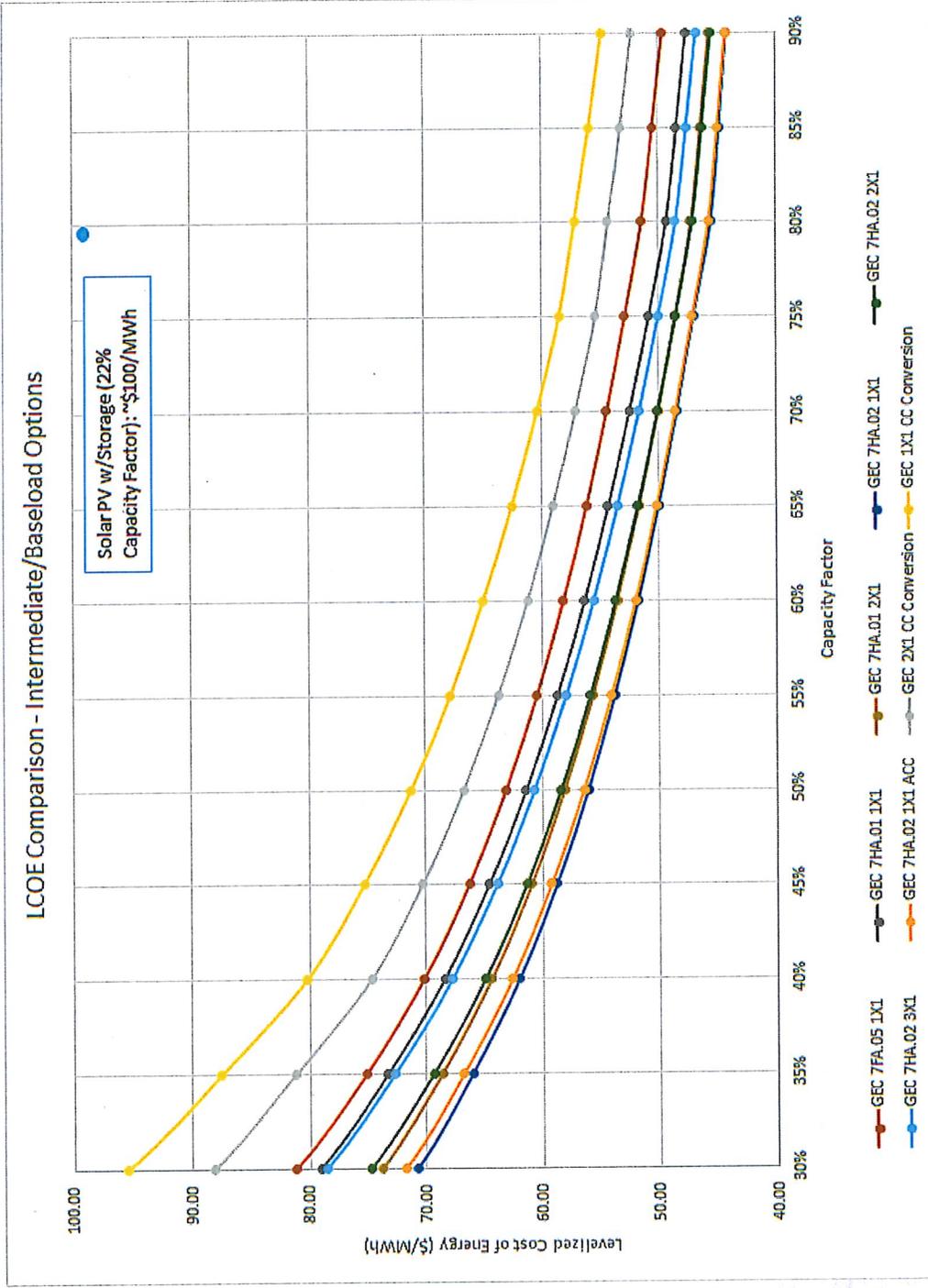


Preliminary Results – JEA Electric System IRP – March 21, 2019

LCOE – Peaking Options



LCOE – Intermediate/Baseload Options



Scenarios and Sensitivities



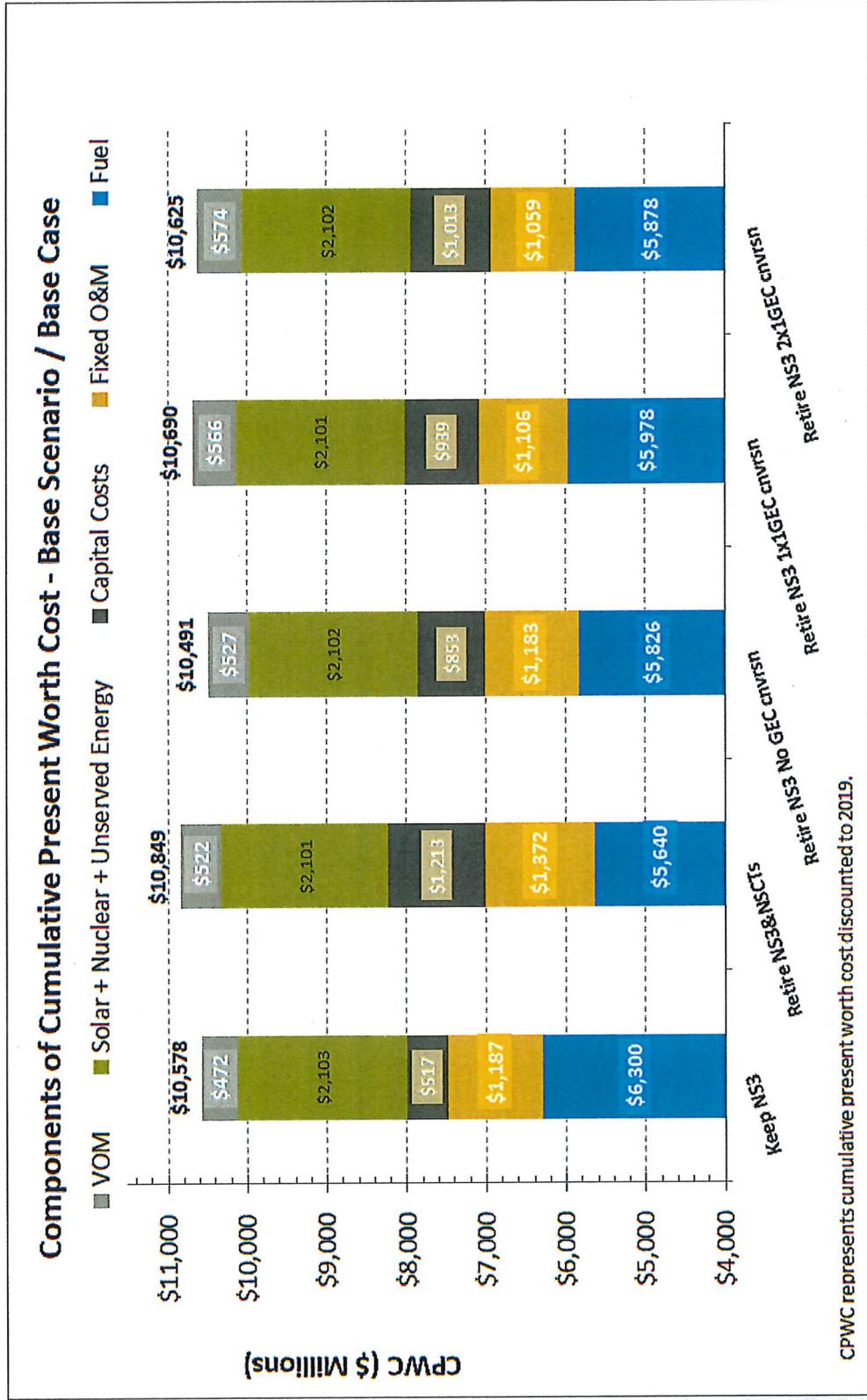
Scenario Matrix

Area	Metric	Baseline	Load Erosion	Increased Electrification	Green Economy
Financial	Interest During Construction & Discount Rate	4.50%	6%	4.50%	4.50%
	Escalation Rate	2.00%	3.00%	2.00%	2.00%
Demand	Total Net Energy Requirements Forecast	AAGR: 0.87%	Energy requirements decline by 1.0%/year for 10 years; then no growth	Energy requirements increase at 2.0%/year until achieve +20% over Baseline forecast; then Baseline AAGR of 0.87% thereafter (See Comment)	AAGR: 0.89%
	Net Firm Peak Demand Forecast	AAGR Winter: 0.86% AAGR Summer: 0.70%	Winter and Summer net firm peak demand declines at 1.0% for 10 years; then no growth	Winter and Summer net firm peak demand increase at 2.0%/year until achieve +20% over Baseline forecast; Baseline Winter and Summer AAGR thereafter	AAGR Winter: 1.6% AAGR Summer: 1.6%
	EE/Conservation	Current Portfolio	Embedded in Energy Forecast	Embedded in Energy Forecast	Embedded in Energy Forecast
	Direct Load Control	None	None	None	None
	Interruptible Load	Current Portfolio	Embedded in Peak Demand Forecast	Embedded in Peak Demand Forecast	Embedded in Peak Demand Forecast
	PEV	0.5% by 2027 3.6% by 2046	Embedded in Energy and Peak Demand Forecasts	Embedded in Energy and Peak Demand Forecasts	Embedded in Energy and Peak Demand Forecasts
Environmental Regulations	Net Metering	Current Portfolio	Embedded in Energy and Peak Demand Forecasts	Embedded in Energy and Peak Demand Forecasts	Embedded in Energy and Peak Demand Forecasts
	Carbon Tax Rate	None	None	None	~\$11.50/ton in 2020, increasing at 5% annually
Supply	Clean Energy Standard (CES)	None	None	None	Reflect 30% carbon neutral by 2030
	Fuel Cost & Availability	Gas supply remains adequate with moderate pricing	Gas supply remains adequate with moderate pricing	Gas supply remains adequate with moderate pricing	Gas supply inadequate with high pricing
	Construction Cost	Costs increase at inflation	Costs increase at inflation	Costs increase at inflation	Costs increase at inflation through 2020, inflation +1% thereafter
	Unit Retirements	Northside 3: 2025; Solid Fuel: none expected	Northside 3: 2025; Solid Fuel: none expected	Northside 3: 2025; Solid Fuel: none expected	Northside 3: 2025; Solid Fuel: 2030

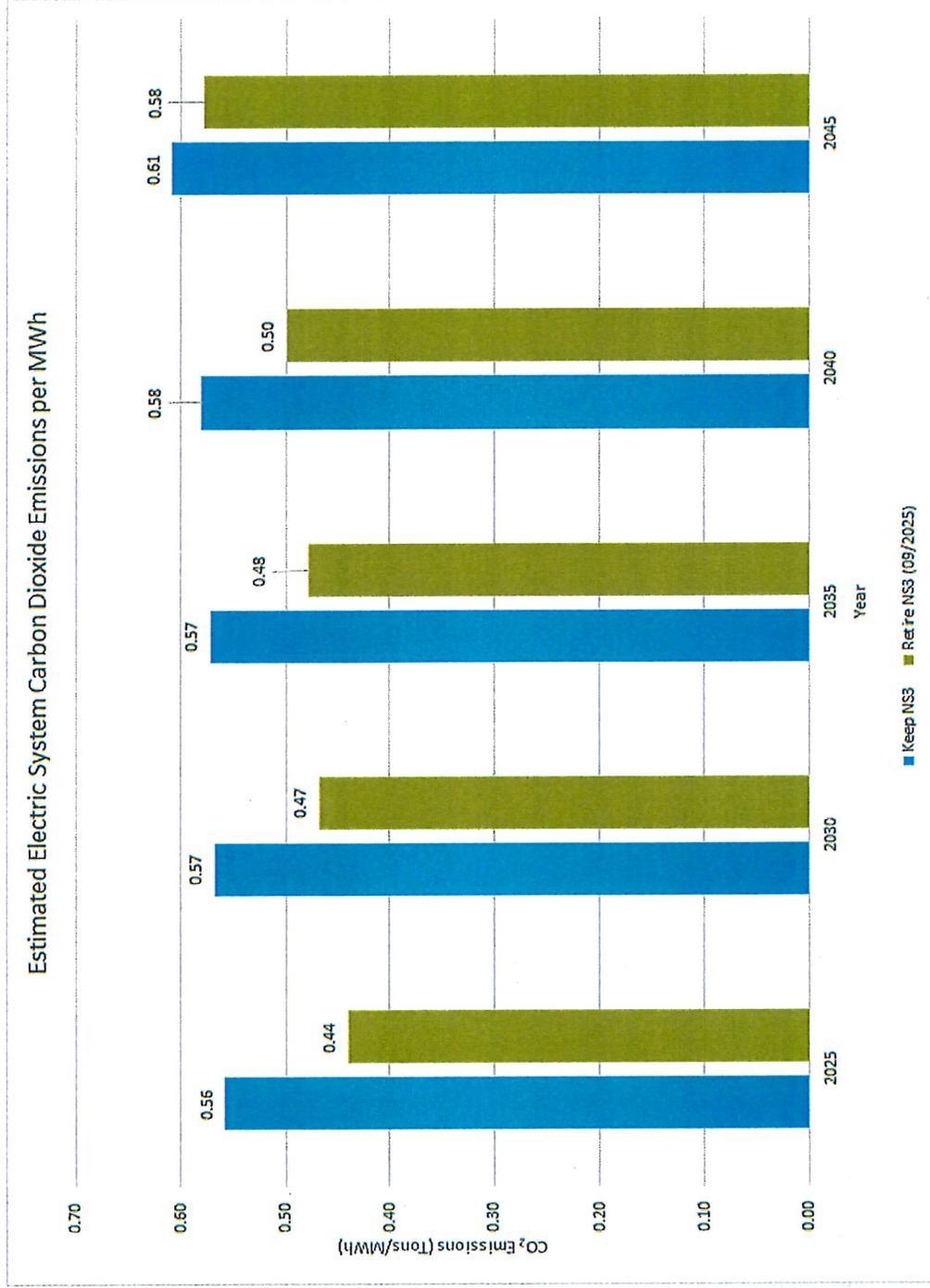
Analysis – Baseline Scenario



CPWC Components – Baseline Analysis



Estimated Carbon Dioxide Emissions per MWh – Baseline Analysis



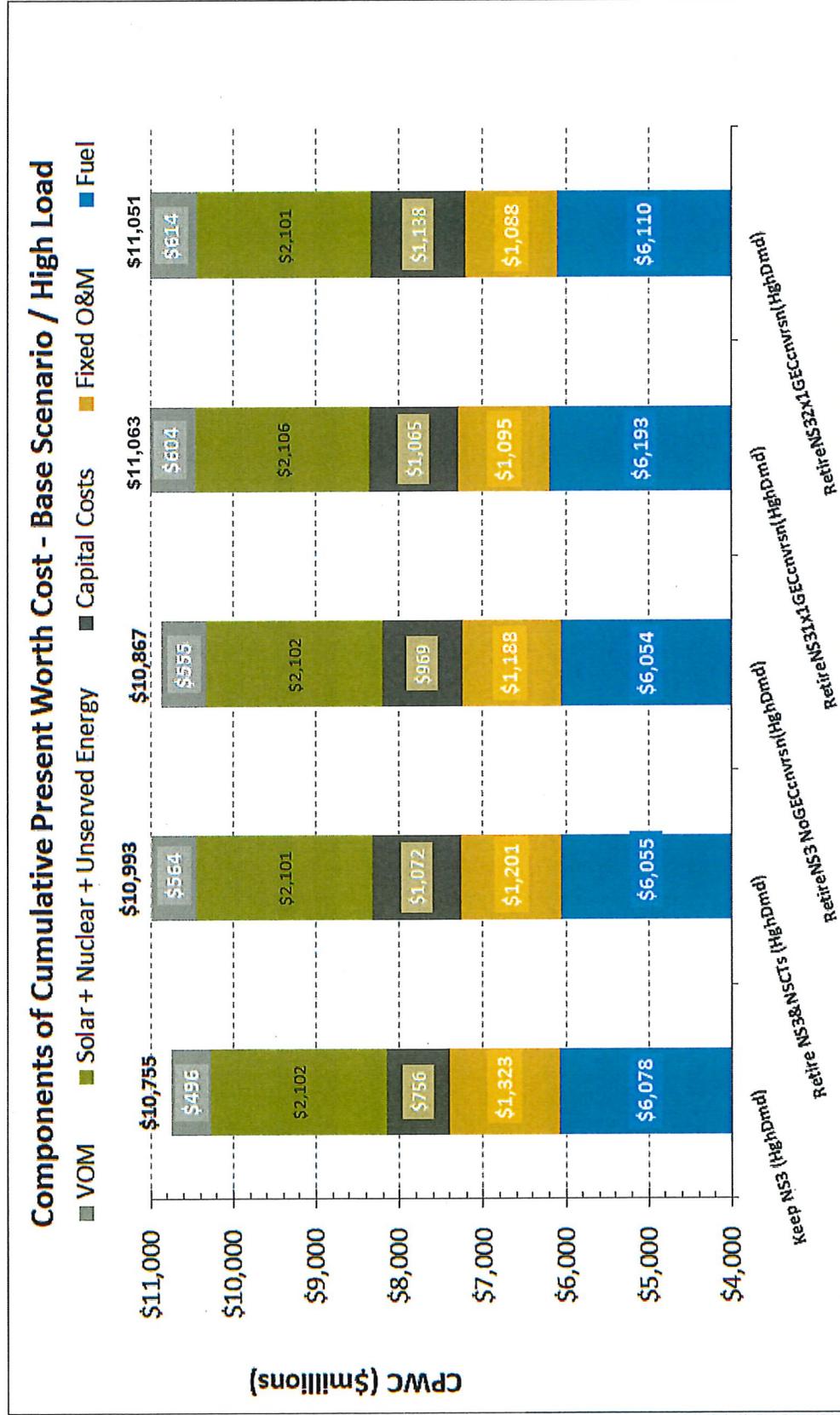
Observations from Expansion Planning and Production Cost Modeling – Baseline Analysis

- Preliminary Results of Base Case/Baseline Scenario:
 - CPWC of case that includes retirement of Northside 3 (9/2025) and new 1x1 7HA.02 combined cycle in 2025 is least cost, but other cases are very close
 - CPWC of case with continued operation of Northside 3 (9/2025) is within 1% of CPWC of least cost case
 - CPWC of case with conversion of the existing simple cycle combustion turbines at Greenland Energy Center to combined cycle (“2x1 GEC CC Conversion”) in 2025 is ~1.3% higher than least cost case
 - CPWC of case with conversion of one of the existing simple cycle combustion turbines at Greenland Energy Center to combined cycle (“1x1 GEC CC Conversion”) in 2025 is ~1.9% higher than least cost case
 - CPWC of case with retirement of Northside 3 and Northside simple cycle CTs is ~3.4% higher than least cost case

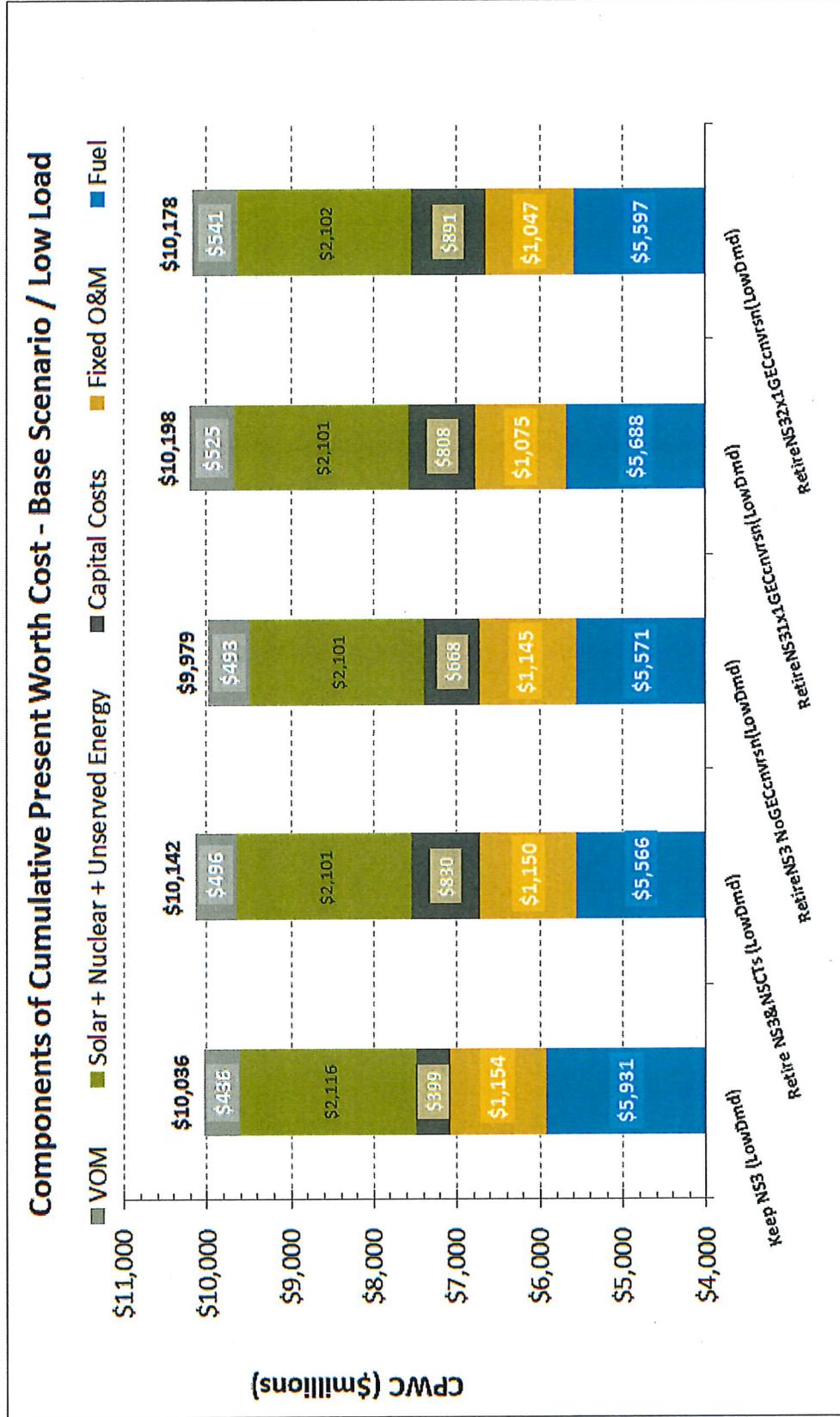
Analysis - Sensitivities and Scenarios



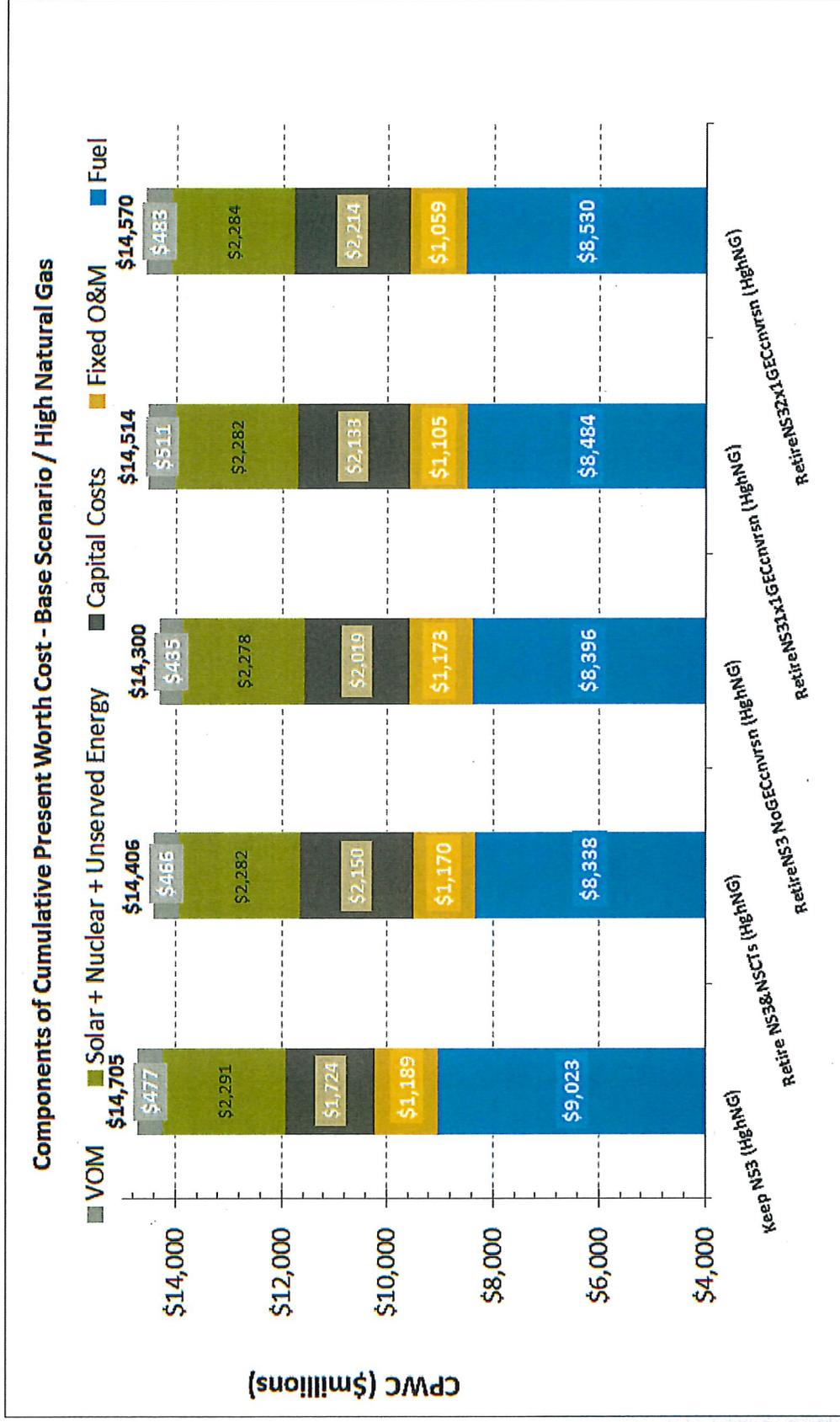
Results of Expansion Planning and Production Cost Modeling – Baseline Scenario/High Load Sensitivity



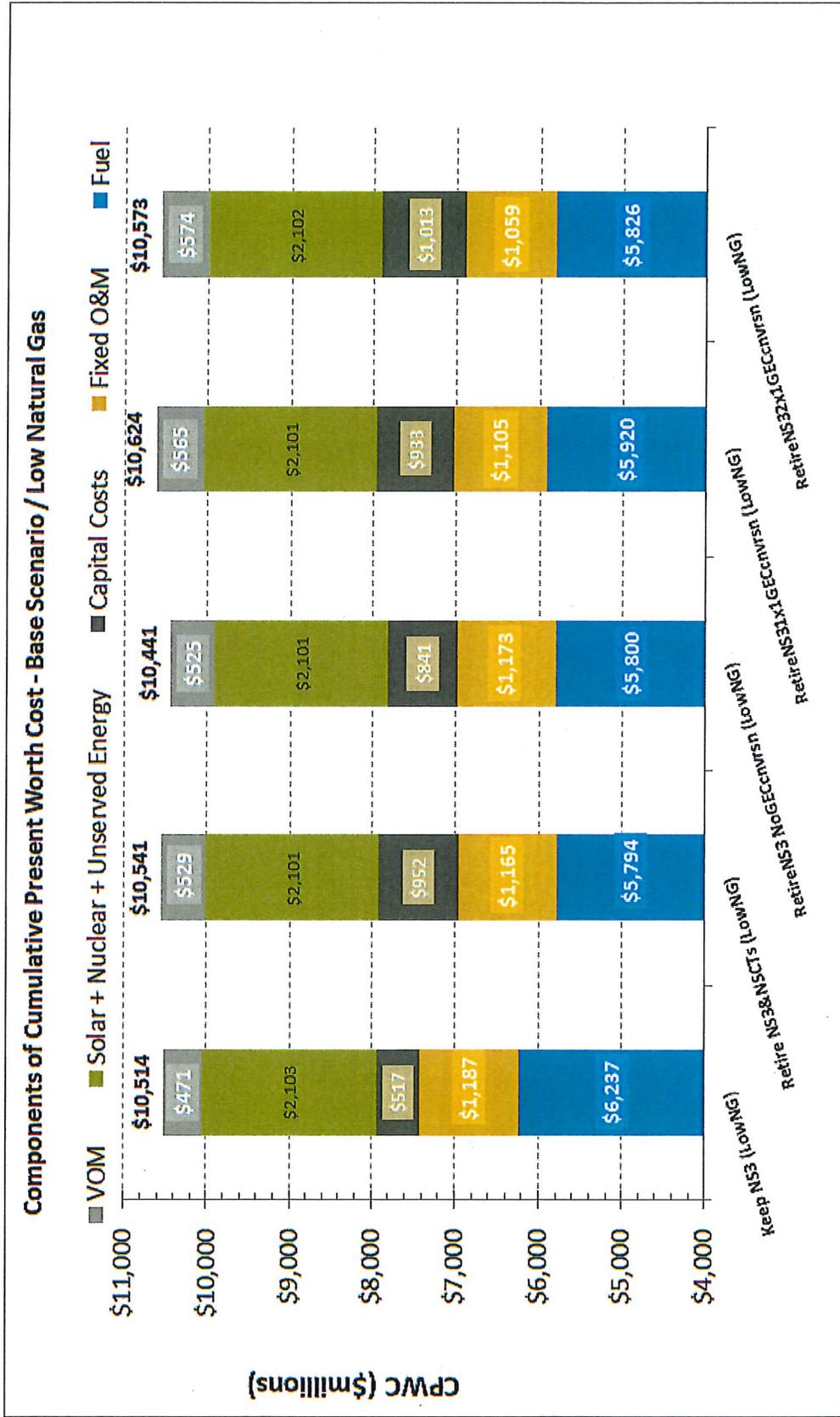
Results of Expansion Planning and Production Cost Modeling – Baseline Scenario/Low Load Sensitivity



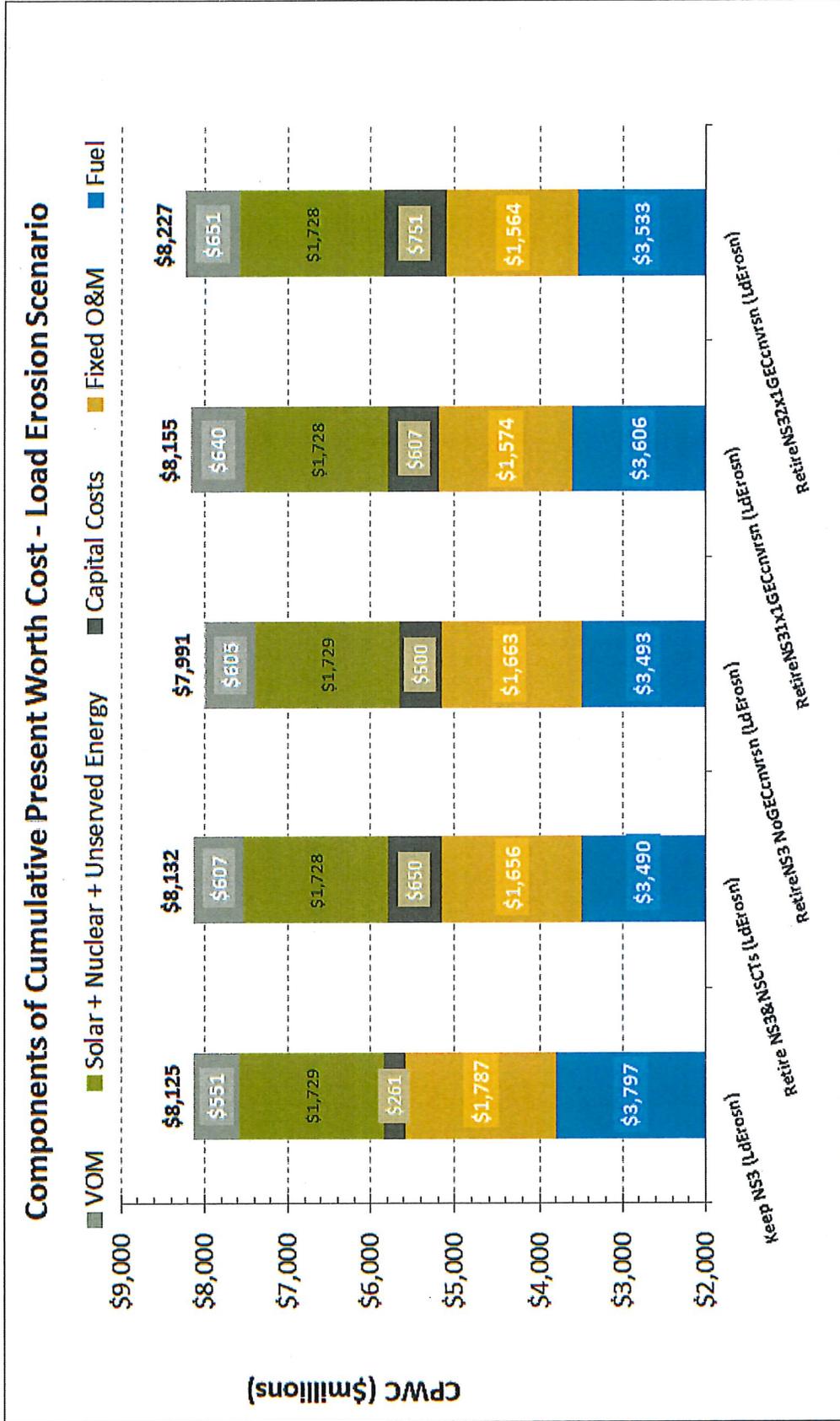
Results of Expansion Planning and Production Cost Modeling – Baseline Scenario/High Natural Gas Sensitivity



Results of Expansion Planning and Production Cost Modeling – Baseline Scenario/Low Natural Gas Sensitivity

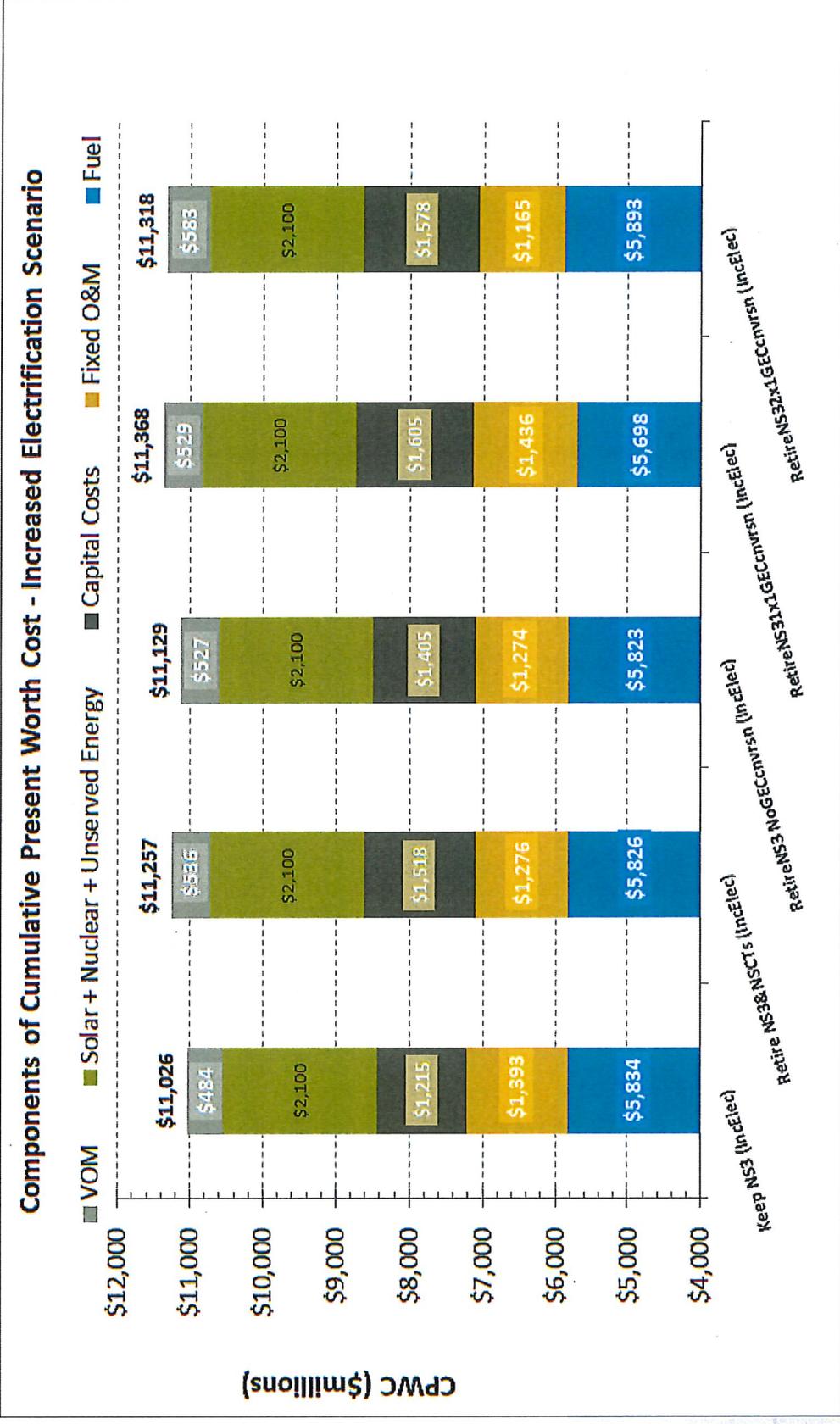


Results of Expansion Planning and Production Cost Modeling – Load Erosion Scenario

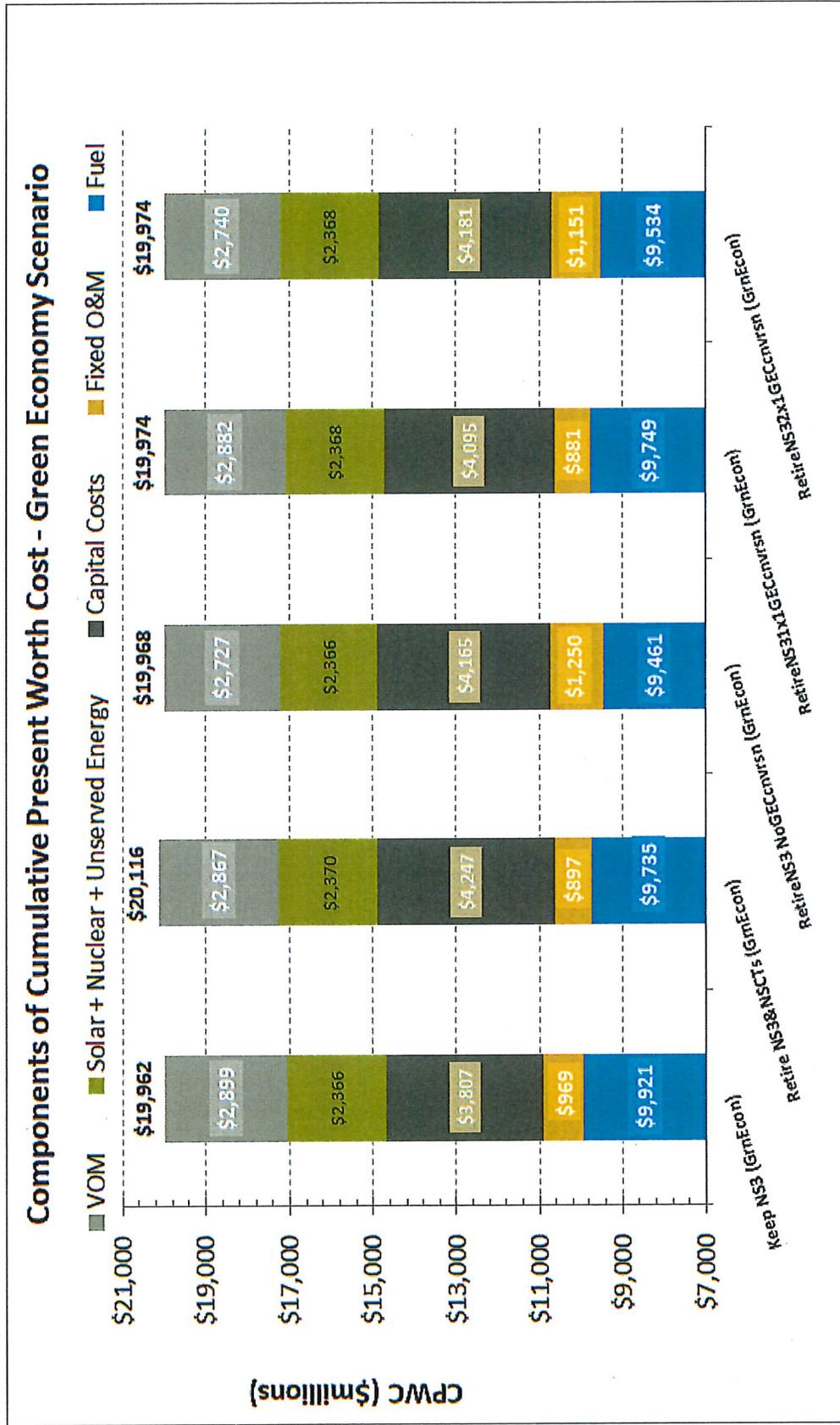


Preliminary Results – JEA Electric System IRP – March 21, 2019

Results of Expansion Planning and Production Cost Modeling – Increased Electrification Scenario



Results of Expansion Planning and Production Cost Modeling – Green Economy Scenario



Observations and Next Steps



Overall Observations from Expansion Planning and Production Cost Modeling

- In general, CPWCs of expansion plans are close to one another
 - When comparing plans including continued operation of Northside 3, retirement of Northside 3 (9/2025), and GEC combined cycle conversion:
 - Comparison of CPWCs within each scenario/sensitivity are within ~ 1% to 3% of one another
 - CPWCs are often less than 1% different between expansion plans
 - Plans with retirement of Northside 3 (9/2025) and new combined cycle in 2025 are generally lowest in CPWC; differentials in CPWC are small
- Other considerations beyond CPWC related to Northside 3 retirement and construction of new combined cycle:
 - Condition Assessment
 - Regulations beyond 316(b)
 - Reliability
 - Safety
 - Capital Investment
 - Efficiency
 - Operational Flexibility

Next Steps

- Finalize IRP
- Northside 3 retirement decision
- If move forward with combined cycle (i.e. GEC 1x1 combined cycle or 2x1 combined cycle conversion or new combined cycle):
 - Consider issuing Request for Proposals (RFP) to compare to selected alternative (i.e. GEC CC conversion or new 1x1 combined cycle)
 - New or expansion of existing power plant with 75 MW or more of steam capacity falls under PPSA (see next slide)
 - Other environmental permitting required

PPSA Considerations

- Statutory Criteria and Relevant Considerations:
 - Need for electric system reliability and integrity
 - How does addition of proposed unit help to improve reliability and integrity – for example, can transmission system benefits be quantified
 - Need for adequate electricity at a reasonable cost
 - Is there a “need” for the proposed unit – for example, to maintain reserve margin
 - Need for fuel diversity and supply reliability
 - Would need to demonstrate reliable supply of fuel for proposed unit
 - Whether the proposed plant is the most cost-effective alternative available
 - Consider power supply request for proposals (RFP) to demonstrate cost-effectiveness
 - Whether renewable energy sources and technologies, as well as conservation measures, are utilized to the extent reasonably available
 - Consideration of the conservation measures taken by or reasonably available to the applicant or its members which might mitigate the need for the proposed plant

Reference Material



Preliminary Results – JEA Electric System IRP – March 21, 2019

Levelized Cost of Energy and Expansion Planning/Production Cost Modeling



Preliminary Results – JEA Electric System IRP – March 21, 2019

Levelized Cost of Energy (LCOE)

- The LCOE analysis was developed based on the estimated cost and performance characteristics for the various alternatives
- LCOE provides a single, levelized cost per MWh (or kWh) lifecycle operating cost estimate for each of the supply-side options
- The LCOE analysis was performed at various assumed levels of annual operation (i.e. capacity factor, or amount of energy generated each year) for each supply-side option
- The LCOE analysis considered (as appropriate for each supply-side option) capital costs, operating costs, and fuel costs and expressed the total annual cost and corresponding energy generation on a nominal (current year) and present value basis

Levelized Cost of Energy (LCOE)

- The cumulative present value costs were then divided by the sum of the annual present worth factors to calculate the lifecycle levelized cost of energy for each option
- Such an approach is widely used in comparing the relative economics of various supply-side options to determine if one (or more) option may be consistently more costly than the others across a range of possible capacity factors, allowing an initial list of supply-side options to be reduced to a smaller number to be considered in subsequent evaluations

Expansion Planning and Production Cost Modeling

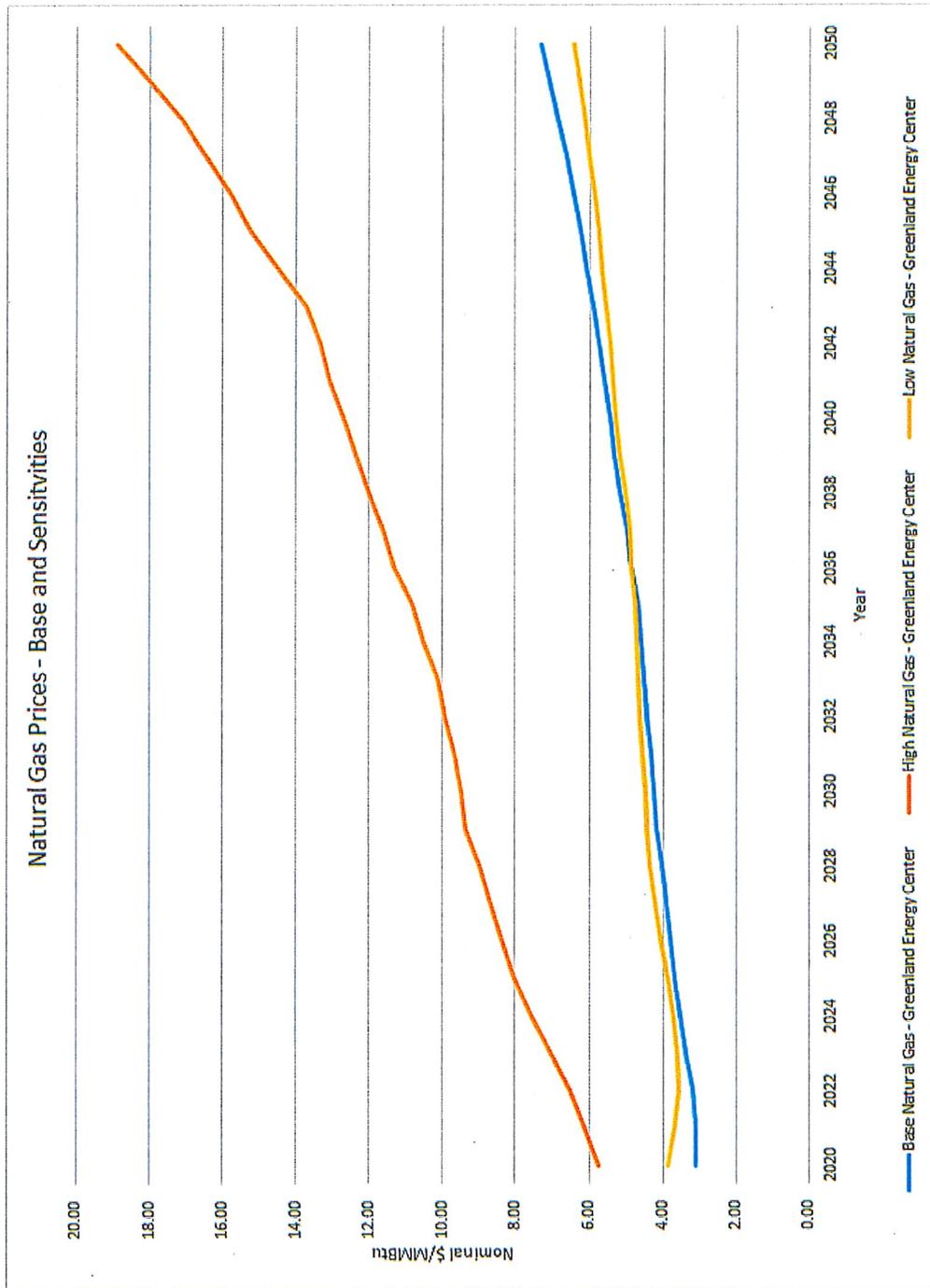
- Expansion planning and production cost modeling was performed to evaluate various resource plans under numerous sensitivities/scenarios
- Used Strategist™ and ProMod™, industry-accepted expansion planning and production cost models licensed by ABB (formerly Ventyx)
- Analyzed cumulative present worth costs (CPWCs), which represent the present value of JEA's system costs over the study period, including variable and fixed O&M costs, capital costs for new unit additions, costs for nuclear and solar purchases, fuel costs, and CO2 emissions costs (for evaluations in which emissions of CO2 are assumed to be regulated)
- Results are presented in subsequent slides

Scenarios and Sensitivities

Scenarios and Sensitivities

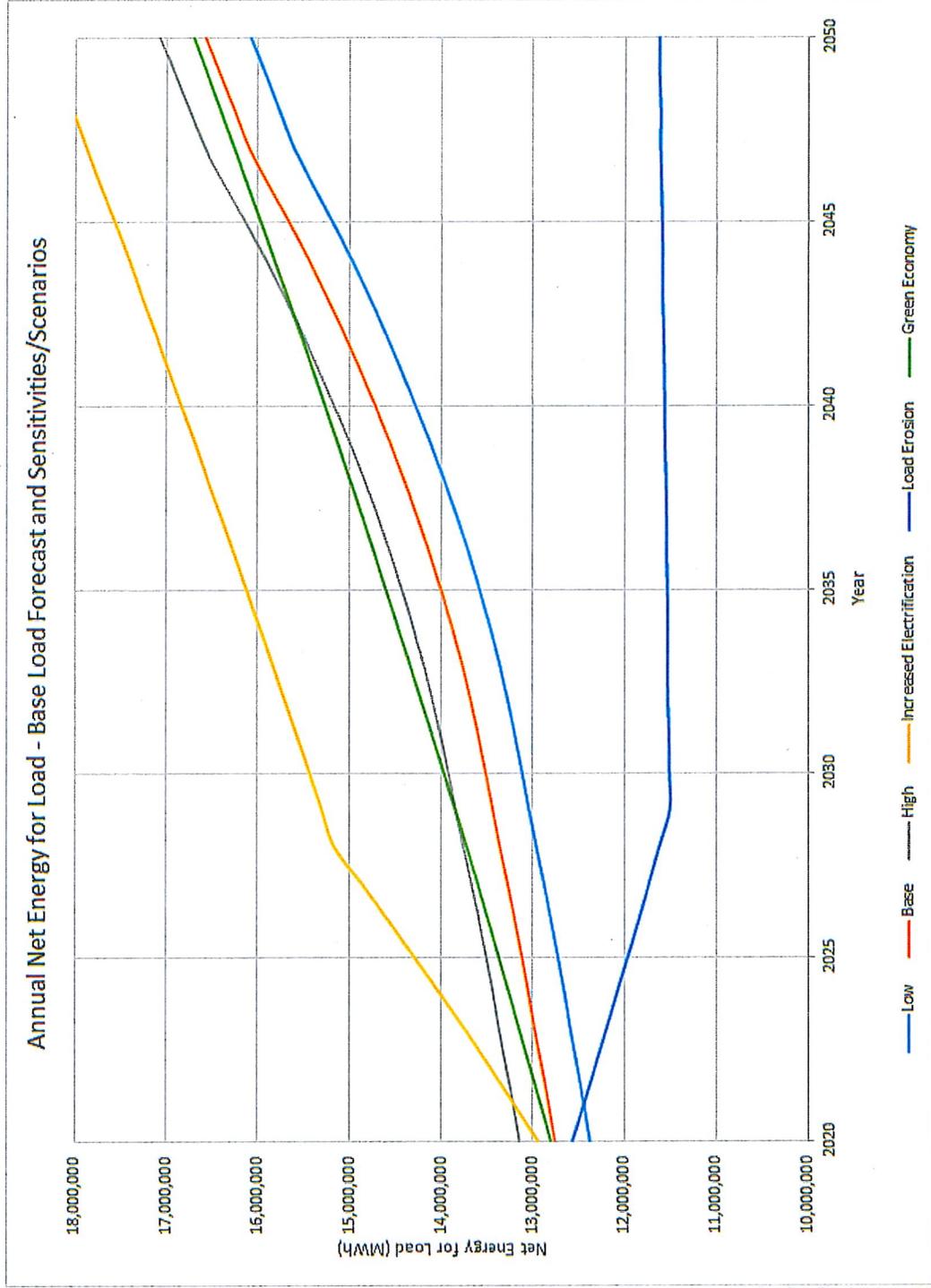
- Baseline Scenario:
 - Retirement of Northside 3 in 9/2025
 - No carbon dioxide emissions regulations
 - No clean energy/renewable energy standards
 - Baseline load forecast, fuel price projections, capital costs for new construction
- Considerations and Sensitivities under Baseline Scenario:
 - No Northside 3 retirement (analyzed for all sensitivities)
 - Retirement of Northside simple cycles (analyzed for all sensitivities)
 - High and low load sensitivities
 - Natural gas price sensitivities
- Additional Scenarios:
 - Load Erosion
 - Increased Electrification
 - Green Economy

Natural Gas Price Sensitivities



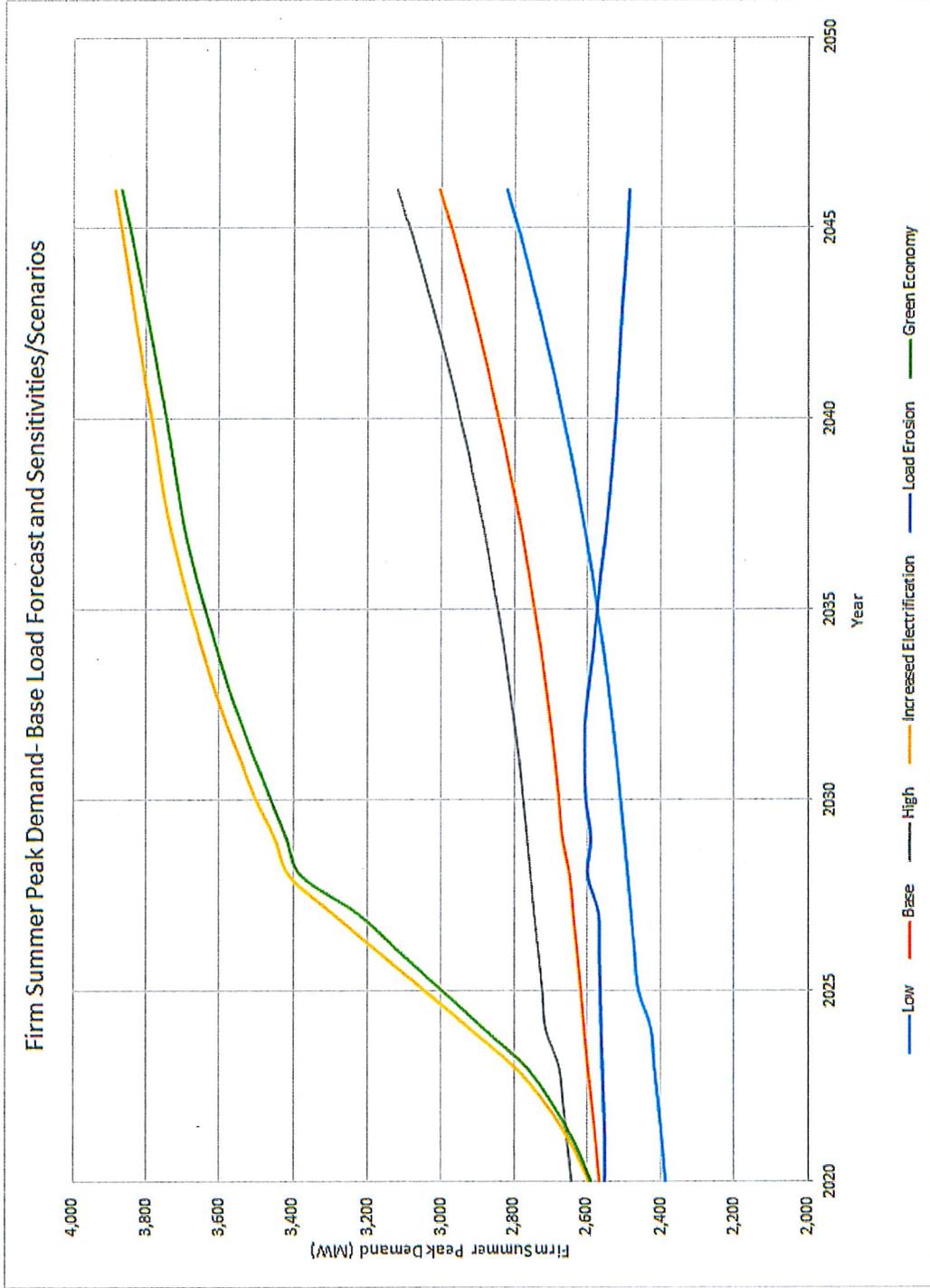
Preliminary Results – JEA Electric System IRP – March 21, 2019

Load Sensitivities and Scenarios



Preliminary Results – JEA Electric System IRP – March 21, 2019

Load Sensitivities and Scenarios



Observations and Next Steps



Observations from Expansion Planning and Production Cost Modeling – Sensitivity and Scenario Analyses

- High Load Sensitivity
 - Least cost plan includes continued operation of Northside 3 and new 1x1 7HA.02 combined cycle in 2025
 - Plan with retirement of Northside 3 (9/2025) includes new 1x1 7HA.02 combined cycle in 2025; ~ 1% higher in CPWC than least cost plan
 - Plans with retirement of Northside 3 (9/2025) and either 1x1 GEC CC Conversion or 2x1 GEC CC Conversion are ~ 2.7% to 2.8% higher in CPWC than least cost plan
- Low Load Sensitivity
 - Least cost plan includes retirement of Northside 3 (9/2025) and new 1x1 7HA.02 combined cycle in 2025
 - Plan with continued operation of Northside 3 is ~ 0.6% higher in CPWC than least cost plan
 - Plans with retirement of Northside 3 (9/2025) and either 1x1 GEC CC Conversion or 2x1 GEC CC Conversion are ~ 2.0% to 2.2% higher in CPWC than least cost plan

Observations from Expansion Planning and Production Cost Modeling – Sensitivity and Scenario Analyses

- High Natural Gas Sensitivity
 - Least cost plan includes retirement of Northside 3 (9/2025) and new 1x1 7HA.02 combined cycle in 2025
 - Plan with continued operation of Northside 3 is ~ 2.8% higher in CPWC than least cost plan
 - Plans with retirement of Northside 3 (9/2025) and either 1x1 GEC CC Conversion or 2x1 GEC CC Conversion are ~ 1.5% to 1.9% higher in CPWC than least cost plan
- Low Natural Gas Sensitivity
 - Least cost plan includes retirement of Northside 3 (9/2025) and new 1x1 7HA.02 combined cycle in 2025
 - Plan with continued operation of Northside 3 is ~ 0.7% higher in CPWC than least cost plan
 - Plans with retirement of Northside 3 (9/2025) and either 1x1 GEC CC Conversion or 2x1 GEC CC Conversion are ~ 1.3% to 1.8% higher in CPWC than least cost plan

Observations from Expansion Planning and Production Cost Modeling – Sensitivity and Scenario Analyses

- Load Erosion Scenario
 - Least cost plan includes retirement of Northside 3 (9/2025) and new 1x1 7HA.02 combined cycle in 2026
 - Plan with continued operation of Northside 3 is ~ 1.7% higher in CPWC than least cost plan
 - Plans with retirement of Northside 3 (9/2025) and either 1x1 GEC CC Conversion or 2x1 GEC CC Conversion are ~ 2.1% to 3% higher in CPWC than least cost plan
- Increased Electrification Scenario
 - Least cost plan includes continued operation of Northside 3 and new 1x1 7HA.02 combined cycle in 2025
 - Plan with retirement of Northside 3 (9/2025) includes new 1x1 7HA.02 combined cycle in 2025; ~ 1% higher in CPWC than least cost plan
 - Plans with retirement of Northside 3 (9/2025) and either 1x1 GEC CC Conversion or 2x1 GEC CC Conversion are ~ 2.7% to 3.1% higher in CPWC than least cost plan

Observations from Expansion Planning and Production Cost Modeling – Sensitivity and Scenario Analyses

- Green Economy Scenario
 - Least cost plan includes continued operation of Northside 3 and GEC 1x1 combined cycle conversion in 2025
 - Plan with retirement of Northside 3 (9/2025) includes new 1x1 7HA.02 combined cycle in 2025; CPWC is essentially a “break-even” with least cost plan
 - Plans with retirement of Northside 3 (9/2025) and either 1x1 GEC CC Conversion or 2x1 GEC CC Conversion essentially “break-even” with least cost plan

From: McInall, Steven G. - Dir, Electric Production Resource Planning <mcinsg@jea.com>
Sent: Monday, September 10, 2018 10:03 AM
To: Crawford, Juli E. - Manager - Financial Planning & Rates
Subject: FW: Electrification Presentation
Attachments: JEA-ICF Presentation to JEA Board - CSMD 9-10-2018.pptx

FYI. Good luck working this in with your "gloom and doom" presentation.

Steve McInall. P.E.

Director, Electric Production Resource Planning
Direct: (904) 665-4309
Mobile: (904) 312-0739

From: Nichols, Vicki D. - Dir Customer Solutions & Market Development
Sent: Monday, September 10, 2018 9:54 AM
To: McInall, Steven G. - Dir, Electric Production Resource Planning <mcinsg@jea.com>
Subject: Electrification Presentation

Steve,
I appreciate your helpful feedback on our EV presentation. We made some key additions and it set a tone for further alignment with forecasts and financial performance. Here is a copy of the final just finished Friday. Really appreciate your teamwork.

Vicki D. Nichols
Director, Customer Solutions & Market Development
JEA

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Jacksonville, FL 32202-3139
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www.jea.com

JEA is a not-for-profit, community owned utility   



Exhibit 4 - Being Reviewed

From: McInall, Steven G. - Dir, Electric Production Resource Planning <mcinsg@jea.com>
Sent: Monday, September 10, 2018 10:03 AM
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Vicki D. Nichols
Director, Customer Solutions & Market Development
JEA

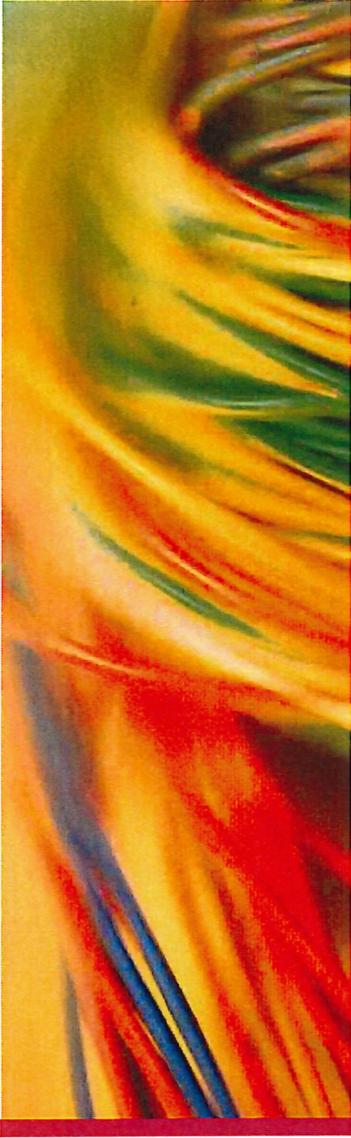
21 West Church Street, T-12
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www.jea.com

JEA is a not-for-profit, community owned utility   

BOARD MEMBER of





Electrification

An Emerging Market

Kerri Stewart

Chief Customer Officer

9/18/2018



Agenda

- JEA Electrification 101
- JEA Strategy To Date
- JEA's Bold Electrification Future
- Introduction to ICF
- Business Drivers for Electrification
- Approaches to Electrification
- Program Examples
- Considerations with Electrification
- A Strategic Path Forward for JEA

Electrification 101: What is Electrification?

Electrification describes the adoption of electric end-use technologies.

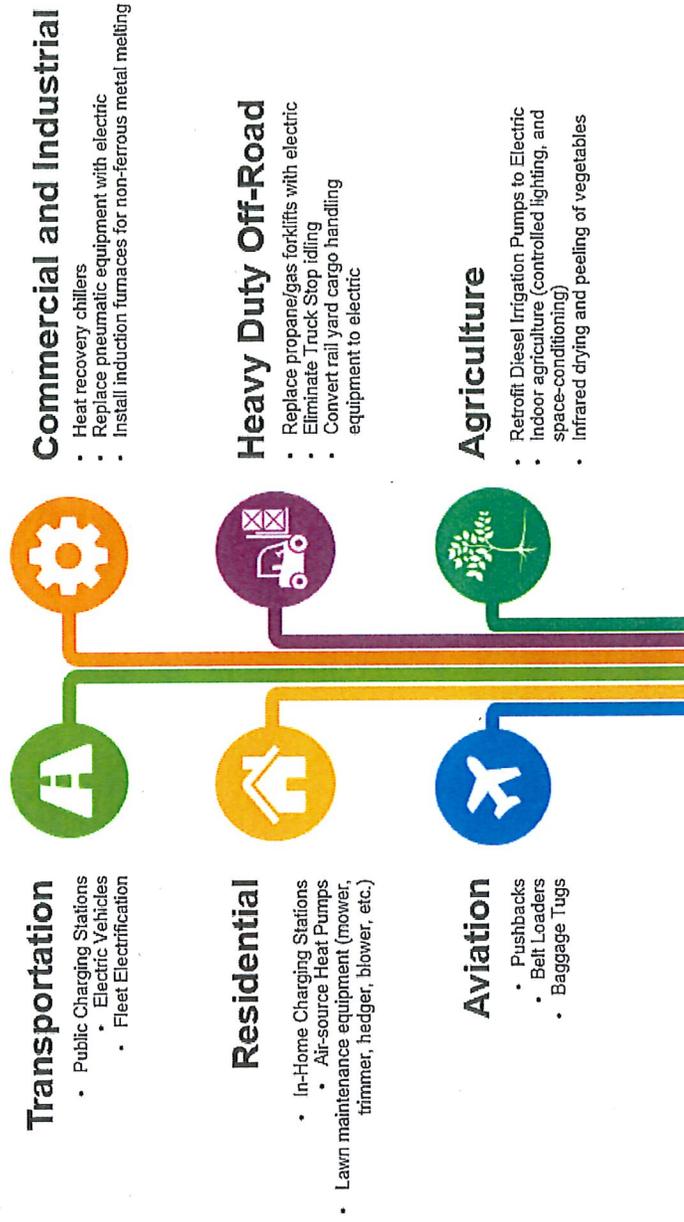
- *Electric Power Research Institute*

Electrification is the shift from any non-electric source of energy to electricity at the point of final consumption.

- *National Renewable Energy Lab*

Beneficial Electrification requires that it be cost-effective for JEA, good for all customers (whether they participate in the program or not), and good or neutral for the environment.

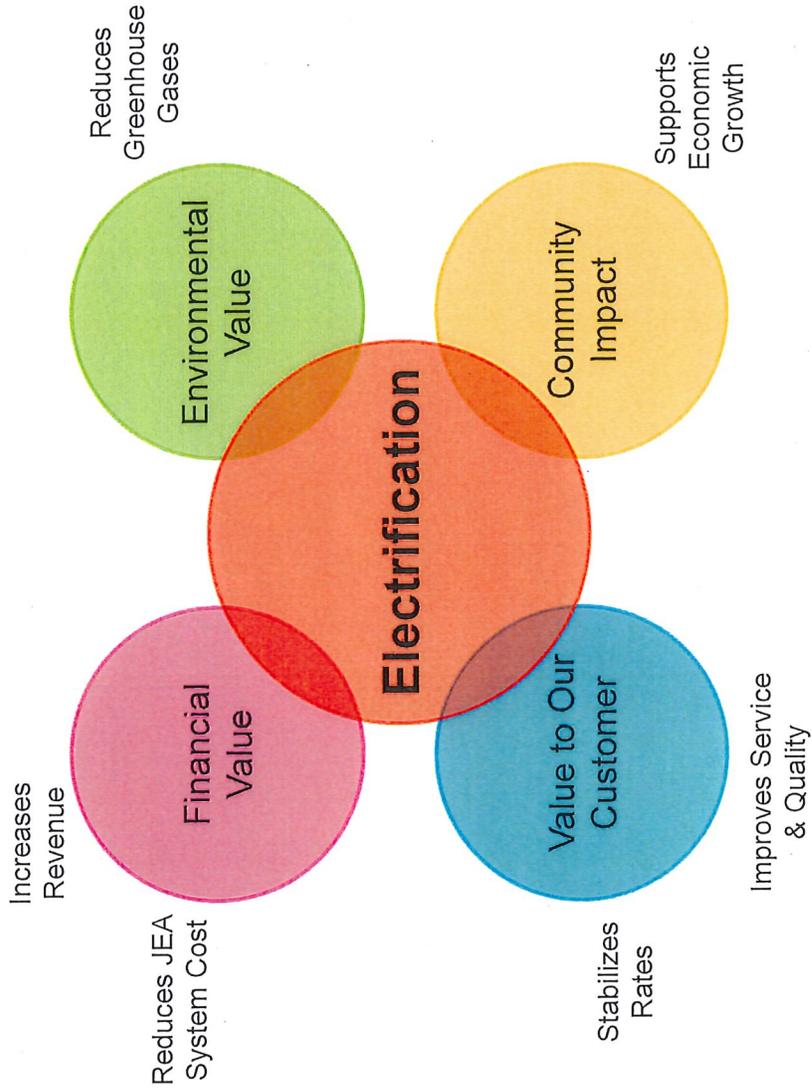
- ICF



Source: Nexant, *Electrification and the Utility of the Future*, <http://www.nexant.com/resources/electrification-and-utility-future>



Why Electrification is so Important for JEA?



Supports All JEA's Core Values

JEA Strategy to Date



Leader Since 2014

On-Road Electrification Program

- Incentives on new Electric Vehicles
- Strategic partnership with Transportation Planning Organization (TPO) and Drive Electric Florida

Off-Road Program

- Conversion of commercial and industrial diesel/propane equipment to electric
- Direct business to business customer analysis and sales

On-Road Program Summary



Components

- EV Educational Forums
- Charging Infrastructures Support
- Trusted Advisor
- Promotional Outreach



Incentives

New Electric Vehicle	JEA Incentive
----------------------	---------------

Battery size less than 15kWh \$500

Battery size of 15kWh or higher \$1,500



Results

- ✓ 1,032 EVs in Jacksonville
- ✓ ~\$400k revenue
- ✓ Program ROI (171 qualified participants) = 135%
- ✓ High market growth projected



Non-Road Electro-technology (NRE) Program Summary



Components

- Marketing
- Vendor Training
- Consultation with JEA Customers
- Technical Support
- Financial analysis
- QA/QC inspections
- Incentive Payment



Incentives

Electrotechnology	JEA Incentive
Forklifts	\$300
Airport Ground Support Equipment	\$100 - \$600
Truck Refrigeration Units	\$200
Heavy-Duty Truck Stop Electrification	\$200
Cranes	\$15,000 - \$75,000
Golf Carts	\$50
Welders	\$500



Results

- ✓ \$8.8M revenue
- ✓ 67% of new sales off-peak
- ✓ Annual Budget ~\$900k
- ✓ Program ROI = +1200%
- ✓ 267 participants
- ✓ 100% customer satisfaction

Strong Non-Road Participation and Customer Satisfaction

Sample Feedback

"The program is exactly as advertised and works very well, [the program] has been excellent to work with and always keeps us abreast of opportunities that we may not have thought of."

J. Peacock Southeastern Toyota/JM Family Enterprises

"We could not be happier with the program and with JEA. JEA treats us very well and we do appreciate that."

Jack McDuffie, Sysco Foods

"When we first entertained the idea of going to electric from diesel with our cranes we were skeptical. The program works very well for us, we have reduced our annual costs, electric versus diesel, and are looking forward soon to more conversions to electric."

Lynn Westbrook, Jacksonville Port Authority

"BMW is very happy with the program... We are very grateful to JEA."

Christopher McMurray, BMW Distribution Center

Notable Participants

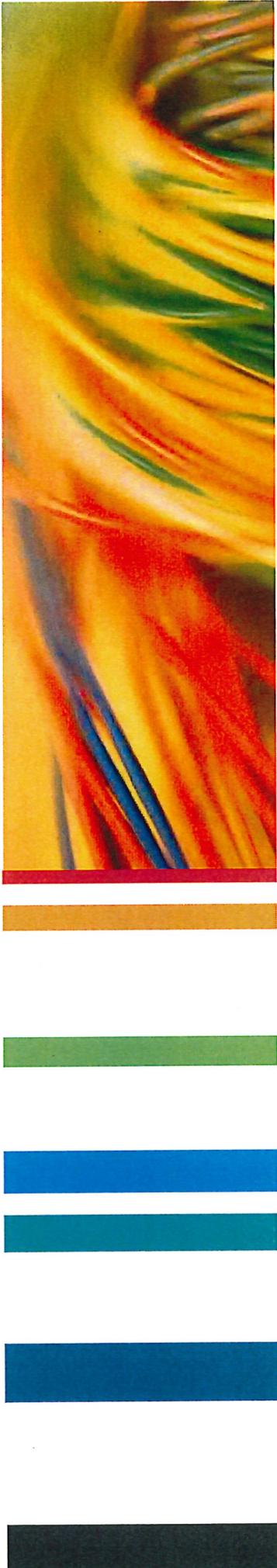


JEA's Bold Electrification Future

There exists an opportunity to increase the scale and scope of both the on-road and non-road program. By adding additional technologies, program design elements, and budget, JEA may be able to:

- Quadruple the revenue and values from the programs
- Put downward pressure on rates
- Provide a more flexible and efficient JEA load shape
- Significantly reduce JEA's (and its customers') environmental footprint

JEA is currently conducting a study with ICF to quantify the costs and risks of pursuing this opportunity. The study will be complete in 2019.



icf.com



David Pickles
Senior Vice President – Commercial Energy

Introduction to ICF


 More than
5,000 People
 55% Female Leaders and Gender Pay Equity

\$1.2B
 In annual revenue

1 Providing More Electrification Services to Utilities than any other Consultancy

9 Global Sectors
 Energy, Transportation, Government, Environment, Health, Education, Retail, Consumer, and Hospitality Sectors

Electrification Services

- Strategic Planning
- Technology Screening
- Market Assessment
- System/Locational Impact Analysis
- Environmental Impact Analysis
- Cost-Effectiveness Evaluation
- Program Design
- Marketing & Outreach
- Program Delivery
- Program Evaluation

Electrification Clients

Utilities



Non-Utilities



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Business Drivers of Beneficial Electrification (BE)

Business Driver	
Slow Sales Growth	BE programs can add as much as 0.75% system energy sales each year
Desire to Reduce Rates	A full-scale program can reduce average rates by as much as 2%
Pressure to Reduce Greenhouse Gases	Customer-site GHG emissions often go to zero, and net emissions decline up to 85%
Goal to Improve Grid Utilization	Utility system efficiency (load factor) can increase by as much as 3%, and Demand Response and Vehicle-to-Grid options provide additional benefits
Need to Manage Distribution System Growth	Growth on capacity constrained distribution feeders can be managed and capital investments delayed or eliminated
Desire to Reduce Customer Costs	Customer costs typically decrease from 10-60%
Need to Provide Exemplary Customer Service	Electro-technologies often operate with significantly less noise, workplace pollution or particulates, and with greater control and less waste

BE Solution

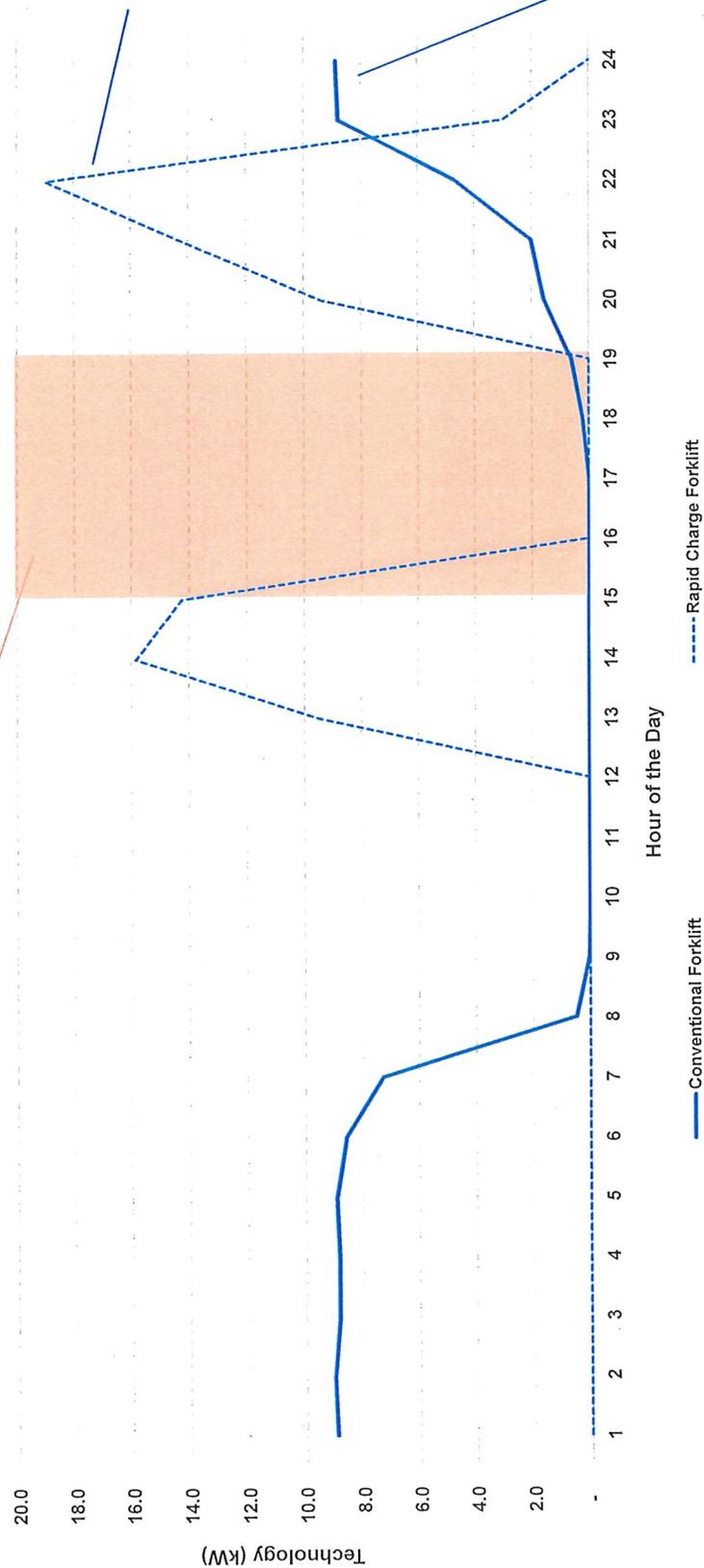


The Power of Improving System Utilization (Load Factor) by Increasing Off-Peak Sales



JEA System Loadshape on 2017 Peak Day vs. Forklift Loadshapes

JEA Peak Period



Rapid charge forklifts have a modest impact during extended peak periods, but shift much demand off-peak

Conventional forklifts have little impact on system peak and charge mostly at night



Possible Expanded Approaches to Beneficial Electrification

Technologies

 Off-Road & Material Handling

 On-Road, Light-Duty

 On-Road, MD & HD

 On-Road, Buses

 Food Preparation

 Custom

 Manufacturing

 Infrastructure (Ports/Airports)

 HVAC

 Water Heating

 Recreational

 Trains

Locations

 Home

 Multi-family

 Workplace or Destination

 In-route

 Fleets

Strategies

 Infrastructure Deployment

 Rate Design

 Education & Outreach

 Incentives

 Financing

 Partnership Planning

 Managed Charging

 Active Load Management (DR, V2G)

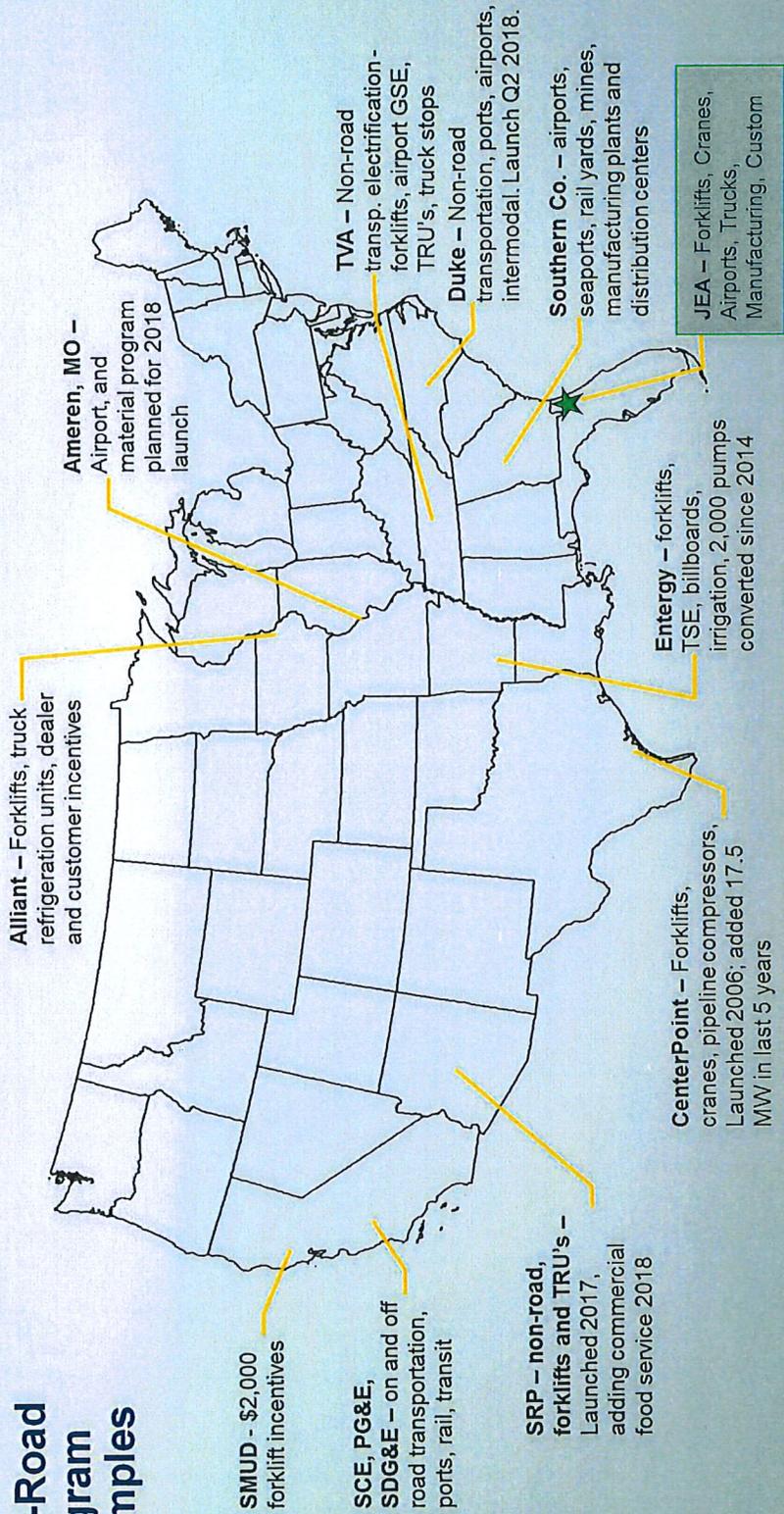
Many Additional Technologies Provide Significant Benefits

	Material Handling and Port Equipment				Airport Ground Support Equipment				On-Road		
	Rapid Charge Forklift	E/S TRU	RTG Cranes	Ground Power Units	Pushbacks	Baggage Tractors	Belt Loaders	Light-duty Vehicles	Transit Buses	Refuse Trucks	
Annual kWh	27,190	15,000	600,000	148,000	61,420	23,360	12,260	4,000	50,000	35,000	
% kWh Off Peak	56%	100%	63%	56%	74%	77%	77%	75% (+)	80% (+)	100%	
Peak kW	7.6	0.0	124.7	35	19.4	7.2	3.8	7	50	0	
JEA Net Annual Margin	\$2,560	\$1,320	\$64,160	\$12,900	\$8,040	\$3,230	\$1,690	\$326	\$3,092	\$2,164	
JEA Present Value Lifetime Net Margin	\$19,760	\$9,560	\$695,450	\$100,240	\$62,100	\$24,960	\$13,100	\$2,510	\$23,806	\$16,664	
Lifetime Site GHG Saved (Metric Ton)	337	237	12,164	1,325	550	250	131	36	534	553	
Lifetime Site NOx Saved (Metric Ton)	0.3	1.0	24.3	6.0	2.5	0.6	0.4	0.2	1.6	2.3	



JEA Leads the Pack in Scope and Relative Impact

Non-Road Program Examples



Considerations in Electrification

- Loads & locations to avoid
- Free riders
- Incentive strategy
- Fuel competition
- Allocation of benefits
- Operations of responsive technologies
- Integration with JEA and national initiatives (VW, Smart City, etc.)
- Recovery of costs
- Competitive markets
- Defining cost effectiveness

Assessing Cost-Effectiveness from Multiple Perspectives

Benefit Cost Tests	Key Question Asked	Benefits	Costs
Ratepayer Impact Measure (RIM)	Will utility rates increase?	Incremental Revenue	Program Incentives Program Overhead Incremental Electricity Supply
Participant (PCT)	Will participants benefit over the measure life?	Incentives Fuel Savings O&M Savings	Incremental Equipment Cost Incremental Electricity Supply
Modified Total Resource Cost (mTRC)	Will the total cost of energy in the utility service territory decrease?	O&M Savings Cost of IC Energy Supply	Net Participants Electric Supply and Net Participants Incremental Capital Cost Program Overhead Program Incentives Paid to "Free Riders"

- How do we capitalize on the momentum created by the existing program?
- What is the size and value of future electrification opportunities?
 - On-Road
 - Off-Road
 - Controlled charging/load management
- Which technologies and customers show the greatest promise?
- Which program designs are most appropriate?
- How can we be sure we do not create future generation or distribution problems?
- What are the best entry strategies and where can we cooperate with others?
- What are the risks and how do we mitigate them?
- What are the financial expectations and measures of performance?
- How to resource internally and externally?
- Who are our best partners and how to partner?

Strategic Questions We Will be Addressing with JEA



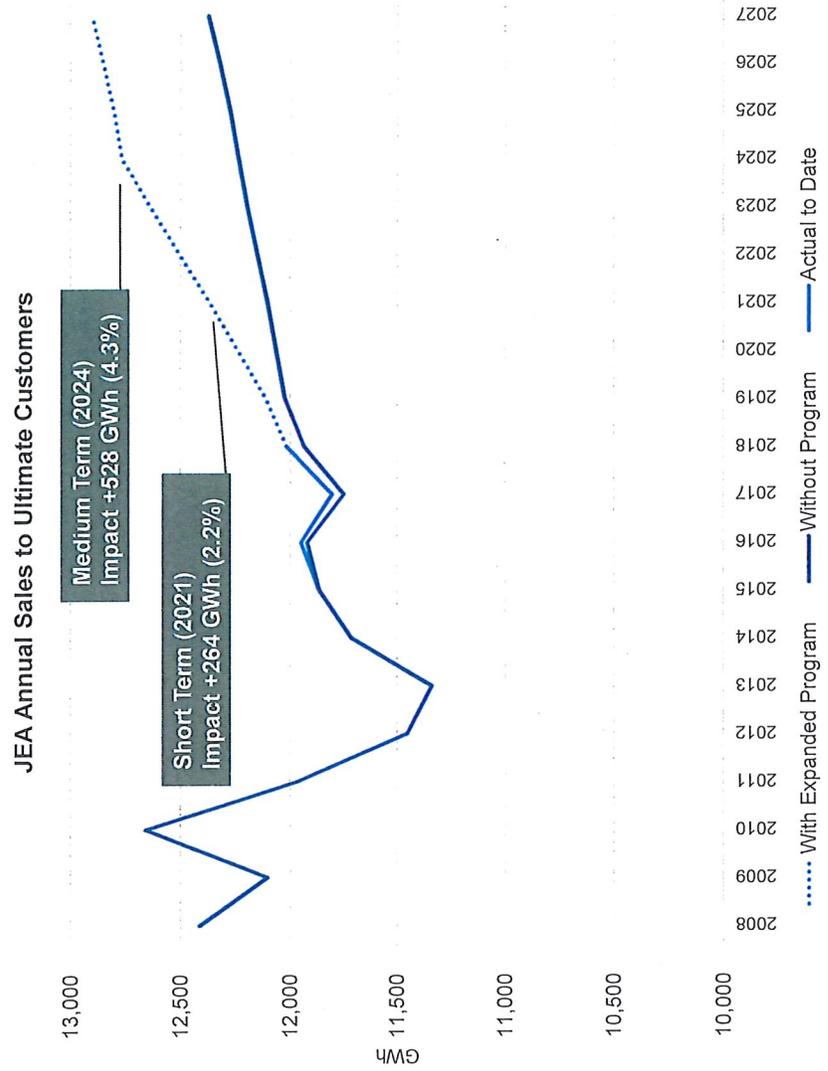
Guiding Principles

- Evaluate against JEA's core values
 - Value to our customer
 - Financial value
 - Community impact value
 - Environmental value
- Create a flexible and scalable platform
- Focus on cost-effectiveness and financial returns
- Consider capacity constraints (recognizing that some on-peak load will come along with significant off-peak sales growth)
- Align with JEA investments in AMI, solar, storage, rate design, and other programs
- Strengthen customer satisfaction and JEA brand

▪ Be innovative; Be bold

What Might It Look Like for JEA?

- Short Term (<3 years)**
 - Expanded non-road program
 - Pilot EV charging stations for personal and fleet vehicles
 - Electric transit bus pilots
 - Additional charging stations
- Long Term (3-10 years)**
 - Dedicated port electrification
 - Expand EV charging stations
 - Expand transit bus electrification
 - Electrify JEA fleet vehicles
 - Support statewide charging network
 - Link electric Transit Buses & Skyway with solar charging stations



*Note: Under evaluation in JEA's Electrification Strategic Plan.



Short-Term Opportunities*

Potential Projects and Opportunities

- Tug Boats at the Jacksonville Port Authority Ports, Naval Air Station Jacksonville, Mayport Naval Ship Yard, and possibly docking stations downtown on the Saint Johns River.
- Port Gantry Cranes (4)
- Mayport Ferry – ship for transporting vehicle and passengers.
- Shore Power for ships (instead of running generators) – ports listed above plus the cruise line port in Jacksonville.
- Vehicle-to-Grid (V2G) and Battery-to-Grid Pilots
- Locomotive Cold-Storage Generators (Florida East Coast Railways opportunity)
- Buses (both city and school)
- Drayage-Yard Trucks (primarily utilized at and around the ports.)
- Local Delivery FedEx, UPS, Amazon, and JTA (Jacksonville Transportation Authority) trucks
- “Garbage” Trucks
- Hangar doors (Boeing, Flightstar, local airports, Air National Guard, Naval Air Station Jacksonville, Mayport Naval Base)

*Note: Under evaluation in JEA’s *Electrification Strategic Plan*.

Next Steps

- 1) Agreement on forward business case initiative
- 2) Inventory and review JEA's current portfolio of initiatives
- 3) On-road assessment
- 4) Expanded off-road assessment
- 5) Identify and assess potential technologies and designs
- 6) Develop business cases
- 7) Recommend strategic plan

From: Fischer, Melinda L. - Manager Customer Solutions <fiscml@jea.com>
Sent: Tuesday, September 11, 2018 11:20 AM
To: Crawford, Juli E. - Manager - Financial Planning & Rates
Cc: Nichols, Vicki D. - Dir Customer Solutions & Market Development; Leigh, Timothy G. - Manager Customer Solutions; Wucker, Donald P.; Blackshear, Victor L. - Financial Analysis Specialist
Subject: RE: JEA Status Quo
Attachments: Juli-DataRequest.xlsx

Juli,

I apologize for the delay. Here is the assumptions we had put together. Please let me know if you have any question regarding this.

Thanks,
Melinda

From: Crawford, Juli E. - Manager - Financial Planning & Rates
Sent: Tuesday, September 11, 2018 11:16 AM
To: Fischer, Melinda L. - Manager Customer Solutions <fiscml@jea.com>; Leigh, Timothy G. - Manager Customer Solutions <leigtg@jea.com>
Cc: Blackshear, Victor L. - Financial Analysis Specialist <blacvl@jea.com>
Subject: JEA Status Quo

Hi Melinda/Tim,

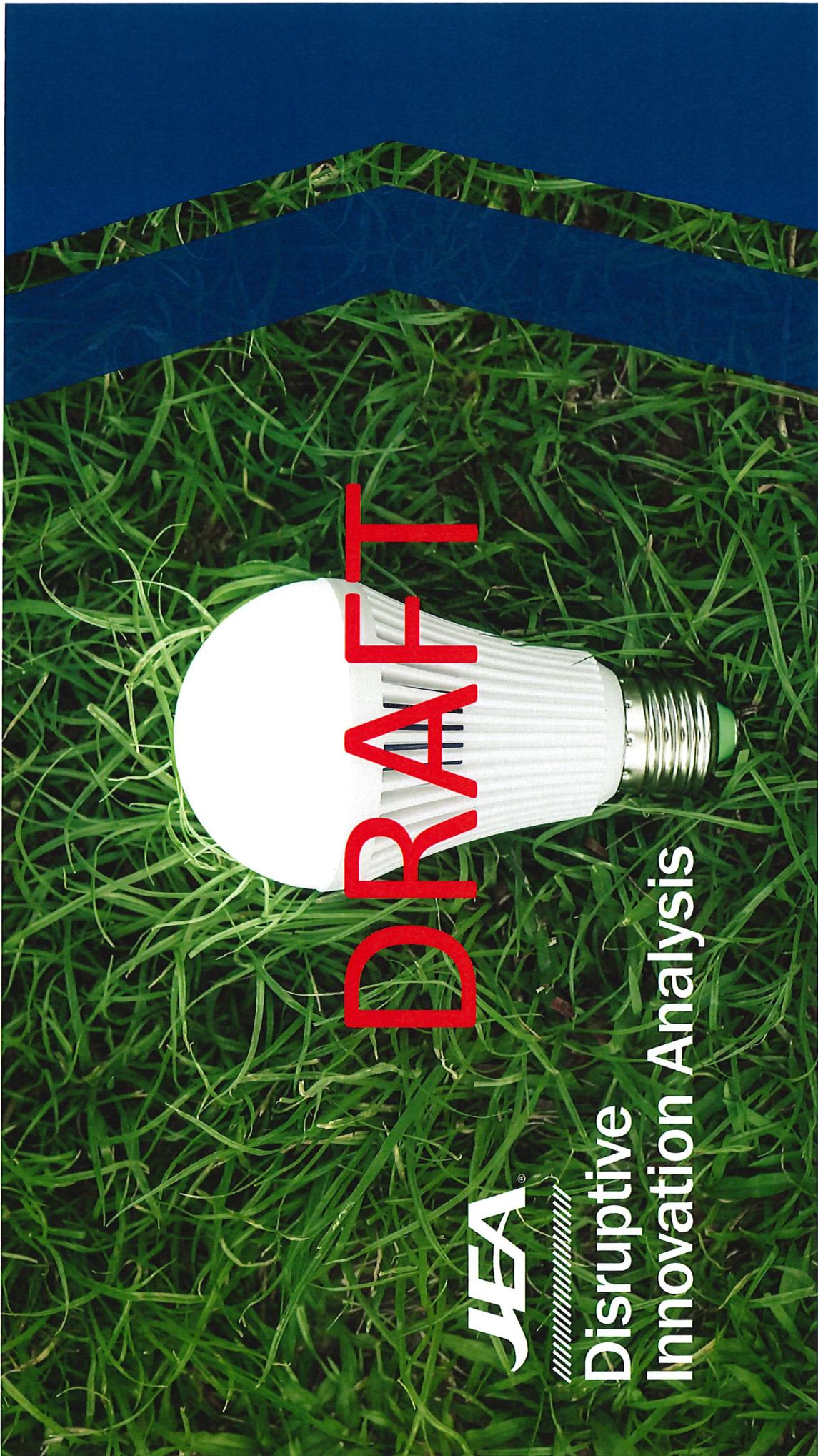
Our first draft for the JEA Status Quo case is due Friday, so we are in the process of creating our outline. Do either of you have assumptions nailed down that you can send to us?

Thanks,
Juli

Juli Crawford

Interim Director of Financial Planning and Analysis
Direct: (904) 665-6151
Mobile: (352) 219-0534





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**Disruptive
Innovation Analysis**

PENGAD 800-631-6999
EXHIBIT
6
1/18/20



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JEA STATUS QUO CASE

Disruptive Innovation

The JEA Enterprise systems face increasing pressure from disruptive innovation. A disruptive innovation is an innovation that creates a new market and value network and eventually disrupts an existing market and value network, displacing established market-leading firms and products. As we all know, disruptive innovation has changed phone service [iPhone], video rental [Netflix], retail sales [Amazon], and taxi [Uber/Lyft] industries.

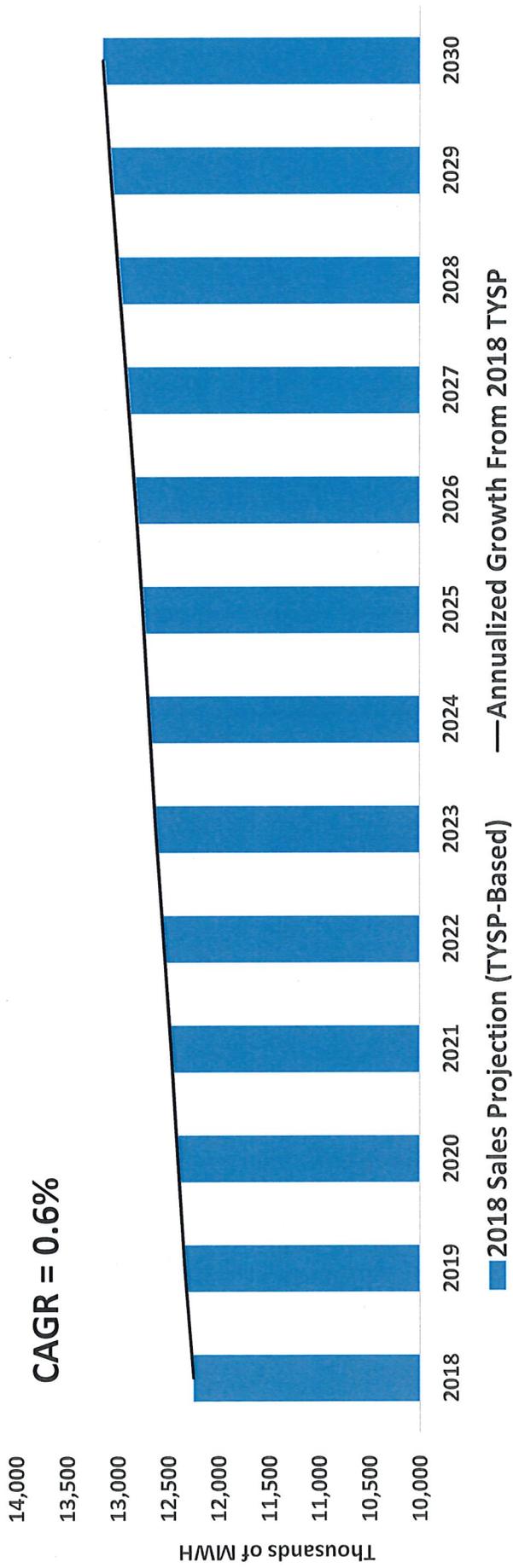
JEA, and its predecessor organizations, has been the market leader for providing electric, water, and sewer services to northeast Florida for over 100 years. Increasing innovation threaten the stability of the core businesses of JEA.

The Electric Enterprise faces threats from increasing rooftop and commercial solar penetration, energy efficiency, and the advancement of battery technology. Electric vehicles and non-road electrification can offset some of the erosion by solar and battery technology and energy efficiency.

The Water Enterprise faces threats from growth in constrained water supply areas due to JEA's CUP limits, and legislation requiring stricter treatment and discharge criteria.

This analysis is an examination of the disruptive innovations affecting the JEA systems. There are several assumptions made in this analysis as to how these innovations and changes will affect traditional JEA revenue sources (electric, sewer, and water sales).

CURRENT ELECTRIC FORECAST = GROWTH



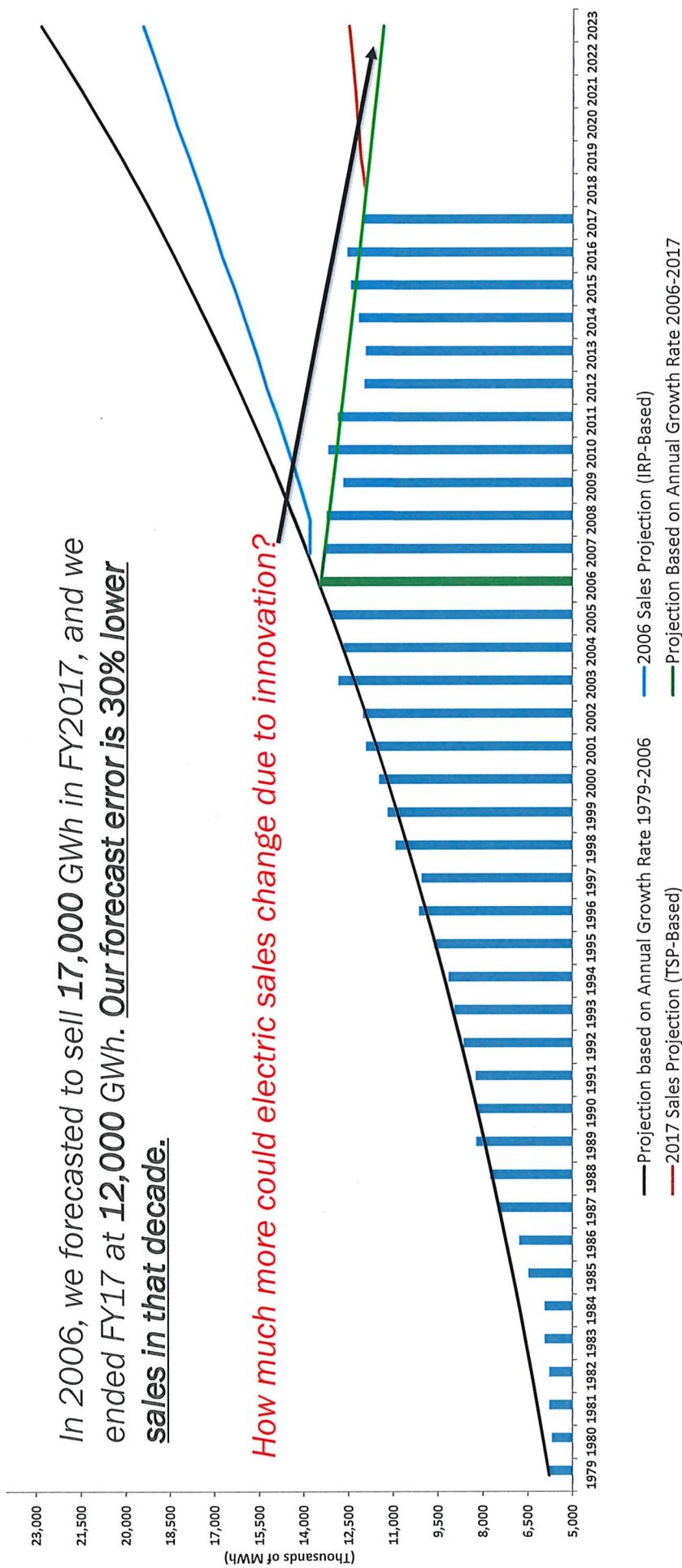
GROWTH JEA electric sales are forecasted using multiple regression analysis of sales history, population, median household income, housing starts, commercial square footage, commercial employment, gross product, and electric rates in the JEA Ten Year Site Plan (TYSP).

However, recent history has taught us that market forces can change this trend

JEA HISTORICAL ELECTRIC PROJECTIONS AND SALES

In 2006, we forecasted to sell 17,000 GWh in FY2017, and we ended FY17 at 12,000 GWh. Our forecast error is 30% lower sales in that decade.

How much more could electric sales change due to innovation?



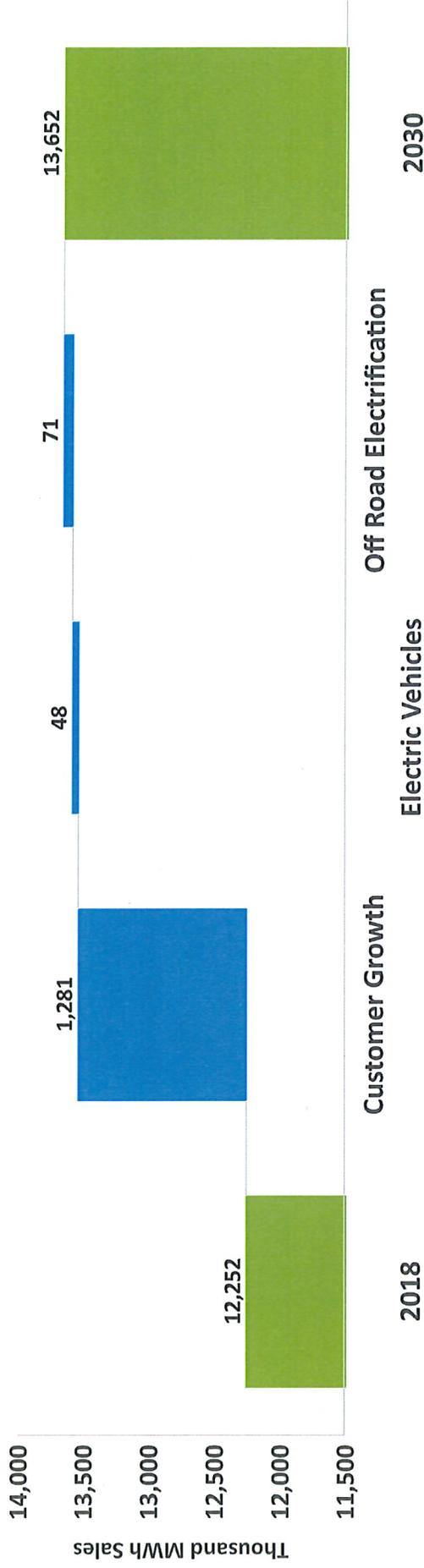
There are market influences that could quickly diverge our forecast, up or down...

POSITIVE ELECTRIC MARKET INFLUENCES FOR JEA

Electric Vehicles(EV) Low adoption assumed for Jacksonville, achieving 9 times the 2018 energy in 2030, forecasted based on battery charge and miles driven per day. EV adoption cause an increase in JEA electric sales.

Non-Road Electrification(NRE) Low forecast, achieving 3 times the 2018 energy in 2030 including the assumption to not renew/rebid the FY18-20 electrification contract. Non-road electrification causes an increase in JEA electric sales.

Potential Positive Market Forces by 2030



If EV and NRE accelerate, JEA is well positioned to handle it

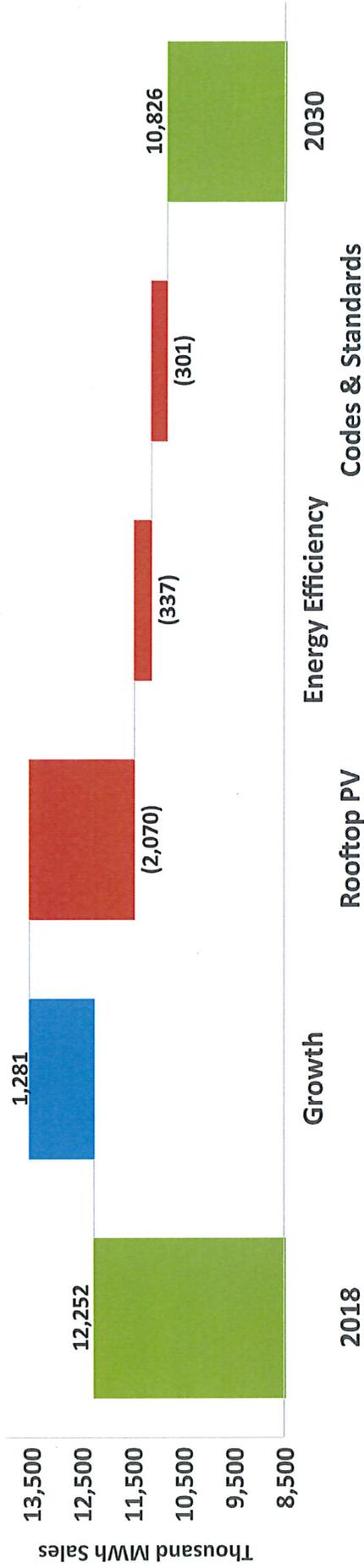
NEGATIVE ELECTRIC MARKET INFLUENCES FOR JEA

Energy Efficiency (EE) JEA is offering customers both education and economic incentives on more efficient end-use technologies achieving a 24% CAGR between 2018 and 2030

Codes and Standards (CS) Anticipating stricter regulations will lead to 1% CAGR between 2018 and 2030

Rooftop PV (RPV) According to Solar Energy Industry Association (SEIA), total installed PV capacity in the U.S. is expected to more than double over the next 5 years and JEA is taking a more aggressive forecast of 60% CAGR between 2018 and 2030

Potential Disruptive Market Forces by 2030



If EE, CS, RPV accelerate and electrification remains stagnant, JEA customer and financial value become at risk.

JEA CURRENT FRAMEWORK



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**JEA STATUS QUO
CASE**

Florida Public Service Commission

- Require electric power conservation and reliability within a coordinated grid
- Approve territorial agreements and settle territorial disputes
- Prescribes uniform systems of accounts & rate structures for all electric utilities
- This includes oversight that the total revenue requirements of utilities are collected fairly from all customer classes.

City of Jacksonville Charter

- Article 21.01: Established JEA for the express purpose of acquiring, constructing, operating, financing, and otherwise having plenary authority with respect to electric, water, sewer, natural gas, and such other utility systems as may be under its control now or in the future.
- Article 21.04: If JEA determines that it is...appropriate...to provide...any other utility system or function...JEA shall by resolution identify such additional utility system...to the council
- Article 21.07: There shall be assessed upon JEA...from revenues of the electric...and water and sewer system...after the payment of all costs and expenses incurred by JEA in connection with the operation...JEA shall pay the city combined assessment from the electric system and the water and sewer system.

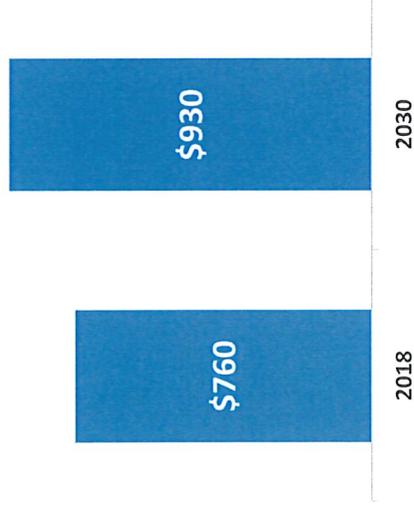
St. Johns River Water Management District

- The district sets minimum flows and levels for rivers, lakes and springs to ensure that water use does not cause significant harm to these important resources.
- JEA's consumptive use permit (CUP) allows water to be withdrawn from groundwater or surface water for reasonable-beneficial uses — such as public supply (drinking water), agricultural and landscape irrigation, commercial use and power generation

JEA Pricing Policy

- Primary goal is to establish revenue requirements to fully recover the costs necessary to operate and maintain the utility, consistent with its mission, through fair and equitable pricing
- The total revenue requirement of each system must be sufficient to ensure the financial integrity of the utility, including recovery of debt service, sufficient revenue to meet renewal and replacement fund requirements, and maintenance of key financial metrics

Declining electric sales results in significant rate increases to meet higher revenue requirements



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**JEA STATUS QUO
CASE**

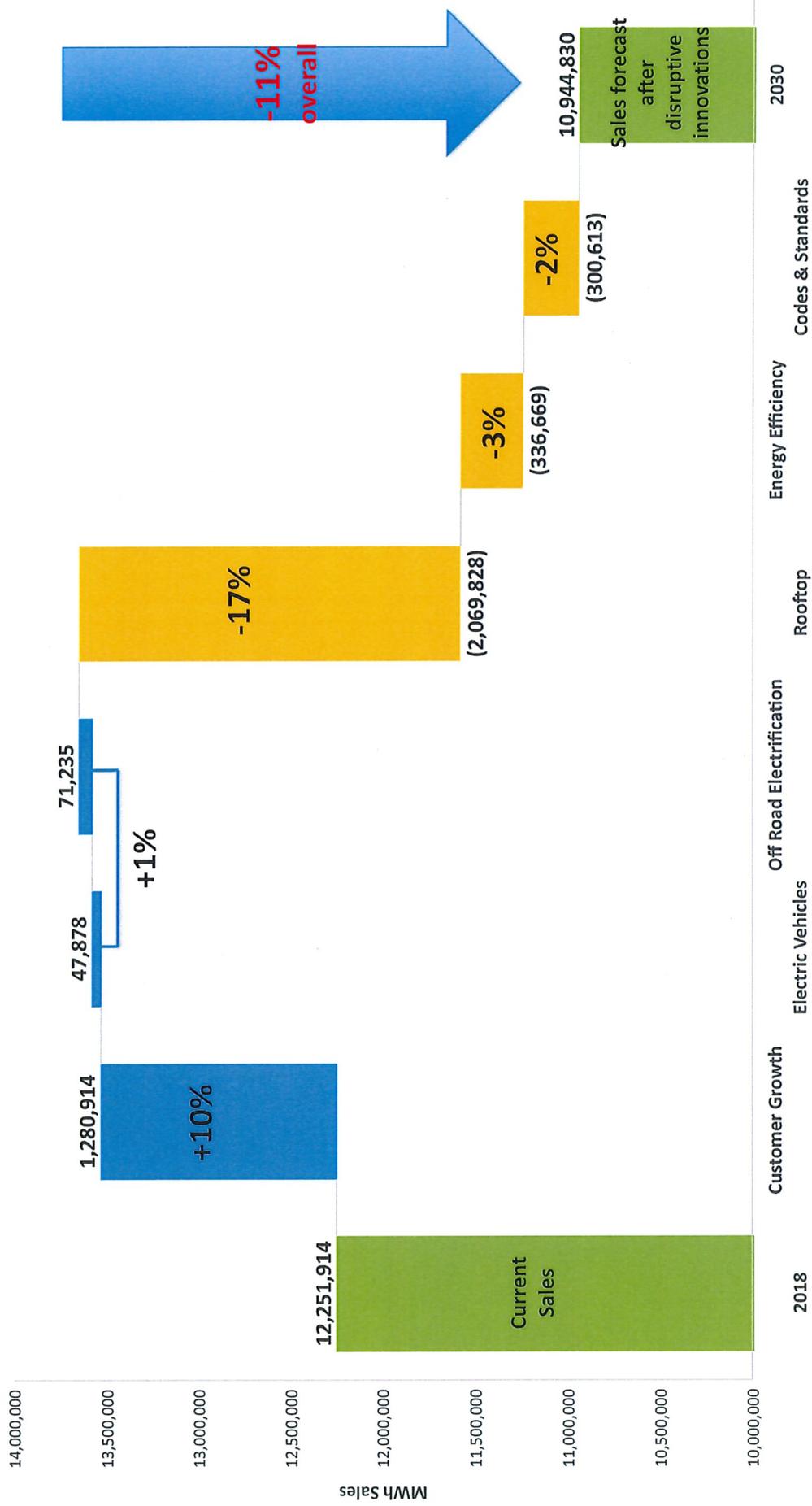
Status Quo: RESULTS IN

- Stranded electric assets
- Fixed debt service obligations
- More pressure to meet the COJ contribution requirement
- Additional revenue required from customers from 2018 to 2030 = \$1 billion

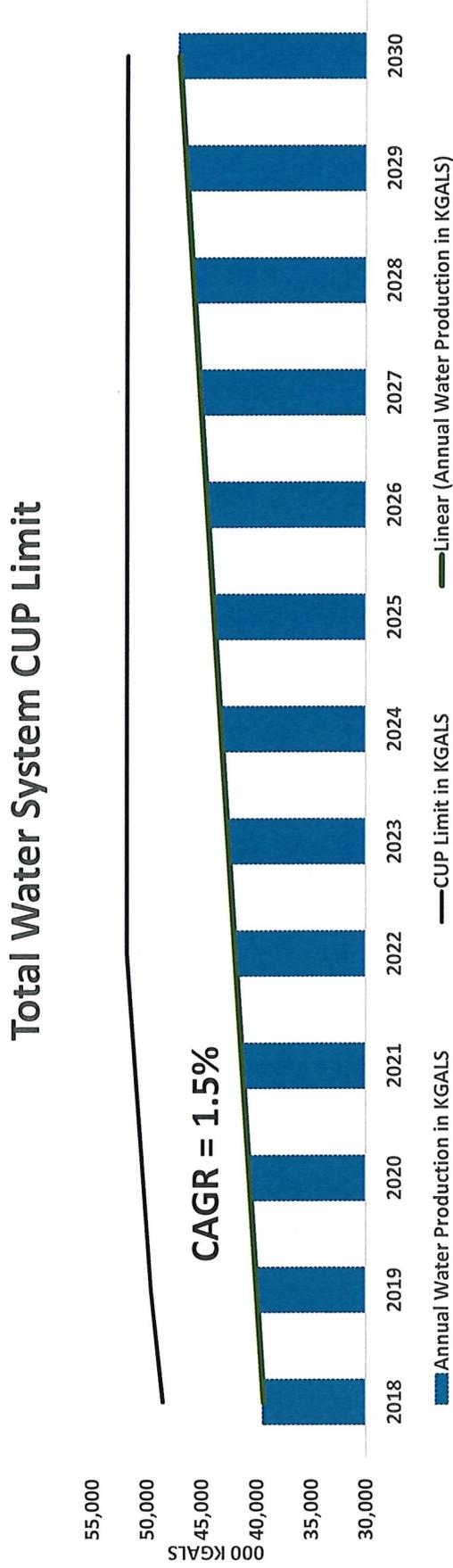
Evolution: JEA Charter Change

- A charter change would allow JEA to participate in disruptive innovation.
- For example, JEA could install rooftop and commercial solar, develop and retail storage solutions, expand dark fiber, and other technology.

Potential Market Forces by 2030



CURRENT WATER FORECAST = GROWTH



Growth JEA water sales are forecasted using multiple regression analysis of sales history, population, weather, and socio-economic variables.

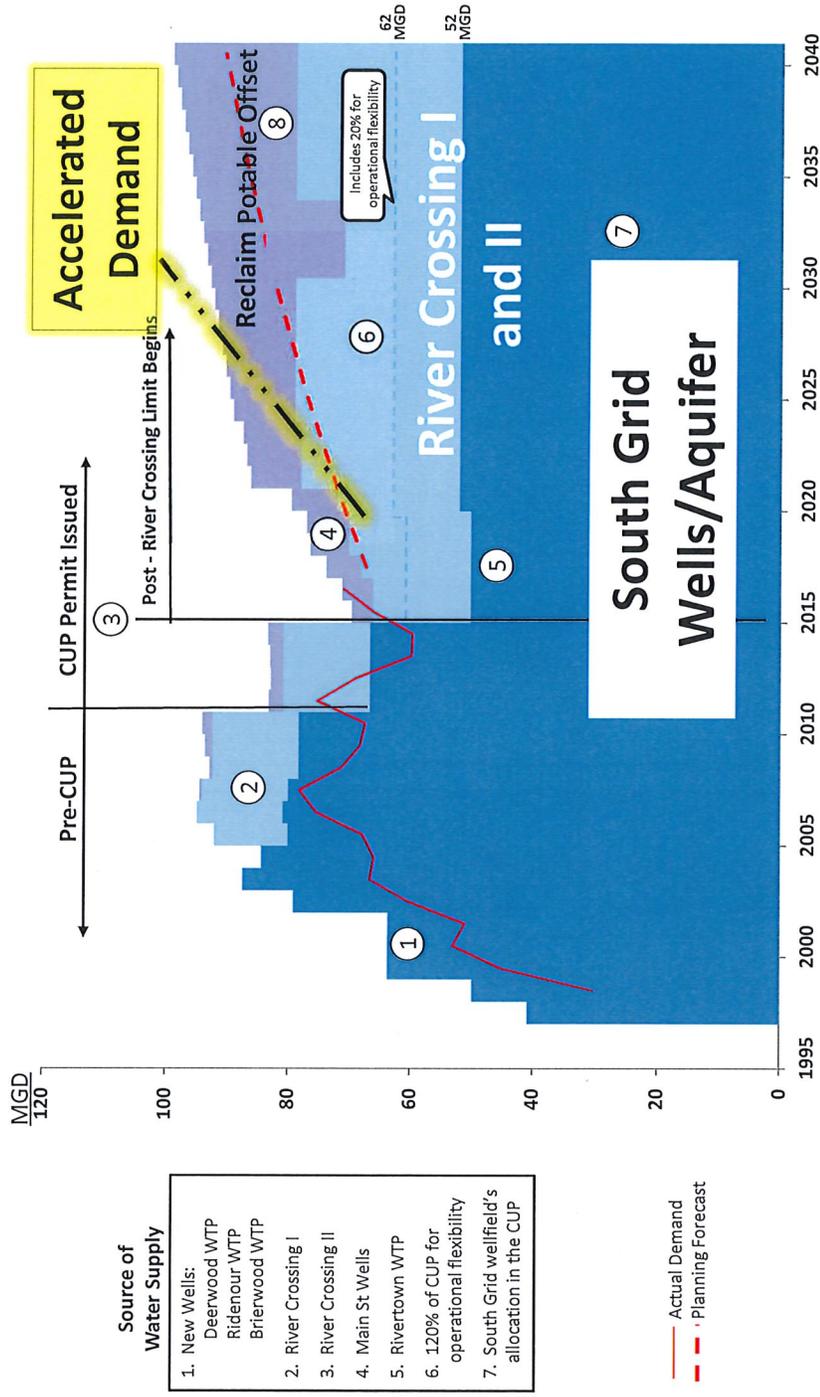
However, associated costs to maintain growth could quickly erode financial value if local CUP limits are exceeded

LOCAL GRID CUP PRESSURE

South Grid's CUP limit is 52MGD. The current demand is ~65 MGD. 18MGD currently comes from Main Street River Crossings.

In the future under high growth conditions, the demand on the South Grid could exceed current supply options.

Costly investments in alternative water supply options will be required.



⑧ Leverage future South Grid Demand (Growth and Development) with reclaimed water, evaluate water purification and consider a third river crossing

Alternative Water Supply Options

JEA is conducting a forward-thinking research and development project to evaluate technologies for producing purified water using highly treated wastewater as a source.

- a. Total O&M cost assumed to be \$1.00/1000 gallons
- b. Total O&M cost assumed to be \$1.50/1000 gallons (Based on Vander Lans and GWRS O&M costs)
- c. Total O&M cost assumed to be \$1.20/1000 gallons (Cost of Brackish Groundwater Desalination in Texas, 2012, Texas Water Develop Board)
- d. Total O&M cost assumed to be \$2.20/1000 gallons (Based upon a + c. Assumes some pretreatment similar to Ozone/BAF would be required for Surface Water RO)
- e. Adjusted to January 2018 dollars (RSM means Historical Cost Indexes)
- f. Purification Cost only – no storage/transmission mains/injection wells)

Water Supply Option	Capacity (mgd)	Capital Cost (\$Millions) ^c	O&M Annual/Year (\$Millions)	Cost per year Capital (\$Millions) [*]
Demand-Side Management	5	\$6	\$1.0	\$0.4
Reclaimed Retrofit	1	\$19	\$0.1	\$1.2
TWMP	20	\$107	\$2.0	\$7.0
Third River Crossing	25	\$230	\$1.7	\$15.0
Water Purification - Ozone/BAF ^{a,f}	10	\$100	\$3.7	\$6.5
Water Purification - UF/LPRO ^{b,f}	10	\$100	\$5.5	\$6.5
RO of Brackish Groundwater ^c	10	\$73	\$4.4	\$4.7
RO of Brackish Surface Water ^d	10	\$138	\$8.0	\$9.0

Table from Todd Mackey - Dir W/WW & Reuse Treatment (* Assumes capital costs are amortized at 5% for 30 years)

Data from Todd Mackey - Dir W/WW & Reuse Treatment

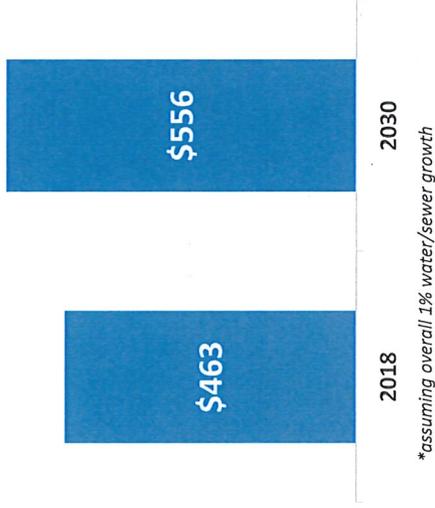
For example: Water Purification Plant

- This 25 MGD plant would cost \$250M in capital and additional \$10M annual O&M.

...RESULTS IN

- New debt for AWS capital investments
- Require a 5% rate increase in 2025

*Localized growth results
in AWS investment
funded with new debt
and rate increases**



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**JEA STATUS QUO
CASE**

WATER MARKET

Water Efficiency JEA water production is governed by the consumptive use permit (CUP) issued by the St. Johns River Water Management District. The current permit is valid through the year 2031 for a system total of 142 MGD. JEA Water/Wastewater Planning projections for this time period does not exceed the total CUP limit for combined JEA grids. There is the slight possibility that SJRWMD will reduce JEA's total CUP after 2031. There is some localized CUP limit pressure (namely the Southside grid) that will impact water supply decisions before 2031.

Water Quality Currently, the St. Johns River Water Management District does not regulate JEA on mineral discharge into the waterways. The District may choose in the future to regulate utilities and other companies on nitrogen or phosphorous discharge and strontium scale formation. Increased water quality and discharge regulation will increase cost for the water and wastewater systems.

Nitrogen Credits The City of Jacksonville has an agreement with JEA to trade nitrogen credits. If the city requires JEA to transfer additional nitrogen credits in the future, JEA will have to implement alternative wastewater solutions to fulfill this requirement.

Conclusion

TBD

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**JEA STATUS QUO
CASE**

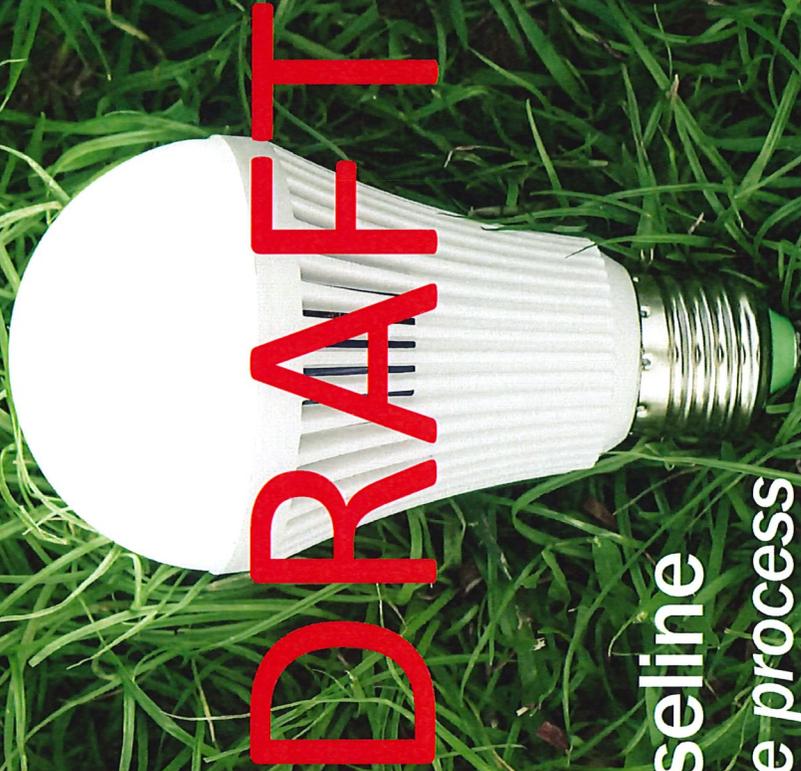
Exhibit 7 - Being Reviewed

Overall theme
needs to be similar
to a pitch book

JEA[®]



Status Quo Baseline
The first step in the process



PENGAD 800-631-6989

EXHIBIT

8

Wendell 1/8/20

P

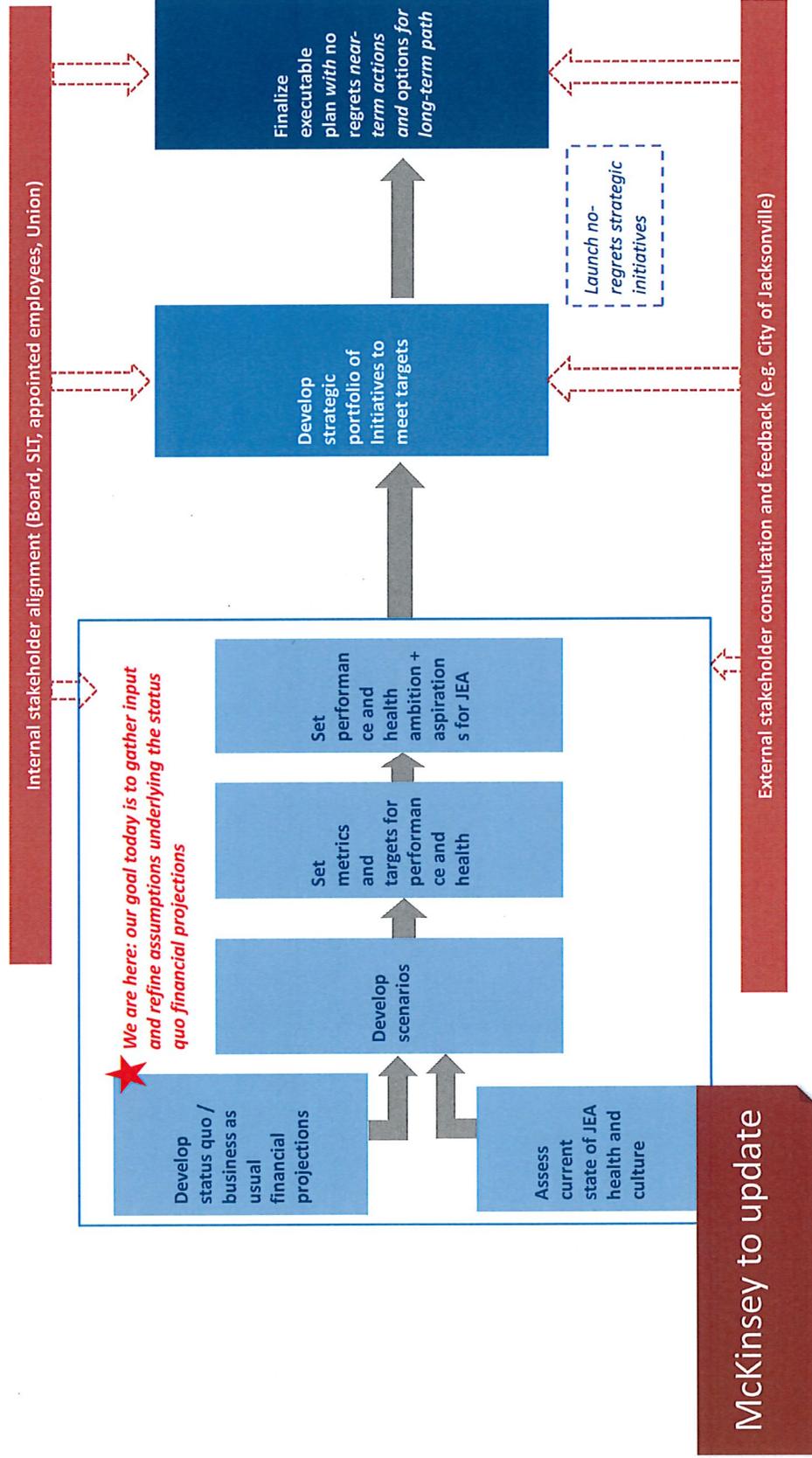
Disclaimer

Update language,
include context
language, include
on each slide

Following “Baseline Conversation” financial projections are presented solely for JEA Board of Directors and action. They are not a projection of future financial performance and, as such, should not be relied upon by present or prospective JEA bond investors to purchase or sell any security or to make an investment decision. The projections are merely a mathematical representation of a hypothetical case for change. Actual results are likely to differ materially from this business case.

Today, we will discuss JEA's first step in a broader strategy to succeed.

What does the future look like if JEA doesn't change?



Add a slide that shows JEA consolidated/trends and impacts to JEA as a whole business/top down

Add more assumptions and cost drivers, revenue, capex, opex, contribution

Mention what is not included i.e. economy, deregulation, weather, natural disaster, etc.

Add slide with historical forecast – McKinsey?

Executive summary

Water System

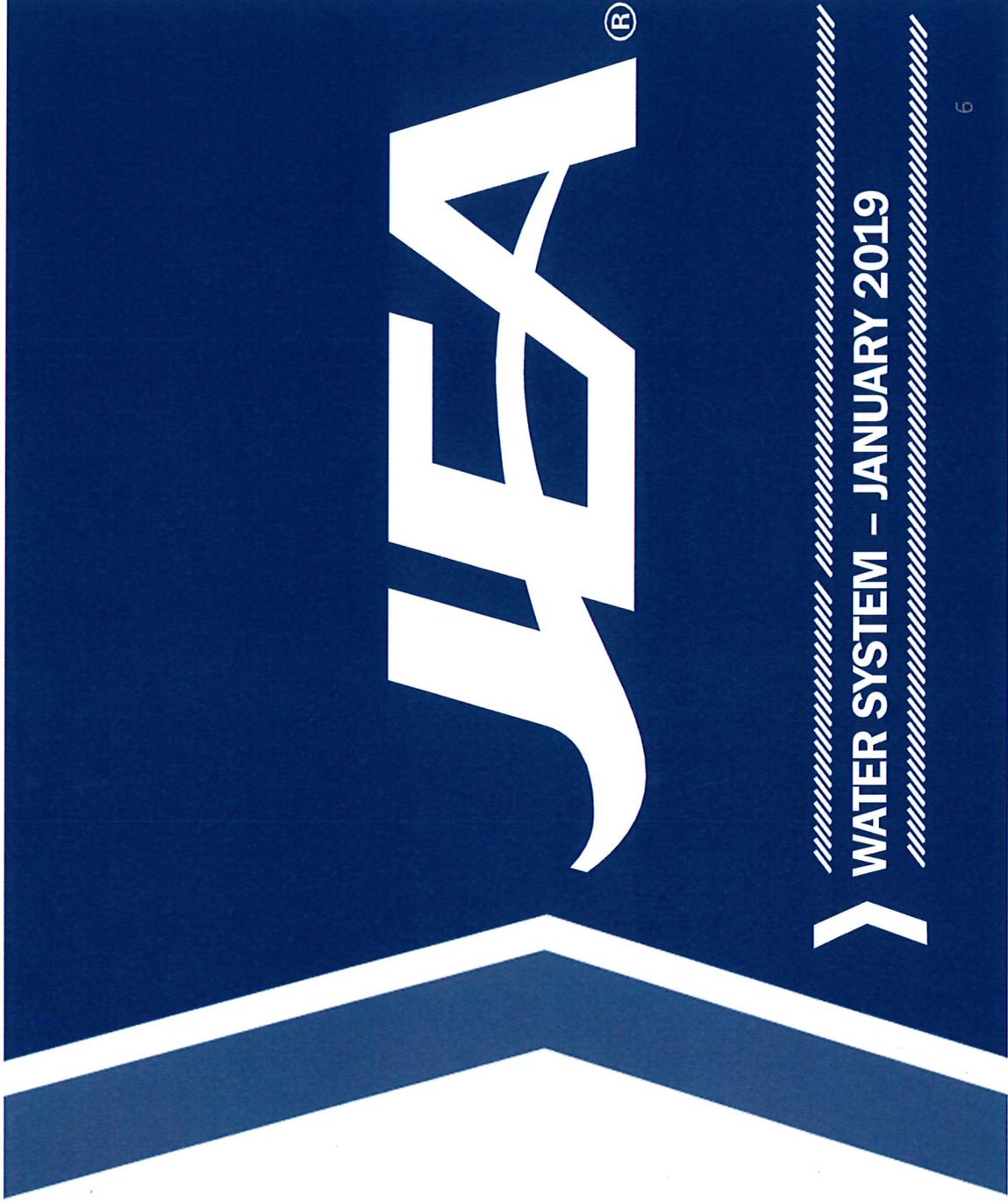
- Water/Wastewater income is forecasted to be **stable through 2030** with funds available for city contribution
- Preliminary forecasts show **continued growth during the period** driven by new connections, though may be offset by continued trend in more efficient use per capita
- While **no significant supply challenges** are forecast in the short-term, JEA is taking proactive steps to address the projected shortage in the South Grid
- JEA's water business can continue to build on its stable financial health to become a **distinctive leader in value to its customers, community, and environment**

Energy System

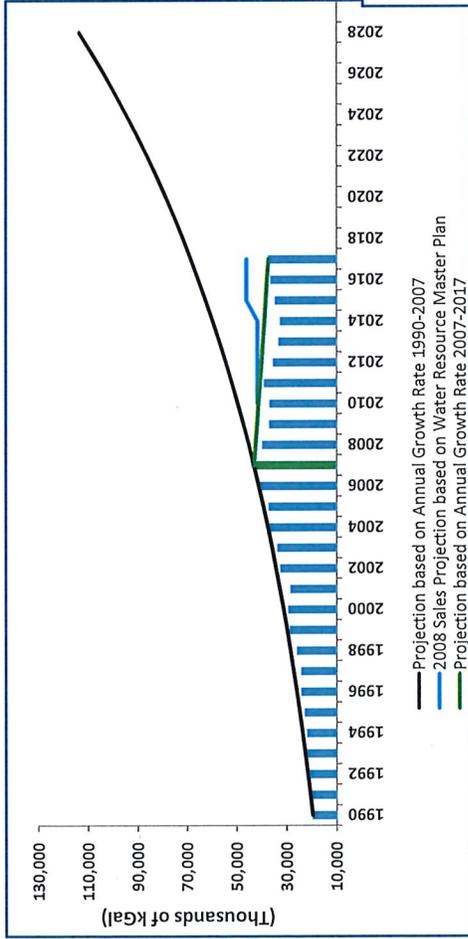
- National trends in energy efficiency and distributed generation have begun to **shape utility energy sales forecasts across the county**
- JEA is no exception, with **declining loads over the past decade** driven by both the economic downturn and energy efficiency gains
- Looking forward to 2030, **strong economic growth will not offset accelerated distributed generation and energy efficiency**, leading to decreased load (7% reduction 2018-30), declining income, and a net loss after city contributions

Mention regulations will have impacts on sales, cost per kgal and business performance (governor)

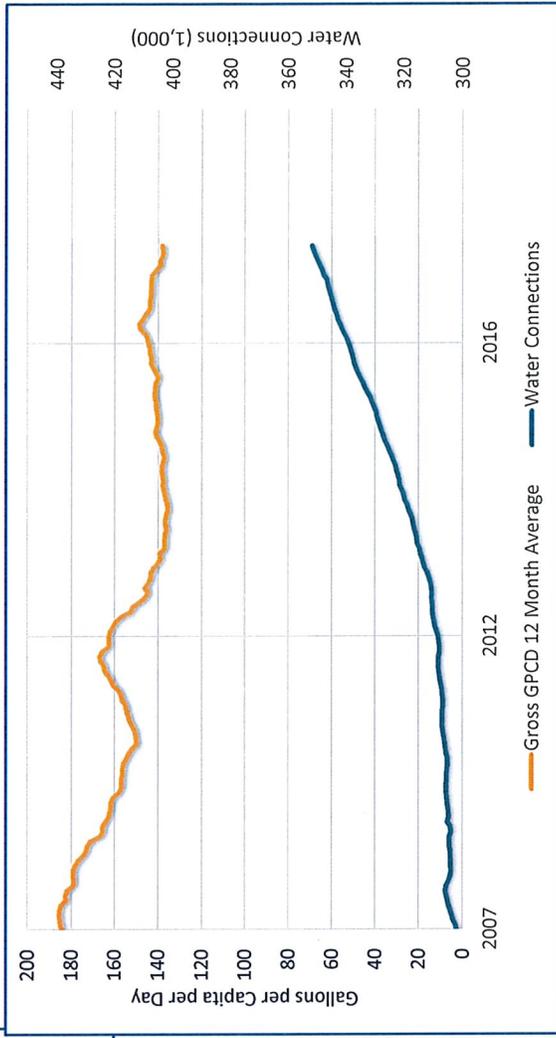
Water Sustainability Strategy



Historical water usage and sales



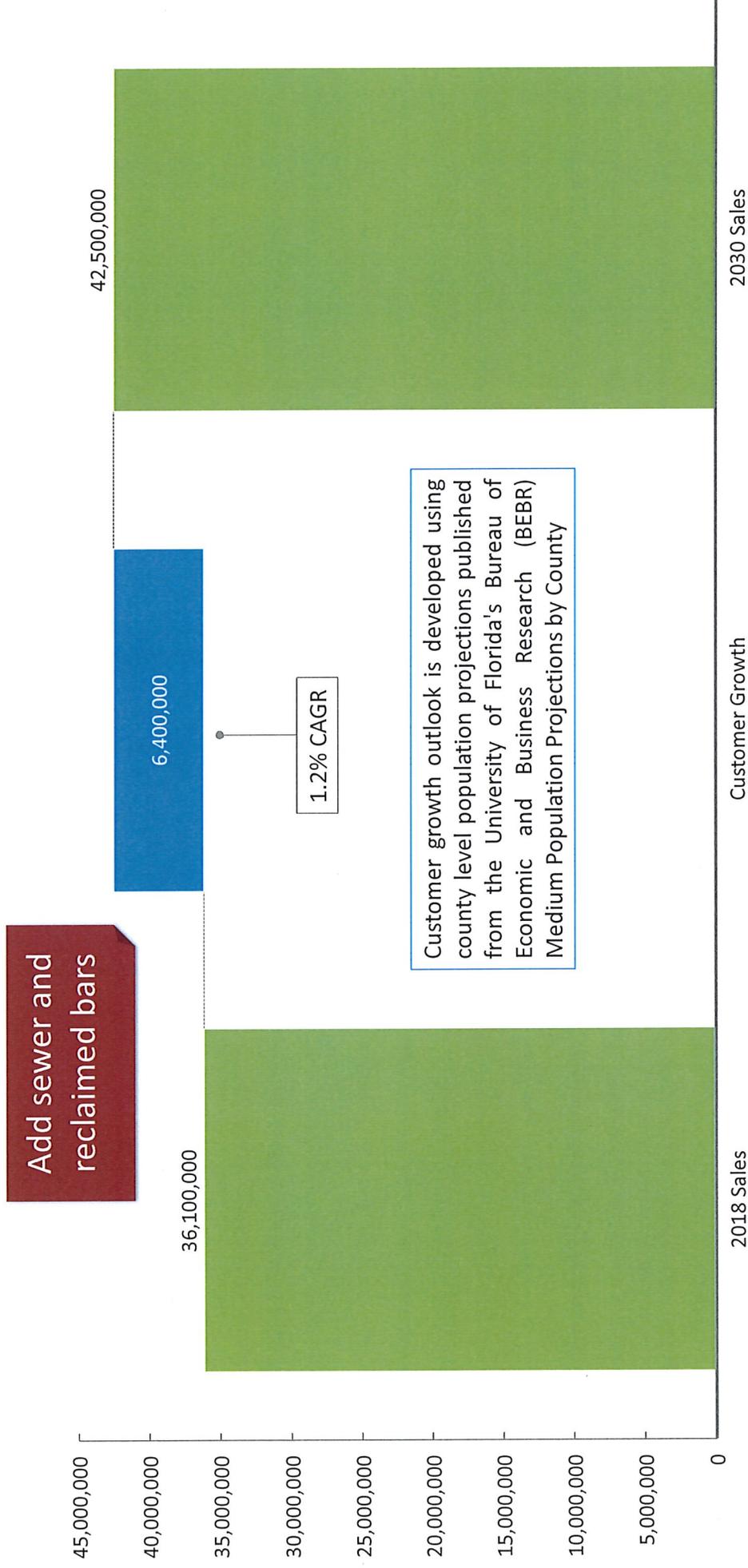
There are market influences that could diverge our forecast, up or down...



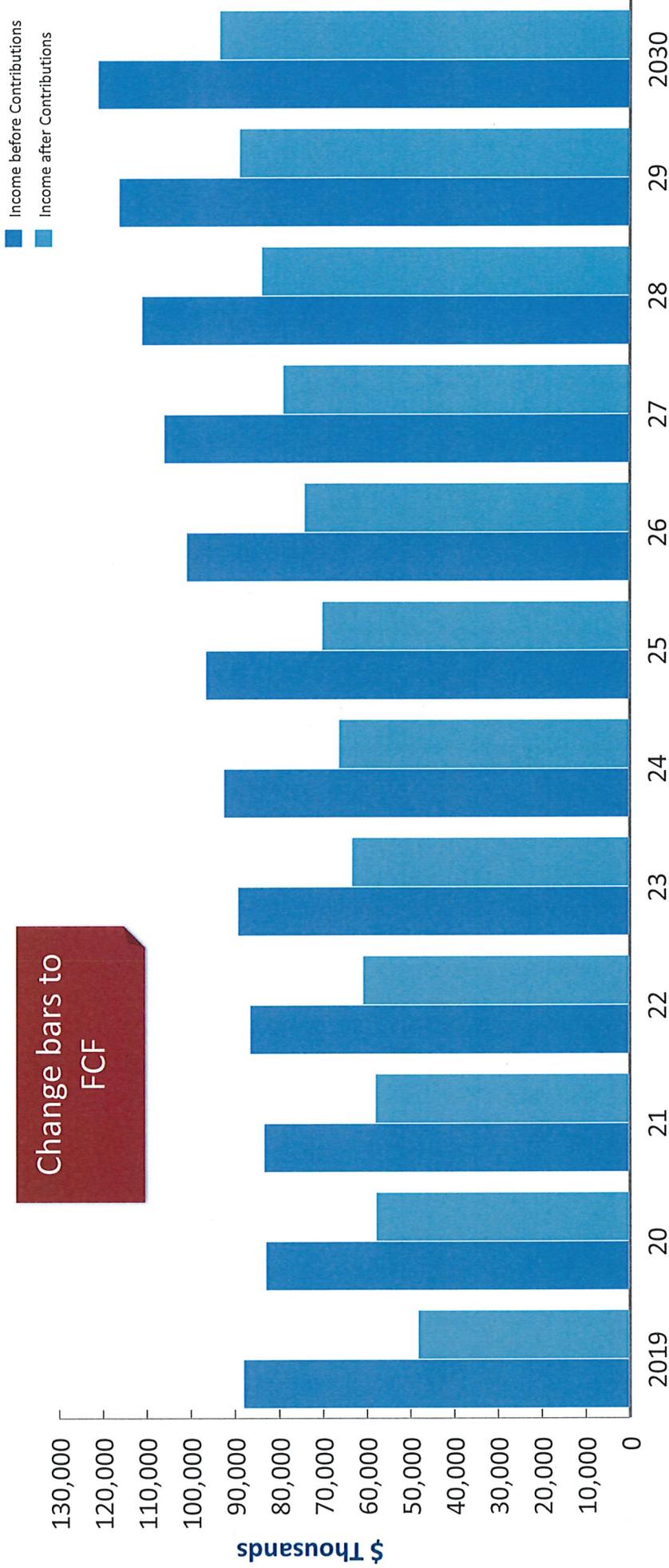
Water connection growth continues, however water efficiencies have stabilized usage per customer

Water sales outlook by 2030

■ Total
■ Increase
■ Decrease



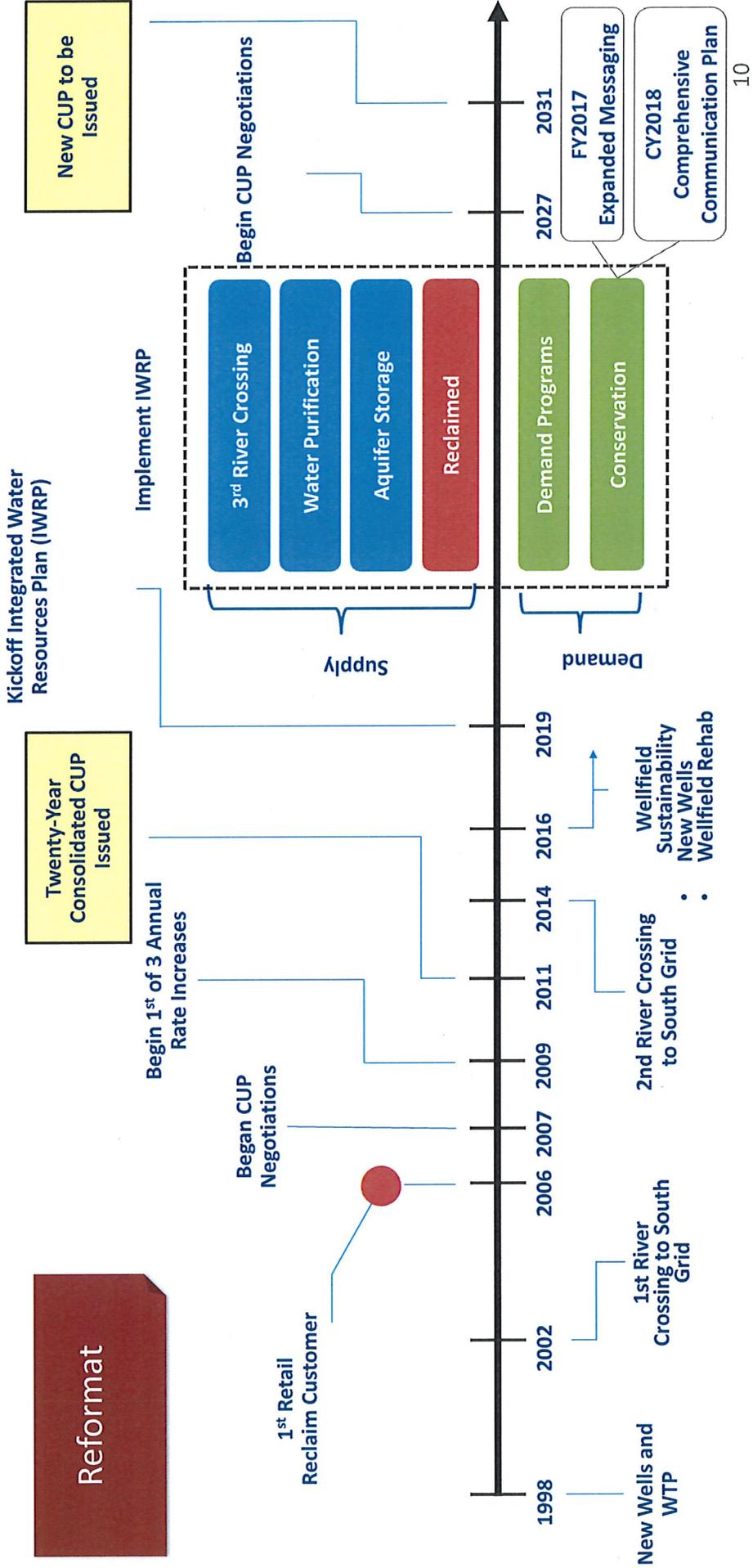
Water/sewer system financial outlook stable



The Water System Income is stable before and after city contributions

Significant milestones achieved in the past & innovative plans for the future will ensure a sustainable resource

Reformat



Water system supply outlook challenge

Expand on water assumptions?

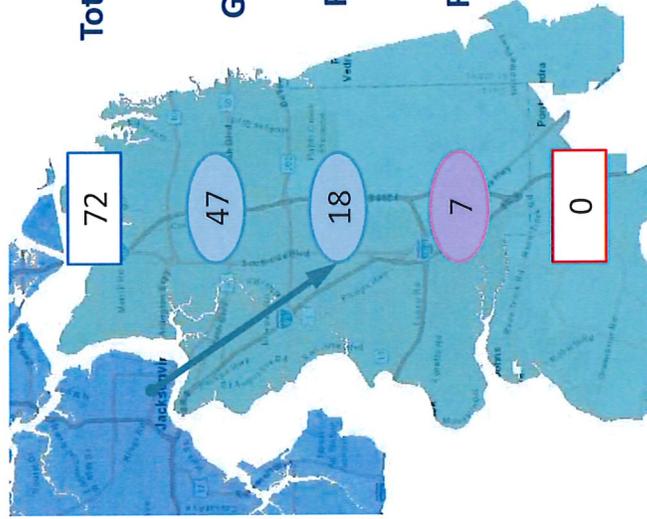
South Grid Groundwater Production was approximately 75 MGD prior to 2011

2011 CUP reduced South Grid allocation to 52 MGD

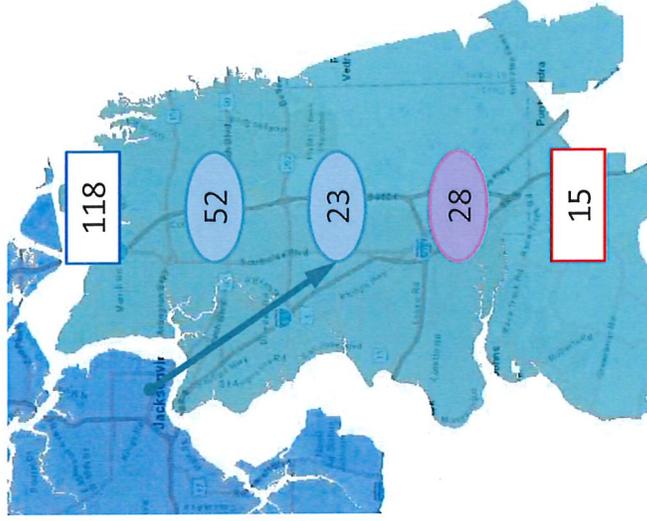
JANUARY 2019



2018



2048



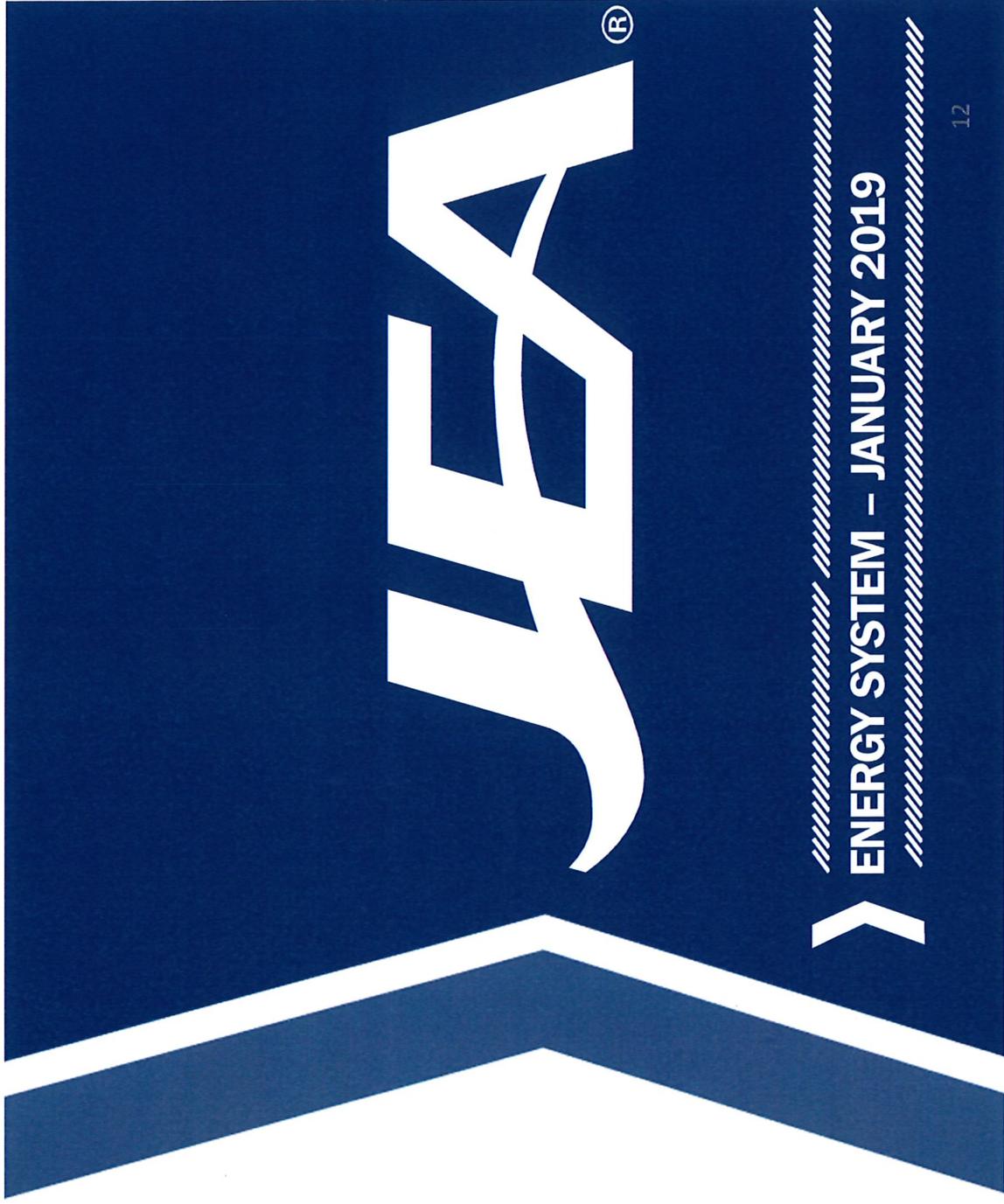
Implemented IWRP Solutions

Alternative Water Supply

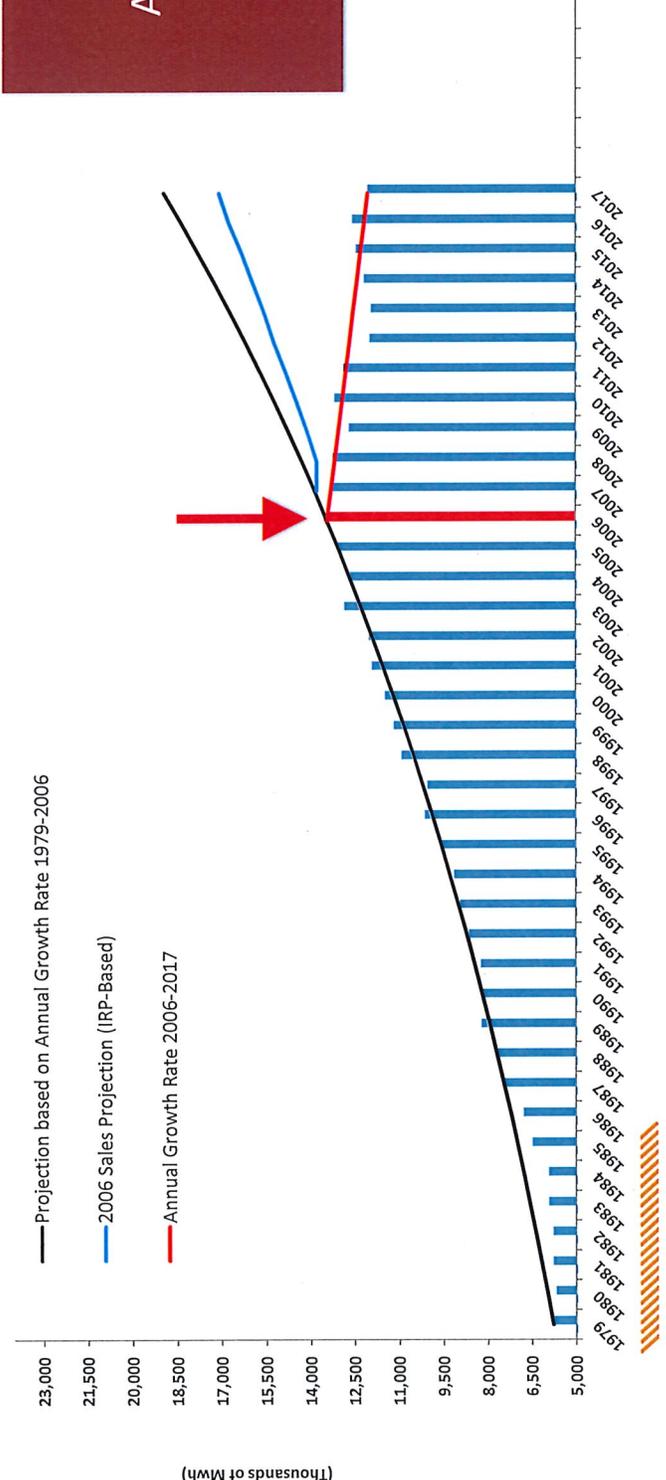
Demand Side Management

Etc.

Energy System Projections



History illustrates that changing market conditions can quickly alter sales projections



In **2006**, we forecasted to sell 17,000 GWh
 In 2017, and we ended FY at 12,000 GWh
 30% lower sales in 2017 than forecasted back in 2006

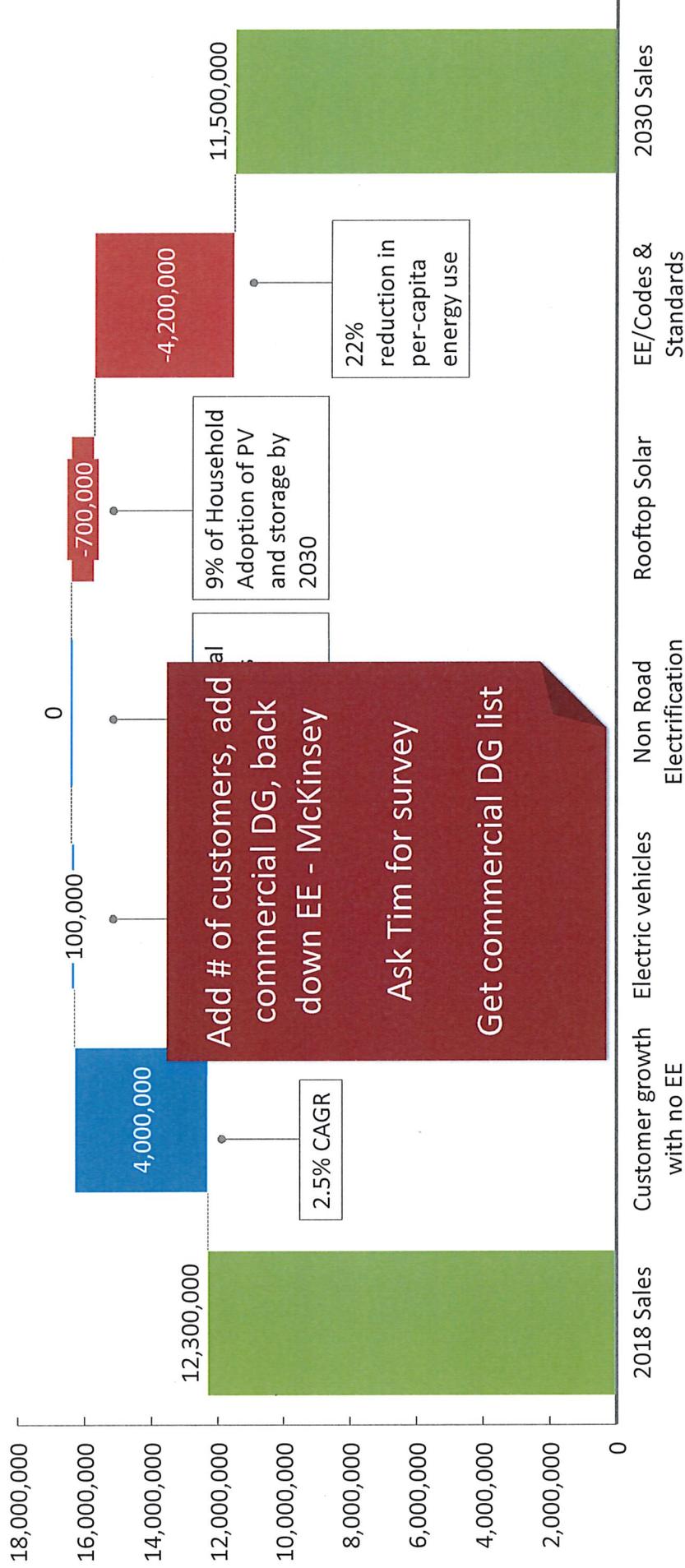
JEA's demand forecast is driven by trends affecting utilities nationwide

	National trends	Assumptions used for JEA
<p>Electric vehicles (EV)</p>	<ul style="list-style-type: none"> EV adoption is growing steadily in the US, with 200k EVs¹ on the road in 2017 Over 2M EVs are expected on the road by 2030, constituting 7-12% of light duty vehicles 	<ul style="list-style-type: none"> 3.5% of cars on the road expected to be EV's by 2030 (30K total) driving 95k MWh of increased energy sales
<p>Distributed generation (solar)</p>	<ul style="list-style-type: none"> There are 60 GW of solar installed in the US (as of December 2018); forecasted to grow to over 100 GW by 2021 Distributed solar accounts for ~40% of installed solar capacity in the US (half of which residential), and residential is expected to outpace large-scale growth 	<ul style="list-style-type: none"> Solar+storage becomes cost effective in 2023, driving 9% of residential customers to adopt by 2030, offsetting 700k MWh of energy sales
<p>Energy efficiency & new technology adoption</p>	<ul style="list-style-type: none"> Energy efficiency has been a major driver of decreased energy sales in the past decades; improvements since 2000 led to a 10% reduction in US energy expenditures and \$140 energy savings per capita Efficiency is expected to continue to improve as key energy-saving upgrades have low penetration today (e.g. heat pump water heaters) 	<ul style="list-style-type: none"> New home tech upgrades and continuation of service territory trends drive 22% reduction in residential sales per capita from 2018-30

Illustrate impacts to \$

¹ "EV" includes PHEV and BEV
 Source: McKinsey automotive forecast, SEIA, EIA, Edison Foundation

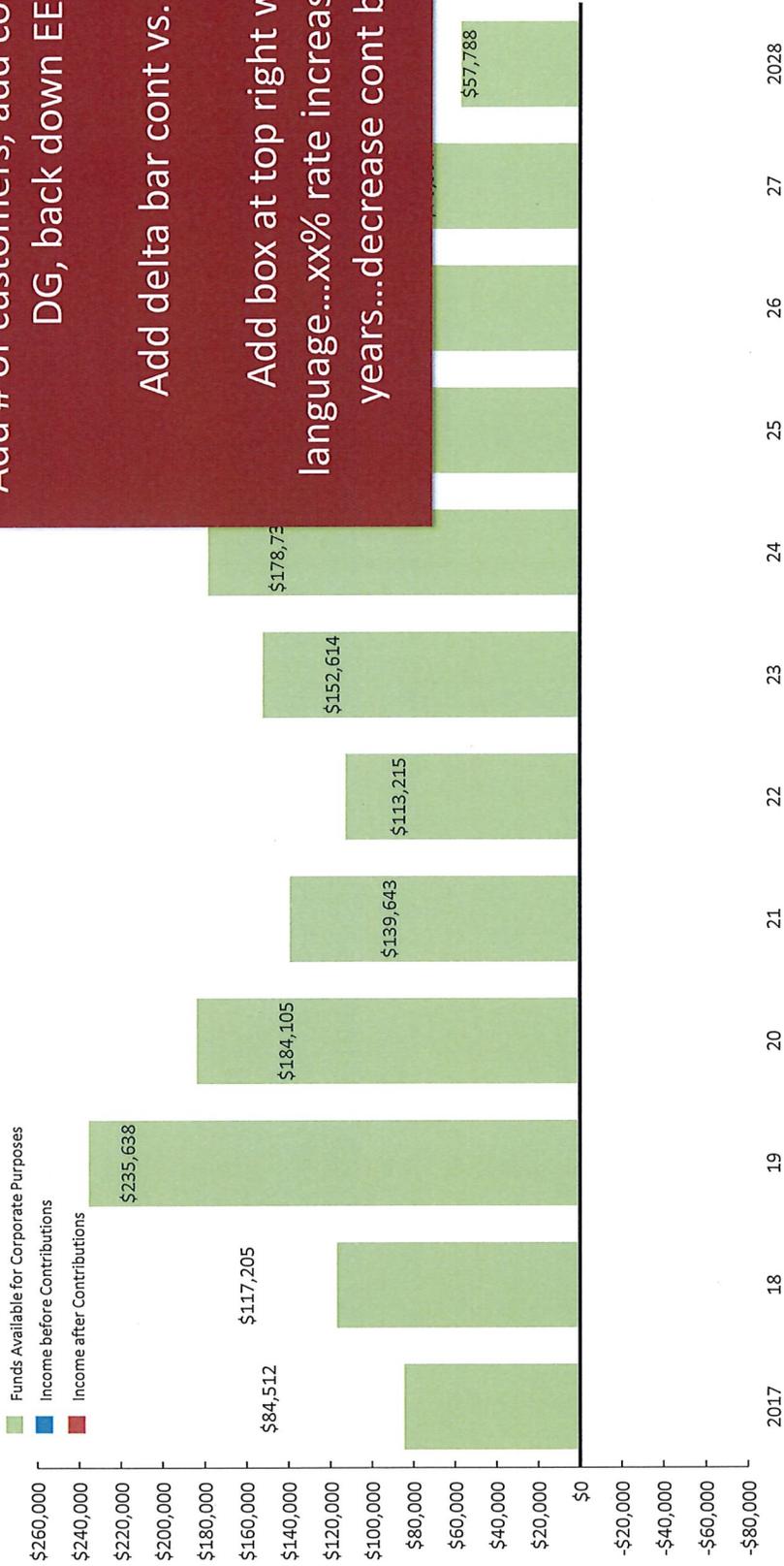
Energy sales outlook by 2030 shows a potential 7% drop in sales relative to 2018



Add slide with case studies from other fixed cost businesses/Netflix/other utilities
- McKinsey

Add slide with levers and what moves/rates/payback/affordability –
McKinsey?

Electric system financial outlook challenge



Edit chart with updated numbers
 Add # of customers, add commercial
 DG, back down EE
 Add delta bar cont vs. FCF
 Add box at top right with
 language...xx% rate increase over x
 years...decrease cont by \$x

Reduced energy sales forecast drives a challenging financial outlook for JEA by 2030
if JEA were to take no action

While the call to action is clear, JEA has several potential responses:

- JEA can deploy at all strategic
- These responses electrification **evolving the business**, e.g. by expanding existing **business**, e.g. by expanding existing **of operational performance**; and benefit from DER and other trends
- These and other effort

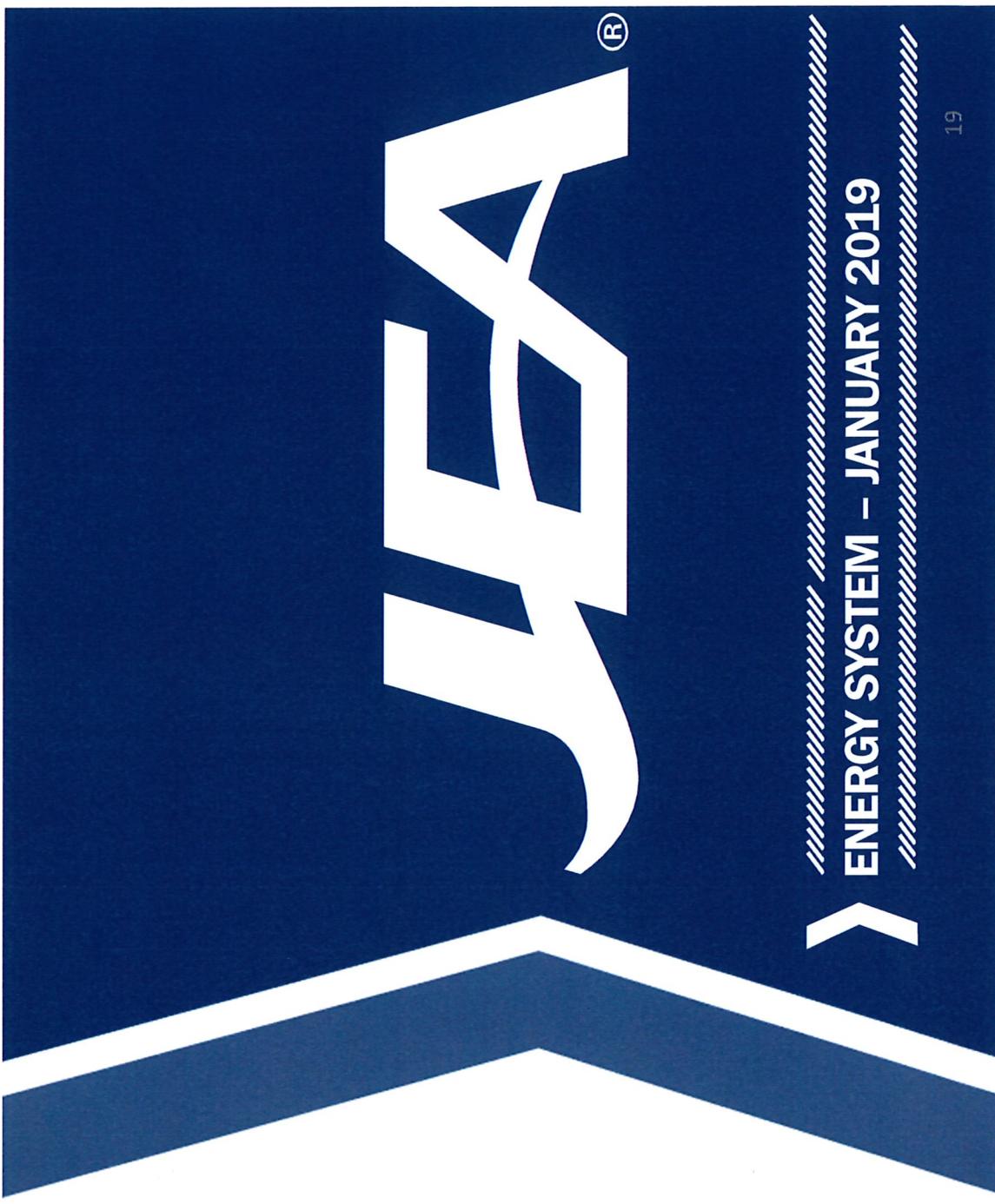
Change verbiage, "the time is now" ...etc.

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**The opportunity
at hand**

Supplemental Information



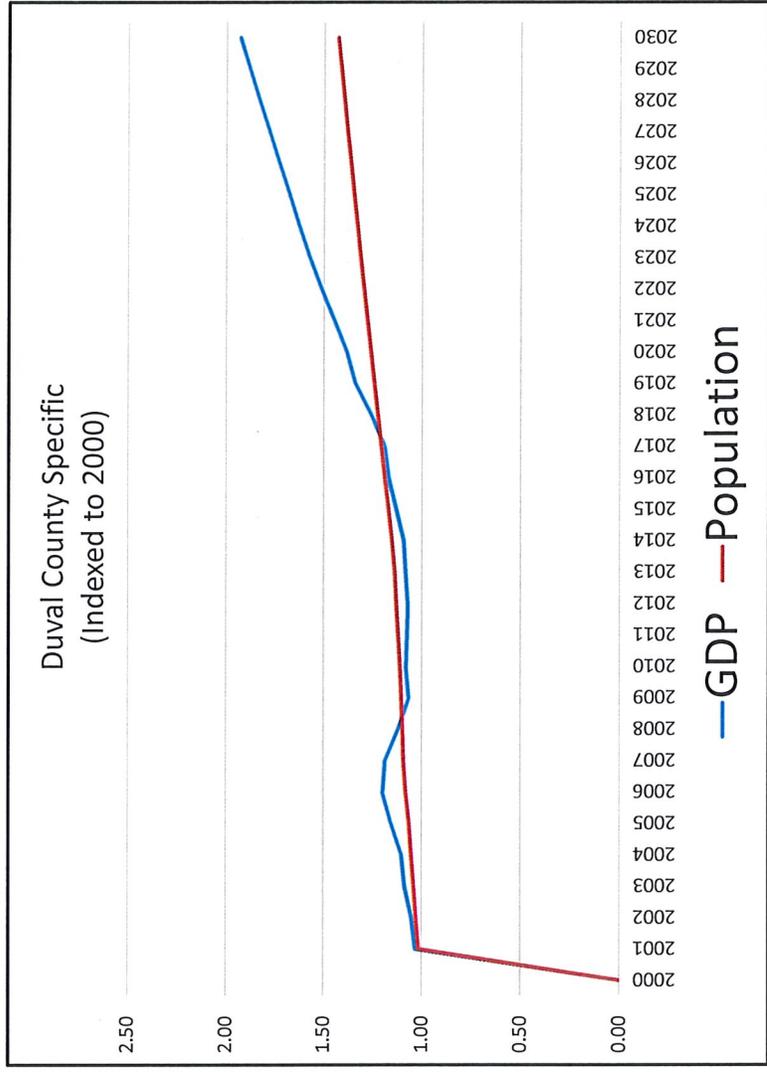
Customer growth likely to continue in the foreseeable future

Customer growth projections considers the U.S. Census Bureau (BOC): Population Estimates, Projections; Moody's Analytics Estimated and Forecasted for Duval County

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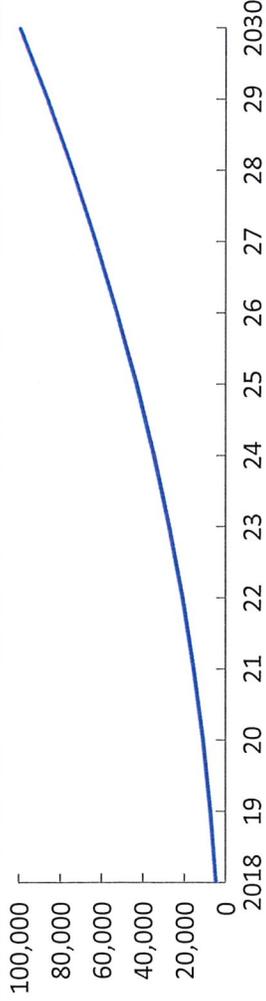


Customer Growth



30k EVs expected in in JEAs territory by 2030 based on EV modeling and penetration today

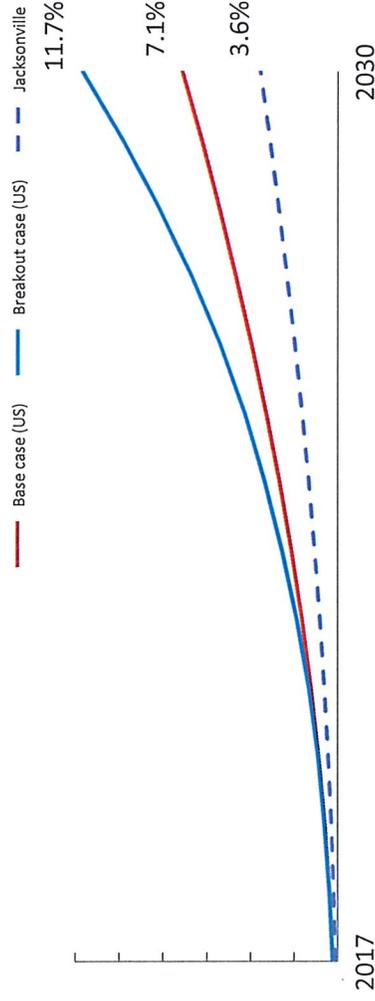
Energy added by EV fleet, MWh



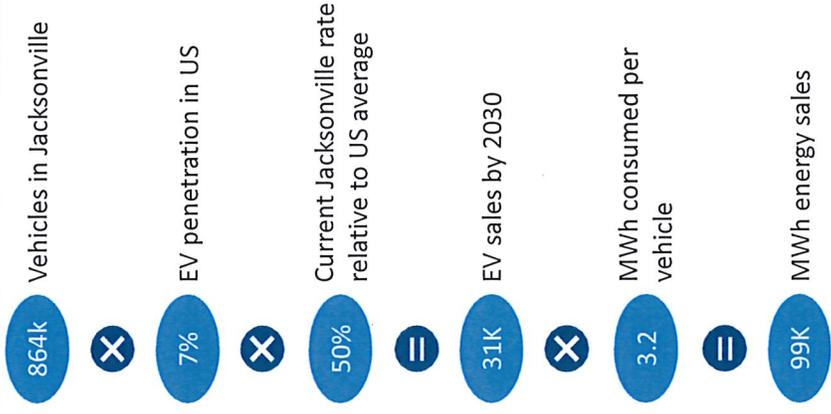
100k MWh in energy sales in 2030 because 31k EVs are added to Jacksonville fleet, constituting 3.6% of light duty vehicles



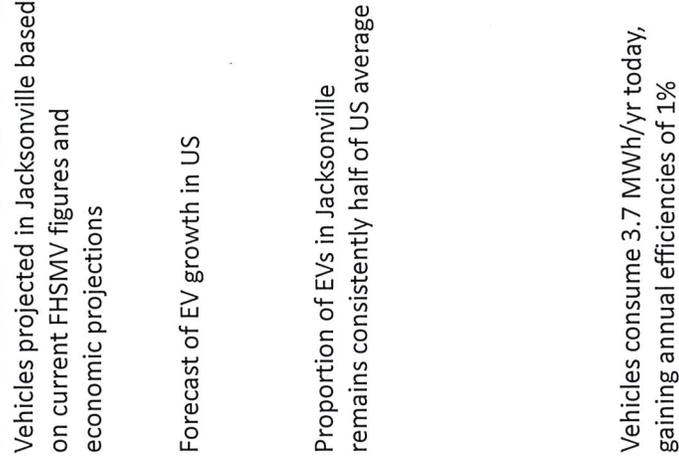
EV fleet penetration forecasts, %



Base case 2030 figures



Base case 2030 assumptions

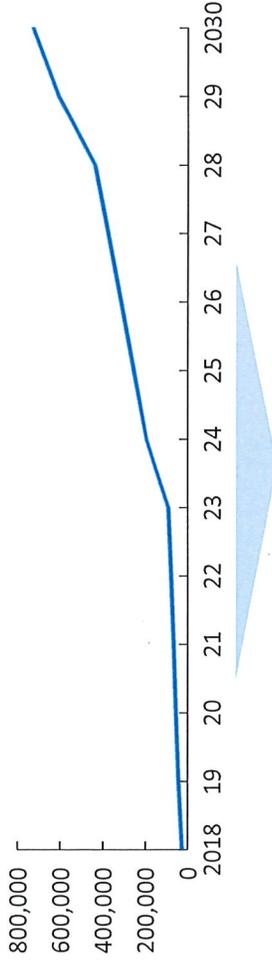


Source: Federal Reserve income per capita data; McKinsey Automotive practice TCO-based forecasting models; Florida Highway Safety and Motor Vehicles; Internal forecasts

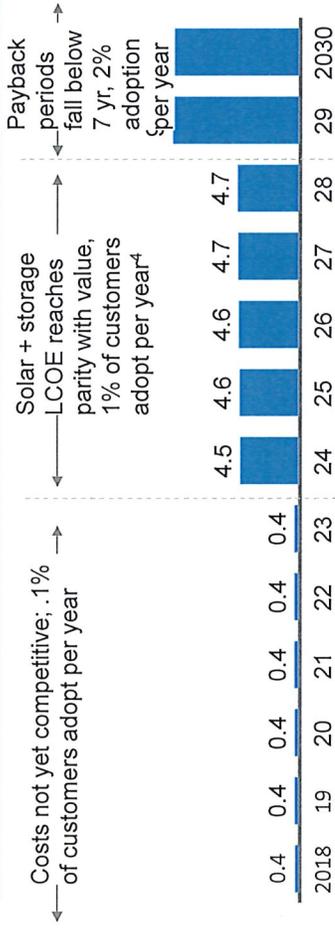
Solar reaching economic parity could lead to significant reduction in energy sales

- 750k MWh in energy sales reduced by 2030, with 45k homes and 1% of C&I load installing DG solar + storage by 2023
- Solar adoption is assumed to be a function of economic parity; once solar makes economic sense, uptake is expected to increase significantly

Energy sales lost to DG solar + storage, MWh



New residential solar + storage customers, thousand households



1 20 year system life; 7% discount rate; 17% capacity factor; assumes 5-10kW(DC) system size; 2% rate increase YoY based on trends in Europe and Australia

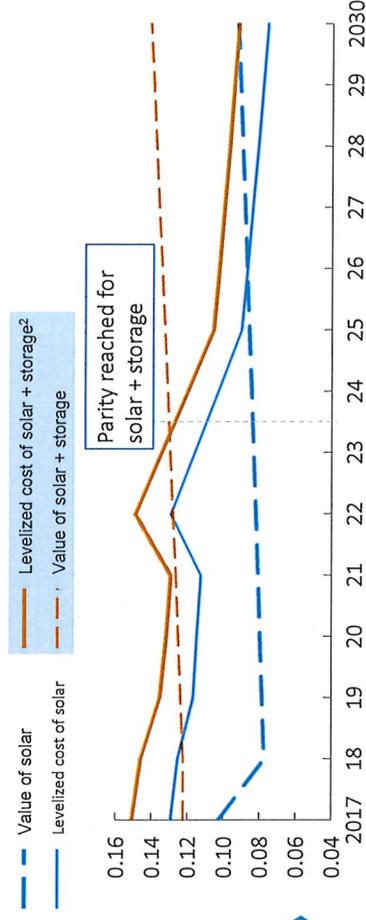
3 Considers backup as economic value towards payback

4 Uptake in line with post-parity adoption in other states (e.g., HI, CA)

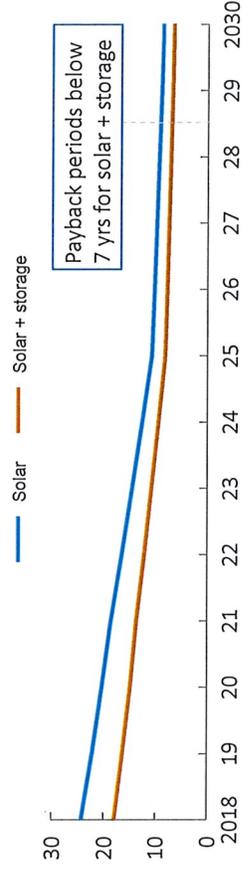
- Solar + storage has a higher value proposition for JEA customers than solar alone
- Though system costs are higher, value increases as well,³ driving shorter payback periods

Cost and value of solar for JEA customers¹,

\$/kWh



Simple payback period for JEA customers' systems,³ years

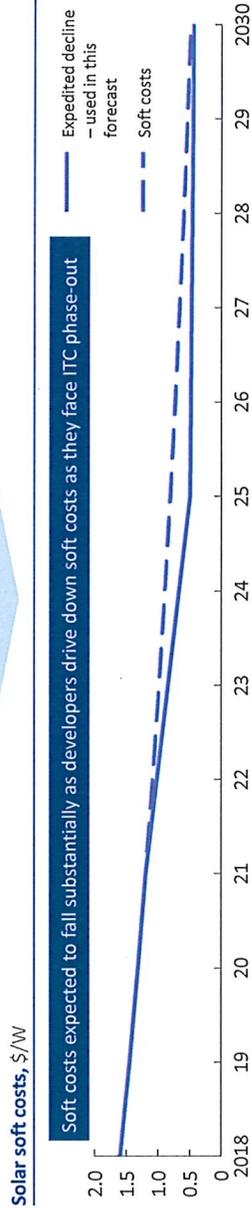
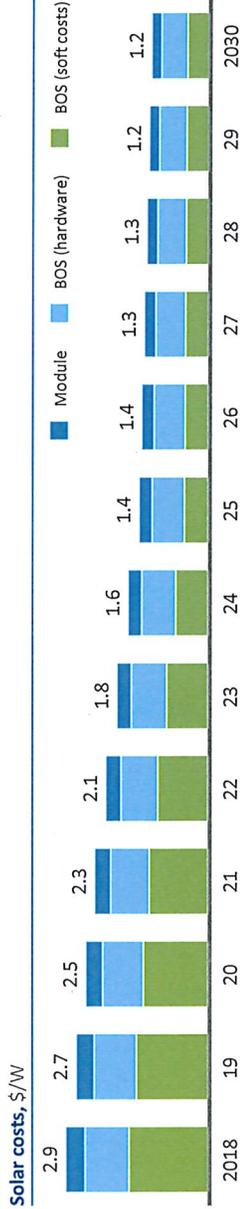
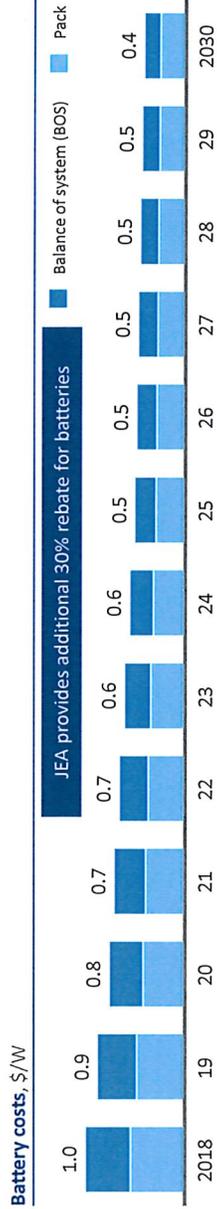


2 Assumes more aggressive solar soft cost declines post-2021 as ITC is phased out; cost reductions appear viable in line with post-parity adoption in other states (e.g., HI, CA)

Source: Sigrin and Drury, Diffusion into New Markets: Economic Returns Required by Households to Adopt Rooftop Photovoltaics, NREL

Economic parity driven by decreasing soft costs and potential added value of storage

Both solar and battery costs decline over the forecast period...



1 Battery economics assume consistent willingness to pay premium for backup power in region
Source: McKinsey, SEIA

...While Batteries add value to system due to willingness to pay for backup storage and reduced need to export energy



- Value of solar driven by offsetting variable cost of electricity
- Reduced value given fuel cost-only pricing for excess solar generated

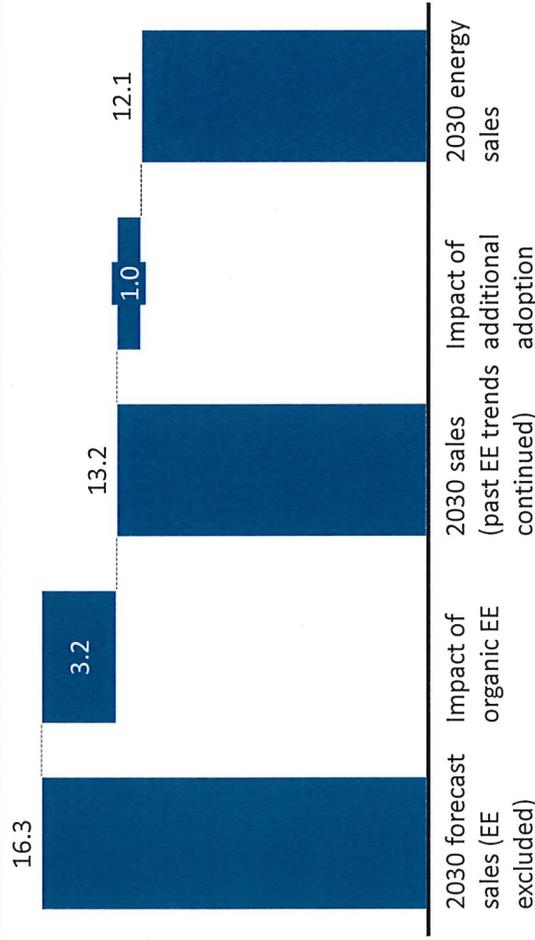
- Battery storage adds value through reducing need to sell back power to grid at lower rate

- Addition of storage also assumes additional monetary value placed on backup power (valued at \$200 / year)¹

Storage adds incremental value as part of home DG solution, particularly when backup power is a major consideration

Energy efficiency momentum is the largest driver of energy sales reductions, consistent with US utility trends

2030 energy sales (independent of solar, EV), TWh



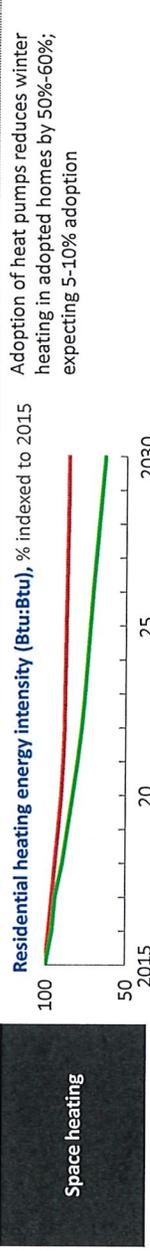
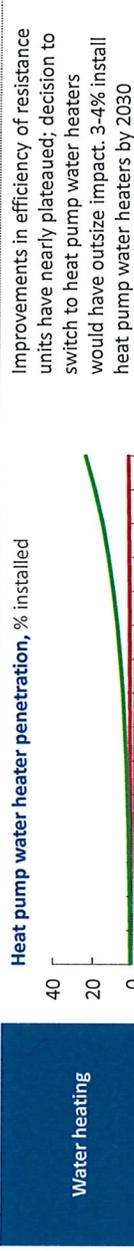
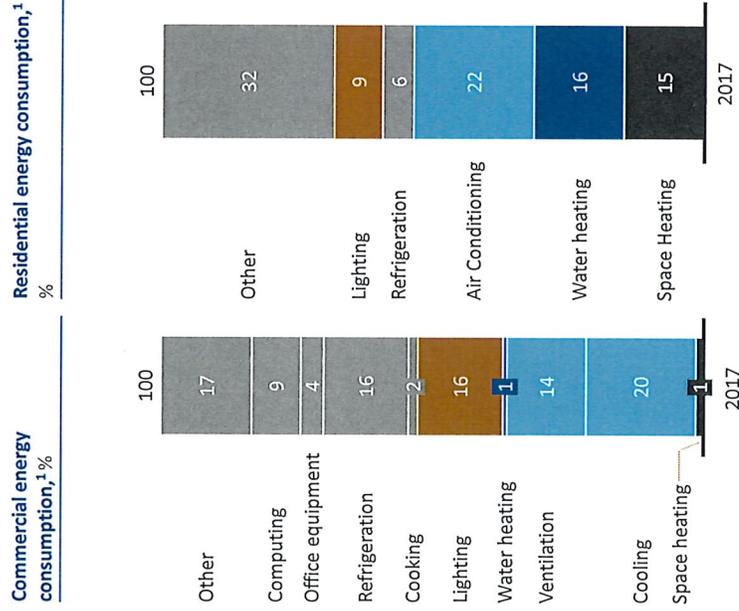
- Organic EE includes continued adoption of energy efficient products as these products become more efficient, as well as the continuation of general building trends, e.g. gas connections
- Additional tech includes higher uptake of products and active decisions to purchase more economic solutions, e.g. heat pump water heaters

Discussed in additional detail on following page



¹ Includes Residential, Commercial, Industrial customers; C&I customer characteristics vary significantly
Source: JEA forecast, PowerIQ

Natural EE improvements with new products will drive up EE; consumer choices regarding new water and space heating technologies can have outsized impact on efficiency

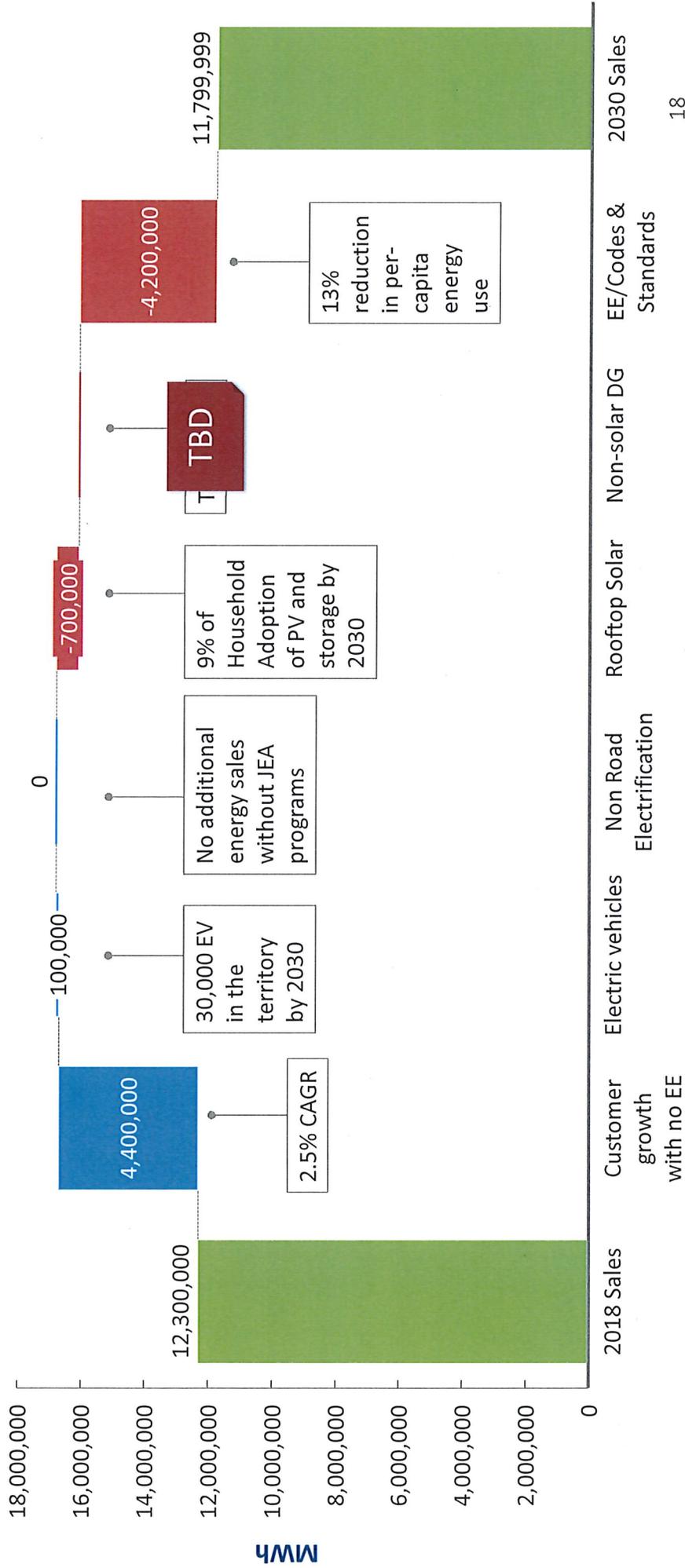


1 ECS breakdown, South Atlantic, %
Source: EIA RECS 2015 and CBECS 2012, Pathways database, McKinsey analysis

The following "Baseline Conversation" financial projections are presented solely for JEA Board of Directors planning and action. They are not a projection of future financial performance and, as such, should not be relied upon by present or prospective JEA bond investors to purchase or sell any security or to make an investment decision. The projections are merely a mathematical representation of a hypothetical case for change. Actual results are likely to differ materially from this business case. Use of this presentation not in its entirety could result in material financial harm to the company.

Energy sales outlook by 2030 shows a potential 4% drop in sales relative to 2018

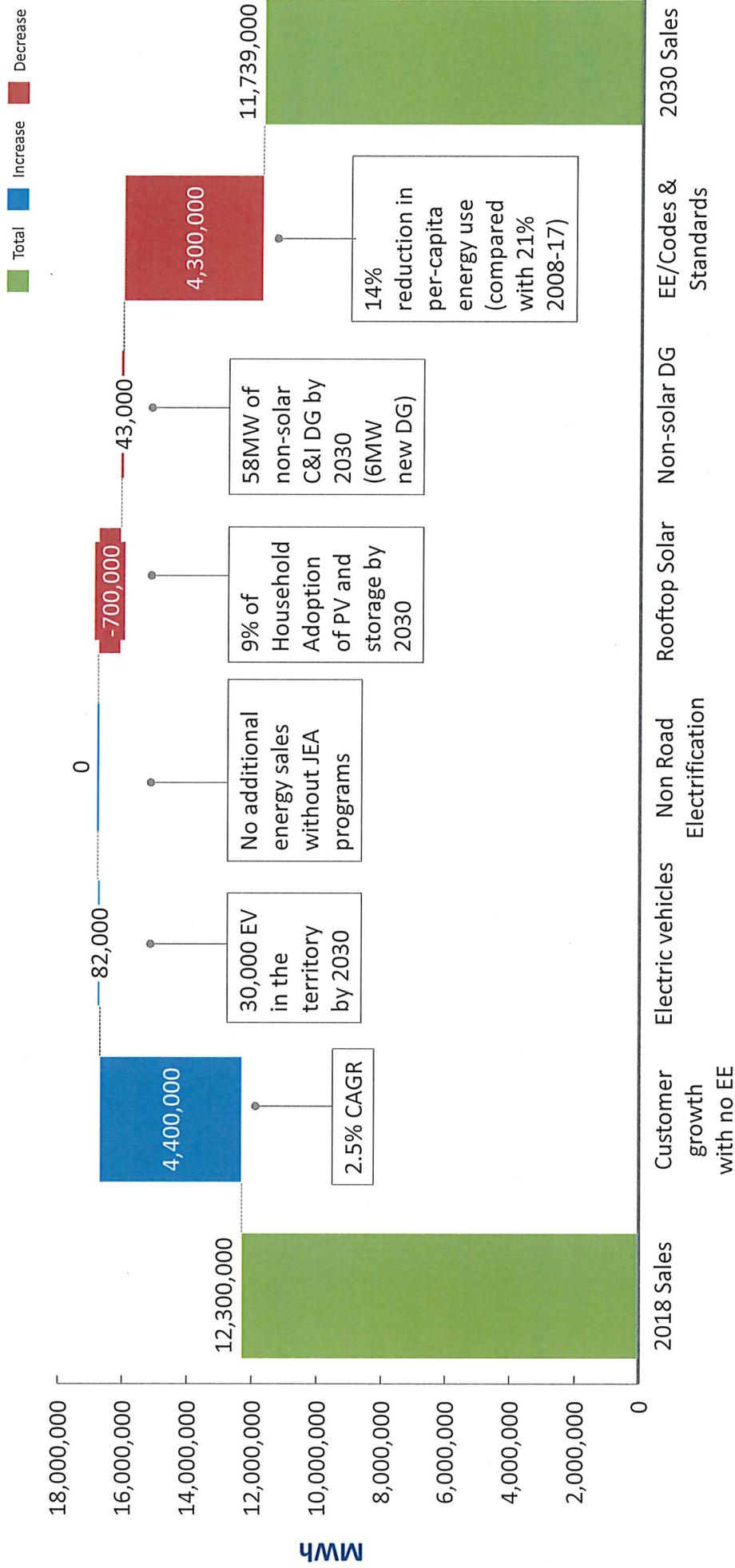
■ Total Increase ■ Decrease



The following "Baseline Conversation" financial projections are presented solely for JEA Board of Directors planning and action. They are not a projection of future financial performance and, as such, should not be relied upon by present or prospective JEA bond investors to purchase or sell any security or to make an investment decision. The projections are merely a mathematical representation of a hypothetical case for change. Actual results are likely to differ materially from this business case. Use of this presentation not in its entirety could result in material financial harm to the company.

Energy Sales Outlook by 2030

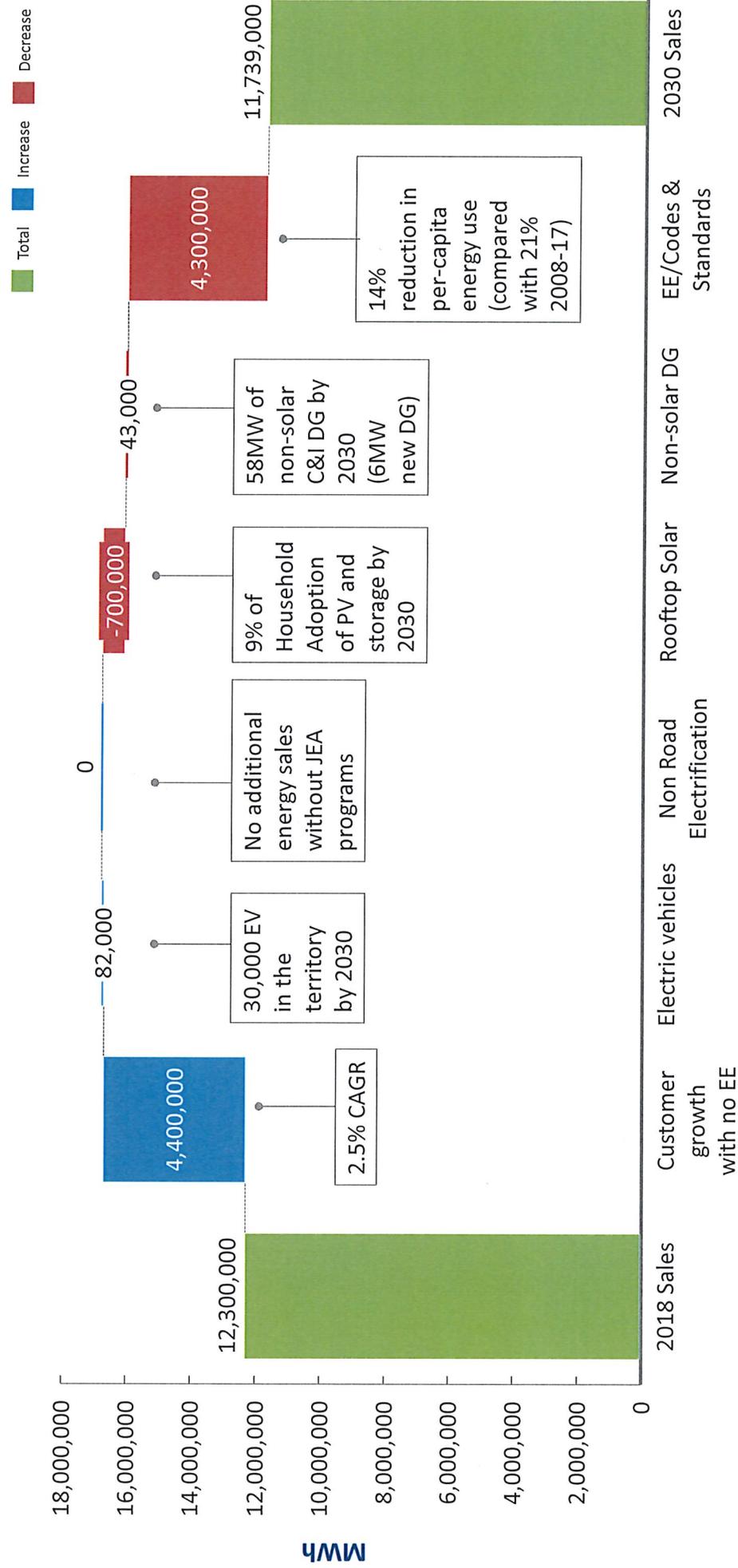
There's a potential 4% drop in sales relative to 2018



The following "Baseline Conversation" financial projections are presented solely for JEA Board of Directors planning and action. They are not a projection of future financial performance and, as such, should not be relied upon by present or prospective JEA bond investors to purchase or sell any security or to make an investment decision. The projections are merely a mathematical representation of a hypothetical case for change. Actual results are likely to differ materially from this business case. Use of this presentation not in its entirety could result in material financial harm to the company.

Energy Sales Outlook by 2030

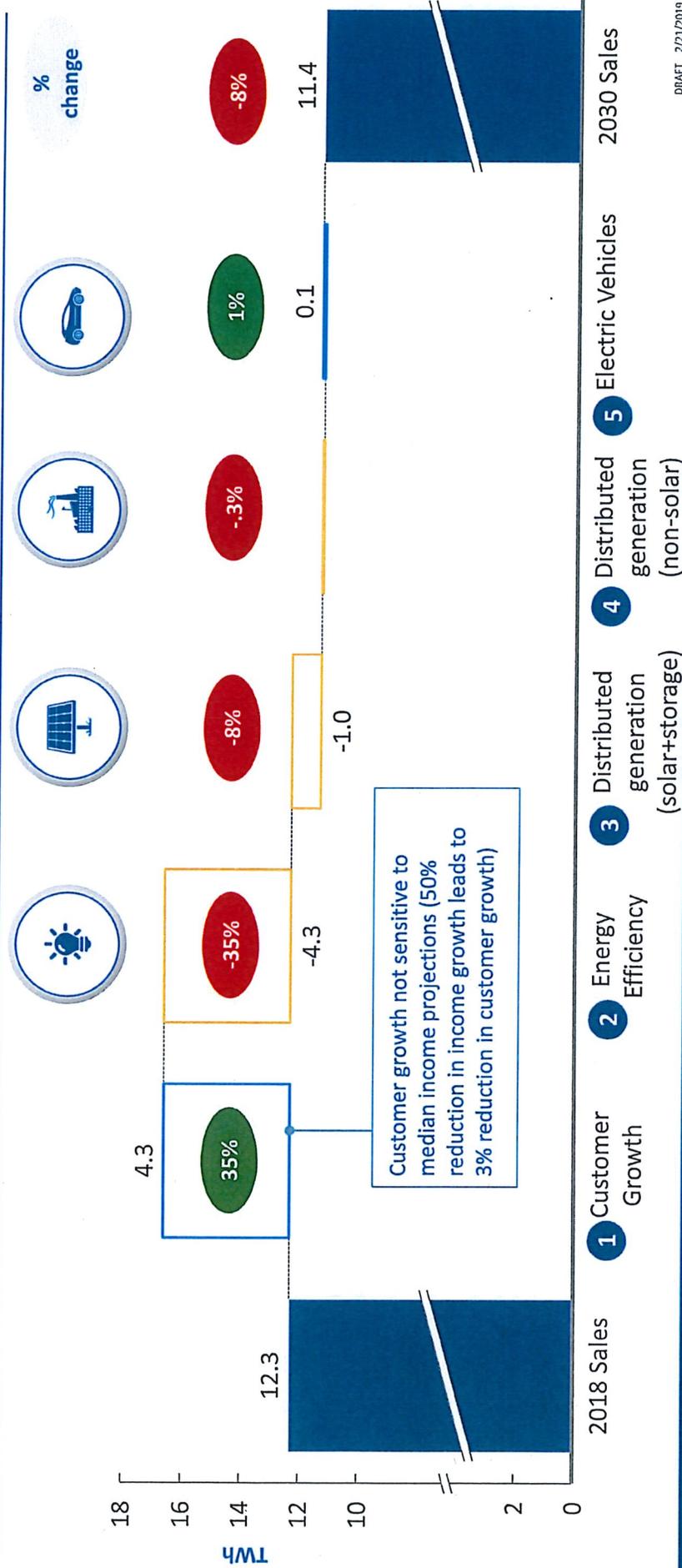
There's a potential 4% drop in sales relative to 2018



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Energy sales forecast: Energy efficiency and solar will drive down JEA's sales by 8% through 2030 despite a growing customer base

2030 JEA projected energy sales, TWh



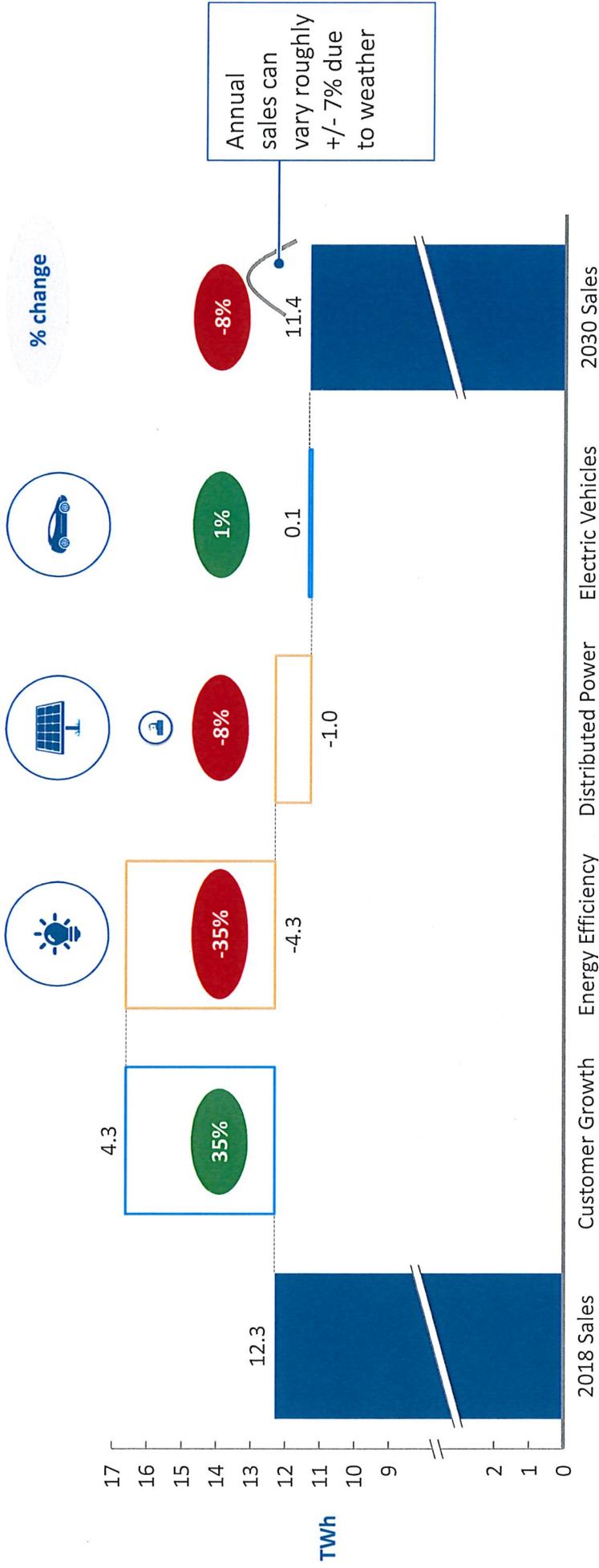
DRAFT 2/21/2019



EXHIBIT 10
 Merged 7/6/20
 PENNSYLVANIA 800-631-6999

JEA's sales expected to fall by 8+% through 2030 despite a growing customer base

2030 JEA projected energy sales, TWh

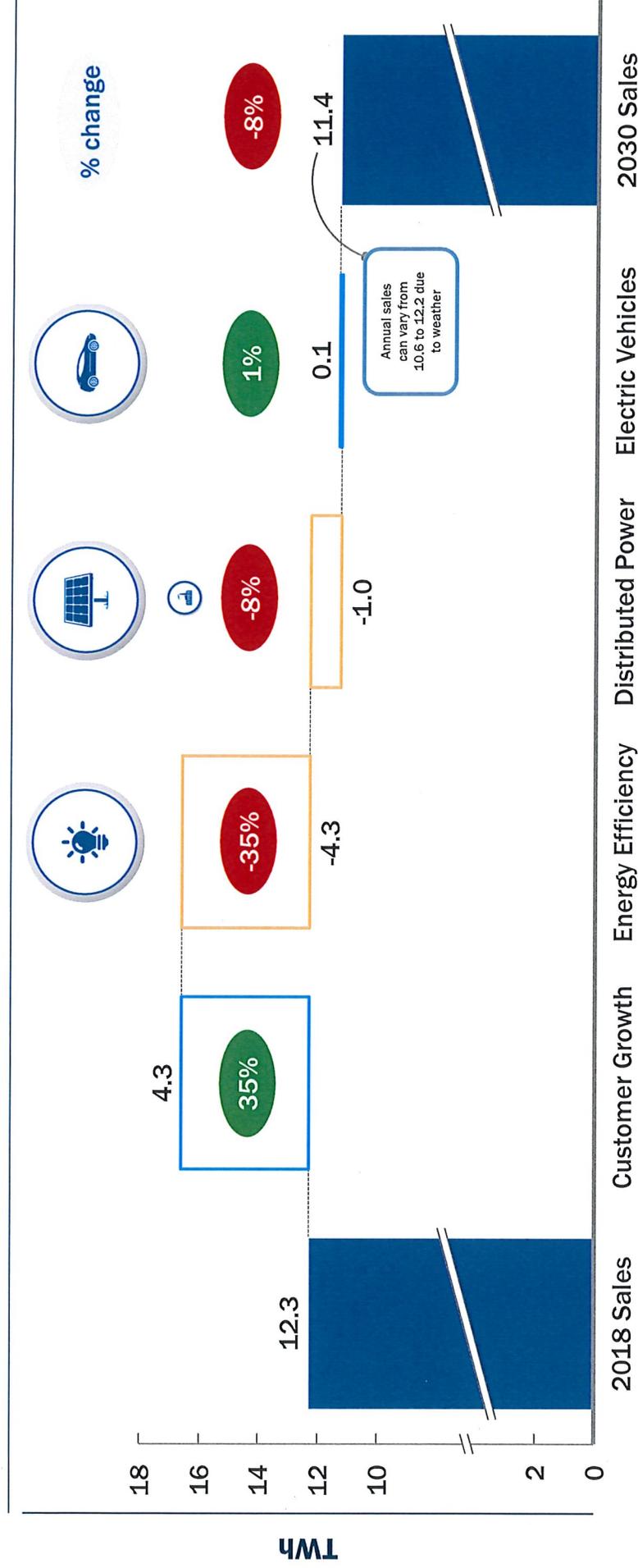


JEA[®]



STATUS QUO ENERGY SALES PROJECTION

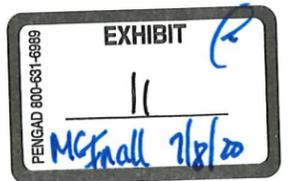
By 2030 JEA's Customers May Likely Increase 16% and Energy Sales May Likely Fall by 8%



Ten Year Site Plan Figures

	Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Residential	GWh sales	5,307	5,319	5,747	5,237	4,880	4,852	5,162	5,197	5,351	5,199	5,224	5,262	5,285	5,302	5,326	5,356	5,384	5,417	5,459	5,509
Residential	Avg # of customers	365,363	365,872	368,111	369,051	369,761	372,430	377,326	383,998	398,387	404,806	410,703	417,700	424,293	430,780	437,294	443,893	450,362	456,598	462,573	468,265
Residential	Growth		0.1%	0.6%	0.3%	0.2%	0.7%	1.3%	1.8%	3.7%	1.6%	1.5%	1.7%	1.6%	1.5%	1.5%	1.5%	1.5%	1.4%	1.3%	1.2%
Residential	Avg kwh / customer	15,072	14,506	14,448	15,572	14,163	13,102	12,860	13,443	13,431	12,842	12,721	12,598	12,455	12,307	12,180	12,066	11,954	11,864	11,802	11,766
Commercial	GWh sales	4,040	4,024	4,071	3,927	3,852	3,777	3,882	4,001	4,064	4,011	4,071	4,103	4,122	4,148	4,173	4,195	4,214	4,233	4,251	4,269
Commercial	Avg # of customers	44,489	45,093	45,748	46,192	46,605	47,127	47,691	49,364	51,441	51,970	52,482	53,134	53,775	54,412	55,041	55,662	56,275	56,884	57,489	58,089
Commercial	Avg kwh / customer	98,887	89,591	87,957	88,137	84,255	81,735	79,204	78,642	78,994	77,176	77,561	77,217	76,646	76,237	75,812	75,369	74,886	74,407	73,942	73,485
Industrial	GWh sales	2,948	2,643	2,720	2,682	2,598	2,589	2,564	2,579	2,457	2,532	2,612	2,653	2,679	2,700	2,723	2,743	2,760	2,772	2,783	2,793
Industrial	Avg # of customers	225	231	226	223	215	218	219	215	202	202	201	199	199	199	199	199	199	199	199	199
Industrial	Avg kwh / customer	11,671,666	12,776,809	11,692,820	12,192,004	12,468,380	11,906,357	11,812,944	11,951,824	12,159,793	12,510,027	12,993,687	13,333,588	13,462,838	13,570,053	13,684,532	13,784,130	13,870,624	13,929,925	13,984,670	14,032,692
C&I	Avg # of customers	44,714	45,324	45,974	46,415	46,820	47,345	47,910	49,579	51,643	52,172	52,683	53,333	53,974	54,611	55,240	55,861	56,474	57,083	57,688	58,288
C&I	Growth		1.4%	1.4%	1.0%	0.9%	1.1%	1.2%	3.5%	4.2%	1.0%	1.0%	1.2%	1.2%	1.2%	1.2%	1.1%	1.1%	1.1%	1.1%	1.0%

Year	R	R	R	C	C	C	I	I	I					
	Sales	# cust	Avg/cust	Sales	# cust	Avg/cust	Sales	# cust	Avg/cust					
2008	5,307	365,363	15,072	4,040	44,489	98,887	2,948	225	11,671,666					
2009	5,319	365,872	14,506	4,024	45,093	89,591	2,643	231	12,776,809					
2010	5,747	368,111	14,448	4,071	45,748	87,957	2,720	226	11,692,820					
2011	5,237	369,051	15,572	3,927	46,192	88,137	2,682	223	12,192,004					
2012	4,880	369,761	14,163	3,852	46,605	84,255	2,598	215	12,468,380					
2013	4,852	372,430	13,102	3,777	47,127	81,735	2,589	218	11,906,357					
2014	5,162	377,326	12,860	3,882	47,691	79,204	2,564	219	11,812,944					
2015	5,197	383,998	13,443	4,001	49,364	78,642	2,579	215	11,951,824					
2016	5,351	398,387	13,431	4,064	51,441	78,994	2,457	202	12,159,793					
2017	5,199	404,806	12,842	4,011	51,970	77,176	2,532	202	12,510,027					
2018	5,224	410,703	12,721	4,071	52,482	77,561	2,612	201	12,993,687					
2019	5,262	417,700	12,598	4,103	53,134	77,217	2,653	199	13,333,588					
2020	5,285	424,293	12,455	4,122	53,775	76,646	2,679	199	13,462,838					
2021	5,302	430,780	12,307	4,148	54,412	76,237	2,700	199	13,570,053					
2022	5,326	437,294	12,180	4,173	55,041	75,812	2,723	199	13,684,532					
2023	5,356	443,893	12,066	4,195	55,662	75,369	2,743	199	13,784,130					
2024	5,384	450,362	11,954	4,214	56,275	74,886	2,760	199	13,870,624					
2025	5,417	456,598	11,864	4,233	56,884	74,407	2,772	199	13,929,925					
2026	5,459	462,573	11,802	4,251	57,489	73,942	2,783	199	13,984,670					
2027	5,509	468,265	11,766	4,269	58,089	73,485	2,793	199	14,032,692					
	5.5%	14.0%	-7.5%	4.9%	10.7%	-5.3%	6.9%	-1.0%	8.0%					
Rate hike required	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030		
	0.0%	0.0%	0.0%	22.5%	0.0%	3.5%	-13.0%	-2.0%	8.0%	3.0%	1.5%	2.0%		
1	1.00	1.00	1.00	1.23	1.23	1.27	1.10	1.08	1.17	1.20	1.22	1.245		
1	1.019	1.037	1.057	1.076	1.096	1.116	1.137	1.158	1.179	1.201	1.223	1.246	Solve for linear growth	



From: McInall, Steven G. - VP & Chief Energy & Water Planning <mcinsg@jea.com>
Sent: Wednesday, December 4, 2019 6:03 PM
To: 'Andrew Grass'
Subject: FW: McKinsey Strategic Plan - Complete Doc - REVIEW
Attachments: 1126 2030 Strategy Document_vF.pdf

Steve McInall. P.E.

Vice President, Energy and Water Planning
 Direct: (904) 665-4309
 Mobile: (904) 312-0739

From: Durham, Russell J. - Manager, Electric T&D Planning <DurhRJ@jea.com>
Sent: Wednesday, December 4, 2019 3:32 PM
To: McInall, Steven G. - VP & Chief Energy & Water Planning <mcinsg@jea.com>
Cc: Coarsey, John B. - Director, Electric T & D Planning <CoarJB@jea.com>; Fowler, Robert E. <FowlRE@jea.com>
Subject: FW: McKinsey Strategic Plan - Complete Doc - REVIEW

Steve,

My comments/observations. Robert had a significant comment for slide #63. The others are very minor.

Slide #11: the two bullets about EV charging seem to contradict each other at a high level. One says "Charge whenever"; the other implies "only charging when good for JEA".

Slide #12: footnote 4 shown on bottom left chart but the actual footnote is missing.

Slide #32: No reference to adjusting rate structure to encourage shifting EV charging away from peak (ties to slide #11).

Slide #63: [From Robert Fowler] the numbers for this OH to UG Conversion slide came from an analysis we did in the past. Most numbers matched but some numbers are wrong. See the two pictures below: Also, real estate costs not included.

Overhead-to-underground conversions of JEA's at-risk distribution feeders and laterals

1,394	\$593K	+	269	x
Single phase OH lateral miles	Cost per mile to UG		2-phase OH lateral miles	Cos
+	297	x	\$593K	+
3-phase OH lateral miles	Cost per mile to UG		902	x
			3-phase feeder OH miles	Cos

Assumptions

- 55% of system is already underground, and future system expansions are re
- JEA has estimated the total cost to underground the remainder of the OH late

EXHIBIT
 12
 McInall 1/8/20
 PENGAD 800-631-6989

Full Overhead System Underground			
Overhead Segment	Distance (Miles)	Cost/Mile	Total Cost
1-Phase Lateral	1,394	\$593,074	\$826,745,156
2-Phase Lateral	269	\$760,079	\$204,461,251
Three-Phase Lateral	297	\$822,261	\$244,211,517
Three-Phase Feeder	1,061	\$1,670,373	\$1,772,265,753
Real Estate, Easements, Permits	3,021	\$26,142	\$78,974,982
Sub-Total #1 (2017 dollars)			\$3,126,658,659
Sub-Total #1 (PV)			\$4,200,724,453

Slide #65: at the bottom "Source real-time data on electric current, voltage, and Var levels to drive..." [added Var data]

Slide #73: Seems very optimistic.

Slide #87: "Duvall" misspelled

Slide #89 & 90: missing extra costs to add or prematurely upgrade existing transformers serving these new EV chargers and some likely reconductor work. Unfortunately I don't know those costs.

Russ Durham

Manager, Electric T&D Planning

Direct: (904) 665-7108

From: Coarsey, John B. - Director, Electric T & D Planning <CoarJB@jea.com>

Sent: Monday, December 02, 2019 9:32 AM

To: Durham, Russell J. - Manager, Electric T&D Planning <DurhRJ@jea.com>; Lundeen, Timothy M. - Manager System Analysis <lundtm@jea.com>

Subject: FW: McKinsey Strategic Plan - Complete Doc - REVIEW

John B. Coarsey, P.E.
 Director, Energy Planning
 Direct: (904) 665-6739
 Fax: (904) 665-7263

From: Coarsey, John B. - Director, Electric T & D Planning

Sent: Monday, December 2, 2019 8:08 AM

To: McInall, Steven G. - VP & Chief Energy & Water Planning <mcinsg@jea.com>; Pope, Jordan A - Dir Economic Development and Real Estate <popeja@jea.com>; Zammataro, Robert J. (Rob) - Dir W/WW Planning & Development <zammrj2@jea.com>

Subject: RE: McKinsey Strategic Plan - Complete Doc - REVIEW

This entire PDF, having been for the most part crafted with no input from my team seems to be the work of inexperienced consultants and financial people. This entire report seems to be more of a wish list put together by people who have little or no understanding of the critical technical hurdles most of this involves. The logic or lack thereof of comparing of JEA with other utilities that are completely different and then drawing comparisons that by their nature are not completely accurate seems to be a recurring theme in this report. Comments below. I am forwarding to Matt and Russ to see if I am missing something.

John

John B. Coarsey, P.E.

Director, Energy Planning
Direct: (904) 665-6739
Fax: (904) 665-7263

-----Original Message-----

From: McInall, Steven G. - VP & Chief Energy & Water Planning <mcinsg@jea.com>
Sent: Friday, November 29, 2019 6:24 PM
To: Coarsey, John B. - Director, Electric T & D Planning <CoarJB@jea.com>; Pope, Jordan A - Dir Economic Development and Real Estate <popeja@jea.com>; Zammataro, Robert J. (Rob) - Dir W/WW Planning & Development <zammrj2@jea.com>
Subject: FW: McKinsey Strategic Plan - Complete Doc - REVIEW

Fyi. Hope you had a great Holiday

From: Eads, Shawn W. - VP & Chief Information Officer
Sent: Wednesday, November 27, 2019 4:38 PM
To: (Mgmt - JEA Senior Leadership Team (SLT)
Cc: Aaron Bielenberg; Andrew Grass; Anton Derkach
Subject: McKinsey Strategic Plan - Complete Doc - REVIEW

SLT,

McKinsey has finished their alignment of the 10 year strategic plan and have added all the details they collected and worked with you on for mid-level implementation details. It is now time for us to give these documents a deep scrubbing.

Attached is the complete document. You are more than welcome to review the document in its entirety, but we also have provided a guide below for the pages we definitely need you to dig into and make sure you understand them and can take them forward as we move into the next phases of detailed implementation planning and execution.

McKinsey will be onsite December 2-13 to work with you on any questions you have and any corrections you feel are needed. Post December 13, McKinsey will begin their Light Touch phase through March, which means they will not be onsite daily and will be available through request.

It is our time to take the lead on our plan. Please let me know where I can help you!

Name

Role

Pages

Herschel Vinyard

Chief Administrative Officer

2-43

Lynne Rhode

Chief Legal Counsel

2-43, 77-100, 140-147

Kerri Stewart

Chief Customer Officer

2-43, 55-57, 125-128

Jon Kendrick

CHRO

2-43, 58, 129, 150-155

Steve McInall

Energy and Water Planning

2-43, No ready way to validate numerous statements made in this portion of the work.

62-75, This part of the work compares us and makes recommendations based on other utilities such as Con-Ed. Electric Planning had virtually zero input into this. As such there are several serious flaws. One such flaw calls for conversion of 4 kV. This has been done. What is left is in politically sensitive areas that are heavily treed. The conversion OH to UG is laughable. At the end of the day most of what is suggested can be done but will likely be a t a much higher cost.

77-100, No comments

135-139, They are words but as they say the devil is in the details.

140-147, Same as above

John McCarthy

Chief Supply Chain Officer

2-43, 58-59, 132-134

Shawn Eads

CIO

2-43, 58, 77-100, 130-131, 140-147

Ted Hobson

Chief Compliance Officer

2-43

Paul Stienbrecher

Environmental Services

2-43, 69-70, 138-139

Caren Anders

Energy

2-43, 47-51, 62-68, 71-75, 77-100, 114-121, 135-137, 140-147

Sherry Hall

Chief Government Affairs Officer

2-43, 77-100, 140-147

Deryle Calhoun

Water & Wastewater Systems

2-43, 52-54, 69-70, 121-124, 138-139

Shawn W Eads

Chief Disruption Officer

From: "McInall, Steven G. - VP & Chief Energy & Water Planning" <mcinsg@jea.com>
Subject: Forecast Reconciliation
Sent: Mon, 23 Sep 2019 15:12:33 -0500
To: "Sarah Brody" <Sarah_Brody@mckinsey.com>

Sarah:

I am trying to come with a comparison of the TYSP and McKinsey forecasts. Did you start with our forecast? If so, the answer is whatever tweaks McKinsey made.

Thanks,

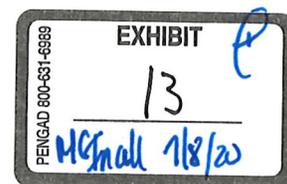
Steve

Steve McInall, P.E.

Vice President, Energy and Water Planning

Direct: (904) 665-4309

Mobile: (904) 312-0739



From: Sarah Brody <Sarah_Brody@mckinsey.com>
Subject: Re: Forecast Reconciliation
Sent: Mon, 23 Sep 2019 15:32:53 -0500
To: "McInall, Steven G. - VP & Chief Energy & Water Planning" <mcinsg@jea.com>

[External Email - Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.]

Hi Steve,

We started with the sales forecast from JEA (Melinda Fisher's group specifically within planning). I assume this is the same as what's in the TYSP. Then we made modifications for EE, EVs and DG based on joint McKinsey / JEA assumptions. EV growth for example was based partly on projected vehicle sales in the territory, again from the planning team.

Happy to walk through this in more detail where needed.

Sarah

On Sep 23, 2019, at 1:14 PM, McInall, Steven G. - VP & Chief Energy & Water Planning <mcinsg@jea.com> wrote:

Sarah:

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Steve McInall. P.E.

Vice President, Energy and Water Planning

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=====
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=====

From: McInall, Steven G. - VP & Chief Energy & Water Planning <mcinsg@jea.com>
Sent: Tuesday, September 24, 2019 11:13 AM
To: 'Sarah Brody'
Subject: RE: Forecast Reconciliation
Attachments: Copy of FY19 Peaks and Energy Forecast - Final.xlsx

Sarah – can you highlight some of the key assumptions that went in to the modifications, and where the effect was? If you just have your broken out forecast, that would help.

We are trying to answer some of the questions about the differences in the forecasts.

Thanks

Steve McInall, P.E.

Vice President, Energy and Water Planning
Direct: (904) 665-4309
Mobile: (904) 312-0739

From: Sarah Brody <Sarah_Brody@mckinsey.com>
Sent: Monday, September 23, 2019 4:33 PM
To: McInall, Steven G. - VP & Chief Energy & Water Planning <mcinsg@jea.com>
Subject: Re: Forecast Reconciliation

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Steve

Steve McInall, P.E.

Vice President, Energy and Water Planning

Direct: (904) 665-4309

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+-----+

From: Sarah Brody <Sarah_Brody@mckinsey.com>
Sent: Tuesday, September 24, 2019 12:03 PM
To: McInall, Steven G. - VP & Chief Energy & Water Planning
Subject: RE: Forecast Reconciliation

[External Email - Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.]

Hi Steve – it might be easier to walk you through the broken-out forecast model and we can go through the modifications. I'm in Jacksonville today and free after 2:30PM if there is a time in there that works for you.

Sarah

From: McInall, Steven G. - VP & Chief Energy & Water Planning <mcinsg@jea.com>
Sent: Tuesday, September 24, 2019 11:13 AM
To: Sarah Brody <Sarah_Brody@mckinsey.com>
Subject: [EXT]RE: Forecast Reconciliation

Sarah – can you highlight some of the key assumptions that went in to the modifications, and where the effect was? If you just have your broken out forecast, that would help.

We are trying to answer some of the questions about the differences in the forecasts.

Thanks

Steve McInall, P.E.
Vice President, Energy and Water Planning
Direct: (904) 665-4309
Mobile: (904) 312-0739

From: Sarah Brody <Sarah_Brody@mckinsey.com>
Sent: Monday, September 23, 2019 4:33 PM
To: McInall, Steven G. - VP & Chief Energy & Water Planning <mcinsg@jea.com>
Subject: Re: Forecast Reconciliation

[External Email - Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.]

Hi Steve,

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assumptions. EV growth for example was based partly on projected vehicle sales in the territory, again from the planning team.

Happy to walk through this in more detail where needed.

Sarah

On Sep 23, 2019, at 1:14 PM, McInall, Steven G. - VP & Chief Energy & Water Planning <mcinsg@jea.com> wrote:

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I am trying to come with a comparison of the TYSP and McKinsey forecasts. Did you start with our forecast? If so, the answer is whatever tweaks McKinsey made.

Thanks,

Steve

Steve McInall, P.E.

Vice President, Energy and Water Planning

Direct: (904) 665-4309

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+=====
=====

From: McInall, Steven G. - VP & Chief Energy & Water Planning <mcinsg@jea.com>
Sent: Wednesday, September 25, 2019 12:52 PM
To: Moran, Mary L. - Mgr Electric Generation Planning; 'Sarah Brody'
Subject: Forecast Review
Attachments: Forecast Review.docx

Sarah: Thank for meeting with me yesterday. Can you review the attached, and recommend any edits?

Mary: Can you take a look at this, too?

Thanks

Energy Forecasting

The purpose of this memo is to describe the different forecasts currently in use at JEA: the JEA developed Ten Year Site Plan (TYSP) forecast; the JEA developed Florida Energy Efficiency and Conservation Act (FEECA) forecast; and the JEA and McKinsey developed Status Quo (SQ) Forecast. Both energy (MWh) and peaks (seasonal MW) are forecast – this memo concentrates on the energy forecasts.

Ten Year Site Plan Forecast - JEA begins this forecast process by weather normalizing energy for each customer class (residential, commercial, industrial and lighting) using NOAA historical weather data.

- The residential energy forecast was developed using multiple regression analysis of weather normalized historical residential energy, Total Population, Median Household Income, Total Housing Starts from Moody's Analytics, JEA's total residential accounts 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 footage, total commercial employment, gross product and JEA's commercial electric rate.
- The industrial energy forecast was developed using multiple regression analysis of weather normalized historical industrial energy, total industrial employment, proprietors' profit and total retail sales product for existing industrial accounts. JEA then layers in the estimated energy for new industrial customers on the forecasted industrial energy.
- The lighting energy forecast was developed using the historical actual energy, number of luminaries and JEA's estimated High Pressure Sodium (HPS) to Light-Emitting Diode (LED) street light conversion schedule.

Energy efficiency, EV and electrification forecasts are developed separately and combined with the base forecast described above. JEA's forecasted Annual Average Growth Rate (AAGR) for net energy for load (NEL) during the TYSP period is 0.57 percent.

Florida Energy Efficiency and Conservation Act Forecast – The FEECA forecast used the 2018 TYSP energy forecast. Methodology of forecast development was unchanged from 2018 to 2019, however the 2019 forecast utilizes actual 2018 results rather than forecast. The 2018 TYSP forecast an NEL of 12,586 GWh, whereas the 2019 TYSP reported a 2018 actual NEL of 12,813 GWh, a difference of approximately 2%.

Status Quo Forecast – The SQ forecast starts from the same point as the 2018 TYSP, by setting the kWh/customer the same as in 2018, and then forecasting growth based on population. From this SQ base forecast, McKinsey and JEA applied individual forecasts for energy efficiency, distributed generation (DG) growth, electrification, etc. The SQ and TYSP forecasts, not including DG and electrification, differ by about 5% (SQ is 600 MWh lower than the TYSP forecast). In addition, the SQ forecast incorporates a much more aggressive DG adoption rate, calling for 0.1% of customers/yr until 2025, 1%/yr from 2025 until 2028 (2025 being the year that Solar PV achieves parity), and 1.5%/yr after 2028 (as batteries become economical).

Summary – The TYSP and SQ forecasts are intended for different purposes. The TYSP is submitted to the Public Service Commission to demonstrate that JEA has planned adequately and has the required generation reserves to meet peak demand, plus 15 percent. The SQ forecast, by contrast, is intended to examine potential load erosion due to developing efficiency and distributed generation technologies.

The forecasts differ due to the *weather normalization* in the TYSP forecast, higher levels of *energy efficiency and DG* in the SQ forecast, and the effect of the multiple regression analysis in the TYSP compared to individual forecasts for each factor in the SQ forecast.

From: Moran, Mary L. - Mgr Electric Generation Planning <GuytML@jea.com>
Sent: Wednesday, September 25, 2019 2:30 PM
To: McInall, Steven G. - VP & Chief Energy & Water Planning
Subject: RE: Forecast Review

Concur with TYSP and FECCA discussion. Don't think normalization comment in last section is correct IF McKinsey started with the JEA normalized forecast.

From: McInall, Steven G. - VP & Chief Energy & Water Planning <mcinsg@jea.com>
Sent: Wednesday, September 25, 2019 12:52 PM
To: Moran, Mary L. - Mgr Electric Generation Planning <GuytML@jea.com>; 'Sarah Brody' <Sarah_Brody@mckinsey.com>
Subject: Forecast Review

Sarah: Thank for meeting with me yesterday. Can you review the attached, and recommend any edits?

Mary: Can you take a look at this, too?

Thanks

From: Sarah Brody <Sarah_Brody@mckinsey.com>
Subject: RE: Forecast Review
Sent: Wed, 25 Sep 2019 16:22:53 -0500
To: "McInall, Steven G. - VP & Chief Energy & Water Planning" <mcinsg@jea.com>, "Moran, Mary L. - Mgr Electric Generation Planning" <GuytML@jea.com>
[Energy sales summary status quo.xlsx](#)
[Forecast Review.docx](#)

[External Email - Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.]

Hi Steve – looks good. I made some direct edits and comments in the attached. I'm also attaching the summary status quo energy sales forecast by year and customer class, broken out by driver.

Sarah

From: McInall, Steven G. - VP & Chief Energy & Water Planning <mcinsg@jea.com>
Sent: Wednesday, September 25, 2019 12:52 PM
To: Moran, Mary L. - Mgr Electric Generation Planning <GuytML@jea.com>; Sarah Brody <Sarah_Brody@mckinsey.com>
Subject: [EXT]Forecast Review

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Energy efficiency, EV and electrification forecasts are developed separately and combined with the base forecast described above. JEA's forecasted Annual Average Growth Rate (AAGR) for net energy for load (NEL) during the TYSP period is 0.57 percent.

Commented [SB1]: I would describe here that energy efficiency and electrification are based on the impact of JEA-led programs, and electric vehicles are based on new vehicle sales (I believe)

Florida Energy Efficiency and Conservation Act Forecast – The FECCA forecast used the 2018 TYSP energy forecast. Methodology of forecast development was unchanged from 2018 to 2019, however the 2019 forecast utilizes actual 2018 results rather than forecast. The 2018 TYSP forecast an NEL of 12,586 GWh, whereas the 2019 TYSP reported a 2018 actual NEL of 12,813 GWh, a difference of approximately 2%.

Status Quo Forecast – The SQ forecast starts from the same point as the 2018 TYSP, by setting the kWh/customer the same as in 2018, and then forecasting growth based on population. From this SQ base forecast, McKinsey and JEA applied individual forecasts for energy efficiency, distributed generation (DG) growth, electrification, etc based on projections of key drivers of each factor: for example energy-intensive appliance turnover rates and cost of distributed generation relative to cost of power in JEA's service territory. The SQ and TYSP forecasts, not including DG and electrification, differ by about 5% (SQ is 600 MWh lower than the TYSP forecast). In addition, the SQ forecast incorporates a much more aggressive DG adoption rate, calling for, for residential customers 0.1% of customers/yr until 2025, 1%/yr from 2025 until 2028 (2025 being the year that Solar PV achieves parity), and 1.5%/yr after 2028 as solar financing begins to realize attractive returns for developers. (Commercial customer adoption assumptions follow a similar logic)

Deleted: ()
Deleted: as batteries become economical
Deleted:)

Summary – The TYSP and SQ forecasts are intended for different purposes. The TYSP is submitted to the Public Service Commission to demonstrate that JEA has planned adequately and has the required generation reserves to meet peak demand, plus 15 percent. The SQ forecast, by contrast, is intended to examine the potential impact to JEA's financial performance given trends market trends that will impact sales. The forecasts differ due to the weather normalization in the TYSP forecast, higher levels of energy efficiency and DG in the SQ forecast, and the effect of the multiple regression analysis of historical data in the TYSP compared to individual forward-looking forecasts for each factor in the SQ forecast.

Deleted: potential load erosion due to developing efficiency and distributed generation technologies.9

Energy Forecasting

Segment/Component (Impairment)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Customer growth (pre-EI)	12,200,000	12,764,425	13,078,487	13,485,485	13,885,472	14,272,262	14,650,012	14,982,422	15,286,528	15,572,231	15,847,720	16,112,620	16,376,620	16,629,120	16,879,620	17,128,620
Sold - Mediantell	(4,420)	(5,517)	(6,620)	(7,727)	(8,834)	(9,941)	(11,048)	(12,155)	(13,262)	(14,369)	(15,476)	(16,583)	(17,690)	(18,797)	(19,904)	(21,011)
Sold - C&I	(9,677)	(10,774)	(11,871)	(12,968)	(14,065)	(15,162)	(16,259)	(17,356)	(18,453)	(19,550)	(20,647)	(21,744)	(22,841)	(23,938)	(25,035)	(26,132)
Non-sold DC Impact	(3,373)	(4,470)	(5,567)	(6,664)	(7,761)	(8,858)	(9,955)	(11,052)	(12,149)	(13,246)	(14,343)	(15,440)	(16,537)	(17,634)	(18,731)	(19,828)
EV	1,843	2,940	4,037	5,134	6,231	7,328	8,425	9,522	10,619	11,716	12,813	13,910	15,007	16,104	17,201	18,298
Real Impact	(4,626)	(5,723)	(6,820)	(7,917)	(9,014)	(10,111)	(11,208)	(12,305)	(13,402)	(14,499)	(15,596)	(16,693)	(17,790)	(18,887)	(19,984)	(21,081)
Real Impact	(4,626)	(5,723)	(6,820)	(7,917)	(9,014)	(10,111)	(11,208)	(12,305)	(13,402)	(14,499)	(15,596)	(16,693)	(17,790)	(18,887)	(19,984)	(21,081)
x Real Impact	12,200,000	12,216,276	12,166,666	11,970,641	11,864,536	11,718,512	11,522,488	11,276,464	11,030,440	10,784,416	10,538,392	10,292,368	10,046,344	9,800,320	9,554,296	9,308,272
Real Impact	(7,226)	(10,220)	(13,214)	(16,208)	(19,202)	(22,196)	(25,190)	(28,184)	(31,178)	(34,172)	(37,166)	(40,160)	(43,154)	(46,148)	(49,142)	(52,136)

From: McInall, Steven G. - VP & Chief Energy & Water Planning <mcinsg@jea.com>
Sent: Thursday, September 26, 2019 8:04 AM
To: Dykes, Melissa H. - President/COO
Subject: Forecast Review rev
Attachments: Forecast Review rev.docx

Edits from Sarah Incorporated.

Energy Forecasting

The purpose of this memo is to describe the different forecasts currently in use at JEA: the JEA developed Ten Year Site Plan (TYSP) forecast; the JEA developed Florida Energy Efficiency and Conservation Act (FEECA) forecast; and the JEA and McKinsey developed Status Quo (SQ) Forecast. Both energy (MWh) and peaks (seasonal MW) are forecast – this memo concentrates on the energy forecasts.

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- The commercial energy forecast was developed using multiple regression analysis of weather normalized historical commercial energy, commercial inventory square footage, total commercial employment, gross product and JEA's commercial electric rate.
- The industrial energy forecast was developed using multiple regression analysis of weather normalized historical industrial energy, total industrial employment, proprietors' profit and total retail sales product for existing industrial accounts. JEA then layers in the estimated energy for new industrial customers on the forecasted industrial energy.
- The lighting energy forecast was developed using the historical actual energy, number of luminaries and JEA's estimated High Pressure Sodium (HPS) to Light-Emitting Diode (LED) streetlight conversion schedule.

Energy efficiency and electrification forecasts are based on the impact of JEA-led programs, and the electric vehicle (EV) forecast is based on new vehicle sales projections. These are developed separately and combined with the base forecast described above. JEA's forecasted Annual Average Growth Rate (AAGR) for net energy for load (NEL) during the TYSP period is 0.57 percent.

Florida Energy Efficiency and Conservation Act Forecast – The FEECA forecast used the 2018 TYSP energy forecast. Methodology of forecast development was unchanged from 2018 to 2019, however the 2019 forecast utilizes actual 2018 results rather than forecast. The 2018 TYSP forecast an NEL of 12,586 GWh, whereas the 2019 TYSP reported a 2018 actual NEL of 12,813 GWh, a difference of approximately 2%.

Status Quo Forecast – The SQ forecast starts from the same point as the 2018 TYSP, by setting the kWh/customer the same as in 2018, and then forecasting growth based on population. From this SQ base forecast, McKinsey and JEA applied individual forecasts for energy efficiency, distributed generation (DG) growth, electrification, etc. based on projections of key drivers of each factor; for example energy-intensive appliance turnover rates and cost of distributed generation relative to cost of power in JEA's service territory. The SQ and TYSP forecasts, not including DG and electrification, differ by about 5% (SQ is 600 MWh lower than the TYSP forecast). In addition, the SQ forecast incorporates a much more aggressive DG adoption rate, calling for, for residential customers 0.1% of customers/yr until 2025, 1%/yr from 2025 until 2028 (2025 being the year that Solar PV achieves parity), and 1.5%/yr after 2028, as solar financing begins to realize attractive returns for developers. (Commercial customer adoption assumptions follow a similar logic).

Summary – The TYSP and SQ forecasts are intended for different purposes. The TYSP is submitted to the Public Service Commission to demonstrate that JEA has planned adequately and has the required generation reserves to meet peak demand, plus 15 percent. The SQ forecast, by contrast, is intended to examine the potential impact to JEA's financial performance given trends market trends that will impact sales. The forecasts differ due to the *weather normalization* in the TYSP forecast, higher levels of *energy efficiency and DG* in the SQ forecast, and the effect of the multiple regression analysis of historical data in the TYSP compared to individual forward-looking forecasts for each factor in the SQ forecast.

From: Dykes, Melissa H. - President/COO <dykemh@jea.com>
Sent: Thursday, October 3, 2019 10:58 PM
To: McInall, Steven G. - VP & Chief Energy & Water Planning
Subject: Forecast Review copy.docx
Attachments: Forecast Review copy.docx; ATT00001.txt

Energy Forecasting

The purpose of this memo is to describe the different forecasts currently in use at JEA: the JEA developed Ten Year Site Plan (TYSP) forecast; the JEA developed Florida Energy Efficiency and Conservation Act (FEECA) forecast; and the JEA and McKinsey developed Status Quo (SQ) Forecast. Both energy (MWh) and peaks (seasonal MW) are forecast – this memo concentrates on the energy forecasts.

Common elements

Both methodologies begin with actual sales data from FY18, the most recent full fiscal year for which we have data. Both then weather normalize and adjust the sales projections based on a number of common variables: economy, population, housing. (which other ones are common to both analyses?)

Ten Year Site Plan Forecast –

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In its forecast methodology, the ten year site plan utilizes a multiple regression analysis because (why?)

JEA begins this forecast process by weather normalizing energy for each customer class (residential, commercial, industrial and lighting) using NOAA historical weather data.

- The residential energy forecast was developed using multiple regression analysis of weather normalized historical residential energy, Total Population, Median Household Income, Total Housing Starts from Moody's Analytics, JEA's total residential accounts and JEA's residential electric rate.
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Energy efficiency, EV and electrification forecasts are developed separately and combined with the base forecast described above. JEA's forecasted Annual Average Growth Rate (AAGR) for net energy for load (NEL) during the TYSP period is 0.57 percent.

For the TYSP projection, the projections of energy efficiency and distributed generation reflect historical adoption data. In other words, we do not assume improvements in technology or changes in cost curves might change adoption rates in the future. This assumption is consistent with the intent of the forecast: to conservatively project future capacity needs to ensure there is adequate generation capacity in the future. It is intentionally conservative in these assumptions, and these assumptions are the largest difference in the two forecasts.

Florida Energy Efficiency and Conservation Act Forecast – The FEECA forecast used the 2018 TYSP energy forecast. Methodology of forecast development was unchanged from 2018 to 2019, however the 2019 forecast utilizes actual 2018 results rather than forecast. The 2018 TYSP forecast an NEL of 12,586 GWh, whereas the 2019 TYSP reported a 2018 actual NEL of 12,813 GWh, a difference of approximately 2%. If this is the same forecast as the TYSP forecast delete extra section and say that at the beginning of the TYSP section to simplify

Energy Forecasting

Status Quo Forecast – Re-order so this is described first. The SQ forecast starts from the same point as the 2018 TYSP, by setting the kWh/customer the same as in 2018, and then forecasting growth based on population. From this SQ base forecast, McKinsey and JEA applied individual forecasts for energy efficiency, distributed generation (DG) growth, electrification, etc. The SQ and TYSP forecasts, not including DG and electrification, differ by about 5% in 2030 (SQ is 600 MWh lower than the TYSP forecast). In addition, the SQ forecast for energy efficient and distributed generation reflect expected continued evolution of technology and improvement in cost curves rather than a static look assuming no technology or cost improvements. This is consistent with the intent of the forecast: to incorporate the best available information into a projection that can be used for strategic planning purposes. The SQ DG forecast is an adoption rate of 0.1% of customers/yr until 2025, increasing to 1%/yr from 2025 until 2028 (2025 being the year that Solar PV achieves parity), and 1.5%/yr after 2028 (as batteries become economical), which reflects this expected technology and economic changes.

Deleted: Incorporates a much more aggressive DG adoption rate, calling for

What is the apples-apples comparison of methodology since that seems to drive some of the delta? Did SQ not use a regression analysis? If not, why does that make sense for that purpose?

Deleted: .

The Bottom Line:

Deleted: Summary –

- The TYSP and SQ forecasts are intended for different purposes. The TYSP is intentionally conservative to ensure adequate future generation capacity. The SQ forecast is intended to capture our best predictions for the future impact of changes in technology and cost curves that will continue to impact the business.
- The forecasts differ primarily due to higher levels of energy efficiency and DG in the SQ forecast, and the effect of the multiple regression analysis in the TYSP compared to individual forecasts for each factor in the SQ forecast. The following page shows different sales forecasts and impact of key variables.

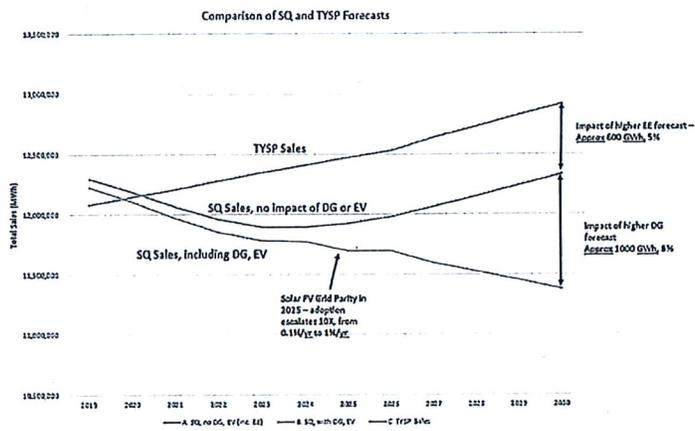
Formatted: List Paragraph, Bulleted + Level: 1 + Aligned at: 0.25" + Indent at: 0.5"

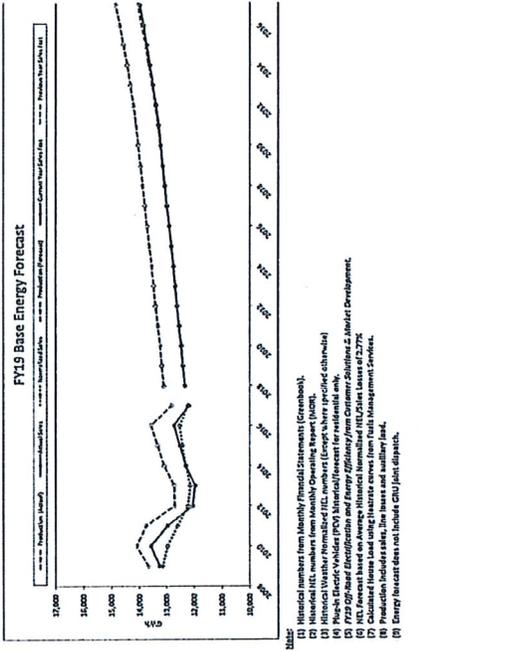
Deleted: submitted to the Public Service Commission to demonstrate that JEA has planned adequately and has the required generation reserves to meet peak demand, plus 15 percent.

Deleted: , by contrast,

Deleted: examine potential load erosion due to developing efficiency and distributed generation technologies.

Energy Forecasting





Item No	Residential		Commercial		Industrial		TPU	FPV	Demand Forecast (MWh)			Energy Efficiency	Total	FIT Forecast	Actual FIT	FIT (MWh)		FIT Forecast	Production (MWh)
	2019	2020	2019	2020	2019	2020			Electricity	Thermal	Oil/Propan					Uplink	Actual FIT		
2009	2,213,511	2,202,156	2,827,143	2,827,143	604,337	0	0	0	120,131	0	0	13,146,699	13,146,699	13,225,462	13,183,835	13,183,835	13,183,835	13,183,835	13,183,835
2010	2,318,601	2,301,533	2,784,545	2,784,545	380,654	0	0	0	122,131	0	0	13,252,997	13,252,997	13,252,997	13,252,997	13,252,997	13,252,997	13,252,997	13,252,997
2011	2,417,041	2,399,973	2,749,537	2,749,537	467,051	0	0	0	124,131	0	0	13,359,531	13,359,531	13,359,531	13,359,531	13,359,531	13,359,531	13,359,531	13,359,531
2012	2,515,481	2,500,963	2,714,529	2,714,529	553,566	0	0	0	126,131	0	0	13,466,065	13,466,065	13,466,065	13,466,065	13,466,065	13,466,065	13,466,065	13,466,065
2013	2,613,921	2,601,403	2,679,521	2,679,521	640,081	0	0	0	128,131	0	0	13,572,600	13,572,600	13,572,600	13,572,600	13,572,600	13,572,600	13,572,600	13,572,600
2014	2,712,361	2,701,845	2,644,513	2,644,513	726,596	0	0	0	130,131	0	0	13,679,134	13,679,134	13,679,134	13,679,134	13,679,134	13,679,134	13,679,134	13,679,134
2015	2,810,801	2,801,287	2,609,505	2,609,505	813,111	0	0	0	132,131	0	0	13,785,668	13,785,668	13,785,668	13,785,668	13,785,668	13,785,668	13,785,668	13,785,668
2016	2,909,241	2,909,729	2,574,497	2,574,497	900,626	0	0	0	134,131	0	0	13,892,202	13,892,202	13,892,202	13,892,202	13,892,202	13,892,202	13,892,202	13,892,202
2017	3,007,681	3,017,170	2,539,489	2,539,489	988,141	0	0	0	136,131	0	0	14,000,736	14,000,736	14,000,736	14,000,736	14,000,736	14,000,736	14,000,736	14,000,736
2018	3,106,121	3,115,610	2,504,481	2,504,481	1,075,656	0	0	0	138,131	0	0	14,109,270	14,109,270	14,109,270	14,109,270	14,109,270	14,109,270	14,109,270	14,109,270
2019	3,204,561	3,214,050	2,469,473	2,469,473	1,163,171	0	0	0	140,131	0	0	14,217,804	14,217,804	14,217,804	14,217,804	14,217,804	14,217,804	14,217,804	14,217,804
2020	3,303,001	3,311,490	2,434,465	2,434,465	1,250,686	0	0	0	142,131	0	0	14,326,338	14,326,338	14,326,338	14,326,338	14,326,338	14,326,338	14,326,338	14,326,338
2021	3,401,441	3,409,930	2,399,457	2,399,457	1,338,201	0	0	0	144,131	0	0	14,434,872	14,434,872	14,434,872	14,434,872	14,434,872	14,434,872	14,434,872	14,434,872
2022	3,500,881	3,509,420	2,364,449	2,364,449	1,425,716	0	0	0	146,131	0	0	14,543,406	14,543,406	14,543,406	14,543,406	14,543,406	14,543,406	14,543,406	14,543,406
2023	3,600,321	3,608,910	2,329,441	2,329,441	1,513,231	0	0	0	148,131	0	0	14,651,940	14,651,940	14,651,940	14,651,940	14,651,940	14,651,940	14,651,940	14,651,940
2024	3,700,761	3,708,400	2,294,433	2,294,433	1,600,746	0	0	0	150,131	0	0	14,760,474	14,760,474	14,760,474	14,760,474	14,760,474	14,760,474	14,760,474	14,760,474
2025	3,800,201	3,807,890	2,259,425	2,259,425	1,688,261	0	0	0	152,131	0	0	14,869,008	14,869,008	14,869,008	14,869,008	14,869,008	14,869,008	14,869,008	14,869,008
2026	3,900,641	3,907,380	2,224,417	2,224,417	1,775,776	0	0	0	154,131	0	0	14,977,542	14,977,542	14,977,542	14,977,542	14,977,542	14,977,542	14,977,542	14,977,542
2027	4,000,081	4,006,870	2,189,409	2,189,409	1,863,291	0	0	0	156,131	0	0	15,086,076	15,086,076	15,086,076	15,086,076	15,086,076	15,086,076	15,086,076	15,086,076
2028	4,100,521	4,106,360	2,154,401	2,154,401	1,949,806	0	0	0	158,131	0	0	15,194,610	15,194,610	15,194,610	15,194,610	15,194,610	15,194,610	15,194,610	15,194,610
2029	4,200,961	4,205,850	2,119,393	2,119,393	2,036,321	0	0	0	160,131	0	0	15,303,144	15,303,144	15,303,144	15,303,144	15,303,144	15,303,144	15,303,144	15,303,144
2030	4,300,401	4,305,340	2,084,385	2,084,385	2,122,836	0	0	0	162,131	0	0	15,411,678	15,411,678	15,411,678	15,411,678	15,411,678	15,411,678	15,411,678	15,411,678
2031	4,400,841	4,404,830	2,049,377	2,049,377	2,209,351	0	0	0	164,131	0	0	15,520,212	15,520,212	15,520,212	15,520,212	15,520,212	15,520,212	15,520,212	15,520,212
2032	4,500,281	4,504,320	2,014,369	2,014,369	2,295,866	0	0	0	166,131	0	0	15,628,746	15,628,746	15,628,746	15,628,746	15,628,746	15,628,746	15,628,746	15,628,746
2033	4,600,721	4,603,810	1,979,361	1,979,361	2,382,381	0	0	0	168,131	0	0	15,737,280	15,737,280	15,737,280	15,737,280	15,737,280	15,737,280	15,737,280	15,737,280
2034	4,700,161	4,703,300	1,944,353	1,944,353	2,468,896	0	0	0	170,131	0	0	15,845,814	15,845,814	15,845,814	15,845,814	15,845,814	15,845,814	15,845,814	15,845,814
2035	4,800,601	4,802,790	1,909,345	1,909,345	2,555,411	0	0	0	172,131	0	0	15,954,348	15,954,348	15,954,348	15,954,348	15,954,348	15,954,348	15,954,348	15,954,348
2036	4,900,041	4,902,280	1,874,337	1,874,337	2,641,926	0	0	0	174,131	0	0	16,062,882	16,062,882	16,062,882	16,062,882	16,062,882	16,062,882	16,062,882	16,062,882
2037	5,000,481	5,001,770	1,839,329	1,839,329	2,728,441	0	0	0	176,131	0	0	16,171,416	16,171,416	16,171,416	16,171,416	16,171,416	16,171,416	16,171,416	16,171,416
2038	5,100,921	5,101,260	1,804,321	1,804,321	2,814,956	0	0	0	178,131	0	0	16,279,950	16,279,950	16,279,950	16,279,950	16,279,950	16,279,950	16,279,950	16,279,950
2039	5,200,361	5,200,750	1,769,313	1,769,313	2,901,471	0	0	0	180,131	0	0	16,388,484	16,388,484	16,388,484	16,388,484	16,388,484	16,388,484	16,388,484	16,388,484
2040	5,300,801	5,300,240	1,734,305	1,734,305	2,987,986	0	0	0	182,131	0	0	16,497,018	16,497,018	16,497,018	16,497,018	16,497,018	16,497,018	16,497,018	16,497,018
2041	5,400,241	5,400,730	1,699,297	1,699,297	3,074,501	0	0	0	184,131	0	0	16,605,552	16,605,552	16,605,552	16,605,552	16,605,552	16,605,552	16,605,552	16,605,552
2042	5,500,681	5,500,220	1,664,289	1,664,289	3,161,016	0	0	0	186,131	0	0	16,714,086	16,714,086	16,714,086	16,714,086	16,714,086	16,714,086	16,714,086	16,714,086
2043	5,600,121	5,600,710	1,629,281	1,629,281	3,247,531	0	0	0	188,131	0	0	16,822,620	16,822,620	16,822,620	16,822,620	16,822,620	16,822,620	16,822,620	16,822,620
2044	5,700,561	5,700,200	1,594,273	1,594,273	3,334,046	0	0	0	190,131	0	0	16,931,154	16,931,154	16,931,154	16,931,154	16,931,154	16,931,154	16,931,154	16,931,154
2045	5,800,001	5,800,690	1,559,265	1,559,265	3,420,561	0	0	0	192,131	0	0	17,039,688	17,039,688	17,039,688	17,039,688	17,039,688	17,039,688	17,039,688	17,039,688
2046	5,900,441	5,900,180	1,524,257	1,524,257	3,507,076	0	0	0	194,131	0	0	17,148,222	17,148,222	17,148,222	17,148,222	17,148,222	17,148,222	17,148,222	17,148,222
2047	6,000,881	6,000,670	1,489,249	1,489,249	3,593,591	0	0	0	196,131	0	0	17,256,756	17,256,756	17,256,756	17,256,756	17,256,756	17,256,756	17,256,756	17,256,756
2048	6,100,321	6,100,160	1,454,241	1,454,241	3,680,106	0	0	0	198,131	0	0	17,365,290	17,365,290	17,365,290	17,365,290	17,365,290	17,365,290	17,365,290	17,365,290
2049	6,200,761	6,200,650	1,419,233	1,419,233	3,766,621	0	0	0	200,131	0	0	17,473,824	17,473,824	17,473,824	17,473,824	17,473,824	17,473,824	17,473,824	17,473,824
2050	6,300,201	6,300,140	1,384,225	1,384,225	3,853,136	0	0	0	202,131	0	0	17,582,358	17,582,358	17,582,358	17,582,358	17,582,358	17,582,358	17,582,358	17,582,358
2051	6,400,641	6,400,080	1,349,217	1,349,217	3,939,651	0	0	0	204,131	0	0	17,690,892	17,690,892	17,690,892	17,690,892	17,690,892	17,690,892	17,690,892	17,690,892
2052	6,500,081	6,500,020	1,314,209	1,314,209	4,026,166	0	0	0	206,131	0	0	17,799,426	17,799,426	17,799,426	17,799,426	17,799,426	17,799,426	17,799,426	17,799,426
2053	6,600,521	6,600,060	1,279,201	1,279,201	4,112,681	0	0	0	208,131	0	0	17,907,960	17,907,960	17,907,960	17,907,960	17,907,960	17,907,960	17,907,960	17,907,960
2054	6,700,961	6,700,000																	

From: McInall, Steven G. - VP & Chief Energy & Water Planning <mcinsg@jea.com>
Sent: Thursday, October 3, 2019 2:49 PM
To: Dykes, Melissa H. - President/COO
Subject: Forecast
Attachments: Forecast Review.docx

Hopefully this is a little clearer.

Steve McInall, P.E.
Vice President, Energy and Water Planning
Direct: (904) 665-4309
Mobile: (904) 312-0739

Energy Forecasting

The purpose of this memo is to describe the different forecasts currently in use at JEA: the JEA developed Ten Year Site Plan (TYSP) forecast; the JEA developed Florida Energy Efficiency and Conservation Act (FEECA) forecast; and the JEA and McKinsey developed Status Quo (SQ) Forecast. Both energy (MWh) and peaks (seasonal MW) are forecast – this memo concentrates on the energy forecasts.

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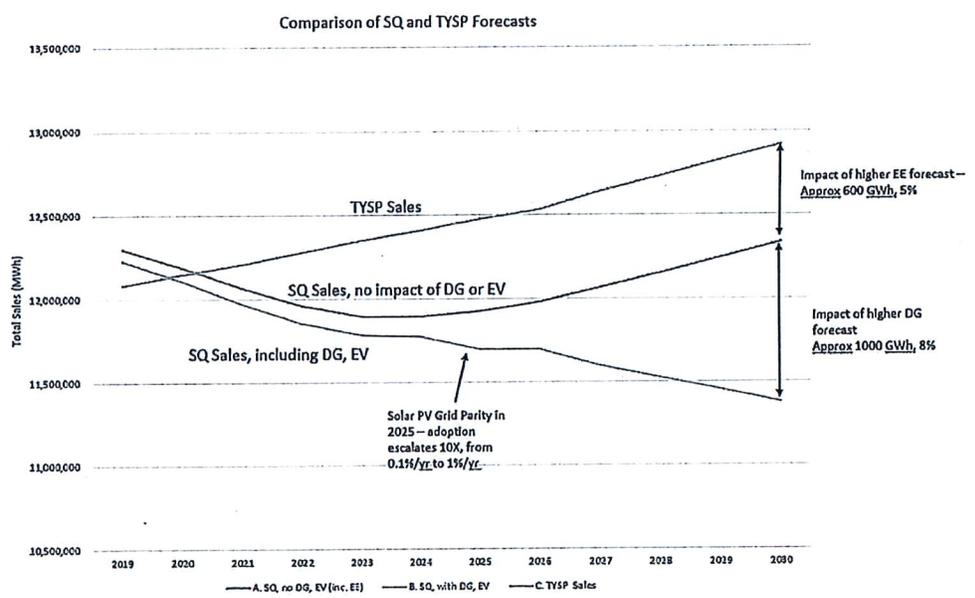
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Energy Forecasting



From: McInall, Steven G. - VP & Chief Energy & Water Planning <mcinsg@jea.com>
Sent: Thursday, October 3, 2019 4:57 PM
To: Dykes, Melissa H. - President/COO
Subject: RE: Forecast

I added a figure that should help. Tysp based on regression analysis of historical is in there.

From: Dykes, Melissa H. - President/COO
Sent: Thursday, October 3, 2019 4:01 PM
To: McInall, Steven G. - VP & Chief Energy & Water Planning
Subject: Re: Forecast

Did you add commentary that 10y sp dg is based on history? Didn't see that in here but reading on my mobile.

On Oct 3, 2019, at 11:49 AM, McInall, Steven G. - VP & Chief Energy & Water Planning <mcinsg@jea.com<mailto:mcinsg@jea.com>> wrote:

Hopefully this is a little clearer.

Steve McInall. P.E.
Vice President, Energy and Water Planning
Direct: (904) 665-4309
Mobile: (904) 312-0739

<Forecast Review.docx>

From: McInall, Steven G. - VP & Chief Energy & Water Planning <mcinsg@jea.com>
Sent: Friday, October 4, 2019 11:44 AM
To: Moran, Mary L. - Mgr Electric Generation Planning
Subject: Forecast Review copy 2
Attachments: Forecast Review copy 2.docx

Mary – can you work on this? Comments in yellow are from Melissa.

Also, trying to defend the regression analysis – FPL and Duke methodology looks different. Take a peek and see if we should be adjusting our methodology.

Energy Forecasting

The purpose of this memo is to describe the different forecasts currently in use at JEA: the JEA developed Ten Year Site Plan (TYSP) forecast; the JEA developed Florida Energy Efficiency and Conservation Act (FEECA) forecast; and the JEA and McKinsey developed Status Quo (SQ) Forecast. Both energy (MWh) and peaks (seasonal MW) are forecast – this memo concentrates on the energy forecasts.

Common elements

Both methodologies begin with actual sales data from FY18, the most recent full fiscal year for which we have data. Both then weather normalize and adjust the sales projections based on a number of common variables: economy, population, housing, [which other ones are common to both analyses?]

Status Quo Forecast

The SQ forecast starts from the same point as the 2018 TYSP, by setting the kWh/customer the same as in 2018, and then forecasting growth based on population. From this SQ base forecast, McKinsey and JEA applied individual forecasts for energy efficiency, distributed generation (DG) growth, electrification, etc. The SQ and TYSP forecasts, not including DG and electrification, differ by about 5% in 2030 (SQ is 600 MWh lower than the TYSP forecast). In addition, the SQ forecast for energy efficient and distributed generation reflect expected continued evolution of technology and improvement in cost curves rather than a static look assuming no technology or cost improvements. This is consistent with the intent of the forecast: to incorporate the best available information into a projection that can be used for strategic planning purposes. The SQ DG forecast is based on an adoption rate of 0.1% of customers/yr until 2025, increasing to 1%/yr from 2025 until 2028 (2025 being the year that Solar PV achieves parity), and 1.5%/yr after 2028 (as batteries become economical), which reflects expected technology and economic changes.

[what is the apples-apples comparison of methodology since that seems to drive some of the delta? Did SQ not use a regression analysis? If not, why does that make sense for that purpose?]

Ten Year Site Plan Forecast/Florida Energy Efficiency and Conservation Act Forecast

The FEECA forecast used the 2018 TYSP energy forecast. Methodology of forecast development was unchanged from 2018 to 2019, however the 2019 forecast utilizes actual 2018 results rather than forecast. The 2018 TYSP forecast an NEL of 12,586 GWh, whereas the 2019 TYSP reported a 2018 actual NEL of 12,813 GWh, a difference of approximately 2%.

In its forecast methodology, the ten year site plan utilizes a multiple regression analysis of historical data. This approach is conservative in that it captures the impact of all variables, whether or not the precise impact of the variable on the forecast is known. JEA begins this forecast process by weather normalizing energy for each customer class (residential, commercial, industrial and lighting) using NOAA historical weather data.

- The residential energy forecast was developed using multiple regression analysis of weather normalized historical residential energy, Total Population, Median Household Income, Total Housing Starts from Moody's Analytics, JEA's total residential accounts 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 footage, total commercial employment, gross product and JEA's commercial electric rate.
- The industrial energy forecast was developed using multiple regression analysis of weather normalized historical industrial energy, total industrial employment, proprietors' profit and total retail sales product for existing industrial accounts. JEA then layers in the estimated energy for new industrial customers on the forecasted industrial energy.

Energy Forecasting

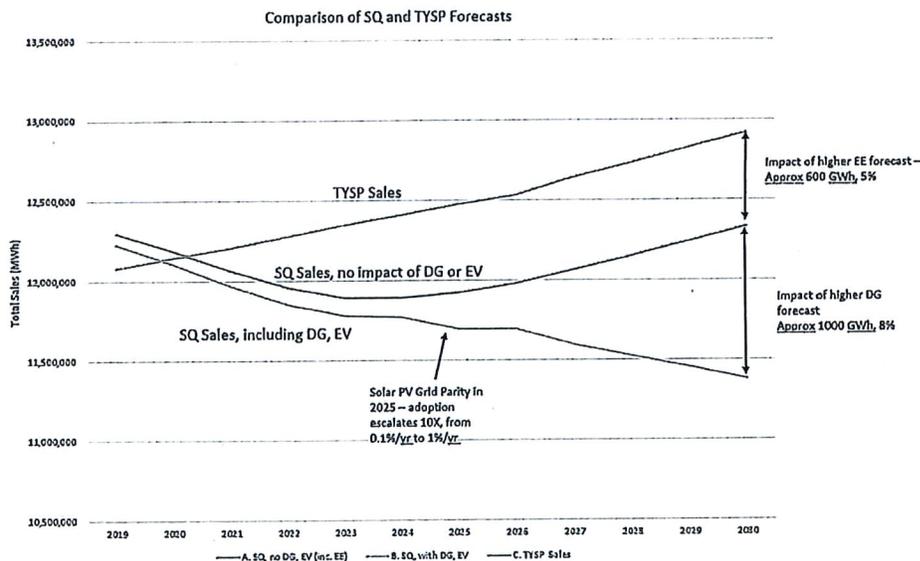
- The lighting energy forecast was developed using the historical actual energy, number of luminaries and JEA's estimated High Pressure Sodium (HPS) to Light-Emitting Diode (LED) street light conversion schedule.

Energy efficiency, EV and electrification forecasts are developed separately and combined with the base forecast described above. JEA's forecasted Annual Average Growth Rate (AAGR) for net energy for load (NEL) during the TYSP period is 0.57 percent.

For the TYSP projection, the projections of energy efficiency and distributed generation reflect historical adoption data. In other words, we do not assume improvements in technology or changes in cost curves might change adoption rates in the future. This assumption is consistent with the intent of the forecast: to conservatively project future capacity needs to ensure there is adequate generation capacity in the future. It is intentionally conservative in these assumptions, and these assumptions are the largest difference in the two forecasts.

The Bottom Line:

- The TYSP and SQ forecasts are intended for different purposes. The TYSP is intentionally conservative to ensure adequate future generation capacity. The SQ forecast is intended to capture our best predictions for the future impact of changes in technology and cost curves that will continue to impact the business.
- The forecasts differ primarily due to higher levels of *energy efficiency and DG* in the SQ forecast, and the effect of the multiple regression analysis in the TYSP compared to individual forecasts for each factor in the SQ forecast. The following page shows different sales forecasts and impact of key variables.



Energy Forecasting

From: Dykes, Melissa H. - President/COO <dykemh@jea.com>
Sent: Monday, October 7, 2019 9:40 PM
To: McInall, Steven G. - VP & Chief Energy & Water Planning
Subject: Fwd: Forecast Review copy.docx

Did you send me another version of this? Sorry if I missed it but not finding in my email.

Begin forwarded message:

From: "Dykes, Melissa H. - President/COO" <dykemh@jea.com>
Date: October 3, 2019 at 10:57:52 PM EDT
To: "McInall, Steven G. - VP & Chief Energy & Water Planning" <mcinsg@jea.com>
Subject: Forecast Review copy.docx

Energy Forecasting

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Energy Forecasting

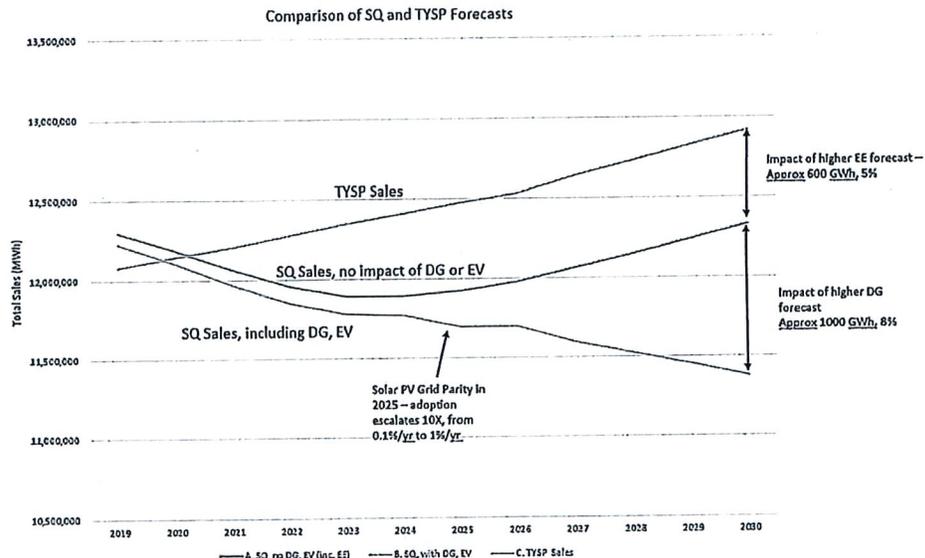
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Energy Forecasting

From: McInall, Steven G. - VP & Chief Energy & Water Planning <mcinsg@jea.com>
Sent: Thursday, October 10, 2019 6:07 PM
To: Dykes, Melissa H. - President/COO
Cc: Coarsey, John B. - Director, Electric T & D Planning; Moran, Mary L. - Mgr Electric Generation Planning; 'Sarah Brody'
Subject: Forecasting - Short Version
Attachments: Forecast Review short version.docx

Melissa: Depending on the audience (i.e., non engineer/scientists), this explanation may be more straightforward.

Steve

Energy Forecasting – Short Version

The purpose of this memo is to describe the basic differences and purposes of the JEA developed forecast used in JEA's 2019 Ten Year Site Plan (TYSP) and the JEA and McKinsey developed Status Quo (SQ) Forecast.

The TYSP is primarily intended to ensure that JEA has adequate capacity to serve its peak loads (winter and summer), plus a reserve margin. The Florida Public Service Commission reviews individual and state aggregated utility TYSPs to ensure that the state as a whole has adequate generation resources. The forecast used in the TYSP and the Florida Energy Efficiency and Conservation Act (FEECA) primarily produces peak demand and is not intended to be a sales forecast, although it does include a forecast of sales.

The SQ forecast is intended to be a forecast of future utility sales, incorporating developing trends such as an accelerated adoption of solar distributed generation which is not individually accounted for in the TYSP forecast, as well as accelerated energy efficiency.

The Annual Average Growth Rate (AAGR) for net energy for load (NEL) during the TYSP period is 0.57 percent, which is barely above a flat forecast. As a result, any change in forecast methodology can change this modest rise into a declining forecast. The SQ forecast captures the potential impacts of future technology changes (such as solar and storage achieving parity with grid power) that are not reflected in historically-based forecasts. The historically-based forecasts developed for use in the TYSP are accurate in the short-term (i.e., 1-3 years), but will not pick up large-scale changes that are not yet reflected in the energy and peak statistics for the system.

From: Wannemacher, Ryan F. - Chief Financial Officer <wannrf@jea.com>
Sent: Thursday, August 15, 2019 3:53 PM
To: McInall, Steven G. - VP & Chief Energy & Water Planning
Subject: Fwd: Project for Strategic Planning

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----- Forwarded message -----

From: "Quarterman, Kristina M - Manager Operating Budgets" <quarkm@jea.com>
Date: Thu, Aug 15, 2019 at 3:06 PM -0400
Subject: FW: Project for Strategic Planning
To: "Wannemacher, Ryan F. - Chief Financial Officer" <wannrf@jea.com>

FYI

From: Quarterman, Kristina M - Manager Operating Budgets
Sent: Friday, August 9, 2019 3:49 PM
To: Jones, Madricka L. - Executive Staff Assistant <joneml@jea.com>; Taylor, Brandi N. - Mgr Business Operations <taylbn@jea.com>; Begue, Kandi R. (Randstad) <begukr@jea.com>; McDonald, Nancy M - Executive Assistant <mcdonm@jea.com>; Stevens, Celeste A. <stevca@jea.com>; Luster, Jill R. - Executive Staff Assistant <lustjr@jea.com>
Cc: Bartley, La'Trece M. - Mgr Executive Administration <bartlm@jea.com>; Crawford, Juli E. - Director Financial Planning & Analysis <crawje@jea.com>
Subject: Project for Strategic Planning

Please utilize the following information for all recapitalization/strategic planning expenses:

Project Number: 8005764 Project Name: PA19E-OM-Strategic Planning-E
Users will have to pick the ET when they create the POs/check requests.

Tasks:

- 003.1 – Holland & Knight – 021.50001.00000000.00.923101.2070.0000 (Pick Legal as your Expenditure Type)
- 003.2 – McKinsey – 021.50001.00000000.00.923101.2002.0000 (Pick Professional Fees as your Expenditure Type)
- 003.3 – Foley & Lardner – 021.50001.00000000.00.923101.2070.0000 (Pick Legal as your Expenditure Type)
- 003.4 – Morgan Stanley – 021.50001.00000000.00.923101.2002.0000 (Pick Professional Fees as your Expenditure Type)
- 003.5 – JP Morgan – 021.50001.00000000.00.923101.2002.0000 (Pick Professional Fees as your Expenditure Type)
- 003.6 – Pillsbury Winthrop Shaw Pittman LLP – 021.50001.00000000.00.923101.2070.0000 (Pick Legal as your Expenditure Type)

If any new vendors are added, we will add them as a new task and I will communicate them via email.

Thanks,
Kristina 6513



Daniel Nunn, Jr.

From: McInall, Steven G. - VP & Chief Energy & Water Planning <mcinsg@jea.com>
Sent: Thursday, March 7, 2019 10:53 AM
To: Van Aartsen, Randall D. - Mgr Fuels Mgmt Services
Subject: FW: Status Quo 2 - Please Complete Initiative Template by March 15
Attachments: JEA initiative templates.pptx

Randy – can you look at the attached with respect to the natural gas sales? Don't send me anything. This is a what-if exercise. Try to capture where we are now.

Thanks

Steve McInall. P.E.

Vice President, Energy and Water Planning
Direct: (904) 665-4309
Mobile: (904) 312-0739

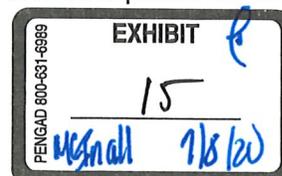
From: Romero Aguero, Julio E. (Chief Inno. and Transformation Officer) <romeje@jea.com>
Sent: Wednesday, March 6, 2019 5:08 PM
To: (Mgmt - JEA Senior Leadership Team (SLT) <Mgmtslt@jea.com>
Cc: Jones, Madricka L. - Executive Assistant <joneml@jea.com>; 'Anton Derkach' <anton_derkach@mckinsey.com>; Aaron Bielenberg <Aaron_Bielenberg@mckinsey.com>; 'Sarah Brody' <Sarah_Brody@mckinsey.com>
Subject: Status Quo 2 - Please Complete Initiative Template by March 15
Importance: High

Dear colleagues,

Thanks for your time on Monday as we kicked off our work on status quo 2 – initiative development. As we discussed, over the next two weeks (through March 15) you will be working with your teams to develop initiatives to reduce costs (or generate additional revenue) within your business area.

You'll find attached a template for recording these initiatives (page 1), it includes the items and categories discussed on Monday. We ask that you fill out this template as completely and thoroughly as possible over the next 1 ½ weeks for each initiative, knowing that many details are still to be developed at this stage. Page 2 of the template is a lighter template to fill out ideas that are currently outside of JEA's current charter agreement or that involve addressing governance constraints, which we would encourage you to think about and fill in for future discussions, these ideas will be developed further in the next stage of the process. Pages 3-5 of the template provide additional guidance for initiative development: a guide to advancing initiatives through the implementation funnel (page 3) and examples of initiative templates that have been filled out (pages 4-5), for illustration purposes only. Please send your templates by **March 15**.

We'll be hosting optional "office hours" on next Monday March 11 (between 3 and 5 PM) and Wednesday March 13 (between 2 and 4 PM) for you to stop by to ask questions as you develop initiatives and fill in the templates. We will be



setting up individual meetings with each of you, the finance team, and any representative from your business area whom you'd like to invite, for the week of March 18, to review the initiatives you have developed and develop a path to refining these initiatives before the SLT offsite on April 4. Finally, I'll be contacting a subset of you individually shortly on additional data we'll need from your business areas so we can develop the "opportunity sizing" we discussed on Monday that will also form part of the April 4 discussion.

Please let me know if you have any questions. I'm excited to work with all of you on the next phase of our journey.

Thanks,

Julio

Julio Romero Agüero, PhD, MBA
Chief Innovation and Transformation Officer
JEA
21 West Church Street
Jacksonville, Florida 32202-3139
Phone (904) 665-8898
Fax (904) 665-4238
Cell (919) 208-4885
Email romeje@jea.com



E NAME]

Details

[Brief description of initiative]

[Brief explanation for why this initiative will provide financial value to JEA]

Mark low / medium / high for each risk category that applies:

- Environmental Customer satisfaction Reliability Safety
 Financial Compliance Other

[brief explanation of level of risks shown]

- Minimal effort to implement Significant effort to implement
 Major operational change required to implement

[brief explanation of level of effort]

- No-regrets Trade-offs Difficult (risks > rewards)

Additional supporting data

[Short impact assessment, rationale for initiative]

[Source of data]

[Explanation if needed or available of steps to implementation, current status of initiative]

Stakeholder Perspective

- [Viewpoints of relevant directors, business area leads, and SMEs who have been consulted on initiative]

Expected impact when fully implemented

Source of impact:

- Increased revenue Reduced costs

(If reduced costs) What is the source of savings that apply:

- Internal labor O&M Capital
 Contracted services Other

Is impact one-time or recurring?

- One-time Recurring

Fill in boxes below in '000 (impacts are annual recurring impacts, total for one-time impacts)

Estimated total impact:

Estimated cost to implement:

Estimated net impact (total impact minus cost):



ot" for initiatives outside of JEA's current charter and/or that involve addressing governance co

initiative

What would need to change

Text

Text

Text

Text

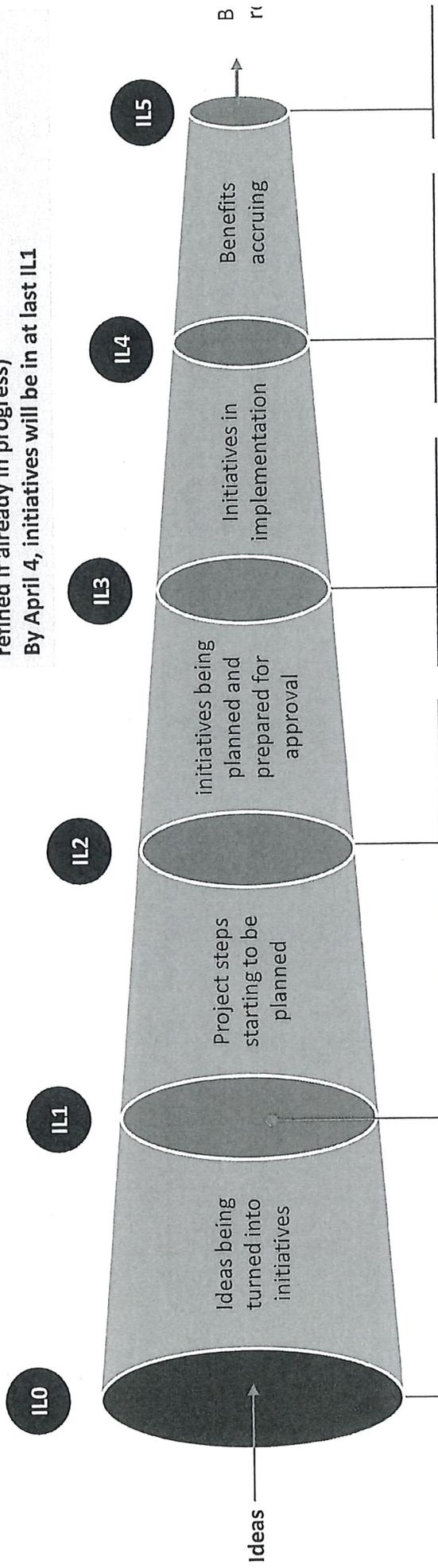
Text

Text

move through an "implementation level" structure from inception to completion

Initiatives should be at least IL0 by March 18 (Some initiatives may be refined if already in progress)

By April 4, initiatives will be in at least IL1



	Generated	Refined	Planned	Approved	Implemented	Benefit realized
Idea for initial	Idea generated with high level estimate of savings benefit	Idea is likely to proceed, estimate of savings is more refined	Idea analyzed for feasibility, and high-level implementation plan developed	Initiative approved and signed off by relevant parties, all milestones defined	All implementation steps completed	Run-rate savings impacting both
	±50%	±20%	±10%	±10%	Final	Final
Initiative	We think there is opportunity to save up to \$2M on filters	We spend \$10m on filters, and we think we can get 10% (\$1m)	We have checked pricing across sites and believe a 15% improvement is possible	We confirmed the applicable baseline (both volume and price) and estimate value of opportunity is \$1.4 million	We have firm price commitments from suppliers and have changed operations practice to begin buying	We are only buying lower cost items or following new process



Administrative Clerk IV position

Details

Consolidate 1 Administrative Clerk IV position from the Production Engineering department

- Position was originally developed to provide assistance on NERC and CIP requirements
- Requirements fulfilled and now load is not justified

Mark low / medium / high for each risk category that applies:

- Environmental Customer satisfaction Reliability Safety
- Financial Compliance Other

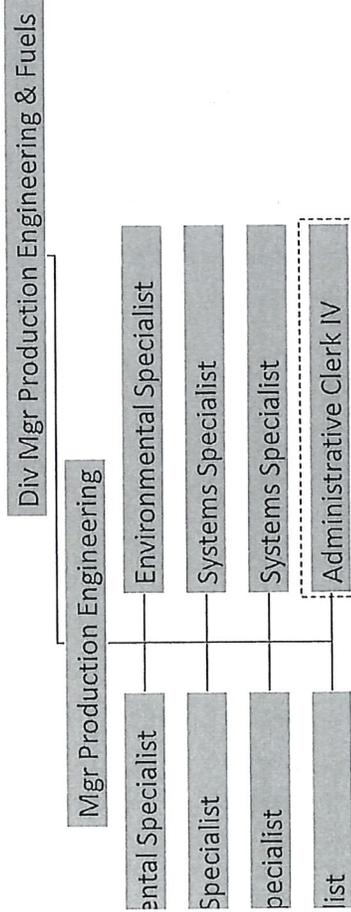
Increased workload on department

- Minimal effort to implement Significant effort to implement
- Major operational change required to implement

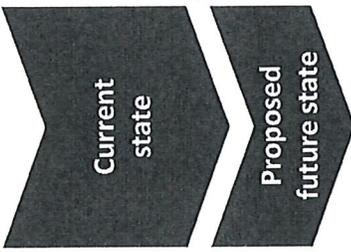
Requires minimal new skills or training

- No-regrets Trade-offs Difficult

Additional supporting data



- Limited clerical work needed for the division as tasks for N requirements have been completed
 - Supports fuels analyst
 - Shares some duties with division secretary
 - Managers are having to seek work for the position
 - Consolidate the position and do not backfill
 - Not detrimental to the workload and output of the division
- Data source: 2015 employee database, annual benefits inclusion on manager interviews



Expected impact when fully implemented

Source of impact:

- Increased revenue Reduced costs

(If reduced costs) What is the source of savings that apply:

- Internal labor O&M Capital
- Contracted services Other

Is impact one-time or recurring?

- One-time Recurring

Fill in boxes below in \$'000 (impacts are annual recurring impacts, total for one-time impacts)

Estimated total impact:

Estimated cost to implement:

Estimated net impact (total impact minus cost)

Production Engineering & Fuels OS spend

Details

- Consolidate spend for environmental consulting service
- Reduce spend on ground water by conducting in house
- Reduce budgeted amount for fish entrainment study as a part of 316B

- Additional spend on environmental consulting is not necessary in today's rate environment and current environmental affairs staffing
- Statistics portion of ground water testing can be done internally at lower cost than outsourcing; expect frequency of analyses needed to increase in the near future, increasing savings through insourcing
- Fish study budgeted for \$407k, however, cost estimate at ≤ \$370K

Mark low / medium / high for each risk category that applies:

- Environmental Customer satisfaction Reliability Safety
- Financial Compliance Other

Lack of experience when conducting statistical analysis of groundwater reports

- Minimal effort to implement Significant effort to implement
- Major operational change required to implement

Need to cancel contracts and develop capabilities in-house

- No-regrets Trade-offs Difficult

Supporting data

1 of outside services (\$ '000)

FY16	Proposed budget, FY16	Comment
consulting	18	9
analysis	18	6
	407	370
	443	385

Source: Department Manager and 2016 budget



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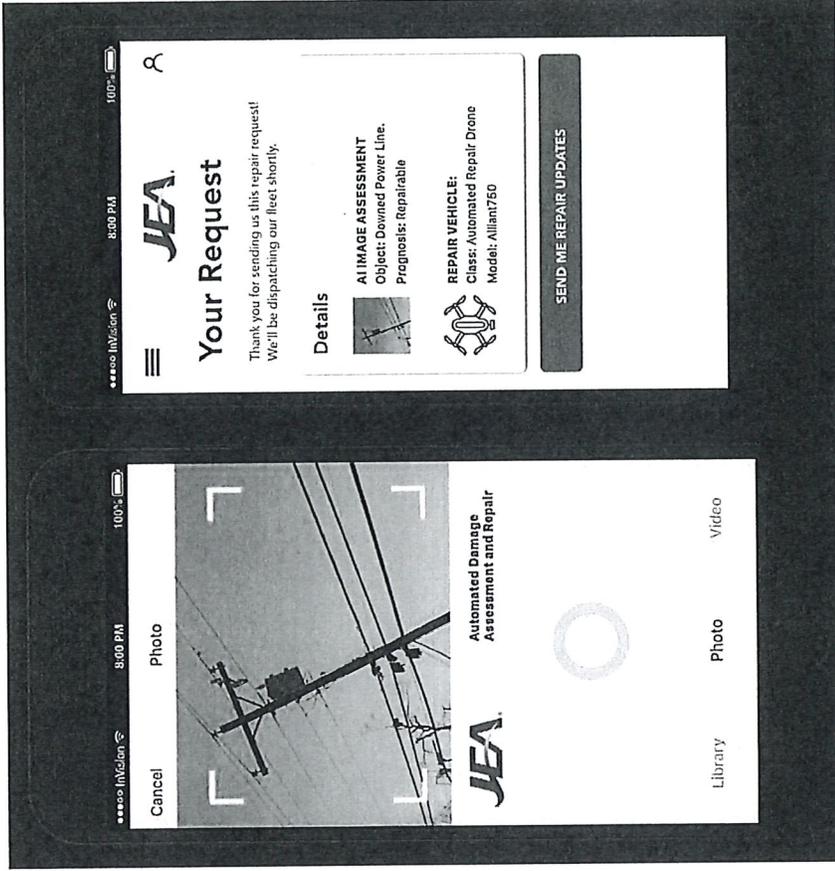
Estimated cost to implement:

Estimated net impact (total impact minus cost)

INSPIRATION

Drone Inspect & Repair App

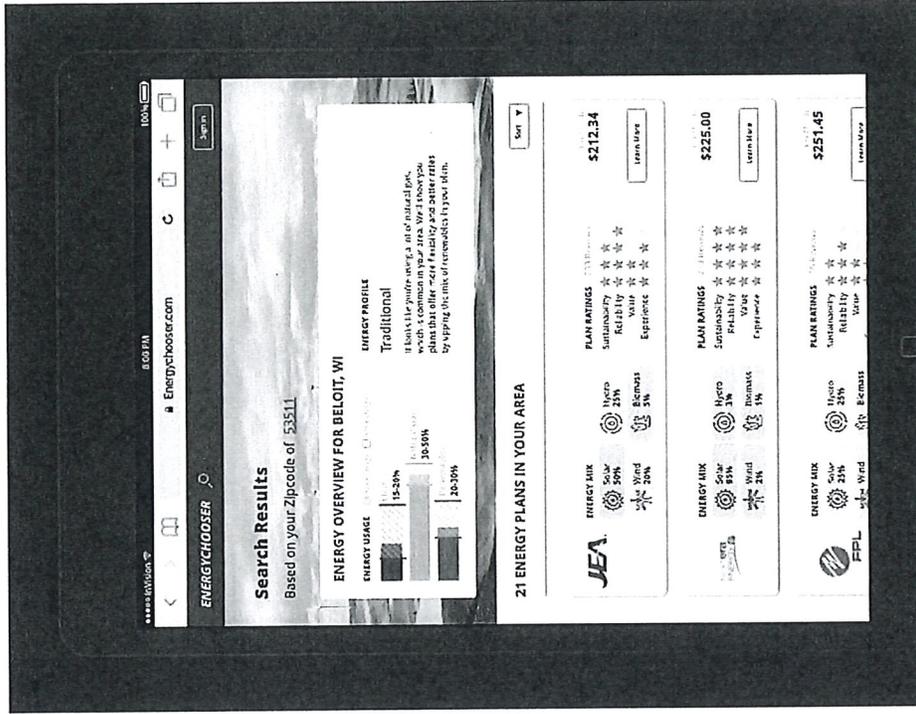
How might JEA use
new technology and
digital platforms to
revolutionize the
workforce?



INSPIRATION

Energy Providers Comparison Website

How might third party competition for new products and services impact our relationship with customers, as well as our financial position?

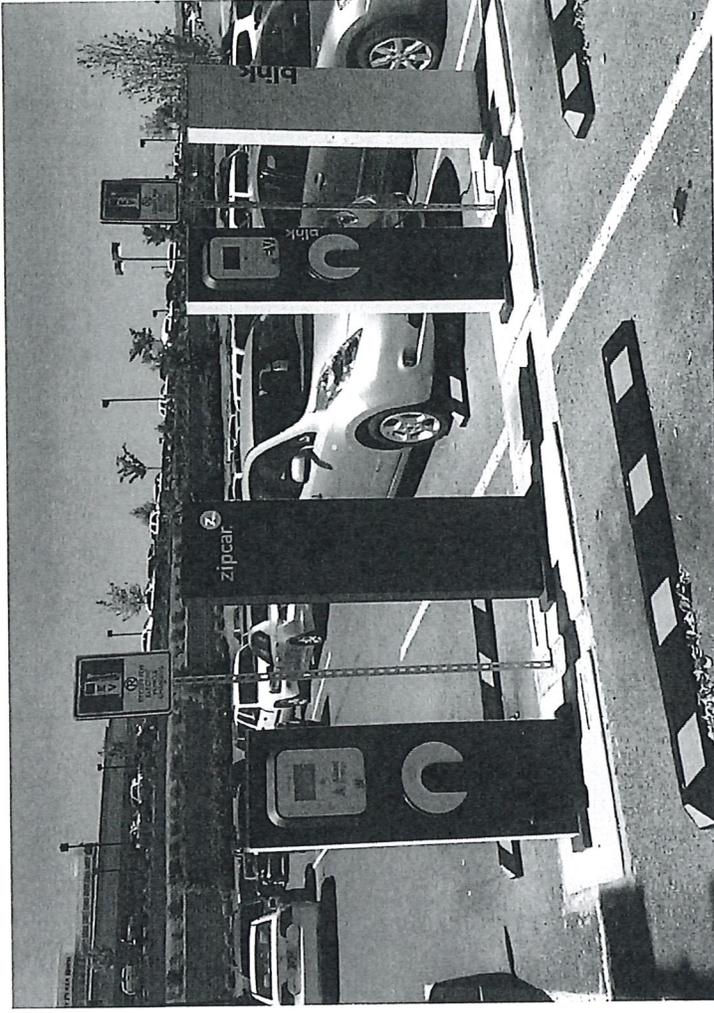


JEA

INSPIRATION

**ZipCar and JEA EV Charging
Solution Partnership**

**How can JEA build
or grow existing
partnerships and
take advantage of
new revenue
opportunities?**



INSPIRATION

JEA New Tech Incubator

How can we work
with start-ups to
develop new water
and energy
solutions?

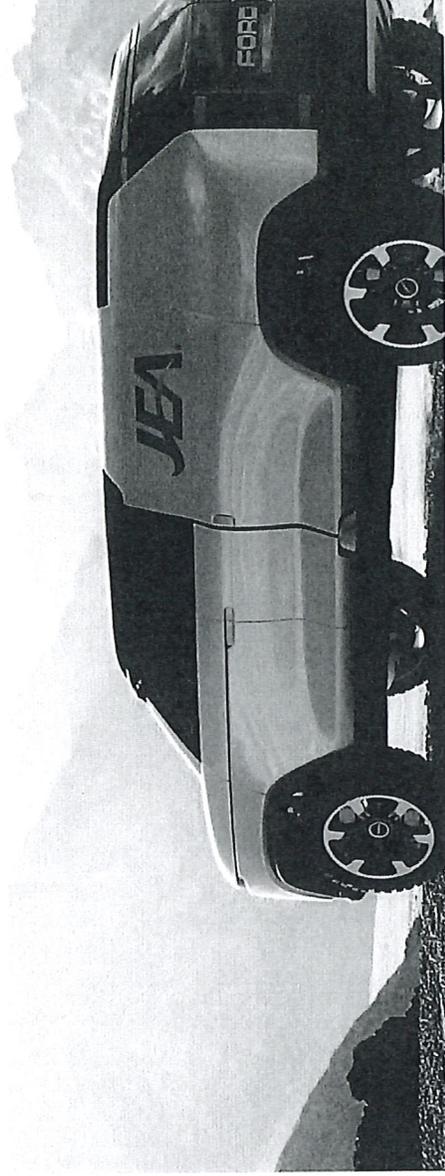


JEA

INSPIRATION

JEA and Ford Triple Play EV Solution Partnership

-2030



**How can we help
facilitate the
future of
transportation?**

JEA

Statement of Steven McInall – July 7, 2020

I have worked in various capacities at JEA for the past nine years. It has been my greatest professional pleasure to lead the groups that I have – Generation Planning, Fuels, Byproducts, Energy Planning, Water Planning, and Real Estate and Economic Development. The people that I worked with at JEA are among the finest I have ever known.

I am proud of all that my teams have accomplished over the years:

- Implemented solar plans that added 27 MW of utility scale solar and another 250 MW of solar currently being developed.
- Led negotiations with FPL for the closure of Scherer Unit 4 and replacement with a Power Purchase Agreement, saving JEA \$200M NPV over 20 years and cutting CO₂ emissions by 500,000 tons annually.
- Part of the team that negotiated the closure of the St Johns River Power Park. Identified and secured alternative power sources via power purchase agreement. Closure saved JEA customers \$450M NPV.
- Reduced CO₂ emissions by over 40 percent.
- Launched a company-wide innovation forum, “Watts Up?,” to share initiatives across business lines.
- Investigated the integration of battery Virtual Power Plants, Reciprocating Internal Combustion Engines (RICE) and utility-scale battery storage as methods to aid the increase in solar energy on the grid.
- Started the redevelopment planning of the former SJRPP, so that JEA and the City can benefit from this valuable resource
- Planned for large scale purified water system on JEA’s south grid, to offset future Consumptive Use Permit challenges.
- Prepared fuel hedging strategies to reduce fuel cost risk, as part of a \$400M annual fuel budget.
- Developed and implemented Distributed Generation and Battery Incentive programs.

Through all this I have always acted ethically, impartially, fairly and honestly.

My greatest accomplishment at JEA was assembling the highly qualified team of individuals who worked for me, and without whom I could not have accomplished anything. I wish them and all my former colleagues all the best in the future.

