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BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

In the Matter of:

DOCKET NO. UNDOCKETED

REVIEW OF TEN-YEAR SITE PLANS
OF ELECTRIC UTILITIES.
_____/

PROCEEDINGS: COMMISSION WORKSHOP

COMMISSIONERS PARTICIPATING: CHAIRMAN GARY F. CLARK
COMMISSIONER ART GRAHAM
COMMISSIONER JULIE I. BROWN
COMMISSIONER DONALD J. POLMANN
COMMISSIONER ANDREW GILES FAY

DATE: Tuesday, August 18, 2020

TIME: Commenced: 1:00 p.m.
Concluded: 3:27 p.m.

PLACE: Betty Easley Conference Center
Room 148
4075 Esplanade Way
Tallahassee, Florida

REPORTED BY: DEBRA R. KRICK
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STACY DOCHODA - FRCC

JOSE APONTE - Tampa Electric Company

STEVE SIM - Florida Power & Light Company and Gulf Power Company

MAGGIE SHOBER - Southern Alliance for Clean Energy

KATIE CHILES OTTENWELLER - Vote Solar

PUBLIC COMMENT SPEAKERS:

ZELALEM ADEFRIS - Catalyst Miami

MACKENZIE MARCELIN - Climate Justice Organizer

RAQUEL FERNANDEZ MAKAROV - Sierra Club

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P R O C E E D I N G S

CHAIRMAN CLARK: Okay. I think we've got everything cleared up. We are going to go ahead and call the workshop to order.

Welcome to the Commission workshop on the 2020 10-year site plan for Florida's electric utilities. I would like to ask staff, if they would, to please read the notice.

MS. PASSIDOMO: Good afternoon, Chairman Clark and Commissioners. Gabriella Passidomo on behalf of Commission staff.

By notice issued on August 11th, 2020, this time and place has been set for a Commission workshop to review the 2020 10-year site plans for Florida's electric utility. The purpose of the workshop is set out in the notice.

CHAIRMAN CLARK: Thank you, Ms. Passidomo.

We've got several presentations that are going to be made this afternoon. What I would like to ask is that Commissioners and staff, as the presentations are concluded, we will take an opportunity to ask questions of those individuals making the presentations, and then we will, at the end of the hearing, have a public comment section. We do have five members of the public that have

requested to comment today. So we will take those up -- take their comments at the very end today.

Our first presenter this afternoon is the Florida Reliability Coordinating Council. We've got a little bit of feedback, I believe. Let's get some microphones.

Just a reminder to anyone that's participating in today's meeting, please mute your microphones. Please mute your microphones until you are going to be -- and your cameras, unless you are speaking or presenting at that time.

All right. Let's move on to FRCC's presentation. Stacy, is it Dochoda?

MS. DOCHODA: Good afternoon, Chairman. It's Stacy Dochoda. The C in my last name is silent, so it's a rather challenging name.

Are you able to hear me okay?

CHAIRMAN CLARK: Yes, we can hear you fine.

MS. DOCHODA: Great. And.

I think I will pause to let staff pull up the slides. I don't see those yet. Oh, there they are. Great.

Well, thank you for inviting me to speak to you. Again, I am Stacy Dochoda, President and CEO of the Florida Reliability Coordinating Council,

and today I will be providing you a summary of our work looking at the 2020 10-year site plan.

Next slide, please. Can you advance to the next slide, please? Thank you.

A little bit about FRCC. We are a nonprofit corporation that was formed in the 1970s. Our vision is to be the premier organization for grid reliability and security in North America. And our vision -- excuse me -- our mission is to coordinate a safe, reliable and secure bulk power system with our members.

We have 20 members. They are the utilities in Florida include investor-owned utilities, cooperative and municipal utilities.

We carry out our activities on behalf of our members, and that includes being a reliability coordinator for Florida, and in that role we act like the air traffic controller in the high voltage electric grid.

We are also a planning authority working with our members to coordinate transmission planning in our area, with a staff of 26, and an annual budget of $15 million.

Next slide, please.

Today, I will describe the results of the 2020

FRCC load and resource plans. The topics will include how Gulf Power data is handled in the plan, the utility's integrated resource planning processes, and the aggregate load forecast, generation forecast, reserve margin and fuel mix in the 10-year site plan.

I will also discuss the reliability considerations of both utility solar additions and the natural gas infrastructure in Florida.

The data that I will show you was filed by the utilities earlier this year, and it does not take into account any projected impacts of COVID-19.

Next slide, please.

In the 2020 FRCC load and resource plans, firm peak demand and energy forecasts are comparable to the 2019 10-year plan. The utilities are projected to add over 12,000 megawatts of new firm capacity.

Now, when we consider the demand forecast and the plan generation, the planned reserve margins are above 20 percent over the 10 years. Demand response is reducing summer peak demand by 6.1 percent by 2029, and energy efficiency codes and standards are projected to reduce peak demand by 5.1 percent by 2029. Meeting those target reserve margins is increasingly dependent upon demand

response in the latter years.

And finally, the aggregate forecasts have renewable energy increasing from four percent to 13 percent on an energy bases.

Next slide, please.

On January 1st of 2019, Gulf Power became a subsidiary of NextEra Energy, which also owns Florida Power & Light. Now, in the previous FRCC load and resource plan, Gulf was not part of the FRCC load or generation, but we did supply their data. It was included in the state section of our report.

Now, FPL plans to integrate Gulf, creating a single operating system on January 1st, 2022. Now, Gulf has about 2,300 megawatts of existing generation that will be added to the FRCC region. And in this presentation, we will show the first two years, '20 and '21 without a Gulf, and then in 2022, Gulf Power's data has been added.

Next slide, please.

In Florida, each utility develops its own integrated resource plan to look out in into the future to forecast customer demand, and how to reliably serve that demand. The utility will prepare forecasts of demand and energy usage

considering drivers such as customer growth, impacts of energy efficiency and normal weather. Fuel and resource price forecasts are also developed.

The utility will consider the demand in energy that can be produced by its existing resources, and also consider plans for upgrades and outputs, and will also consider the impact of resource retirement, or the expiration of purchased power agreements.

The forecast of demand and energy needs are compared to the resources available, and then compared to the target reserve margin criteria. And where there is a shortfall, the utility will consider options to meet the reserve margin targets.

Now, these options will include supply side to just new generation or purchased power, and demand side options, such as load control. The cost and operating criteria of these options are used to evaluate the alternative. And the result of this analysis is each utility's integrated resource plan.

Next slide, please.

The individual utility integrated resource

plans are brought together by FRCC to create the FRCC load and resource plan. In addition, we use the load and resource plan data to conduct reliability assessment of generation adequacy and transmission reliability.

Next slide, please.

So looking first at the load forecast portion of the load and resource plan, firms on repeat demand growth is similar to last year's 10-year site plan, and grows on average 1.1 percent per year.

Forecasted energy sales growth is also similar to last year's 10-year site plan, and it grows on average, 0.75 percent per year.

Demand response is reducing firm summer peak by 6.1 percent. And then there are two types of impacts from energy efficiency on the summer peak forecast. First, mandated codes and standards are reducing peak demand by 5.1 percent, and utility sponsored energy efficiency programs are reducing peak demand by 1.4 percent.

Next slide, please.

This slide includes the several factors that impact the load forecast. Please note again that the load forecast for this year's 10-year site

plan, they were prepared prior to COVID-19. And rates at the time these forecasts were developed have increased to about three percent in January of 2020. Population growth was projected to remain strong, however, wage and income growth have not kept pace with employment growth.

Energy efficiency codes and standards and, to a lesser extent, distributed solar are dampening energy use growth.

In addition, commercial customer forecasts are being dampened by on line commerce.

And then finally, the impact of electric vehicles is forecast to grow to 500 megawatts by 2029.

Next slide, please.

This graph shows the 2019 and the 2020 10-year site plan firm peak demand forecast. The 2020 10-year site plan forecast is in the red.

Now, the unusual shape of the lines on this chart is due to the effect of the integration of Gulf into FPL in January of 2022. The first two years displayed, '20 and '21, are without Gulf. And then in '22, we included Gulf's demand in both the 2019 and the 2020 10-year site plan demand so that you can see the growth on a comparable basis.

The growth rates are the line between the two forecasts from '22 to '29 were very similar, at about one percent.

Next slide, please.

Now, this is the chart of the energy forecast from the 10-year site plans. Again, Gulf Power data is included beginning in the year 2022.

Now, the 2020 10-year site plan forecast has an average annual growth rate of 0.75 percent between 2022 and 2029.

Next slide, please.

On this graph, the black line shows the actual historical summer peak demand from 1991 to 2019. So those were actual demand. And then to the right, we have the forecasted from this year's 10-year site plan.

Next slide.

And so here, you can see that expanded. This is Slide 13. And we show the 2020 10-year site plan forecasted summer peak demand. And here we are highlighting the impact of demand response and utility energy efficiency programs.

The red line on the bottom is the forecasted summer firm peak demand. The top yellow line is the forecasted demand without demand response and

energy efficiency.

If we didn't have demand response, peak demand would be 6.1 percent higher in 2029. Similarly, without energy efficiency programs, demand would be 1.4 percent higher by 2029.

Next slide, please.

Here we have the compound average annual growth rate for firm peak loads of the summer in red and the winter in blue. The chart really highlights the decline in forecasted growth rate from around two percent in the early 2000s to around one percent today.

Next slide, please.

This bar chart shows demand response as a percentage of peak demand in various areas of the United States. In 2020, demand response in the FRCC area is projected to be 5.9 percent of peak demand.

Next slide, please.

Now I will turn to capacity additions and reserve margins.

Utilities are planning over 12,000 megawatts of new capacity over the next 10 years, and that includes 4,500 megawatts of firm solar. That 4,500 megawatts of firm solar is drawing from 9,700

megawatts of nameplate solar. On average, the utilities counted 42 percent of fuller nameplate as firm at peak.

This new capacity also includes 1,400 megawatts of battery storage. And the 10-year site plans project 5,100 megawatts of capacity retirement.

When we consider the load and generation forecast and the planned reserve margins that are projected to remain above 20 percent over the 10 years, but meeting that reserve margin target is increasingly dependent on demand response in the latter years.

Next slide, please.

This bar chart shows the available capacity over the 10 years. It includes the impacts of plans, new built and retirement. Again, there is over 1,200 megawatts of new capacity planned for the region. Of this, 3,400 megawatts is combined cycle generation, and 1,900 megawatts is from combustion turbines or reciprocating engines. Again, there are 4,500 megawatts of firm solar, and 1,400 megawatts of battery capacity. And during that time --

COMMISSIONER BROWN: Could you please -- I am

sorry, could you please repeat that?

CHAIRMAN CLARK: Commissioner Brown.

MS. DOCHODA: Certainly, Commissioner Brown.

So the -- this chart shows -- what's embedded in this graph are 1,200 megawatts of new capacity, and of that, there is 3,400 megawatts of combined cycle generation, and 1,900 megawatts from combustion turbine, or reciprocating engines. And then in addition, there is 4,500 megawatts of firm solar, and 1,400 megawatts of battery capacity.

COMMISSIONER BROWN: Thank you.

MS. DOCHODA: Certainly.

And then finally, there are 5,100 megawatts of plant retirement planned.

Next slide, please.

This chart shows the incremental generation changes, additions or retirement, by fuel type for each year. In the blue, we show coal. In the red, natural gas. The green is solar. And for the first time this year, we are showing purple, with the battery capacity being added.

Next slide.

For nuclear generations, there is no material change in projected capacity over the 10 years. We have 3,600 megawatts, and we have 20 megawatts of

planned upgrades over the 10 years.

Next slide.

So now I will turn to reserve margin. And here, we are using the forecasted firm load. So this is assuming that demand response and utility energy efficiency programs are used to reduce demand. So using the firm load and the projected available resources, we calculated the reserve margins over the 10-year period, and they are expected to be above 20 percent over the forecast period.

Next slide.

These charts show forecasted capacity by fuel type on a megawatt basis. In the blue, you can see that natural gas goes from 74 percent in 2020 to 71 percent in '29. In yellow, the coal capacity is decreasing from 11 percent to eight percent, while in red, renewables increased from three percent to 12 percent on a capacity basis.

Next slide.

These pie charts are looking just at the renewable resources, and the sources of renewable. In the red, solar is growing from 79 percent this year to 93 percent of renewable capacity in 2029.

Next slide.

This chart shows how the amount of forecasted solar capacity has changed from the 2018 10-year site plan to this year. Each year's 10-year site plan has shown more forecasted solar than the prior year's plan for the same year, however, the rate of increase has slowed this year.

Next slide.

These pie charts show the forecasted fuel mix on an energy, or a gigawatt hour basis. In the blue, natural gas decreases from 71 percent to 65 percent in 2029. In the yellow, coal decreases from 10 percent to 7 percent. And in the red, renewables are going from four percent to 13 percent on an energy basis.

Next slide.

Now looking at renewables only on an energy basis, in the red, solar is growing from 73 percent to 95 percent in 2029.

Next slide.

With the significant growth of solar that is forecasted, the utilities and FRCC are working to understand the reliability considerations of this change in resource. At the current levels of solar penetrations, we haven't seen any significant operational impact.

FRCC is working with our members this year to conduct a solar study looking at the plan levels for solar and sensitivity on those demands, and the impacts on reliability.

In the meantime, utilities are developing experience with these resources, understanding the importance of solar output forecasting, and integrating that into their generation dispatch to ensure reliable and efficient operation.

We also have the ability to learn from other parts of the country that already have high penetration rates of solar. We do see in the data that the utilities are assigning varying firm capacity values to the utility solar in terms of its contribution to peak.

Next slide.

Now turn to a discussion of Florida's natural gas infrastructure.

For years, FRCC members have employed a consultant to maintain a comprehensive gas infrastructure model and a utility fuels database. This allows the members to identify periodic reliability studies where we examine different infrastructure contingencies.

We also have the consultant perform studies to

see if the capacity is projected to be adequate based on the forecasted infrastructure and forecasted needs.

And based on these studies, I can report the natural gas infrastructure capacity is on pace to support planned generation additions.

On a realtime basis, we need to do system conditions. FRCC coordinates regional responses to fuel emergencies with utilities and the pipeline.

And to bolster reliability, utilities and FRCC have a large percentage of gas generation with alternate fuel capability of between 64 and 66 percent.

Next slide, please.

So I will just conclude by reiterating that we show planned reserve margins above 20 percent for the next 10 years, however, meeting the reserve target is increasingly dependent on demand response in the latter years. We show renewables increasing from four to 13 percent due to growth in solar, and that's on an energy basis. And then finally, natural gas infrastructure capacity is on pace with natural gas generation.

Next slide.

CHAIRMAN CLARK: All right. Thank you, very

much, Ms. Dochoda.

Any questions from Commissioners?

Commissioner Brown.

COMMISSIONER BROWN: Thank you. Appreciate always hearing your presentation. You know, this is kind of like our -- our game plan, right? It's not binding, but it does give us a perspective every year as we look at the future, so I really appreciate it.

The thing that really kind of jumped out at me, the first thing, was the demand forecast -- if I can find it. It's somewhere in there. You have projected demand --

MS. DOCHODA: By 10. By 10.

COMMISSIONER BROWN: That's it. Okay.

So you have projected demand being forecasted to -- for 2020 to go below the 2019 forecast, yet load forecast, of course, is above. Can you kind of elaborate for us?

MS. DOCHODA: I'm sorry, just ask it one more time. I couldn't hear the first part. Sorry.

COMMISSIONER BROWN: Certainly. It's probably the lawnmower outside.

You have the demand forecast for 2020 being projected from the '29 forecast to be a little bit

below, I think you said roughly one percent-ish low for the demand from firm peak compared to your net energy load forecast being above. If you could just explain the disparity also from the prior forecast.

MS. DOCHODA: Right. Now, that's -- so if you were to look at Slide 10, which shows the demand, and then Slide 11 I think is the energy that you are speaking of, yes, exactly. The -- what we saw in the energy forecast is that this year, there was a slightly higher usage per customer from the utilities in their forecast, and that was attributed to the impact of the warmer temperatures that we've seen that are now starting to impact the -- you know, we do the normal -- normalized weather and adjust the forecast, that's starting to show up in a little bit higher usage per customer, and so that's what's showing up in this energy forecast.

COMMISSIONER BROWN: Sorry. Thank you.

You talk a little bit about the solar study that you are going to be partaking in. Battery storage, you have -- what was it -- 1,200 megawatts projected?

MS. DOCHODA: 1,400.

COMMISSIONER BROWN: Okay. So of the 1,400, could you tell us, are they all IOUs? Are they all the IOUs?

MS. DOCHODA: It does include all the IOUs -- oh, no, I am sorry. You are talking batteries or the solar? Sorry.

COMMISSIONER BROWN: Batteries.

MS. DOCHODA: Batteries. No, the batteries are -- it's Florida Power & Light, and then I think it's TECO. Let me -- let me check my notes. I have that.

COMMISSIONER BROWN: Obviously, battery storage is a huge component of the reliability focus, and I am assuming that your solar study that you are going to partake in is going to have an aspect of that -- examining the effects of batteries on -- on the reliability.

MS. DOCHODA: At this point, I believe our study is really a thermal study, and so I don't know that it will impact -- I don't know that it will actually consider the battery interplay. That's something that I will check for you and I can follow up with you on.

COMMISSIONER BROWN: No, I think -- what is the shoal study supposed to be based on, really?

Is it going to be talking about the varying firm capacity values or --

MS. DOCHODA: So one of the things that the study will look at is -- certainly we are seeing this large increase certainly on a percentage basis of solar in -- in the -- in the mix. And so looking at geographically where that solar will be, the impact on the grid of those locations, and the -- the way that that will impact the -- the load flow, that's what that study will look at.

And so we did a study a couple of years ago, and that study was similar, but it just had much less solar projected. So we did think we needed to updated that to make sure that we have captured the increase that they are showing us today.

COMMISSIONER BROWN: Absolutely. And I think that that 1,400 megawatts of planned battery storage, I think it would be helpful for the Commission next year to kind of look at how that has affected reliability, and possibly the firm capacity attributes associated with solar. So I would love to see the effects of the planned battery, which is so important for solar.

Thank you.

One last question really, and it's kind of not

related to your -- your agenda here, but it -- we had this come up I guess at an Internal Affairs meeting, so I just wanted to know if you know anything about the Southeast Energy Exchange Market? And I know it's an energy imbalanced market that has some of our parent companies, like Duke Energy. I know it's not an RTO, nor does it prohibit any companies from joining. It's voluntarily -- voluntary wholesale, but do you know anything about it and also why, you know, we are not thinking of -- (inaudible) -- if at all.

MS. DOCHODA: I -- I know a small amount. It's not something I am engaged in, but certainly Duke is one of our members, and I have spoken with our -- our members there.

What I do understand is that Duke Energy Florida is not participating, but Duke Carolinas would be. As I understand it, I don't know that it's really an imbalanced market. I think it's more of an exchange. An imbalanced market would involve more security dispatch. And I do believe this is, if I understand, more really of an opportunity exchange when power -- when the -- the parties have power available. And I am going to describe it more of a bulletin board sort of

system. That's what I understood.

Now, there may be much more to that than what I know, but that's my understanding.

COMMISSIONER BROWN: So you are not -- I am just curious. I mean, Florida is not having discussion with, Florida utilities aren't engaged, there is no reason for us to be participants in that?

MS. DOCHODA: To my knowledge, they are not engaged in that.

COMMISSIONER BROWN: Okay. Thank you. Thanks, Stacy.

MS. DOCHODA: Certainly. Thank you.

CHAIRMAN CLARK: Thank you, Commissioner Brown.

Any other Commissioners have questions?

Commissioner Fay.

COMMISSIONER FAY: Yeah. Thank you, Mr. Chairman.

Just real quick for you, Ms. Dochoda. On Slide 13, you are discussing the forecasted summer peak demand, and I think you were saying between the projected firm peak demand and then the demand with the adjustments made, it would be about a 6.1 percent, is that -- was that right?

MS. DOCHODA: Right. What we show on the chart is really two pieces. So the -- if you go up to the -- from the red line to the orange line, which you can barely see below the yellow line, that is the 6.1 percent. So that's the demand response piece.

COMMISSIONER FAY: Okay.

MS. DOCHODA: And then that narrower band, that's the contribution from the utility sponsored programs, energy efficiency programs.

COMMISSIONER FAY: So that's the 1.4 in between the yellow and the orange?

MS. DOCHODA: Correct.

COMMISSIONER FAY: Got you. Okay. Perfect.

All right. Thank you for that. That's all I had. Thank you.

CHAIRMAN CLARK: Thank you.

Other questions?

Commissioner Polmann.

COMMISSIONER POLMANN: Thank you, Mr. Chairman.

Ms. Dochoda, I am -- well, you mentioned, first of all, that the forecasts were presented back in the spring, and certainly developed earlier than that, but not including impacts from COVID-19.

Can -- can you tell us, do you think there will be enough information for these to be updated in the coming year, or is that kind of information being gathered now, or are we going to await updates that would include that in sufficient detail for a longer period of time, can you tell us?

MS. DOCHODA: Based on my discussions with the utilities, they are working hard at trying to make those evaluations right now. And I think it's -- I am certain they will do what they can, but, frankly, I think don't know just yet today whether we will -- whether they will be able to capture those impacts in next year's. I am sure they will -- they will put in what they can estimate, but I -- I think we are all living through really a once in a lifetime first time ever event, so I think what we will know by that time, you know, at this point, I don't know that we can really say.

COMMISSIONER POLMANN: Looking at your slides, I am trying to understand how far into the future these -- these forecasts go, and given that this is a 10-year plan, I guess I take that in certain terms to be a 10-year forecast, is that -- am I reading that correct?

MS. DOCHODA: That's correct. Uh-huh.

COMMISSIONER POLMANN: So as an example, just looking at Slide 11 -- (inaudible) -- through 2029, there are a number of different ways, of course, to do forecasting, and it really depends on the data and the type of models you use. But are there any confidence bands, or -- or some kind of uncertainty around these forecasts?

We -- we see here, you know, essentially straight lines, more or less linear projections. Is there any effort, or any understanding about how -- how good of a forecast it is, or -- or is this just something that we update every year?

MS. DOCHODA: So that's a good question.

Now, what I am showing you here is really simply the sum of the utilities' forecast. So, no, at FRCC, I don't attempt to, you know, do some sort of aggregate sensitivity.

I really would need to refer you to the utilities. I think each of them do a little bit different things, and certainly, you know, there is levels to look at around weather and -- and -- and other aspects. So I would need to defer that question, really, to the individual utilities.

COMMISSIONER POLMANN: Okay. So you are taking information from the utilities and compiling

it?

MS. DOCHODA: Correct. Correct. It's not an FRCC forecast. This is really the aggregate of the utilities' forecasts from their 10-year site plans.

COMMISSIONER POLMANN: Okay. Well, then let me -- my last question then would be to jump ahead here in my notes then.

From your experience, we have a number of -- of items that you displayed for us, and I very much appreciate it. This is a great compilation. You have forecast of -- of need over the time period that we are discussing, and then there is, further on your presentation, generation mix among different fuels, if you will, and so forth, the gas, nuclear and the alternatives, and then there is a schedule going out into the future.

So on -- on these different aspects, the time period, and the need, and the -- and the fuel mix and the schedule of projects, from your experience, what is it that is typically revised here? It's really the forecast that changes, or the fuel mix that -- that the utilities suggest is -- is moving the schedule of projects, the types of projects? What have you seen, and what -- what might be, and understand might, we anticipate going forward over

the next decade? Is there a lot of flux? Big change? I know solar has changed a lot over the past decade. What's -- what's typically your experience? Is there anything typical or is this all just some --

MS. DOCHODA: I was going to say, I think over the last 40 years I have been in the industry, I started when it was all about nuclear, and nuclear was too cheap to meter, we were all going to be nuclear, and so I -- I guess the thing I have learned is whatever I think is going to happen the next year is not going to be what's going to happen. That's why we have reserve margins, and all those things.

I guess what I would say, in the last couple of years in these forecasts, you know, the notable changes that perhaps are a little more startling, or, you know, more sizable than what I might have seen in my history is certainly around the solar, and now batteries coming in.

If you would have asked me five years ago if I thought I would see these numbers in Florida, I would probably not have -- as a matter of fact, I did say that I didn't think we would see them, but here they are. And -- and so that, I think, is

very got notable, and I think you can see each of the utilities working to bring those in. And, you know, I think that's driven, certainly by technology, by economics, and all of those factors have made the forces competitive and -- and -- and brought into the plan, you know, you have seen a quick reaction to bring them in.

The other thing that I would say that I saw this year, and that I haven't seen recently as much, is the -- on the chart where we show the additions and -- and retirements by year, saw a little bit more gas being retired than I had in recent years. That was another -- another change.

COMMISSIONER POLMANN: So -- so given your comparison five years ago to today, I -- I shouldn't ask you and hold to you what's going to happen five years from now?

MS. DOCHODA: You are right. I would be unworthy to predict that for you.

COMMISSIONER POLMANN: Yeah, you mentioned nuclear from 40 years ago. I will simply mention that I graduated college in 1979, which, you know, I -- I studied engineering with many nuclear engineers who I think maybe ended up working for the Navy in nuclear engineering because that's all

they had available.

MS. DOCHODA: Yeah. I had a best friend who came into the cafeteria that day and said, I think I am changing my major.

COMMISSIONER POLMANN: Yeah. Yeah. That's exactly what happened.

So -- well, thank you very much. It's a great presentation.

MS. DOCHODA: Thank you.

COMMISSIONER POLMANN: Thank you, Mr. Chairman, that's all I have.

CHAIRMAN CLARK: Thank you, Commissioner.

MS. DOCHODA: Thank you.

CHAIRMAN CLARK: Any other -- any other questions for Ms. Dochoda?

All right. Thank you very much for your presentation today.

Let's move on to the TECO presentation, Jose Aponte. There we go.

Mr. Aponte, you are recognized.

MR. APONTE: Good afternoon, Commissioners, members of staff and the rest of the audience. Thank you for the opportunity to be here.

Can y'all hear me okay?

CHAIRMAN CLARK: We are having a little bit of

trouble hearing you. Can you speak up a little, or get a little closer to the mic?

MR. APONTE: Yes. Is this better now?

CHAIRMAN CLARK: That's a little better. Yes, sir.

MR. APONTE: Okay. Thank you.

My name is Jose Aponte, Manager of Resource Planning for Tampa Electric Company. And today I will be presenting on distributed energy resources, and how they fit into our portfolio of new capacity additions as shown in the 2020 10-year site plan.

Next slide, please.

Distributed energy resources, or DERs, consider a variety of technologies of various sizes that can stand alone or work together within a network of integrated technologies to meet the needs of both large and small energy users.

Some DERs have more market experience on generation than others, and some more are in rapid stages of development than others.

Historically, generation was typically consolidated at a single location to maximize efficiency and minimize support costs. Distributed generation, on the other hand, is strategically located based on the availability of the energy or

fuel source, or strategically placed for system benefit avoided in for continuous operations.

Distributed power modalities are today more widely available than ever, have come down in price and have improved the efficiency. They provide benefits of being distributed while competing economically with centralized generation.

Next slide, please.

Tampa Electric's generation portfolio has evolved, and continues to do so. With the Polk 2 combined-cycle conversion completed in 2017, the SoBRA solar capacity additions about to be completed in 2021 and the Big Bend 1 Modernization project expected to be completed in 2023, they have provided TECO with abundant low-cost energy. Additionally, their reserve margin needs have shifted to the winter due to the absence of firm solar capacity in the early morning hours during the winter season.

We looked at various alternatives for meeting the winter capacity need. One alternative we considered was the deployment of large peaking combustion turbines at existing central stations. Due to our modest low growth that our systems experienced, this approach, although viable, would

result in having excess winter capacity in the year the unit goes in service until the peak demand grows and the reserve margin declines.

Another alternative we evaluated, and a more streamline approach for our system is to meet winter peaks with smaller distributed energy resources that allow for a more agile deployment of capacity that better matches the reserve margin need. As a result, our system is expected to greatly benefit from flexible, quick response peaking capacity that reciprocating engines and battery storage delivers.

Next slide, please.

Even with the addition of incremental DSM programs, SoBRA, solar and Big Bend Modernization, Tampa Electric still has a winter capacity need that grows every year. With a modest 40 to 50 megawatts a year peak demand growth, smaller distributed energy capacity additions is a viable and favorable option for our system.

Next slide, please.

This slide shows various benefits that we evaluated. The expansion plan alternative on the left demonstrates the winter reserve margins under a -- under a centralized generation plan approach,

versus the one on the right, which shows the reserve margins under a distributed generation approach.

As you can see, the distributed generation plan on the right allows for a tighter reserve margin closer to the 20 percent.

One of the benefits of the smaller, more streamlined capacity additions, is that it gives the distributed generation plan more flexibility and adaptability in the event of changing circumstances, such as advancements in technology, a decrease in technology costs, changes in fuel pricing and load forecast, and others.

Next slide, please.

This pie chart demonstrates the capacity mix by percent addition the 2020 10-year site plan for future capacity additions. Solar and battery storage accounting for approximately 74 percent of the total new capacity additions.

Next slide, please.

This graph illustrates Tampa Electric's approach. It illustrates a sample summer generation dispatch with centralized and distributed generation resources.

The dark blue area is primarily low cost,

highly efficient natural gas combined cycle running flat line around the clock to maximize efficiency, reliability, and as a result, cost savings.

Solar fills the bulk of the peaking need during the long sunny days of Florida.

Energy storage is used to store energy at night, keeping the natural gas combined cycle units at a very efficient rate, and the solar in the morning then is charging the energy in the evening as the load picks up at the same time that solar energy is declining.

Peaking assets such a reciprocating engines provide the flexibility, reliability to react quickly as imbalances arrive sporadically during the day.

TEC -- the TEC system benefits from all of these components working together to simultaneously lower fuel costs and build reliability.

Next slide, please.

The following are some of the value components considered when we evaluated distributed energy resources. Just to name a few, you see an increase in efficiency and lower fuel cost as a result; decreasing transmission and distribution line losses from placing generation closer to the load.

We see an offset of capacity and demand charges by peak savings. We see enhanced an ancillary services benefit; environmental benefits; a potential deferral of transmission and distribution investments, and then increase in resiliency and reliability.

But what's really more, the real potential of DERs is the stacking of all of these value streams inside an optimized portfolio, with all the component -- components working in concert to maximize the total benefits.

Next slide, please.

Tampa Electric has selected a mix of elements that provides a robust, reliable and resilient cost-effective expansion plan. As a portfolio of distributed energy resources consisting of the utility-scale solar, battery storage and reciprocating engines, it's a favorable option, and it's in the best interest of Tampa Electric Company customers.

This resource has synergies that work in concert to provide cost savings, operational flexibility, environmental and reliabi-- reliability benefits, and value to include system reliability.

The geographical flexibility and quick deployment timeframe of DERs enables TEC's system to adapt to changing needs.

To summarize, distributed energy resources fit Tampa Electric's need. They provide a better match for the load growth. They provide operational flexibility and highly reliable cost-effective, and can be easily adapted to changing circumstances.

Thank you again for allowing me to be here, and this concludes my presentation.

CHAIRMAN CLARK: Thank you, Mr. Aponte.

Do Commissioners have questions for Mr. Aponte?

Commissioner Brown, begin with you.

COMMISSIONER BROWN: Thank you.

Just a comment. I mean it's a different approach to presenting a 10-year site plan today, Mr. Aponte, and I -- I like the -- the focus on the distributed energy resources. It's definitely a novel approach to kind of showing what -- how you have analyzed your projections on the DER side.

What is the percentage on new additional additions other than solar for Tampa Electric over the -- the 10-year horizon?

MR. APONTE: Yes. So more utility scale solar

accounts for about 54 percent of the new capacity additions over the 10-year horizon. Right after the solar, about 20 percent of it is battery storage. And then about 60 percent is natural gas reciprocating engines, and then about nine percent or so are existing -- existing system enhancements, efficiency type of enhancements existing combined-cycle stations --

COMMISSIONER BROWN: Upgrades?

MR. APONTE: Yes.

COMMISSIONER BROWN: Well, thank you, Mr. Aponte. I love what your company is doing to help improve the environment, and excited about the future for -- for you all.

MR. APONTE: Thank you, Commissioner Brown.

CHAIRMAN CLARK: Commissioner Fay.

COMMISSIONER FAY: Thank you, Mr. Chairman. I think I will be really quick.

Mr. Aponte, Slide 7, just help me understand this. I am guessing we've got the time periods listed out here, and then at the beginning you have got the batteries charging and then the solar generation. Explain how that works.

MR. APONTE: Yes, that is correct, Commissioner Fay. As you can see by -- by having

to charge the batteries in an optimum -- optimum time, which is in the off peak when the energy costs are lower, it helps also keep existing base-load type of generation, mostly combined-cycle, at a better point in the erector at a more efficient operation. By having to charge the batteries, you accomplish that with the existing stations. Then as the solar generation starts to ramp up, the combined cycle units stay flat. And then as the solar generations start to decline, we continue to keep the combined cycle units flat, and then we discharge the batteries to account for an hour or two worth of peaking type of need in the early evening of the day.

COMMISSIONER FAY: Great. I appreciate that.

And then I also just want to thank you for your -- your Slide 8, the value type, I think there is also a lot of discussion as to the financial component, but you listed a bunch of things on here that touch on the resiliency and optimization, I think those are key components for us to include, and so I appreciate you including that.

Thank you so much.

MR. APONTE: Thank you, Commissioner Fay. Appreciate it.

CHAIRMAN CLARK: All right. Mr. Aponte, I have a couple of just questions, observations.

I am -- I am interested in your capacity needs in the winter beginning in 2022. As I understand the -- the slides, you begin to have reserve margin concerns in the wintertime in 2022, which you propose to address with -- with solar as your primary source of addressing those margins, is that correct?

MR. APONTE: Well, actually the winter capacity needs are not going to be met with the solar due to the lack of capacity value in the winter. So our plan is to fill the winter capacity need with the combination of battery storage and a small portion of reciprocating engines, natural gas-fired.

CHAIRMAN CLARK: What's -- are you powering your battery storage with simple cycle CT, or are you using solar to power your batteries?

MR. APONTE: It's is a combination. We optimize them, and it will be basically all of the above as -- as the system sees the most optimum way of charging, that's how we do it. And it's certainly on a -- on a project-by-project basis.

CHAIRMAN CLARK: Okay. So -- so we wouldn't

be looking at, for example to -- to meet your demand needs for the wintertime, a solar farm that has battery storage in it and that being your primary driver to offset your winter reserves, right?

MR. APONTE: We -- we are actually looking at that as one as an option. Yes, sir, that is one of the options we are looking at.

CHAIRMAN CLARK: So how do you -- how do you justify -- in terms of the cost, you are saying that's a cost-effective solution. If you are looking at basically, I assume from FRCC's presentation, 42 percent factor, capacity factor awarded to solar and then add the battery cost in, you can still get that in more effective than a simple cycle CT?

MR. APONTE: Well, that's -- that's a great we. And the new way of looking at our integrated resource plan is that we have to look at it at the portfolio basis, not just looking at one particular capacity addition in isolation, because all of the capacity additions that we show complement each other in many ways, and -- and so looking at the whole portfolio as -- as -- as a one big entity as demonstrated cost-effectiveness, just looking at

just one specific unit component by itself.

CHAIRMAN CLARK: Okay. My last question, your -- and I read in here you are looking at, I guess, Sterling engine as a -- is this some new development, new technology, or -- I realize Sterling engines have been around since the 1800s, but is there something that you guys have that -- that's going to make this an effective model?

MR. APONTE: No, actually, it's not. That Slide No. 2 was more of an inflow of some high level screening that we did on different types of technology. But by far, the reciprocating engine has gone through a lot of very important developments in terms of it efficiency, costing, flexibility, that -- that is the number one option for a natural gas type of distributed -- distributed generation asset.

CHAIRMAN CLARK: And that leads to my final question, is distributed generation, and making sure we are all -- I think that term probably catches some folks and has different meanings, but distributed generation, as opposed to central generation, give me your take on -- on how that operates in the real world.

MR. APONTE: Yeah. Sure.

Distributed generation would be, like I said, any combination of recip engines, small utility-scaled solar, battery storage, strategically located at closer to the load in order to provide benefits such as congestion relief, perhaps some deferral of DMD investments, certainly a high resiliency and high reliability component, which brings a lot of benefit because you won't have to 100 percent rely on your central station in the event of a -- of an unwanted event, could you -- you could have pockets of distributed generation close to your territory that will definitely help with the types of customer service that we are looking for.

CHAIRMAN CLARK: Have you ever looked at -- has TECO ever explored the possibility of dispatched generation from customers that had on-site combustible generators?

MR. APONTE: Yes. We are looking at those options also.

CHAIRMAN CLARK: Do you have a plan in pla-- or do you have that system in place now, or is it something you are looking at?

MR. APONTE: We have a little bit of that in place now.

CHAIRMAN CLARK: Any idea how many megawatts you can dispatch?

MR. APONTE: I want to say about 40 or 50 megawatts.

CHAIRMAN CLARK: Wow, that's pretty good.

Great, thank you very much.

Any other questions?

All right. Let's move it along.

Thank you very much, Mr. Aponte.

Next is --

MR. APONTE: You are welcome, sir. Thank you.

CHAIRMAN CLARK: -- Mr. Sim from FPL and Gulf Power.

Mr. Sim, are you on the line?

DR. SIM: Yes, sir.

CHAIRMAN CLARK: We hear you, but haven't seen you yet. There we are. Welcome.

DR. SIM: Good afternoon, Mr. Chairman and Commissioners. It's -- it's a pleasure to be here today to speak on behalf of Gulf and FPL regarding our combined 10-year site plan.

Because we are discussing both Gulf and FPL, let me make a point off the bat that perhaps needs to be made, and that is we do not do a singular or special resource planning exercise in order to

prepare the 10-year site plan each year. That's been our practice at FPL, and it continued this year now that we've rolled in Gulf.

Instead, our resource planning process is a continual one. We are constantly doing planning. And when it comes time to begin to prepare to put the 10-year site plan document together, we simply freeze assumptions, freeze the analyses, extract them, and begin putting them in the reporting format that is called for in the site plan.

So in that sense, there is not a 10-year site plan process to speak. It's simply a reporting document for work that is ongoing at FPL.

If I could have the next slide, please.

Now, what is different this year is the fact that now that Gulf is under the NextEra Energy umbrella, we are presenting a resource plan for the first time of an integrated FPL and Gulf system. And we have been undertaking activities to integrate the two systems with the idea being that we will have a single operating electrical system in 2022.

Now, the resource planning for both companies now, and for the integrated system later, is being done under the FPL hierarchy group, or shop.

Before, it was being done for Gulf by the Southern Company Services group. Now, the operation of the Gulf unit, however, is currently being performed by Southern Company, and this will continue through 2021, which sets up a somewhat awkward situation of we are doing the planning and they are doing the operating when it comes to Gulf's systems, but it is -- it is working with minimal difficulty at this point fortunately.

Now, one of the features that we will talk about in a moment is we have announced plans for the North Florida Resiliency Connection, or NFRC transmission line, that will connect the FPL and Gulf systems starting in 2022.

And what I am hoping to do in this presentation is not present too many numbers, but, instead, give you an overview of the approach. Kind of a peak behind the scenes as to what happened this past year in regard to the resource plan for the integrated system.

If I could have the next slide, please.

What we actually did is we carried out three different resource planning analysis. What we call steps one, two, three. And steps one and two were sort of interim steps to get to Step 3.

In Step 1, we were handed the -- the Gulf system and said, let's see how we can improve it. So we initially look at it as a stand-alone utility, that there was no longer any commitment from Southern company to provide energy or capacity to it. And what we wanted to see is how much system improvement could be made to the Gulf system now that it was separate, on its own. And so what we did is developed a optimized resource plan for Gulf, which I will get to in a moment.

Now, the importance there was to see how much improvement we could bring for Gulf's customers through those activities, and also to provide a starting point with this new optimized plan for Gulf from which to consider the economics and the need for the NFRC transmission line.

So in Step 2, we assumed that the NFRC line was in place. We had an optimized FPL only resource plan, and we assumed that Gulf's customers now have access to the much larger and more fuel efficient FPL system. So we then took advantage of that and reoptimized a new resource plan for Gulf.

So what we wanted to see was were the projected benefits in excess of the projected costs of the NFRC line. And also where we ended up here

was a second optimized resource plan for Gulf, a resource -- an optimized resource plan for FPL, and that was the starting point to see if it made sense to then integrate the two systems into a single entity. And that resource plan, again optimized one more time, but this time for both FPL and Gulf, that became the resource plan that's presented in this year's 2020 10-year site plan.

The next slide, please.

Let's talk a little bit about Gulf. The table we are showing here is prior to 2020, this was the -- kind of an overview of the Gulf generating units. And what stands out to us is the three yellow highlighted lines. Gulf has three generating units, or resources, that together comprise 60 percent of their entire generating capacity, and one of them, the last row down there, is the Shell PPA with a power purchase agreement from a combined cycle up in Alabama that makes up fully 26 percent of their entire generating capability.

For example. The largest unit on FPL's system, the Ft. Myers unit, is an 1,800-megawatt unit, so that comprises about seven percent of our total generation.

So it's an unusual system on a stand-alone basis, and with no commitments, firm commitments or capacity or energy, our analysis showed that if this stayed a separate stand-alone system, it would require a reserve margin of about 30 percent.

Go to the next slide, please.

So in Step 1 of the analysis where we are trying to optimize the stand-alone Gulf system, we started off looking at a variety of resource options. And the first one we looked at was pretty similar to the way -- or to the resources that had shown up in the 2019 10-year site plan when Gulf was still part of Southern Company. And Those were new combustion turbines and combined cycles.

Now, in addition, the other options we looked at was early retirement of Gulf's ownership of the two Daniel coal units in Mississippi. We looked at essentially 75 megawatts solar photovoltaic facilities, converting a couple of the Christ units from coal to gas, upgrades to the Lansing Smith combined cycle and battery storage facilities of several different variations.

Now, we analyzed each one of these options sequentially and in total, and what we found was there was a role for each of them in this optimized

plan for a stand-alone Gulf system. There was considerable economic savings projected from these improvements, and the resource plan that resulted from this interim step became the starting point for the Step 2 analysis, where we were electrically connecting the two systems, but the two systems would stay as separate utility systems.

Go to the next slide, please.

Okay. And here's a rough depiction in the inset of the route of the NFRC line. It goes through six counties in northern Florida, 176 miles. It will allow bidirectional transfer either direction of up to 850 megawatts, an in-service date of 2022. And the primary feature is it gives the Gulf customers access to the much larger FPL system.

FPL is about 10 times the size of Gulf's system. And the fuel efficiency of our units, we have an average fossil fleet average heat rate of about 6,900. The Gulf fleet currently is about 9,600. So this would allow access to much cheaper, much more fuel efficient energy that could flow into Gulf.

Next slide, please.

Now, we once again reoptimized a resource plan

for Gulf, and in doing so, we were trying to address two questions. First, taking into account the cost of the NFRC line, were the benefits to Gulf's customers greater than the cost of the line? And the answer to that question was yes. So it made sense to try to arrange for a transmission route from FPL to Gulf.

So the second question was, is it cheaper to build the NFRC line than it is to pay the projected cost of wheeling through neighboring utility systems, which is Southern Company? The answer to this question is also yes. It was less expensive to build the line.

So the NFRC line was projected to be a cost-effective addition, and we walked away from Step 2 analysis having the line -- assuming the line is in place, having a reoptimized, stand-alone separate utility system for Gulf and an optimized plan for FPL alone.

And go to the next slide, please.

Okay. As we started in on Step 3, there were a number of considerations that the fact that we were trying to integrate two systems 170 miles apart brought into play, and one of them was coincidence in the load. Both systems currently

peak at the 4:00 to 5:00 p.m. hour, but FPL is in the Eastern Time Zone, Gulf is in the Central Time Zone. So the two areas do not experience peak loads simultaneously. Because FPL is about -- system is about 10 times larger an Gulf, on an integrated basis, FPL drives the -- the peak hour, which is at 4:00 to 5:00 p.m. Eastern Daylight time in summer. So this coincident peak is about 100 megawatts less than what the sum of the peak in Gulf and the peak load in FPL would otherwise be.

Now, from reliability planning, with an integrated system, we no longer have to have a 20-percent reserve margin, which we came out of Step 2 with the line in place for Gulf and a 20-percent reserve margin for FPL area alone. What we needed was a 20-percent reserve margin for both areas simultaneously.

And both of these considerations led to the fact that we needed somewhat fewer resources for the single integrated system than what we would for the two separate systems. And this is an argument in favor of integrating the systems, but there was more.

If we could go to the next slide, please.

Okay. In regard to solar, the fact that Gulf

is 170 odd miles west of FPL's area, at the 4:00 to 5:00 p.m. hour eastern time, when the integrated system peaks, the sun is a bit higher in the sky if solar is sited in Gulf's area than it is in FPL's area. So what that means, that all else equal, you have greater output for solar sited in Gulf than you do in FPL, and it gets a slightly higher firm capacity value. By that, I mean the percent of the solar nameplate rating that we account for as firm capacity in the reserve margin analysis. So there was an advantage to siting solar in Gulf for the benefit of both -- customers in both areas.

So based on these and some other considerations, we came up with an optimized resource plan for the integrated and FPL and Gulf system, and we projected the cost for that versus the sum of the cost for the optimized plans coming out of Step 2 for Gulf and for FPL.

Go to the next slide, please.

And what we found was that the resource plan for the integrated system was projected to be lower than it was for the sum of the two stand-alone resource plans.

And before I go on to the next bullet, which provides some of the key features that are found in

this integrated resource plan, let me just mention that load growth on FPL's system is still significant -- to the FPL Gulf system, I should say. The number of customers that we are going to serve -- the increase in number of customers rather -- is about 1.2 million, and the summer peak load projected would be about 5,000 megawatts.

Now, from that 5,000 megawatts, we have about 2,000 megawatts of energy efficiency through codes and standards, and through utility programs that are lowering the 5,000 increased load, megawatts of load, to about 3,000. And to meet that, some of the items that are sub-bullets here, we are adding about 9,000 megawatts of solar going forward, which will bring us to about 10,000 megawatts of nameplate solar by 2029. We are adding about 1,200 megawatts of batteries by 2029.

One of the things we found out was that because Gulf had -- the Gulf area has no fast start capability, and very little fast ramping capability, there was a need to put fast start, fast ramp capability in Gulf, both for reliability planning and for operational planning. So we are building four 230-odd megawatt combustion turbines in the Gulf area that will come in on 2022, and

with the idea being that those will be in place when the NFRC line comes in. In part to make up for the possibility of the transmission line being unexpectedly lost.

Now, the last item here, we have combined cycles that worked in the 2019 site plan, one for Gulf and one for FPL. Those have now been deferred out of the 10-year window. And in addition, we have three coal units that are being retired by 2022.

If you could go to the next slide, please.

Okay. This was -- this data was presented in the 10-year site plan, but not in this format. We thought this might be helpful to show.

This shows the 8,800 odd megawatts of solar that we are adding from '22 through 2029. It shows in 2020 and 2021, this is primarily the, for FPL, the SoBRA and solar together. We are seeing three 75-megawatt solar facilities in Gulf being added. And then for three straight years, we are adding six 75-megawatt per year in Gulf to take advantage of this higher firm capacity value.

At that point we are straining the transmission system inside of Gulf where these solar facilities are sited, and it becomes more

cost-effective to switch the solar over to the FPL area, which you see in the first -- first column there.

By the end of 2029, we are projecting about 10,000 megawatts of total nameplate solar, and this allows FPL to meet its 30 by '30 objective that was announced over a year ago.

If we go to the last slide, please.

In conclusion, each of the three steps that we went through, the interim Step 1 and Step 2, and then the final Step 3, we found significant enhancements to the system that were resulting in cost savings coming out of all three of those analysis steps.

And our analysis to try to continue to improve the Gulf and FPL system is continuing as usual, and it's an ongoing continual resource planning process here. So with updated forecast and assumptions, our analysis are continuing, and the outcome of the new analysis will be presented to the Commission in the 2021 10-year site plan.

And that concludes my presentation. I am open to questions, please.

CHAIRMAN CLARK: Thank you, Mr. Sim.

Any questions for Mr. Sim?

Commissioner Brown.

COMMISSIONER BROWN: Thank you.

Thank you, Dr. Sim, for the in-depth analysis of the integration. I think it was kind of like TECO, it was a different approach to your presentation on the 10-year site plan, but I think very relevant, so I appreciate it.

I got to give you all some kudos to all of the solar contributions and battery storage that you are doing to advance the ball in our state. You are -- you are making a huge difference, so big kudos to y'all.

That being said, let's talk about this integration of the NFRC line and -- and where we are.

You mentioned that having that NFRC line will, I guess, obviate the need to have a 20-percent reserve margin for the utilities. Is that what you said? Did I hear that right?

DR. SIM: In part yes. Let me try to clarify.

If we are looking at Gulf as remaining forever a stand-alone utility, with the size of their generating unit, the forced outage rates of their generating units, a 30-percent reserve margin, which is high by historical standards, but needed

for that particular situation would be required. But with access to FPL's much larger system of generating units, no longer need 30 percent, we are down to 20 percent, which was part of the savings for the NFRC line.

COMMISSIONER BROWN: So where are you in the NFRC process?

DR. SIM: Proceeding. There are a number of agreements that have been made in regard to right-of-way acquisition. And my understanding is in each of the six counties through which the line will pass, there is a schedule for eminent domain hearings that will be occurring from September through roughly mid-December --

COMMISSIONER BROWN: I am so --

DR. SIM: -- plant --

COMMISSIONER BROWN: -- it's a long process, I know.

DR. SIM: It is. And -- but we are -- we are making progress, and we are confident the line will be in in 2022.

COMMISSIONER BROWN: Okay. What -- and forgive me if I made may be naive here, but what role does the Commission have in approving the NFRC line, and just curious if you have any information

on that, or if our staff does?

DR. SIM: My understanding is that cost recovery for the NFRC line will go through the Commission.

COMMISSIONER BROWN: So as part of the rate case, the -- that will be something that we will consider?

DR. SIM: Yes, that's correct.

COMMISSIONER BROWN: Okay. So I -- I expect we will have a lot of discovery on -- on it, and of course the benefits and the projected cost of the line, and everything that you just kind of addressed in -- in more detail, and we will hear from you probably directly.

DR. SIM: I am not sure whether that's a positive or negative for any of the parties, but yes, that's probably the case.

COMMISSIONER BROWN: Well, I will have -- I will have ample questions for you on the benefits of that, and whether FPL foresaw when they bought -- or NextEra, I guess, bought Gulf, whether NextEra foresaw having that -- that integrated utility, which, you know, is -- is an important component of having a unified utility and grid in our state, so I think it's an important attribute,

but I -- I will so many questions for you during that, so be prepared.

DR. SIM: Thank you for the forwarning, will look forward to it.

COMMISSIONER BROWN: Thank you. Thank you for presenting today.

CHAIRMAN CLARK: Thank you, Commissioner Brown.

Any other Commissioners have questions?

All right. Let's move right along.

Thank you, Dr. Sim. We appreciate you being here today.

DR. SIM: Thank you, sir.

CHAIRMAN CLARK: Moving to the SACE presentation, Maggie Shober. Ms. Shober, are you on the line? Thank you.

MS. SHOBER: Yes, I am. Can you hear me okay?

CHAIRMAN CLARK: Yes, we can hear you fine.

MS. SHOBER: All right. I will just wait until my slides come on up.

All right. So I am Maggie Shober, Director of Utility Reform at the Southern Alliance for Clean Energy.

On to the next slide.

So SACE, for anyone who is not familiar by

now, we work all across the southeast, and we have been working in clean energy in Florida for decades, and we focus on energy choices to ensure clean, safe and healthy communities.

One way that we engage on clean energy issues across the region is through resource planning. And I am also speaking as someone who, in my previous job, I was on the modeling side, and did portfolio optimization and energy markets modeling for resource planning policy analysis and other applications. So that's why you are seeing me today instead of, you know, one of my SACE colleagues that you might have seen present in the past.

So the next slide is where we are going today. I am going to go over Florida's 10-year site plan process compared to some other states, and show how, you know, Florida is an outlier in this -- in this instance, and that that has led to overreliance on gas, and we see some -- some serious concerns with this overreliance on gas. And then I am going to talk a little bit about alternative resources, particularly energy efficiency and solar, and then, you know, go through a few other areas where we see

opportunities for lowering the -- the overall utility costs and -- and have a recommendation for you.

So on the next slide.

So starting out, like I said, Florida's 10-year site plan process has led to an overreliance on gas. We see three main concerns with this. The first is costs, an increase in costs that get, you know, passed on to ratepayers. We see a flatlining in CO2 emissions, and we see an increased risk of stranded asset -- an increase in exposure to stranded asset risks.

I do want to note here that we, you know, we understand and recognize that gas has played an important role in Florida's power sector over the past decade. By employing new and efficient gas technologies, Florida utilities were able to retire coal power plants, and thus, reduce carbon dioxide emissions while renewable energy technologies were still more expensive, but as a result -- so gas as often been described as a bridge fuel, and that has aided in this transition from coal to renewables, and we don't want to minimize the impact gas has had historically, but we do recognize that bridges don't go on forever, with renewable costs to

control improvements and a -- you know, which is a trend that shows no sign of stopping that we -- you know, that it is now time for Florida utilities to recognize we have reached the end of the gas bridge, and from here on out, to invest in renewables, energy efficiency and storage for the future, but I will dig in a little bit deeper into these three issues on -- starting on the next slide.

So what we mean by 10-year site plan process as an outlier, here's a continuum of utility resource planning. I won't go through all of these in the interest of time, but some examples on the slide show, you know, more traditional IRP processes, which include at least some feedback in a duration between stakeholders, regulators and then the utilities that are, you know, doing the IRP.

These can also include modeling that allows energy efficiency to compete directly with supply side resources. This has been done very successfully in the northwest, leading to significant bill savings for customers.

And then further, you know, on the continuum, All-Source Procurement can be implemented. This

has been done successfully in Colorado, is the example that I have up there. And All-Source Procurement is a process that uses competition in the procurement process to lower overall utility -- utility costs.

And then, of course, all the way to the right on that continuum is competitive markets, which uses, you know, price signals instead of this type of a modeling process necessarily.

All right, on the next slide.

So 10-year site plan process, some of the main issues with this that we see compared to, you know, what's going on elsewhere are that, you know, lack of alternatives presented, you know, a lack of data assumptions and scenarios available, but primarily that stakeholders and the Commission, you know, the main role is a reaction and not an engagement in the development of the plan itself.

So with all of this in mind, we are actually making a recommendation to you, to the Commission, to hold a workshop just to, you know, learn more and explore how Florida's resource planning process compares to others, you know, what are some other examples of what states and utilities are doing in other parts of the country -- in other parts of the

region and other parts the country.

On the next slide I will get a little bit more into those three main issues we have with the overreliance on gas.

The first is economic. So at this point, energy efficiency, solar and soon to be storage is, you know, the more cost-effective investment, and so we see overreliance on gas and the build -- particularly the building of new gas resources, new gas capacity has increasing costs -- increasing utility costs that are then passed on to ratepayers.

The other economic issue here that's on the right of the slide is that Florida does not have native gas supplies, so, you know, every dollar, you know, that's spent on fuel is sent out of state. Currently, that's to the tune of four- to six-billion-dollars a year, and with increases to gas capacity and increased, you know, generation from gas, that that number can rise in the future.

And then on the next slide, we also see an issue in overreliance from -- on gas from a climate perspective and an emissions perspective. So you can see the blue line is historical CO2 emissions starting in 2010 from all of Florida utilities,

and, you know, that has been going down.

And current projections, the -- the red line is the current projections under the, you know, 2020 10-year site plans, and so we do see those continuing to decline through about 2025, you know, they are not as steeply, and then they flatten out. And part of this is because of this -- again, this overreliance on gas. You know, gas does have a less CO2 per megawatt hour than coal, but it still emits CO2 and, therefore, you know, when the state has 70 percent of generation from gas, as it does today, you know, you are not going to be able to bring that CO2 emission rate much, you know, lower than the emission rate of a gas plant, and so that's why we see it flattening out.

The green and the orange path lines there are, you know, kind of where the scientists saying we need to be headed to address the climate crisis. In order to do that, I mean, it's -- it's simple to say, harder to do, but we need to do is, you know, retire existing fossil, that means both coal and gas, and replace it with zero emission sources like energy efficiency and solar.

And then on the next slide.

This is, in some ways, a combination of the

previous two. We see that new gas power plants, as well as, you know, uprates to existing gas combined cycles, have the potential to expose ratepayers to increasing costs by exposing utilities to stranded asset risk and, you know, what this means is that either economics, or a climate policy, or a combination of the two are likely to limit the amount -- limit how much utilities can use these knew resources.

So, you know, the ones that have been proposed in the 2020 10-year site plans, a book life of 30 years or more, and we don't think that they are going to be able to be used at, you know, expected capacity factors for that amount of time. And then, you know, ratepayers are continuing to pay for these assets even though they are no longer providing value to the system.

And then on the next slide.

So, you know, what do we do? What's available besides -- besides building new gas? And one of the, you know, cheapest resources out there has been, and continues to be, is just the megawatt hour that you don't use through energy efficiency.

So you can see here that Florida, even though it's the largest state in the southeast by

population, it's, you know, way behind on the energy savings that utilities have captured in -- this is 2018 data from our annual energy efficiency report.

And, you know, some other, you know, examples is that, for instance, Duke Energy Florida captured far less, you know, in terms of per customer than their sister utilities -- than its sister utilities in the Carolinas.

And just as a side note on this, too, the Commission does also have the opportunity to revise the decades old FEECA screening processes, you know, under a current separate docket, and that that would reverse -- you know, that would have the potential to reverse the state's poor past performance and capture, you know, the full potential of low-cost energy efficiency in these, and then that would feed into these 10-year site plans through resource planning.

And then on to the next slide.

Another way is solar, and here, you know, obviously have to recognize that, you know, Florida utilities have done a lot, you know, have increased their projections on solar each year in the -- in the last few years, and we really applaud that, and

they have -- you know, we are now projecting Florida to surpass North Carolina in total megawatts of solar in -- starting in 2021, but there is still, you know, room for improvement here.

If you look at a -- you know, again normalizing by population, if you look at a solar watts per customer, even through 2023, and this is under the current 10-year site plans, the solar watts per customer, Florida is, you know, still at the average of the region -- that's the southeast regional average.

Next slide, please.

And then I just want to touch on quickly, again going back to All-Source Procurement. This is something that the Commission could look into at a resource planning workshop. This is a process that uses competition within the procurement process, you know, has a technology neutral procurement process, and ends up with the, you know, lowest possible portfolio at the end for the utility.

And we have a -- a report on this, if you would like to read more, and a few other pieces up on our website, but here are just the high level

five Best Practices for All-Source Procurement.

And then on the next slide, another thing that could be explored in a resource planning workshop, you know, would be taking -- taking things a little bit further and looking at reserve margin sharing.

I think that the FPL/Gulf presentation just before mine, you know, really teed this up well, which is that, you know, if you don't have utilities solving each for their own individual reserve margins and there is more, you know, sharing of balancing reserves from utility to utility, that, you know, each individual utility can cut down on the new generation they have to build, that cuts down on cost to customers, and everybody saves money. So that's something we would be interested in exploring with -- with you all on a potential workshop on resource planning.

And then on the next slide.

So I will just wrap up, and, you know, kind of go over what I -- what I have talked about here. The main points that the 10-year site plan process is an outlier, and it's -- it's a bad deal for customers because of the lack of transparency, lack of stakeholder involvement and lack of -- lack of resource competition that has led to an increase in

reliance on gas all across the state; and that this overreliance on gas, you know, really increases utility costs, increases utility bills, fails to address the climate crisis, and exposes customers to, you know, future costs through this issue of stranded assets.

And again, our recommendation is that the Commission hold a workshop on resource planning methods.

And then on the next slide, I just included -- I mentioned -- or had on the slides, four of our annual -- or four of our reports that we put out this year, and so if there is more that you want to learn about any of these issues, this is a way to dive in, but happy to answer any questions at this point.

CHAIRMAN CLARK: Thank you, Ms. Shober.

Any questions? Okay, we do have questions.

Commissioner Polmann.

COMMISSIONER POLMANN: Thank you, Mr. Chairman.

Thank you very much, Ms. Shober. Very thought provoking presentation.

I think a number of points that you raised, at least in part were we are dealing with, and I think

you brought many of them together here. I think it's helpful in that context.

I want to assure you that -- that you -- you do have Commissioners sitting here that share your concern of reliance on natural gas. We have brought that up repeatedly in regards to overreliance, the issues that you mentioned in terms of no gas being produced in Florida, all being imported, single source, you used the risk associated with that, and so forth. We have talked about that. We are concerned about it. Source diversity and so forth is -- is top of mind. So the issue there, for us, is that's a large shift and takes a long time to turn that.

So it is something we are -- we are working on, but we don't want to force the issue quickly on -- on the stranded asset that -- that -- and create stranded assets that you identified. You mentioned the, you know, this is a bridge fuel. I don't -- I don't embrace that notion. And then you mentioned that, you know, the bridge does not go on forever.

To continue with that analogy, there are very long bridges these days, improvements in bridge technology. Bridges are getting longer and higher.

They are lasting for longer periods of time. Bulk bridges, you know, not so good, but my point being I think that gas technology is improving, being more efficient, lowering emissions, and so forth.

Now, we -- we may see in the future a concern about stranded assets, but I am not going into this looking at use of gas as necessarily anticipating stranded assets. So I think we are cognizant of that, and I appreciate you pointing that out, and repeatedly bringing that back to us as concern. And I would like to assure you we have the same concern. We -- we may be interpreting it and applying it -- applying it in a somewhat different view.

But another aspect, Mr. Chairman, if I could -- if I could direct us to Slide 5, Mr. Chairman, brought this up and then came back to it at the end.

The notion that our 10-year site plan process is an outlier for many years in -- in my education, training and in my professional career, being an outlier is -- is a badge of honor. And, in fact, I enjoy being an outlier. Many of you know me as an outlier. I ran an organization, in large part, to create -- to create an outlier, and -- and some of

you are familiar with that, became a regional, state and, in fact, a national leader as an outlier. This is not a bad thing.

Now, are we an outlier here necessarily in a good way? We have some work to do, but I am not offended by you identifying us as an outlier, but it's not necessarily bad, but we certainly don't belong on the right-hand side as an outlier. That doesn't fit in Florida at all.

We need to examine what we are doing, and find -- find the opportunity for improvement. But we are somewhat restricted on what we can do. We are regulated what authority we have, and so forth. There are many thinking in terms of things, and we brought some of those up.

The procurement issues that you raised, I am intrigued by those. I want to examine those. I appreciate you bringing those forth. We will have some other discussion. I certainly intend to have some discussion internally with -- with technical and legal staff. I want to thank you for coming today. I appreciate your comments.

Thank you very much slab.

MS. SHOBER: Thank you.

CHAIRMAN CLARK: Thank you, Commissioner

Polmann.

Commissioner Brown.

COMMISSIONER BROWN: I don't have a question, Ms. Shober, but I do want to thank you for your presentation, your participation really in -- in the process. I always enjoy seeing the data that you produce. The recommendations, you know, for the past few years I have been thinking about the 10-year site plan process as well. I have. I have colleagues around the country that have a much more in-depth process. They have, you know, days long hearings.

So it -- it has come to my attention as well, you know, are we doing the best that we can do to forecast the future of our planning? So I don't think a workshop, at least exploring the resource planning methods around the country, whether we are utilizing all of our Best Practices is a bad idea. So I really appreciate the recommendation.

Mr. Chairman, I -- I think this is a good opportunity for staff to kind of delve into -- we haven't done this in the history of our -- our 10-year site plan process, so I think it would be ripe for consideration, at least exploring, you know, where we are. Not really taking a point of

action, per se, but gathering information to see if we are, you know, capturing all of the information that we can use to -- to benefit Floridians. So I would support that recommendation, Ms. Shober. Thank you for bringing it to us.

MS. SHOBER: Thank you.

CHAIRMAN CLARK: Thank you, Commissioner Brown.

Commissioner Fay.

COMMISSIONER FAY: Thank you, Mr. Chairman.

And Ms. Shober, you have been following along. You are not going to be surprised I have a question on a graph here.

So on Slide 11, you have got the -- the distribution of the solar by state and then by customer. And I know it references the annual report that SACE puts out, but I didn't know if you -- if the data for the per customer was the load resource plan or what specific customer numbers you are using to calculate that, because what I find interesting in the slide is you -- you look at the different geographical states in our area, but then you just consider Florida's population at 22 -- 21 million and counting, and it's -- you know, go to argue positively for the

left diagram and less for the right diagram.

So how do you come up with your customer data to make those calculations?

MS. SHOBER: So we use the customer data from annual EIA filings. So this is again -- I don't think I put it on the slide but I should have. This is 2018 EIA filings and how they -- you know, and then we project those forward.

COMMISSIONER FAY: Got you, okay, and I wasn't --

MS. SHOBER: My apologies.

COMMISSIONER FAY: -- I didn't see a footnote or a reference where those numbers came from.

And then the other quick question just for clarification, I believe it's on Slide 7, it you had some language in here that said Florida does not have native gas supplies, so money spent on gas means money sent out of state. I am not -- I am not interpreting that to mean that it's a suggestion that Florida should consider native gas. I am interpreting that to mean that it's an alternative for renewables potentially to substitute here, correct?

MS. SHOBER: Yes, that's -- that is the implication, yes.

COMMISSIONER FAY: Got you. Okay.

Great, thank you, Mr.Chair. Thank you, Ms. Shober.

CHAIRMAN CLARK: Commissioner Fay, I thought you were going to share with us where some natural gas resources were we might not know about.

COMMISSIONER FAY: Not today, Mr. Chairman. Thank you.

CHAIRMAN CLARK: All right. Thank you, Ms. Shober, for being with us today.

Let's move onto Ms. -- I believe Vote Solar is up next. Ms. Ottenweller.

MS. OTTENWELLER: Hello, can you see me all right --

CHAIRMAN CLARK: We got you.

MS. OTTENWELLER: -- and hear me? Wonderful.

Thank you so much, Mr. Chairman and Commissioners, for giving me an opportunity to speak with you today.

My name is Katie Chiles Ottenweller. I am the Southeast Director of Vote Solar. We are a nonprofit that was founded in 2002, and we have over 32,000 members in Florida working to make solar more accessible and affordable for all.

And I believe I have some PowerPoint slides

that staff is putting up.

Thank you. Next slide, please.

We engaged in resource planning processes across the country, and we reviewed the Florida process, and also the filings that the utilities made, and wanted to focus my comments today on a few questions that the Commission should be asking as it reviews the plans that were filed.

I first want to start by just commending and appreciating the staff's excellent work and responsiveness as we have engaged in this process. They have been enormously helpful and thorough.

Next slide.

And I don't wanted to repeat the points already made, so I am going to go quickly through how utilities are addressing their gas overdependence in Florida, but focus particularly on some of the Commissioner questions and comments that came up.

So Florida is at 70 percent reliance on natural gas. It's in the top four states in the country, which is about double the national average, and, you know, we are seeing some trends of increased renewables that, for some utilities, are offsetting those increases, but we are also

seeing several utilities continue to increase their reliance on gas at the share of overall electricity generation.

So Florida, as a state, is at 70 percent, but Duke Energy is projecting to be at 77 percent at the end of the decade, Tampa Electric at 85 percent, and FMPA at 81 percent, just to give a few examples.

So, you know, it certainly is a large shift, and it takes a long time to turn it, but I think the first step is to make sure you are not continuing to go in the wrong direction, and so we wanted to point out particularly those utilities are continuing to see an uptick in that reliance throughout the 10-year planning cycle.

Next slide.

And here's another sense of what this trend has looked like over the past couple of decades in Florida. You can see the natural gas portion, which is red, and how that really has eaten up a significant portion of electricity, and some facts about the impacts on consumers from this.

I want to highlight the potential risk to consumers, even over this next 10-year period, since that's what we are talking about today.

FPL, in discovery filings, projects that the cost of gas will increase by 75 percent over the next decade. So going from about two-and-a-half dollars to $4.25 per MMBTU.

If gas prices do double for consumers, we will see average bills increased by $360 every year. So even over the next decade, it's pretty significant that we are still seeing gas prices -- gas reliance be as high as it is.

Next slide, please.

Putting that in context, we are at about two percent solar today, and seeing evidence that combined solar battery storage and demand response is proven to offer the same reliability and grid services at less cost than new gas.

I also wanted to point out that in the 10-year site plan statute, it talks about how the Commission shall review the plan's effect on fuel diversity, and signals out the need for consideration of these fuel diversity issues, which I know the Commission is well aware of.

Our encouragement would be for the Commission to be working towards no more than 50 percent natural gas reliance across the system as a whole, and to heavily scrutinize any new gas investments

once a utility hits that 50 percent mark.

And that gets to my second point, which is raising questions about how and when these new investments are going to be reviewed. There is an assumption that even though the 10-year site plan process is nonbinding that these rev-- investments will be reviewed through Power Plant Siting Act review, but the reality is a lot of the investment utilities are planning on making over the next decade are not subject to the Power Plant Siting Act. They fall through loopholes in the statute, meaning they can be fully constructed and paid for before Commission prudency review actually happens.

I listed a few examples, but combined cycle upgrades, new combustion turbines and conversions from coal to gas on existing units all fall within these loopholes. And we have tried to project an estimated capital cost of just a few of these investments came in at over a billion-and-a-half dollars.

So in this circumstance, I think there is extra scrutiny that's warranted at the 10-year site plan stage by the Commission, including asking questions about what alternatives were considered, what cost is to consumers and what assumptions were

used behind those.

Next slide.

So that gets into an overall question of how Florida can be modernizing its resource planning. In our comments, we go through opportunities that the Commission has to modernize, even within the existing legislative framework, and then also recommendations of things the Commission might want to look at beyond its existing authority that would actually require some legislative changes.

This is a 1970s statute. It's a rapidly shifting electric utility landscape. We know the future is likely to be dominated by renewable energy and new technology, and increasingly engage customers. And so making sure that fully integrated resource planning is providing transparency around these costs and ways for us to plan and alternatives is a really good first step.

And one specific recommendation that I will highlight is that the Commission would require utilities next year to file both their plans and alternatives that they rejected but considered with specific cost comparisons so we can start to get some more visibility into the integrated resource planning process that utilities are doing behind

closed doors.

Next slide.

CHAIRMAN CLARK: Ms. Ottenweller, let me interrupt you for two seconds.

MS. OTTENWELLER: Yes.

CHAIRMAN CLARK: We are having some power blurps here. I am not sure exactly what's going on, but should we lose power, I don't know -- I am pretty sure the status of our meeting will be adjourned, so just bear that in mind. If we go dark on you, we are having some -- some power issues, and we will get an email out to all participants very, very shortly if we do go in the dark on you. So just fair warning for everyone.

Please continue.

MS. OTTENWELLER: Okay. Good luck with that. I don't have much on reliability in here --

CHAIRMAN CLARK: Good one.

MS. OTTENWELLER: -- but I think I am getting there.

Okay. So quickly talk about clean energy. According to EIA, solar is now the cheapest generating resource available to Florida utilities, but some utilities are still treating this like a niche energy resource.

I wanted to highlight kind of where utilities stand with respect to each other, and then also some peers across the nation and put some of this in perspective.

I mean, the numbers speak for themselves, but one thing that I thought was particularly telling is even with the investments FPL and Duke are making, they are still below the southeast average in terms of solar per customer. Duke Energy Progress in the Carolinas as 10 times as much solar as Duke Energy Florida, and five times as much as FPL. And, you know, the upside of that is that there are a lot of lessons that these utilities are learning about the ability to integrate large percentages of renewable energy smoothly, creating a whole lot of runway for Florida utilities as they are sort of going on this journey.

The benchmark that we would encourage the Commission to be thinking about looking across the country is at least 30 percent clean energy by 2030. There are states that are certainly doing a whole lot more than that, and pushing towards 50 percent clean energy at that point, but FPL is the one that comes the closest to that goal at only 16 percent at the end of the decade.

So we imagine that these numbers are going to continue to pick up every year as cost-effectiveness of solar just continues to eat into traditional generating resources, but we think that the numbers are still pretty low for Florida.

And hopefully that provides some context for the Commission. And we've got more information about that in our comments if you are interested.

Next slide.

So a related issue is on carbon regulation, and there is broad consensus at this point that carbon regulation is a matter of when and not if. But we are seeing a lot of diversity across the Florida utilities in terms how they are treating this coming reality. Some utilities are including a carbon price in their planning while others aren't. Some utilities were giving solar a capacity value for the capacity benefit that it's providing to the system. Others are still treating it as a zero capacity resource even in the summer.

So we see a lot of opportunities to even look within Florida, see those Best Practices and have utilities sort of catch up with where some of other ones are.

The most concerning thing that I saw as I was

reviewing these plans, honestly, was actually seeing an increase in coal as a percentage of electricity for several of the Florida utilities over the next decade. I am not seeing these trends happen anywhere in the country, but you can see here on this chart that there are a handful of municipal utilities in Florida that are actually increasing their coal electricity between now and 2029.

We would encourage the Commission to strongly scrutinize any plan that includes an increase in coal. This is sharply at odds with where the rest of the country is going just on pure economics. And coal really should be less than five percent in 2030, in line with what we are seeing from FPL and Tampa Electric.

Next slide.

Another part of utilities moving towards clean energy and a carbon constrained economy is better meeting the needs of the customers who are also seeking access to more clean energy options. So this is just a snapshot of some of the large corporations. Lots of household names here who have made 100 percent clean energy commitment, and are clambering for more options from their electric

utilities, particularly in places like Florida that have greater monopolies, you know, they need access to programs that allow them to do that.

So we are seeing some of those programs in Florida today, but we need a whole lot more. We are seeing them fill up and subscribe almost immediately when they are offered by utilities.

Next slide.

This echoes several cities in Florida that are also pushing 100 percent clean energy goals and looking for more options, and also tracks with the popularity that we are seeing for the solar resource really across the political spectrum.

Next slide.

And the last point I wanted to raise for the Commission is around protection of the most vulnerable ratepayers. I think this is particularly salient as to this year given the real burden that we are seeing to the economy due to COVID, and the large numbers of customers that are having a hard time paying their electric bills. We strongly encourage the Commission to think about at least the one-percent annual energy savings in terms of energy efficiency programs and investments. I am very happy to see the FEECA

process be revisited, and I am really looking forward to participating in that conversation, and also encourage utilities thinking outside the box about how they can use energy savings programs to create both stability and incentivize customers to do what they can to stay on top of their electric bills at this time.

Next slide.

And last, I want to flag that in order to help members of the public better understand a utility's filings and save them from having to go through all of the discovery requests themselves, we have put together a report card that look at the metrics that I listed here at the PowerPoint slides, and gave utilities ranked grades based on how they are doing on their 10-year site plans. And you can see those, in there are comments if you are interested in more information on that.

And the last slide, I am happy to take any questions that y'all have.

Thank you for your time.

CHAIRMAN CLARK: Thank you very much.

Any questions from any Commissioners?

Commissioner Brown.

COMMISSIONER BROWN: Just a comment.

Katie, thank you. Always you present great information and great ideas as well that improve our -- our process, so I appreciate you participating in those 10-year site plan process.

And I would echo my earlier comment, Mr. Chairman, and we can have this discussion at a later time, but it would be, I think apt, to look at our 10-year site plan process, and I don't think it requires any type of legislative changes, per se, but I do think having our staff kind of come back to us at an Internal Affairs meeting would give us some -- a broader spectrum of where we are in our, what, 50-year process of reviewing 10-year site plans.

And again, we have been doing this a long time, and it's kind of been the same thing, and I think it's really, really ripe to look at whether we are accurately capturing all of the data that we need to evaluate.

So I would recommend, Mr. Chairman, that we -- we do take the advice of Vote Solar and our previous panelist and have kind of a workshop, or even a directive to our staff to look at this and to back to us in an IA.

CHAIRMAN CLARK: Okay. We will certainly take

a look at it. Thank you, Commissioner Brown.

Any other questions for Ms. Ottenweller?

Commissioner Polmann.

COMMISSIONER POLMANN: Thank you, Mr. Chairman.

Thank you for being here, Ms. Ottenweller. We appreciate your comments.

In one form, I could -- I could interpret your remarks on fuel source and to focus on the fossil fuels to imply perhaps your -- your desire that the Public Service Commission have some involvement in utilities' selection of fuel type or fuel source. You are looking for a reduction in fossil fuels. But I am not sure what you are -- I know what you want, but I am not sure what you are asking.

MS. OTTENWELLER: Sure. Let me see if I can clarify that.

So I think there is clear authority that the Commission has, and even an obligation, under the 10-year site plan statute to look at how these plans the utilities have submitted actually impacts the fuel diversity of the state. And given where Florida is right now, there is also clear ability of the Commission to reject plans as unsuitable, or to make recommendations, both for this year's

plans, for them to be refiled, or for next year's plans, to ask for more information or to express concern about certain areas. And I think given where Florida is on natural gas dependence, any of those options would be appropriate.

I would also make the same point for the increases in coal electricity that we are seeing, that there is, I think, ample authority, and -- and I think very good reasons for the Commission to at least be asking some questions of the utilities about why they are making some of these decisions.

COMMISSIONER POLMANN: Well, thank you for the clarification.

I think, Mr. Chairman, that issue, again, comes back to Commissioner Brown's suggestion, that that question in particular is one we can examine as a matter of how we -- what our duty is in reviewing, and what authority we have to go back to the utilities and -- and persuade, or inform, or direct the long view on the fuel mix.

As I said earlier, the fuel mix issue in terms of reliability and -- and stability going forward is very important to us.

I -- I have a couple more questions.

You mentioned the public's interest at a very

high level across the board on solar. Your slice of solar is popular with all Americans, 89 percent across the political spectrum. Could you clarify for us, elaborate perhaps on the term popular?

MS. OTTENWELLER: Sure. So this --

COMMISSIONER POLMANN: Everybody -- everybody likes it, so --

MS. OTTENWELLER: Yeah.

COMMISSIONER POLMANN: -- so what --

MS. OTTENWELLER: So this comes, in particular, from a 2018 poll that was done by Pew Research, and it was one of the larger polls in policy poles in term of, you know, what types of electricity resources would you like to see your utility do more of. And so this reflects the percentage of Americans that chose solar as the resources that they wanted to see more of.

I am happy to provide that poll to you if you would like more information. It's pretty fascinating, actually.

COMMISSIONER POLMANN: The question immediately arises from an economic regulator's perspective is how to implement more solar in the current electric utility environment in Florida, where we have an electric power resource, and so if

we are going to overlay that with more solar, are the customers willing to pay to add more solar and substitute and set aside, and as I mentioned in the last presentation, effectively create stranded resources? So there is a complexity underlying this question. I like solar too, but I haven't put it on my house because there is costs.

So, yeah, I think we would like to look at this type of research and better understand, and perhaps will inform our staff as they -- they look at these issues.

And again, back in the context of this workshop, we are really -- the workshop we are contemplating, we are really trying to gather all the information and help guide us in future reviews of these kinds of things, because we are interested in what the customers think and what the public perspective is. So I just raise the question here because it just caused me to ask to wonder more questions, and so I -- I appreciate you bringing this -- bringing this forward.

MS. OTTENWELLER: Well, and if I may, I think it's a really important question, and, you know, consumer interest are a small part of the overall picture of figuring out what is the public

interest. Although, as consumers are becoming more sophisticated and seeing saying, I need 100 percent clean energy because I told my shareholders I would get this, or I told my constituents I would get this, then I do think it shifts sort of where -- it shifts the level of responsiveness that utilities need to have to those consumers, especially the ones that have the ability to go vote with their feet and go move their operations to somewhere else.

But I think, too, you know, these are not necessarily a zero sum game of retiring assets right now in order to replace them with solar. And I think TECO's analysis is a great example of how having smarter planning allows you to actually build smarter in smaller increments, overlaying these distributed resources and not just thinking about resources in a vacuum of, you know, we are looking at efficiency over here and then we are looking at solar over there, but having true integrated resource planning, where you are able to see how all of these resources work together. There are a lot of studies that have been done that moving that direction, even if you are retiring assets, is going to create net savings for

consumers. So very interested in participating in that conversation in Florida.

COMMISSIONER POLMANN: Thank you.

And -- and the IRP is something I am very familiar with. I have done that in a former life, and it does get quite complicated, and requires a tremendous amount of data, and expertise, and patience, so thank you for pointing that out.

Thank you, Mr. Chairman. That's all I had.

CHAIRMAN CLARK: Thank you, Commissioner Polmann.

Thank you, Ms. Ottenweller. I appreciate you being here today.

That concludes all of our presentations today. We do have five members of the public that have requested to make public comment today. I am going to recognize each of these individually.

Just a reminder for our public comments, we are asking that you keep your comments to about three minutes. I do have a timer going. I will give you a little nod, a little reminder when your three minutes are up.

And also just ask that you please do not be duplicative. If something has already been said or pointed out, try to skip that point and move right

along and make sure that there is new information being shared with the Commission.

Okay, our first public comment comes from Mr. Adefris. Are you with us, Mr. Adefris? Ms. Adefris. My apologies.

MS. ADEFRIS: I was going to say Ms. Adefris.

Hi, everyone. Thank you so much. I am Zelalem Adefris. I am the Vice-President of Policy Advocacy at Catalyst Miami. We are an antipoverty organization based in Miami-Dade County, Florida. It's so good to be here today.

My comment is to urge all of the Commissioners to place energy efficiency as their top priority as they move forward in time, the next 10 years, of energy supply and demand in Florida.

There is nothing like the present moment where many of us, including myself, we are quarantined in our homes for months on end due to a pandemic to remind us of the importance of healthy, energy efficient homes.

Lack of air conditioning increases mold growth and extreme heat exposure, exacerbating respiratory diseases like asthmas that disproportionately impacts Florida's low income households that we work with every day, and also lead to more severe

COVID-19 symptoms.

Energy efficiency measures like attic insulation, tuning up an AC system can help families significantly cut energy waste and save money on bills, as you all very well know. This is particularly helpful for those residing in older homes, which are often more poorly insulated and have outdated appliances, even less efficient cooling systems that many of the community members that we work with every day.

The PSC has allowed decades of disinvestment in energy efficiency harming Florida's most vulnerable low income customers. As a result, when ranked nationally, Florida is almost last for utility investments and energy efficiency.

Now is the time to reset the discussion on investing in energy efficiency programs which are quick, clean, and cost-effective methods to save fuel and money, and, as we all know, reducing our collective fuel use to lessen the need for more power plants, reducing demand and protecting our environment in the process.

So the COVID-19 crisis has -- (inaudible) -- no one, including our 600,000 customers that are on default right now shouldn't have to choose between

paying electricity bills or buying food and medicine. Again, we see these decisions being made by the community members we work with every day.

Please don't allow deceptive tactics like those that the New York Times reported in January -- (inaudible) -- we know the world is watching.

In addition, 135,000 jobs could be added to our workforce by enhancing energy efficiency policies according to ACEEE, and it's just what we need to build back our economy in this COVID reality, but first we must modernize our practices. Florida is the only that the utilities rely on the rate impact measure cost-effectiveness test.

The test, as you know, that counts the utilities' lost sales and efficiency programs as a cost, and therefore, efficiency measures that are the most significant in savings to family or business are eliminated from the utility's efficiency goals. So this is insulation, efficient air conditioners, LED lightbulbs, program -- programmable thermostats, et cetera, all get counted in this test.

This, to me, is nonsensical as the goal of an efficiency program is to help customers reduce

their energy demand. So, Commissioners, please place energy efficiency as your top priority for the next 10 years. Start by abolishing the RIM test and establishing a more common type alternative such in our frequently used Total Resource Cost test. Let's make sure that through our work today we provide multiple maximum benefits for our most vulnerable communities, like the ones we work in -- work with here in Miami-Dade County and throughout South Florida.

Thank you.

CHAIRMAN CLARK: Thank you very much.

MacKenzie Marcelin, you are recognized.

MR. MARCELIN: Can you hear me?

CHAIRMAN CLARK: Yes, we can hear you.

MR. MARCELIN: Okay. Perfect.

Yeah, so, hi. My name is MacKenzie Marcelin, and I work as a Climate Justice Organizer for New Florida Majority in Miami-Dade, and I am also cochair to the Clean Energy Working, Group for the Miami Climate Alliance. And over the last six months, our group -- our clean energy working group has been working with the community members and local officials to seek key utility relief and protections because health -- because of the health

and economic crisis that we are currently in.

Because of COVID-19 and social distancing, the energy to power our homes has become even more necessary to our daily lives, and the Miami has seen that shift.

I have spoken with a community member who is unemployed because of the pandemic and has the difficult tradeoff -- has to make the difficult tradeoff of turning off their AC because her power bill is -- is -- is increasingly rising. It's too high.

And along with that, Miami has highest week at the end of June, and many of the communities I work in are increased -- are energy burden and must give up large percentages of their income to their power bills.

The increased temperature and increased uses -- use are leading to significantly higher bills, and it's clearly proving harmful to our communities that have already been hit by this. More than 600,000 customers are behind on power bills payments just in the investor-owned utilities territories alone. Unfortunately, or fortunately, this can be prevented easily.

Florida must invest in energy efficient

programs. Even more good news, energy efficiency is a low cost program that will help relieve the burden for everyone, but especially for our black and brown, and lower income communities. We should not unnecessarily waste the money of -- of Florida residents.

The Public Service Commission, you have the opportunity to fix outdated practices that hamper true energy efficiency for all of Florida. You also have the opportunity to consider all those customers that are behind on their power bill, and to consider the families that make unnecessary financial decisions between their health and keeping their lights on. And especially more so, you have the power -- you have the opportunity to -- to help out those that are currently experiencing, you know, shutoffs all across Florida.

As you continue -- you know, as you all continue to navigate regulations, we sincerely hope that the Commission offers the people that they serve transparency and more opportunities to voice their thoughts during this process.

Thank you.

CHAIRMAN CLARK: Thank you very much.

Next up is Raquel Fernandez Makarov.

MS. MAKAROV: Hi, everyone. Can you hear me well?

CHAIRMAN CLARK: Yes, we can hear you.

MS. MAKAROV: Awesome. Thank you.

Well, good afternoon, Commissioners. My name is Raquel Fernandez Makarov, and I am the Central Florida Sierra Club Beyond Coal Organizing representative.

I want to share important information from Orlando, and it's relevant to your role overseeing electric utilities across the state. The potential for energy efficiency is real and can be sig-- and can be a significant source in meeting our energy needs. Let me explain.

I am part of an amazing coalition in Orlando that is helping the city make good on its commitment to transition to renewable energy economy. When it comes to energy efficiency measures that help people keep their electric bills down, like better AC and home weatherization, our local utility, OUC, has the worst program in the state, and one of the worst in the country. And the problem is more urgent now than ever because of the coronavirus pandemic that is making people fall

behind on their electric bills and face the threat of disconnection.

Just last week, I was on the phone with a single mother on a fixed income whose electricity was shut off due to inability to pay. It is important to know that this woman's monthly electric bill is in the $300 due to high energy burden. This is not an isolated issue, this is a statewide issue.

Our coalition taking a stand. We rolled out a report that shows -- we rolled out a report that shows that investments in energy, especially along with renewables, is not only healthier for the Orlando community, but also cheaper for ratepayers.

The analysis found that OUC ratepayers can save 176 million over a period of two decades, and grow local jobs. And we intend to hold OUC and the City of Orlando's feet to the fire to capture this valuable resource.

As Commissioners, you can ensure that every utility meets their potential to capture efficiency. Each power company should perform a similar analysis -- I am sorry, a similar analysis, and then meet that potential and bring it to you with their plans next spring. Every Floridan

deserves to get the best possible value for their money spent on electric bills.

As someone that works directly with low to moderate income communities, as being a witness to the high burden energy can put on a working family, especially during this unprecedented time, I hope you consider my suggestions and work towards making a Florida with clean, safe, affordable renewable energy.

Thank you.

CHAIRMAN CLARK: Okay. Thank you very much.

Next up, Francios Alexandre.

MR. ALEXANDRE: Good afternoon, Commissioners. How you all doing? Can you all hear me?

CHAIRMAN CLARK: Yes, we can hear you fine. Thank you.

THE WITNESS: Thank you.

Thank you for having me.

My name is Francios Alexandre. I'm the CEO of Konscious Kontractors, the Founder of Justice for Miami, President of Concerned Leaders of Ti Ayiti, also better known as, also better known as CLOTA, a board member of the Millennial Task Force on the county level, and a proud member of the Miami Climate Alliance.

Konscious Kontractors is a grass root initiative that developed out of the direct devastation of Hurricane Irma back in 2017 in the Ti Ayiti area of Miami. We renovate residents' homes and properties to be more secure and energy efficient.

We also work to beautify our communities with landscaping. We do both in order to combat one of the major issues that we face here in Florida, climate denitrification.

Upgrading a home with a high efficient air conditioning can significantly lower power bills. Adding insulation, caulking windows or low cost weather heat blankets reduces energy use. This is key to having a safe, secure place to live.

Konscious Kontractors recently helped a grandma with asthma installing a new AC. The smile on her face told us what it meant to have cool air in the hot August summer.

It's so important because the work that we do has a lot to do with the communities that we call marginalized underserved, and so forth. Those communities do not have the economic ladder to help sustained their homes, especially in heat measures.

So as you consider 10-year site plans, the

state power companies know that the economic fallout from COVID is real. As you know, hundreds of thousands of people around the state are at risk of disconnection, myself included.

I am not just here to speak on behalf of -- of my constituents or, you know, speak on behalf of residents. I am also here to speak on behalf of myself. My energy bill at this point in time, living in a six-unit apartment, is over $600. So I am one of the people that we are talking -- we are talking about as we speak.

So many families struggle with high -- with a high energy burden because utilities have not helped vulnerable people access low-cost efficiency measures. That's why Florida is at the bottom of the state ranking for -- ranking for success for energy efficient programs.

The end result of the rate they impact measure in the two-year payback screen is simple, they eliminate -- they eliminate the lower cost and high impact measures, and it's those who can least afford it who suffer the most. Affluent people can get more efficient every time they buy a new appliance. Also, renters need access to programs as their energy burden is through the roof.

So I must ask, why do you use outdated methods which gain the process to analyze the effectiveness of energy reduction measures? Come to Little Haiti, come to Ti Ayiti and see what I see. I see old housing stocks with leaky windows and doors. I see inadequate air conditioners and roofs, and I see even the basic lack thereof, like insulation.

It is the very definition of a system disparity when homes are inefficient, unhealthy and not secure. It is the inequality pure and simple, when many black families pay disproportionately high bills, this must end.

It's time to modernize the conversation goals setting process and efficiency program planning. It's past time to help people live dignified lives in a secure and safe home.

Thank you, Commissioners, for the time that you have afforded me today.

CHAIRMAN CLARK: All right. Thank you very much.

That is all of the public comment that we had requested today.

Just a reminder, we will continue to accept public comment for an additional two weeks. Those that would like to send their comments in may do

so. The email address to submit those to is DKistner@psc.state.fl.us. That address will be posted on our website in cases there any questions about that.

Yes, do we have one more comment? Oh, I am sorry, my apologies. We do have one more person on the list. That's an oversight on my part.

Mr. Claude Gercell.

UNIDENDIFIED SPEAKER: Commissioner, Mr. Gercell has informed me he has elected to email his comments, so you can move that -- move along, thank you.

CHAIRMAN CLARK: Okay. Thank you very much.

All right. Any or comments, Commissioners? Any questions or comments before we adjourn today? Thank you all so much for indulging us today, any questions?

Seeing none -- Commissioner Polmann.

COMMISSIONER POLMANN: Thank you, Mr. Chairman. I just wanted to take this moment to comment to the public comment we just had.

I really do appreciate these folks staying with us during this meeting and taking the time to -- to call in and participate. I am simply grateful. These are important comments to us, and

I wanted to recognize the folks participating, so thank you very much.

CHAIRMAN CLARK: Thank you, sir.

All right. There is no other comments, then we stands adjourned.

Thank you, have a great day.

(Proceedings concluded at 3:27 p.m.)

CERTIFICATE OF REPORTER

STATE OF FLORIDA)
COUNTY OF LEON)

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

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

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

DATED this 1st day of September, 2020.

DEBRA R. KRICK
NOTARY PUBLIC
COMMISSION #HH31926
EXPIRES AUGUST 13, 2024