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 ANDREW GILES FAY
COMMISSIONER ART GRAHAM
COMMISSIONER GARY CLARK
COMMISSIONER MIKE LA ROSA
COMMISSIONER GABRIELLA PASSIDOMO

DATE: Wednesday, June 1, 2022

TIME: Commenced: 1:30 p.m.
Concluded: 4:13 p.m.

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

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I N D E X

P R O C E E D I N G S

CHAIRMAN FAY: All right. Good afternoon, everyone. If you could take your seats, we will begin to the 2022 10-year site plan workshop.

Staff, would you please read the notice.

MR. IMIG: By notices issued on May 18th and 19th, 2022, this time and place have been set for a workshop on the 10-year site plan. The purpose of the workshop is more fully set out in the notice.

CHAIRMAN FAY: Great. Thank you.

Commissioners, just like we would in any workshop, we will go through the participating groups, and then we will allow for some public testimony at the end. We have a few names that have submitted to our office.

So he with that, we will get started. First we have Tampa Electric, and I believe it's Mr. Caldwell presenting.

MR. CALDWELL: Yes, sir.

CHAIRMAN FAY: Yes, you are recognized, Mr. Caldwell.

MR. CALDWELL: Brent Caldwell, Director of Resource Planning and Unit Commitment for Tampa Electric Company. Thank you very much for letting me talk to you about the 10-year site plan we filed

in April. And I particularly want to thank the staff for putting together the presentation template. That certainly makes it easier for us to make sure we present the information that you want, and in the format that you -- that you can best use it.

I'll get started.

As we all know, the foundation of the 10-year site plan is the customer forecast. We use publicly available data from Moody's and from the University of Florida, economic population estimates, to generate our expected load growth.

Consistent with '21, the '22 load annual average growth rates 1.4 percent for residential 0.6 for commercial, and about flat for industrial, it is consistent with our 2021 10-year site plan.

Some of the other key factors that you look at are summer peak demand in 2022 forecast to be a .7 percent annual average growth rate. Winter peak slightly higher at .8 percent. And the net energy for load .6 percent. Those are consistent with but slightly lower than the annual average growth rates in the 2021 10-year site plan load forecast.

There at the bottom, you will see the natural gas annual average growth rate. It looks like a

huge change, 7.3 percent in '21, 1.2 percent in '22. The real difference there is the starting value. If you look at the long-term natural gas fuel price forecast, they are very consistent between '21 and '22. The difference is the first year, $2.28, per MMBtu for '21, 4.03 for '22 10-year site plan. And of course, as we are probably all painfully aware, this summer we are looking at about eight dollars for natural gas. This summer and next winter.

When you put in your load forecast, and then you identify the most cost-effective collection of generation assets or demand-side management opportunities to meet that growing load.

If you will take a quick look at the comparison between '21 and '22. For the first three years, you will see two things. The two 10-year site plans are very consistent in what's known as our expansion, and that's because things have been in flight, and are still in flight, to improve our system.

The other thing you will notice, there are also some negatives in there. We are transitioning from three coal units, Big Bend Steam Turbine 1, Big Bend Steam Turbine 2, Big Bend Steam Turbine 3.

All coal-fired units have served our customers great for a number of years, but 2 and 3 are being retired. In fact, 2 was retired last December 1st. 3 was retired in April of 2023. And then Big Bend Steam Turbine 1 is part of our Big Bend Modernization Combined Cycle.

Those two combustion turbines, Big Bend CTs 5 and 6, went commercial last December 1st. And the eight recovery steam generators associated with those combustion turbines, and then the refurbished Big Bend Steam Turbine 1 are all getting married together at the end of this year to complete the Big Bend modernization.

So that's been going on for a number of years. That mostly finishes toward the end of this year, really end of April of '23 when the Big Bend retires as well.

You will also notice a significant amount of photovoltaic, about 300 megawatts per year in '21. '22 is a little bit less than '23. All of that is a transition into more solar voltaic generation for Tampa Electric. It provides a natural hedge against natural gas volatility. It provides a reduction in carbon emissions, all of which ultimately are good for customers.

When you look beyond '23, the 10-year site plan gets a little boring. You will notice small solar photovoltaic additions, 35 to 150 megawatts per year; battery additions of about 50 megawatts per year, and then some small recip engines, reciprocating engines coming in in '25 and '28.

What that really means is all this work that we've done in the last couple of years the Polk 2 Combined Cycle conversion, the Big Bend Modernization Combined Cycle, we have really driven down the heat rate or increased the efficiency of our system with these excellent, you know, highly efficient combined cycle units.

What we have going forward is a need for units that are quick responding, and that are small to account for the small amount of load growth that's going forward. And that's where you see small amounts of solar, small amounts of battery.

Any questions on that?

On this slide, this is looking at the generation energy mix, the 2021 10-year site plan versus the 2022 10-year site plan. And obviously what jumps off the page in both 10-year site plans a significant dependence on natural gas, looking at roughly 80 percent of the energy on our system

generated from natural gas, both currently and in the future in 2030.

You will see there is a growth in the solar generation, but it roughly just keeps up with the load growth. That's why you don't see a significant drop really in the amount of natural gas energy as a percentage.

Certainly, with the $8 gas prices, we wish we had a little more solar on the system today.

So what does this translate into reserve margins? This is our summer reserve margin, which has a significant amount of solar generation that was put on the system. And really what drives Tampa Electric's expansion plan is the winter peak.

So if we go to the next page, look at the 2021 versus the 2022 10-year site plan winter peak reserve margin, you will see that in our 2022 10-year site plan, right there at the 22, 23 percent level of reserve margin, and it stays there. Plus, we are just adding a small amount of, you know, flexible generation to kind of cover load growth over the next couple of years. You stay right there in the 23 percent. No big chunks of generation like the Big Bend mod or Polk combined cycle.

So that covers the presentation. I will be glad to answer any questions if there are some.

CHAIRMAN FAY: Great. Thank you, Mr. Caldwell for the presentation.

I will start with Commissioners. Do we have any questions for TECO?

Seeing none from the Commissioners. Staff, any questions for TECO?

MS. HARLOW: Thank you, Chairman.

Hello, Mr. Caldwell, I am Judy Harlow with staff. I just have a couple of questions about your winter peak demand forecast.

So on your slide three, entitled Other Forecast Values, you showed the Commission your winter peak demand as well as your summer peak demand. Can he tell me if that winter peak demand model was derived using normal weather assumptions?

MR. CALDWELL: You pointed out a very good thing to talk about. The 3,247 megawatts of winter peak demand shown in that third slide is from the 2020-2021 actual winter peak. And if you go back to our 10-year site plan, you have the 10 years of history and the 10 years of forecast, you will see that is the last year of actual. And of course, it's kind of still, and that was a very mild

winter. The peak was only 3,247. If you look at the following 10 years, such as 2022 projected, which was the winter '22-'23 --

MS. HARLOW: Thank you.

MR. CALDWELL: -- you will see 4,246, which is the normalized 31-degree winter peak projection, and that's what the outer years are.

MS. HARLOW: Thank you.

So your winter peak projections are based on, I will call it normal weather conditions, correct?

MR. CALDWELL: Yes.

MS. HARLOW: And my second question is: Did TECO consider modifying its winter peak demand forecast methodology to take into account an extreme winter weather scenario, or due to the impact of the 2021 winter conditions in Texas?

MR. CALDWELL: Tampa Electric certainly recognizes the event that took place in Texas and the whole midwest, the storm there, and how easily it is for a utility to become complaisant if you are not watching constantly for extremes.

And we -- back to the table you asked about. You look at the past 10 years, peaks like 3,400, it's been so mild for the last 10 years, it's very easy to look at -- you will think that's the norm

and it's going to stay mild like that, and then a January 2010, a January 2014, a January 2018, a December 1989 event pops up, and you are not ready for it.

Tampa Electric has took -- took the storm year events very seriously. We have gone through our units, we have gone through our plans, and we are making sure we are ready for a cold weather event.

MS. HARLOW: Thank you, sir.

If you wouldn't mind, could you repeat how much past data is used on weather in your demand forecast methodology?

CHAIRMAN FAY: And, Mr. Caldwell, if I could, just make sure you are speaking into the mic just so our court reporter gets it. Thank you.

MR. CALDWELL: For the load forecast, the load forecasting group who is the expert in that area, they use 20 years of historic data as their normalization for their winter and summer peak values.

MS. HARLOW: Okay. And so over time, that's a rolling 20 years, correct?

MR. CALDWELL: That is.

MS. HARLOW: Okay. Thank you very much, sir.

That's all I have. I believe engineering has

questions as well.

CHAIRMAN FAY: You are recognized.

MS. MALOY: Hello, Mr. Caldwell. Kerri Maloy for engineering staff.

Referring again to slide three, could you please explain the reason for the overall decreased average annual growth rate percentages of the 2022 10-year site plan compared to the 2021?

MR. CALDWELL: I acknowledge that they are lower, and that is coming purely from the load forecasting group. That would indicate that the population growth data that they feed the model with, coming from the University of Florida and from Moody's, is potentially lower this year versus last year. Potentially COVID related.

Also, I think it reflects an expectation of an increased efficiency, increased conservation that will bring electric demand growth down as well.

MS. MALOY: Thank you.

As you know, NERC is evaluating several issues related to the 2021 Texas cold weather event. Can you indicate whether or not NERC required a change in cold weather planning assumptions following this event?

MR. CALDWELL: We do not expect to have to

change any planning criteria as the result of the NERC, or FERC, or FRCC analyses associated with the storm year. That doesn't mean we haven't looked at a number of different scenarios. And then certainly, we test basically 20 percent reserve margin sufficient for a cold event such as January of 2010? Is it sufficient for expected outages from our units.

But, you know, we certainly are adopting new requirements on our plants to make sure they are ready to run if it should be cold, or ready to run should it be particularly hot in the summer, or a hurricane. But in terms of planning criteria, we believe we are in a pretty good position.

MS. MALOY: Thank you.

Can you verify that overall, the planning assumptions included in your 2022 10-year site plan do not vary much from these -- from those included in the 2021 10-year site plan?

MR. CALDWELL: Yes, I can.

MS. MALOY: Thank you.

That's all the questions.

CHAIRMAN FAY: Great. Thank you so much.

With that, we will move on to Duke's presentation. Mr. Borsch, you are recognized.

MR. BORSCH: Thank you.

CHAIRMAN FAY: Make sure your light is on there.

MR. BORSCH: There we go. How is that? Much better.

Thank you, and thank you for the opportunity to talk about our 10-year site plan. The 10-year site plan, ours, this year, as it always does, provides the electric generation additions and retirements that we have selected to, you know, meet the particular resource needs for this -- in this case, from 2022 through 2031, and similar to what Mr. Caldwell said, you know, we use a standard set of assumptions that underlie that forecast.

And beginning, again, with the customer forecast, we use the same underlying data that Mr. Caldwell mentioned, from Moody's and from the University of Florida.

As has been the case over the last, you know, 10 years, what we continue to see is a fairly steady onward -- upward trajectory in the number of residential customers and a kind of accompanying slightly smaller growth in commercial customers; and, you know, basically a flat to very slightly negative trajectory in our industrial customer

count.

So then on these other forecast values, we modified the slide slightly -- sorry about that, staff -- but to -- because we felt like it was important to see not only the actual values, but also the starting forecast values. And as you can see in the summer values, those are not too different.

In the winter values, there is substantially larger number in our first year winter projection compared to the actual. And as Mr. Caldwell pointed out, the last several years have been very mild from a winter standpoint. So we have continued to project a starting winter point that is -- reflects what we consider to be a normal cold winter, which is colder than certainly any of the winters we've had since 2010.

So that gives you the fact so you can see, you know, broadly across our projections that we have a general kind of softening of our expected load growth going forward. Some of that has to do with projections of maybe slightly less economic growth. I mean, we continue to see healthy customer growth, but economic activity is projected to soften slightly in the next few years.

In addition to that, we continue to see the ongoing trend of additional energy efficiency reduced use per customer, which is driven, again, partly by energy efficiency and also by a certain amount of customer owned mostly rooftop solar generation.

And finally, I think, you know, the same trends that were mentioned in the natural gas, our long-term natural gas forecast is somewhat higher if you compare 2030 to 2030 than it was a year ago, because we see a higher demand offshore on liquified natural gas propping up the price, you know, 10 years out. But it is actually negative from now until then because of the high current price of natural gas.

So on the resource plan, in the next few years, our resource plan shows primarily the completion of our solar generation additions associated with the SoBRA and CEC approved programs, and as well as the beginning of the roll-off of some contracts that we have had for a number of years, which are mostly no longer in the market. So we've -- there is a general trend of contract endings along with, you know, construction of solar facilities.

In addition to that, we have -- we are working on a -- what's actually a transmission project that will bring us the full capacity of our Osprey combined cycle facility in the year future.

As you see then in the 2025 through 2028 period, the trend is very much the same. We are committed to an ongoing growth in the solar generation, and so there is a steady growth. Our 10-year site plan represents an additional 300 megawatts nameplate per year of solar throughout this period. That is reflected in slightly lower numbers when you talk about firm megawatts, but there is a, you know, it's a steady addition of solar, and you will see that reflected in the energy trends when we get to that slide.

And that is offset, again by the roll-off of some expiring contracts, and the opportunity that we are going to have over the next few years to retire a number of older and less efficient simple cycle combustion turbines.

As we get to the end of the period, the overall pattern continues. We do see the need for some addition of reliability units. As we have added a large amount of solar on the system, we recognize the need for additional balancing of the

system to reflect the intermittency of the solar behavior, so we have a peaker projected in 2029, as well as some solar paired with storage in throughout the '29 through '30 period, through '31.

Finally, the energy generation slides, and these are not terribly different from the way they were last year. You do see the uptick in the renewables, because our 2022 site plan calls for more solar than it did in the previous plan. You see a reduction in the expected coal generation, which is driven partly by its replacement with solar energy, and also partly by change in the expected relative prices of natural gas and coal going forward.

Finally, the reserve margins, very much the same trend as we have seen for the last several years. Our reserve margin is fairly high currently, and we expect, in spite of the addition of the solar generation, to allow that to move sort of generally back towards the 20 percent mark, probably a little bit above that, but maintaining, you know, a good reserve margin. We are still planning for the summer. Although, as you will see when we get to the winter, there is a good balance. But the trend is downward as we have generation

rolling off from expiring expensive contracts through the middle of the decade.

And then finally, on the winter side. Again, the trend is very much the same. We have a higher amount of reserve generation at the moment, and it trends back down as we planned, not perhaps to the 20 percent, about but towards it in the latter part of the decade.

So that is our plan in a nutshell, and I am happy to take questions.

CHAIRMAN FAY: All right. Great. Thank you.

Commissioners -- commissioner Clark, you are recognized.

COMMISSIONER CLARK: Just thank you for your presentation. A quick question regarding the proposed installation of solar.

When you show that you are adding 100 megawatts of solar, how much of that do you actually count toward your firm capacity?

MR. BORSCH: That depends on the penetration of the amount of solar that we have on the system. So today, we have evaluated the solar, and we are counting 57 percent of the nameplate value of the solar towards our firm reserves. As we go forward in time, that decreases, because as we build more

solar on the system, the amount that we count towards the net is essentially based on the amount of, you know, gas-fired or fuel-fired generation that we are pushing back on.

So as we get on towards the latter part of the decade, what we see happening is that that net peak starts pushing later in the evening, so, you know -- and we do a statistical average across summer peak hours. So we are not necessarily targeting the single peak hour.

But on average, what begins to happen is that that peak starts to push out past five o'clock towards 6:00, 6:30, and so on. And as that happens, the net capacity of the solar decreases. So in the end part of the decade, we go down towards 25 percent, and even dip a little bit below that at the end.

COMMISSIONER CLARK: And how much would you be contributing toward your -- of that capacity, solar capacity, would you contributing toward your winter reserve margins?

MR. BORSCH: For the time being, we have conservatively assumed that none is contributed to the winter reserve margin. Our historical peak hour in the wintertime is between 7:00 and 8:00

a.m. And there is a very small, you know, sub five percent contribution at that hour, but for conservative purposes, we have assumed that was zero.

COMMISSIONER CLARK: So you are adding no -- no solar capacity is counted toward your winter reserve, or toward your winter peak?

MR. BORSCH: That's correct.

COMMISSIONER CLARK: Thank you, Mr. Chairman.

CHAIRMAN FAY: A quick question for you on slide nine. So I know we are looking forward here, but on the 2021 calculation for the winter reserve, you have a total of 58 percent of peak. Can you just explain that?

MR. BORSCH: I am trying to remember now if that's an actual number.

Yeah -- well, I mean, in essence, we had a lot of -- yeah, I believe that's calculated, because of the timing of when these were put together, that's calculated on an actual value. So it's be abnormally high based on the fact that it was based on the actual mild winter value as opposed to the projected value. If it had been on the projected value, you would have gotten a number that was more in line with those mid-30s values.

CHAIRMAN FAY: Okay. And I am -- to your point, I am presuming it's actual data based on what the previous 10-year site plan projections were?

MR. BORSCH: I would have to double check that. I believe that's actually a value that's calculated on the actual winter of 2020 and '21.

CHAIRMAN FAY: Okay. Great. Thanks.

Commissioner Graham, you are recognized.

COMMISSIONER GRAHAM: Thank you, Mr. Chairman.

I'm trying to find out if I'm reading this correctly. On page three, you guys are traditionally a summer peak utility, is that correct?

MR. BORSCH: We are.

CHAIRMAN FAY: And so you are saying that you are going to a winter peak in 2022?

MR. BORSCH: No. No, we are not.

The reason that it looks like that -- so let me say that technically Duke Energy is, and has been for many years, a winter peaking utility in the sense that our winter peak is higher than our summer peak. However, we are a summer planning utility because our generating fleet has a significantly higher capacity in the winter than it

does in the summer. So the peak that we are planning against in terms of the reserve margin is the summer.

COMMISSIONER GRAHAM: Okay.

MR. BORSCH: And that's because of the fact that, you know, our fleet is very heavily dominated by combustion turbines and combustion turbine combined cycle. And those turbines generate a greater capacity in cold weather than they do in hot weather. So we have almost a thousand megawatt increase in our capacity between the summer and the winter.

COMMISSIONER GRAHAM: Now, looking on page eight and nine in your reserve margins.

MR. BORSCH: Uh-huh.

COMMISSIONER GRAHAM: It seems like, and maybe this goes right back to the question I just asked you, some years your -- it seems like your reserve margin is smaller than the summertime and some years it's smaller than the wintertime.

MR. BORSCH: It's possible that there are a few years where there is a little bit of wiggle back and forth. You know, we are, as I said, planning for the summer, and then, you know, always checking to make sure that we are meeting the

reserve margin target in the winter. You know, especially with the addition of the solar generation, which, as I mentioned, is getting capacity in the summertime but not in the winter, there is a little bit of -- you know, the numbers are very close together, let's just say that. So there is, you know, an opportunity for them to go back and forth. But we continue to plan for the summer. We have not yet seen a situation where we have to be a winter planning utility.

COMMISSIONER GRAHAM: Thank you.

CHAIRMAN FAY: Staff, you are recognized for questions. Oh. I apologize, Commissioner La Rosa, go ahead.

COMMISSIONER LA ROSA: Thank you, Chairman. Sorry, I changed my mind --

CHAIRMAN FAY: That's okay --

COMMISSIONER LA ROSA: -- hearing all the questions.

CHAIRMAN FAY: That's why we are here.

COMMISSIONER LA ROSA: Just a quick clarification. I think it was on slide three, talking about the winter peak demand, you mentioned -- let's see, you had -- there has been a milder winter, but colder than years before, is what you

guys are expecting, can you maybe clarify that a little deeper?

MR. BORSCH: I guess -- so we use a 30-year average to plan our peak, and it's actually a statistically-based -- average isn't the right word. Essentially we are creating a model of what potential projected winters there could be based on the past 30 years, and the normal weather that we project is essentially a sort of a 50-50 projection of what could be the peak of the winter weather.

So that 50-50 projection has, really for the last decade, been above the actual winter weather, you know, throughout that period because it's weighted towards a number of other cold weather periods that we've had in the past.

CHAIRMAN FAY: All right. With that, we will move on to staff for questions. You are recognized.

MS. HARLOW: Thank you, Mr. Chairman.

Good afternoon, Mr. Borsch.

MR. BORSCH: Good afternoon.

MS. HARLOW: Hi. I am Judy Harlow with staff. I just have with quick because, frankly, Commissioner La Rosa stole my question.

Turning again to slide three, you said that

your model was based on 30-year average weather to plan for your peak, and because of that, you are taking into account 30 years of weather. So as you move from 10-year site plan to 10-year site plan, that's a rolling 30 years, correct?

MR. BORSCH: Yes, it is.

MS. HARLOW: Yes. And thinking about that model, and what happened recently in Texas, and the fact that we've had severe weather in Florida as well, for example in 1989, did your company consider changing its winter peak demand forecast methodology to account for those extreme weather events?

MR. BORSCH: No, we did not. But I should say that we do evaluate a high load scenario, which is present in our plan each year. And of that high load scenario is based on a combination of many factors that could bias the load going forward to a higher level. One of those is certainly weather.

So we choose a, what's essentially one standard deviation above the median for our, you know, extreme weather, both for summer and winter. And then on top of that, we layer the idea of, you know, higher than projected economic activity and higher than projected customer growth, and we

evaluate that.

This year, we did look at some of the past cold weather events, 2010, 20 -- 1989. We determined that our high level forecast -- our high load forecast was robust enough to cover those conditions.

So we do not plan to change our planning practice, but we do that practice with an eye to what the outlying possibilities are.

MS. HARLOW: Thank you.

So you -- would it be correct that you could think of that high load scenario that you just discussed as a sensitivity analysis to test the robustness of your traditional forecast model?

MR. BORSCH: Yes.

MS. HARLOW: Thank you.

That's all I have, and I will hand it offer to engineering again.

CHAIRMAN FAY: Great. You are recognized.

MS. MALOY: Good afternoon, Mr. Borsch. Kerri Maloy for Commission staff.

Referring again to slide three, can you please explain the reason for the projected flat to negative average annual growth rate in the summer and winter peak demand, and net energy load for the

2022 10-year site plan?

MR. BORSCH: Yes. Principally, especially where the peak demand is concerned, the flat forecast is an artifact of the fact that we have a number of wholesale contracts which are ending during this 10-year period, and which we do not currently project renewal on those contracts. It's always possible that, you know, in the future something will happen differently, but we don't project ahead to renewal of those contracts.

So even though we do have some underlying growth in our retail load, the overall trend is flat.

MS. MALOY: Again on slide three, can you please explain the reason for the negative average annual growth rate percentage for the price of natural gas for the 2022 10-year site plan?

MR. BORSCH: Yes. In essence, that negative growth is caused by the fact that we have seen a recent spike in the price of natural gas, you know, for a variety of factors that are going on economically today. We do not project that spike persisting. We anticipate that over the next two to three years we will see a return to, you know, more or less the long-term normal price behavior of

natural gas that we have seen over, say, the last 10 years.

MS. MALOY: Is this forecast consistent with the recent market movement given the unexpected events, such as the invasion of Ukraine?

MR. BORSCH: Yes. I think that, you know, the projection is essentially that. I mean, as Mr. Caldwell mentioned, we are all buying spot gas these days, so we are buying gas at something much closer to $8 today, and probably will for the balance of this year. But, I mean, yes, the higher number, the 5.28 that you see compared to the 3.37 that we had in last year's plan is entirely a function of those factors.

MS. MALOY: As mentioned in the question for TECO, we know the NERC serve evaluating several issues relating to the 2021 Texas cold weather event. Can you indicate whether or not NERC required a change in cold weather planning assumptions following the 2021 cold weather -- Texas cold weather event?

MR. BORSCH: We have evaluated the NERC, you know, updates, and we do not believe that that will require a change in our planning.

MS. MALOY: Does the utility conduct practice

runs with extreme weather plans to keep staff trained and ready for these circumstances?

MR. BORSCH: We, we do. In fact, we changed our practices several years ago following the polar vortex of 2014 and '15. Our Duke Carolina utilities were heavily impacted by those events, and we had an enterprise wide change in practice to include a complete review of all of our weatherization plans for the units, as well as semiannual summer and winter seasonal, you know, peak behavior practices, which include, you know, staff training, staff reviews of behavior and also, you know, reviews of the equipment systems themselves.

MS. MALOY: And can you verify that overall, the planning assumption included in your 2022 10-year site plan do not vary much from those included in your 2021 10-year site plan?

MR. BORSCH: Yes.

MS. MALOY: Thank you.

CHAIRMAN FAY: Great. Thank you.

With that, we will move on to the presentation from FPL. I believe we have Andrew Whitley and Jun Park. You are recognized to present.

MR. WHITLEY: Thank you, Mr. Chairman and

Commissioners. My name is Andrew Whitley. I am the Manager of Integrated Resource Planning at FPL. And here with me today is Jun Park, who is the Manager of Load Forecast at FPL.

We are going to get into the slides that have been kind of provided as a template by staff in a bit. First, I want to provide just an overview of some of the general occurrences in our site plan, how they compare -- and how they compare to the 2021 site plan.

So in the executive summary of FPL's 2022 site plan we actually provided four resource plans, only two of which I am going to discussed to. Those are our two official plans; the recommended plan, which accounts for extreme winter planning; and a business-as-usual plan that uses our typical P50 winter load. So in this slide, I lay out some of the similarities that occur in both of these plans.

So both of the plans have the Dania Beach Clean Energy Center coming in -- actually, as of roughly 13 hours ago, it is in service. And both of the plans also add the North Florida Resiliency Connection line coming in later this month.

And in addition, both plans continue upgrades on our existing combined cycle fleet to provide

summer capacity, as well as adding over 9,000 megawatts of nameplate solar over the 10-year period. And all of those resource additions and changes are consistent with the 2021 10-year site plan.

In terms of unit retirements, FPL is planning on retiring its position in all of its coal-fired generation over the next 10 years. So that includes Scherer 4, which was retired earlier this year; the Dania 1 and 2 units in Mississippi; and the Scherer 3 unit, which FPL is has a 25 percent ownership in, in 2028 which is a new retirement compared to the 2021 site plan.

The other major resource addition that's occurring in both of our resource plans in the 2022 site plan is a significant amount of batteries; over 3,000 in the recommended plan, and 1,800 in the business-as-usual plan. And this is a large departure from our 2021 site plan, which only added 700 megawatts of batteries up and above the roughly 470 megawatts that we added at the Manatee Clean Energy Center.

And just for reference, the two other resource plans that I am not discussing today were informational only. Both of those detailed, in

effect, of what proposed federal renewable tax credits would have on our resource plan going forward.

Moving on to the next slide. This is just a brief overview of our changes to prepare for extreme winter. I will do a brief summary here, and at the end, I will wrap up with kind of a more detailed timeline of how FPL came about planning for this and some of the input that went into it.

But FPL's recommended plan is planning to meet a future extreme winter event. And this is based on events that have actually occurred in Florida in the past. So it's based on temperatures that occurred in the December 1989 winter event, along with a pattern of hourly loads based on the January 2010 winter event.

And so there are effectively two sets of resources that are being added in the recommended plan to deal with this extreme winter. One is near-term additions, which are broken out up there. Several units that are in retirement or previously planned for retirement are going to be converted to winter only operation. Meaning that they will be idle throughout the year. In advance of a possible winter event, they will be brought back on-line in

order to provide capacity for that event.

Another near-term event that FPL plans on doing over the next several years is providing a separate outbreak package to its existing combined cycle units. And that will provide roughly 700 megawatts of winter only capacity.

Those near-term changes allow us to be prepared to meet an extreme winter load through the year 2026. As load grows, however, that -- the projected load from an extreme winter event will grow as well. So in order to meet that projected extreme winter load past 2027, FPL will plan on adding an additional 1,400 megawatts of additional batteries from 2027 through 2031.

CHAIRMAN FAY: If you would just make sure you speak in the mic. If you fail a little bit, she will get us back in line. Thank you.

MR. WHITLEY: Okay. All right. And I am going to turn this over to Mr. Park, as he is going to cover the fundamentals of our load forecast.

MR. PARK: Good afternoon, Mr. Chairman, Commissioners. My name is Jun Park, and I am the Manager of Load Forecasting for FPL.

In this slide, though, we see the residential, commercial and industrial customer forecast and the

associated growth rates from the 2021 and 2022 10-year site plans. The current site plan projects residential and commercial customers to grow at an average rate of 1.2 percent per year over the forecast horizon. There is very little change from the prior forecast.

Looking at the industrial customer forecast, there is a decline, and that decline is driven by temporary service poles, or TSPs. TSPs are temporary installations that are used commonly for construction, and the current high level of housing construction is what's driving that. As housing construction returns to more normal levels, the customer count for industrial will decrease by 2031.

And in this next slide, we see the values for the first forecast year for summer peak, winter peak and net energy for load for both the current business-as-usual plan as well as the prior 10-year site plan.

As with customers, the forecast for summer peak, winter peak and net energy for load are very similar. The slight decrease in the summer peak demand growth rate is due to lower wholesale peak demand, which is slightly offset by a somewhat

higher commercial -- excuse me, retail customer. And -- there was a lag there.

In this next slide, this is similar to the prior slide, but this shows the business-as-usual plan and the recommended plan from the current 10-year site plan.

The recommended plan reflects the impacts of December 1989 actual weather conditions on the winter peak demand, as well as net energy for load. The winter peak for the recommended plan was developed by taking the business-as-usual P50 winter peak and then adjusting it for the impacts of the actual conditions that were experienced in December of 1989.

In FPL's business-as-usual plan, a high system peak occurs in summer, while in the recommended plan, the high system peak occurs in the winter. The winter peak in the recommended plan is 4,800 megawatts, or 19 percent higher than the summer plan.

When spread across FPL's total customer base of nearly 5.8 million customers, the 4,800 megawatt increase represents an increase of 0.8 kW per customer. And for reference, a coffee maker uses 0.8 to 1.2 kW, and a typical residential electric

heating system, which is in over 90 percent of FPL's residential premises, uses between five and 10 kW.

The winter peak demand was developed by taking the business-as-usual P50 case, and then we adjusted that to reflect the impacts of the actual weather conditions that occurred in December of 1989. The adjustment was developed using models that specifically focused on the ways in which FPL's peak demands respond to cold weather.

MR. WHITLEY: Okay. Before we leave this slide, I do want to just cover the natural gas forecast. I know there was a question for Mr. Borsch earlier similar to this that details if there is a negative annual growth rate on natural gas. And the answer for that would be similar to the answer Mr. Borsch provided.

We do anticipate -- or we have been seeing some recent short-term volatility in the natural gas market and an increase in price. We do anticipate that that will slowly subside over time, and that results in that negative 1.8 percent that you see on the slide up there.

Okay. So moving through to our resource additions year by year, I will cover some of the

major highlights that we anticipate in each of these time periods.

For the next several years, there is consistent amount of solar additions being added here. All these numbers here are firm summer megawatts from solar.

In 2022, you can see a large spike in combined cycle addition. That is from the Dania Beach Clean Energy Center.

And in terms of retirements here, you see two out of the three retirements I mentioned earlier, with the Scherer retirement in '22 and the Dania retirement in '24. And in '23, you see a expiration of one of FPL's purchase power agreements with a power plant in Alabama, which is the retirement value there.

So going forward to the next time period, 2025 through 2028, again, there is a consistent amount of solar being added. As well you can see a combined cycle increases in megawatts due to the summer megawatt upgrade packages that have been identified earlier.

And starting in 2027, in the recommended plan, you can see that there is additional firm summer capacity being added from those additional

batteries that I mentioned earlier. These batteries don't operate just in the winter. They provide value throughout the year for our customers, and you can see that here, and that they provide peak summer capacity as well.

And finally, for the final time period, in 2029 through 2031, you can again see continued additions of PV, along with the additions of the batteries, both in the recommended plan, as I mentioned. And you do start to see batteries come into play in the business-as-usual plan as well going forward.

So moving forward to the energy generation mix, the fuel mix for all of our plans, you can see a very common pattern between the 2021 10-year site plan, and in this case, both of our plans, both the recommended and business-as-usual plans, have a very similar projection of fuel mix going forward.

We don't anticipate that there will be, you know, there won't be an extreme winter event every year, so the general generation year by year for both of those plans is very similar. So you can see the decrease in natural gas generation made up for by an increase in solar generation in 2031.

And so looking at summer reserve margins,

again, the 2021 site plan and the 2022 business-as-usual plan show a very similar pattern in terms of summer reserves. Starting out in the mid-20 percent range and going down to the 20 percent target as you add solar year to year to keep that summer reserve margin at the 20 percent level.

You can see in the recommended plan, the effects of what I mentioned earlier. The batteries that are being added in that time period continue to provide summer capacity in the 2027 through 2031 time period as well.

Now, moving to the winter reserve margins, you do see some interesting results obviously for our recommended plan. But focusing on the 2021 and the 2022 business-as-usual plan, you again see a very similar trend. Winter reserve margins start out high, in the 40 percent range. We do show a declining trend going forward, which kind of leads into our planning for winter events going forward.

In the recommended plan itself, you can see that the -- you are well under the 20 percent reserve margin target, and that's because to -- in the planning for our recommended plan to meet extreme winters events, we, at FPL, plan on meeting

the extreme winter load exactly. So you can see in those later years, where we are at zero percent, we are essentially meeting that peak load to the megawatt, and are able to serve all our customers in an extreme winter event.

And that concludes the slides that I've been going through. And I just want to kind of, as we are discussing the recommended plan, just provide a summary of how FPL got there. I'm sure there is a lot of interest and a lot of questions in there, so I will start it.

Obviously, as we have heard referenced a couple of times here, after the 2021 winter event in Texas in ERCOT. That precipitated kind of a massive examination at FPL of, you know, its winter planning processes and what it can do going forward.

So FPL began looking at several difference scenarios. One of which was a scenario similar to what it was experienced in Texas, and that it was 10 degrees colder than anything Florida has looked at before. Ultimately, that would have required a massive amount of resources, and so FPL decided to focus on events that have occurred in Florida in the past. So namely the December 1989 event that

I've referenced, and the January 2010 event. Both of which were very cold events in Florida.

For some reference, the 2010, the actual load was roughly 30 percent higher than the P50 forecast that we had put together in advance of that event. And that equated to roughly 4,800 megawatts of additional load during that 2010 event.

For the 1989 event, that was a more extreme event than the 2010 event. Temperatures were about five degrees colder in Miami during that event. It's difficult to say exactly what the load impact was on of that event because -- because of that extreme load, FPL had to rotate feeders, and therefore, was not able to get accurate estimates of the load, or the hourly load pattern.

So in the process of evaluating this extreme winter event, FPL used its 2021 resource plan, and compared it to an event of 1989 winter event occurring in Florida in the future. And when we looked at that, FPL determined that it would not be able to serve all of its load with its 2021 resource plan.

So based on this determination, FPL began a number of actions going forward to mitigate and plan for this event. Part of which are enhanced

winterization on both its nuclear and fossil units, preparing those to operate in temperatures even colder than those in the 1989 events.

And two of the other events were the near-term resource additions that I brought up earlier, which is retaining some units that were going to be planned for retirement as winter only events, and upgrading our existing combined cycle fleet to provide roughly 700 megawatts of additional capacity in the near-term.

And both of those events, when looking at an extreme 1989-like winter event, both of those events led to FPL being able to meet its load through the year 2026. But as I mentioned earlier, with continued load growth, that load would continue to grow, and continue to be more extreme, and therefore, in starting in 2027, FPL needed to add additional resources. In this case the recommended plan adds batteries to meet that capacity going forward, other than, say, new gas-fired power plants.

And part of the advantage -- I alluded to this earlier -- is that the batteries aren't just for winter load. They provide, again, summer capacity. They provide usage throughout the year, and they

provide the ability to help with the curtailment of solar. And given the resource mix, where FPL is continually adding solar throughout the 10-year period, it's likely we would have to install batteries in order to help kind of mitigate some of that curtailment and some of the issues that come along with adding solar as well.

So for a lot of cases, these batteries would merely be accelerated forward from a later timeframe. And because those batteries do generally have a three-year lead time, and they are not being added until 2027, a final decision on whether or not those batteries would be needed would not be needed until 2024.

So for the script to kind of provide an overview of what FPL is looking for is, you know, to -- for the Commission to, you know, find the recommended plan suitable for planning, which will allow us to go forward with our plans to kind of plan for events that have happened in Florida in the past, that have led to extreme winter temperatures. And to mitigate that, again, we would plan on bringing back our units from planned retirement to become winter only units, adding capacity to our existing units, and then as those

units and capacity additions would come on-line, we would then determine the prudency and the cost of those units in the future filings.

So that's the conclusion of my presentation. I will be happy to answer any questions and thank you for your time.

CHAIRMAN FAY: Great. Thank you.

And I guess, if Mr. Park is a better question to answer a question, feel free to respond appropriately.

Commissioner Clark, you are recognized.

COMMISSIONER CLARK: Thank you, Mr. Chairman.

I have several questions. I appreciate FPL's considerations for what I consider a possible scenario in terms of a severe winter event, and how that's going to affect the system. I have several questions. First let me hit a couple of key ones.

You show, on page seven, the installation of 190 megawatts of solar toward firm capacity. My question is how much nameplate solar is that?

MR. WHITLEY: I would have to double check. If you want, I can look up in our executive summary.

COMMISSIONER CLARK: Did you consider -- are you still using a 51 percent rating? That was your

last answer, I think, when --

MR. WHITLEY: Yeah, it varies based on what your load is and how much solar penetration you have on the system.

COMMISSIONER CLARK: But for planning purposes, you ran it through a model, and you have a nameplate capacity and a firm capacity rating, roughly 50 percent?

MR. WHITLEY: It starts out around 50 percent. As you add more, it declines going forward.

COMMISSIONER CLARK: Okay. You have talked a lot about batteries today, and when they begin to come into play in the proposal for, I believe installation of batteries begin in 2027. Are the batteries you are talking about -- and you did just add a minute ago that you had a three-way lead time -- a three-way -- a three-year lead time on these batteries. Are these batteries in commercial production today? Could you order one and have -- I mean, is there one we could go look at and see how it is performs and operates during one of these extreme events?

MR. WHITLEY: Well, our Manatee Clean Energy Center, the 409-megawatt battery is in operation today. And part of the reason for locating that at

Manatee was to address regional winter concerns in that area.

COMMISSIONER CLARK: And how has it performed during an extreme event?

MR. WHITLEY: I don't know the operational considerations of it. I do know that it has been tested in terms of its operation. And I believe it was -- in the coldest temperatures we had in January it was, you know, utilized then, but I don't know exactly how -- how it operated during those events.

COMMISSIONER CLARK: That's my concern. My battery always dies when it gets cold, so that's my biggest concern there.

Could you tell me what -- what drives FPL's winter peak? What is -- if you had to identify one single factor that drives the peak, what would that be?

MR. PARK: One single factor, or the biggest single factor would be electric space heating.

COMMISSIONER CLARK: Electric space heating. And mostly electric resistance heating backed up in heat pumps or straight electric resistance heat for home heating.

MR. PARK: Yes. Correct.

COMMISSIONER CLARK: Okay. When you look at extreme events, specifically I would -- my assumption is that the primary part of your extreme load would be driven by Miami, Ft. Lauderdale, that geographic region right there. What temperatures do you look at in terms of -- and you can convert it to heating degree days if you needed today, but are you saying that if we had five days of 30-degree temperature in Miami, that you would be on an extreme -- extreme weather event?

MR. PARK: Yes.

COMMISSIONER CLARK: Okay.

MR. PARK: Because the way that we looked at it was the 1989, December 1989 -- and I don't recall the specifics of each of the individual weather stations. Miami is one of the weather stations we use, but the system average temperature was 29 degrees.

COMMISSIONER CLARK: Was 29 degrees. And that was for how many days?

MR. PARK: The 29 days was -- I believe it reached 29 days for two mornings in a row. The total event was, just off the top of my head, I seem to recall it was two-and-a-half days.

COMMISSIONER CLARK: And I'm going to just

throw a very hypothetical question out there. If you don't want to answer it, I won't insist on it, but if you had a 29-degree event that lasted five days in Miami, could the system handle it right now?

MR. WHITLEY: Right now, I go back to the answer looking at our 2021 resource plan, where we looked at a 1989-like scenario, that would probably be similar to that.

COMMISSIONER CLARK: But you said that would have tapped it out.

MR. WHITLEY: That would have happened it out.

COMMISSIONER CLARK: And that was a three-day event?

MR. WHITLEY: Yeah. I would have to -- to know exactly what the load is to be able to kind of determine what --

COMMISSIONER CLARK: Sure. And I am not trying to trap -- trap you with a trick question. I want a context for what we are saying is an extreme weather event. We are talking about the possibilities that, you know, things are getting -- the climate is getting worse, that it's getting colder. So how unrealistic is it that we are going to have four-day event in the southern part of

Florida that was 27, 28 degrees?

MR. PARK: To provide a little bit of context as to weather events that Mr. Whitley referred to were December 1989, which was the coldest, but it was not the longest duration. And then the other event was January 2010.

January 2010 was not quite as cold. Again, I believe that was about 33-and-a-half degrees, the system average temperature, but the duration was almost a day longer. And so when we reference to having a combination of both 1989 as well as 2010, specifically what we did was we estimated what the total peak demand would be based on the weather conditions that we experienced in 1989, but then to the duration is more reflective of what occurred in 2010.

But you can think of the severe weather event, the extreme winter peak as being the severity of what actually occurred in December 1989, but the duration is more reflective of what occurred in January 2010, which is closer to three days.

The scenario that you have proposed, the four-day, I don't believe we've seen that -- and this is just, again, not having detailed -- a detail of the analysis of all the weather history,

but based on those two data points, which, again, were the most severe in recent history, we have not experienced four days, but we have experienced something very similar, which was January 2010.

COMMISSIONER CLARK: Thank you.

One final question, as we begin to look at possibilities of allowing systems to have some overbuild, what are the concepts and the possibilities of system integrations to be able to address some of these needs based on the geographic dispersity of the different utilities? Do we have some -- do we have some possibility for some system integration basically moving power across the grid to solve some of these problems?

MR. WHITLEY: I would -- I would have to consult with our energy marketing folks who would probably be better suited to answer that. I can provide some context for that.

If there -- if there is a certain region with capacity, then there would be additional capacity to transfer between utilities. But one of the things we looked when examining our extreme winter scenarios is that if it is cold in South Florida, it's cold everywhere else. And so there is no -- there is not an opportunity for additional capacity

really to come in to -- to FPL's service territory.

COMMISSIONER CLARK: Right. Not necessarily -- and I guess get that. If it's cold in Miami. It's cold everywhere. But what about the idea of some sort of shared resource, some shared integration that maybe we are able to limit some of the upfront costs, some the impacts to ratepayers that could be brought on-line in a severe weather event that everybody needed to utilize, has there ever been any consideration to including something like this in the planning?

MR. WHITLEY: To my knowledge, there hasn't been anything like that considered. It's certainly a possibility that we could look at it in the future if we are planning for these.

COMMISSIONER CLARK: Thanks.

CHAIRMAN FAY: I have got a quick question for Mr. Park.

So you did -- you did just sort of upfront address my original question, which is the overall average decrease in industrial customers, you mentioned that's temporary service poles. It looks like the numbers increase over a few years and then drop. I know there is a lot of discussion about just the growth in Florida in general. Just

clarify for me why this is different and why it goes back down.

MR. PARK: Commissioner, Mr. Chairman, I would say think of temporary service poles more as more of an incremental growth. And so when a construction site is occurring, there has to be the temporary service so that they can do the construction. And really think of the temporary service poles as the level of new construction activity. So that when you are really growing much faster than normal, that's when you have the accelerated number of TSPs. So as it returns to a more normal level, the industrial customer count will go down because the TSPs go back to a normal level. So really, I think of it as more of the temporary just a couple of years out. It's more elevated just because of the housing market.

CHAIRMAN FAY: Okay. Great. Thank you.

Other Commissioners questions?

Commissioner La Rosa, you recognized.

COMMISSIONER LA ROSA: Thank you, Chairman.

And Commissioner Clark, you know, hit on the point that I was kind of going towards. When you are talking about the 1989 winter event and the 2010 winter event with using a load pattern. So I

think I understand it correctly, 29 degrees for two mornings in 1989, and then 33-and-half degrees in January 2010, and that's where you used the load patterns from -- let's maybe start with that. Am I assuming that correctly?

MR. PARK: Yes.

COMMISSIONER LA ROSA: Okay. So when considering the load patterns, was there also a consideration with how the territory is divided, from when you look at South Florida as a heavy, you know, dense territory in comparison to maybe the new territory in the Panhandle?

MR. PARK: We didn't do the analysis by division. What we did was we looked at the total system. And when we look at the total system, we have a system weighted average temperature. The weighted average temperature is based on the weather from Miami, West Palm Beach, Ft. Myers and Daytona Beach. And this is for the -- I call it the FPL legacy, or Peninsula of Florida. And then also have the northwest division, which used to be Gulf Power, and that's the Pensacola Weather Station.

That whether data that we have is the system weighted average. So when we do everything, we do

it on a total system basis, not looking at it by each of the individual divisions.

COMMISSIONER LA ROSA: Okay. So just for clarification, is there ever an event where you look at it separate or, no, it's always --

MR. PARK: We did not look at where if we had severe weather in one division versus the other. I would say that if that were the case, essentially as long as the cold weather hits Miami, then it's going to hit all of the other -- all of the other divisions.

COMMISSIONER LA ROSA: Thank you.

CHAIRMAN FAY: Great. Seeing no other questions from Commissioners, staff.

COMMISSIONER CLARK: Can I follow up with that. Commissioner La Rosa, you are on a -- on a really good point there.

Did you factor into account the time difference and the ability to spread -- that peak actually is going to begin to spread out some because of the time difference. It takes the sun a little longer to reach us over on the other side of the river, and it starts out on this side of the state, so do you have that factored into the plan as well?

MR. PARK: On the load perspective, yes, we do. That's the diversity of load.

COMMISSIONER CLARK: And duration of your peak?

MR. PARK: Duration as well. And for -- specifically for those weather events, as you would expect, the weather event did hit the Pensacola Weather Station as well as the Daytona Beach Weather Station before it hit the Ft. Myers, West Palm Beach, Miami weather stations.

COMMISSIONER CLARK: So which way does it work? To having the northwest division integrated into the system, the duration of the peak would be longer, but the peak occurs an hour later, roughly, is that positive or negative?

MR. PARK: I don't have the answer right offhand, but what I do know is that between the northwest Florida division and then the rest of the Peninsula of Florida, the system diversity is -- I am -- I am trying to recall off the top of my head, but I want to say that it's in order of five, six, seven percent. So it's actually several percent of diversity that we achieve on the winter peaks.

COMMISSIONER CLARK: Okay. Good. Thank you.

CHAIRMAN FAY: Any other questions?

With that, we will move to staff. You are recognized, Ms. Harlow.

MS. HARLOW: Thank you, Mr. Chairman.

Good afternoon, Mr. Whitley and Mr. Park. Again, I am Judy Harlow with economic staff for the Commission.

I would like to ask you some questions to get a little bit more detail on your changed winter peak demand forecast methodology, which is the underpinning, or the foundation of your recommended plan.

So how long has FPL been using its, as you call, business-as-usual peak demand forecast methodology? If you don't mind, I will refer to it as your traditional methodology.

MR. PARK: We've been using the business-as-usual P50 approach for as long as I remember, so it would be many years.

MS. HARLOW: Thank you.

And that methodology uses approximately 20 years of normal weather data to derive that model, correct?

MR. PARK: Yes. That's correct.

MS. HARLOW: Thank you.

And it appears that in your recommended

planning, you are changing -- you are recommending to change your January peak demand forecast methodology, whereas, you will use the traditional or business-as-usual methodology for the 11 -- other 11 months of the year, is that correct?

MR. PARK: That is generally correct. For the January peak, we take the business-as-usual then we actually do increase it or adjust it for the severe winter weather that we experienced in January 1989 -- or excuse me, December '89.

MS. HARLOW: And I believe you explained that your new approach for January is a two-step process in response to one of the Commissioner's questions. Was there anything else would you like to add to that?

MR. PARK: I don't have anything else to add. I will be glad to answer questions, but I don't have any additional details. I feel like that would be going far into the weeds.

MS. HARLOW: Thank you.

Are you aware of any other utilities that are using a similar two-stage process, or another process, to forecast the winter peak demand based on extreme weather circumstances for planning purposes?

MR. PARK: Not for planning purposes, no.

MS. HARLOW: Thank you.

And did FPL consider any other types of models or approaches to looking at the impact of an extreme winter weather scenario on its forecasted peak demand?

MR. PARK: I would say that when we are trying to develop the -- well, backing up. We were tasked with trying to come up with a reasonable peak demand that would best reflect what our system would theoretically achieve if we were to reach the temperatures that we had in December 1989. And during that time, we did consider multiple methods, but ultimately what we decided to do was we felt that it was most reasonable to start with something that was already tested and time proven, which is the P50.

And then from there, we just developed -- there are still multiple linear regression models that are based on statistical analysis, but we just did that based on the -- how our systems respond to cold weather. And so it's -- really, think of it as we still use the P50 models as the basis, and then all we are doing is, for this specific event, which is the severe weather, we are just adjusting

that based on the linear regression models that we developed.

MS. HARLOW: All right. So you chose an approach to take that you believe was reasonable, but would you agree that there might be other approaches to look at the affect of extreme weather on your demand? And if so, could -- is it reasonable to expect that they would result in a different peak demand forecast?

MR. PARK: So the first thing is absolutely, there is other approaches, because I have been in the forecasting business for more than 20 years, and so I have learned that there is many, many ways to solve a problem.

I would not necessarily be surprised if there were slightly different results. However, one data point that you may be interested in is that the models that we used to develop the adjustment for the severe weather, those were provided to staff in staff's, I believe it was the third data request, Item No. 14, subpart (d), and so there were two models; one that was labeled FPL, and then another for Gulf.

If you were to take those and then you were to substitute the 1989 actual weather conditions and

put in the January 2010 weather conditions, those models will -- the model is specifically for Peninsular Florida, so traditional FPL, that would result in an increase in the peak demand over the P50 of, I seem recall somewhere around 25, 26, 27 percent.

And as Mr. Whitley testified, what we saw during the actual 2010 weather event, what was reported in the 2000 -- in the 10-year site plans for the actual net firm demand was about 30 percent higher than the 2009 10-year site plan, which was the most recent forecast for that weather event. So to me, that's a data point that says it's laying right on top of what we actually observed.

MS. HARLOW: As you said, Mr. Whitley mentioned that 30 percent difference between your 2010 P50 forecast and your actual demand when that, we will call it extreme event occurred. Did you also say, Mr. Whitley, that you could not give us a response similar to that for 1989, because you had rolling blackouts at that time?

MR. WHITLEY: Yes. That's correct. Because of the rolling blackouts, that essentially altered the peak load for that event, and so we do not have either accurate estimates of the actual peak load,

and we do not have accurate hourly estimates of what the load shape was looking like.

MS. HARLOW: So is my assumption correct, that you had no rolling blackouts in 2010?

MR. WHITLEY: That's correct.

MS. HARLOW: Thank you.

I just have a few more.

Does FPL believe that a winter event similar to the 1989 event is more likely to occur or there is more risk of such an event in the future in Florida than in the recent past?

MR. PARK: Can you clarify that just a bit, please?

MS. HARLOW: Did FPL do any probabilistic or probability studies on the likelihood of a winter events in the future such as 1989 in its territory?

MR. PARK: We did not perform the probabilistic analysis for the likelihood of 1989.

MS. HARLOW: Thank you.

And since you do not have a probability analysis of such an event -- and perhaps this has been answered already, but I will just give you a chance to add to that if you would like to -- then why does FPL support a change in its forecast methodology today based on the 1989 event? In

other words, what has prompted the company to make this change in your longstanding forecast methodology?

MR. WHITLEY: I can -- I can answer that, and if Mr. Park has anything to add, he can add it.

Again, after the Texas 2021 event, FPL wanted to examine everything about its system to see if it would be able to respond to events similar to that. And FPL chose to analyze the 1989 event because it is something that has occurred in Florida in the past.

And so we obviously cannot predict the weather, which is one of the reasons, I think, why there is no probability study of what could occur, but we do know that a 1989 event has occurred in the past, and we wanted to be ready for an event should it occur in the future.

MS. HARLOW: Thank you, Mr. Whitley.

And if we look -- you don't need turn to this, but on slide six and also schedule 3.2 in your 10-year site plan, a quick calculation shows us that your new approach results in about a 43 percent increase in demand over your traditional forecast approach for winter peak demand, correct?

MR. PARK: Correct.

MS. HARLOW: Yes. And if the Commission finds that your recommended 10-year site plan is suitable for planning purposes, then FPL will plan to meet that 43 percent increase in forecasted demand based on its new methodology, correct?

MR. PARK: Correct. That 43 percent is above the P50 winter peak. But as I noticed -- noted previously, the extreme weather winter peak demand is about 19 percent higher than the summer peak, which the company is already planning.

MS. HARLOW: Okay. But let's look at a mild winter, or I will call it a normal winter, and in fact, you have a significant variable for a recent mild winter in your traditional forecasting approach, as I recall.

In that case, is it fair say that your preferred forecast in your recommended plan will be significantly high compared to your actual peak demand? In fact, I would say it would average 43 percent high, is that reasonable?

MR. PARK: That's a reasonable statement. Yes.

MS. HARLOW: Can you explain, then, why you think this it is -- that this is reasonable, your new approach is reasonable from a planning or

regulatory perspective? And you may have already answered this.

MR. PARK: My answer would be more specific in the way in which the peak demand is developed, and then I believe you are also talking about more of the forecast accuracy. And so when you are talking about forecast accuracy, yeah, typically what we call the P50, or 50 percent probability, what that means is that actual events are just as likely to be lower or higher than the actual -- than your forecast. So P50 means that it will be right in the middle of your distribution of actual outcomes.

With the extreme weather event, by definition, what we've done with this is we have not tried to create a winter forecast that is right in the middle of expected outcomes. Instead, what we have done is that we've developed a forecast, which is, by very definition, one of the most extreme events that we have observed. And so that's the difference there.

And you are correct, in that if you look at the forecast accuracy, the forecast accuracy would be -- would be harmed, or it would be higher using the extreme weather event compared to the P50. But I believe that's the actual purpose of this, is

that we want to ensure that we have the resources to meet that demand, and that's where Mr. Whitley can answer.

MR. WHITLEY: Yeah, just to follow up. You know, as I have alluded to, yeah, we are planning on something that has occurred in the past. And we, you know, recognize that if an extreme winter event were to occur, we would face significant customer outages throughout our service territory, and the resources we add in the recommended plan are designed to minimize or eliminate those outages.

MS. HARLOW: Thank you.

I have one final question are, and then I will hand it off to my colleagues in engineering.

I believe Mr. Whitley noted on one of your slides that in the out years of your recommended approach there would be a zero percent reserve margin, and that's the result of FPL planning to meet peak load exactly. Let me see -- I just want to make sure that I am understanding this correctly.

Does that mean that under your recommended plan, that plan is designed to eliminate all or nearly all projected customer outages, and that

would include anything such as a 15- to 30-minute rolling blackout, correct?

MR. WHITLEY: That's correct. In the executive summary of the site plan, we provided a table of what the projected customer outages would be, and if we did -- if we experienced an extreme winter event and did not add additional resources to it, and those are all based on I believe a 30-minute rolling blackout per customer.

MS. HARLOW: So that's assuming you have gone through -- just last one. That's assuming you have gone through your entire dispatch order, correct? Energy efficiency, power purchases, all your units, and even to the point of exercising demand response, correct?

MR. WHITLEY: That's correct. Yes. All of our units would be dispatched to their fullest capacity. All of our load control would be dispatched to the fullest capacity, including the effects of having additional megawatts from load control due to the extreme temperature itself.

MS. HARLOW: Thank you.

I appreciate your patience, Mr. Chairman, and I will hand it off to engineering.

CHAIRMAN FAY: Great. Engineering, you are

recognized.

MS. THOMPSON: Thank you, Mr. Chairman.

Good afternoon, Mr. Whitley and Mr. Park. Takira Thompson with Commission staff.

As mentioned in the questions here to TECO and DEF, we know NERC is evaluating several issues relating to the 2021 Texas cold weather event. Can you indicate whether or not NERC required a change in the cold weather planning assumptions following this event?

MR. WHITLEY: I don't know if there are any official requirements that NERC has sent out regarding the event. I do know that in one of its postmortems, one of its summaries of the event, it did mention including the possibility of planning for -- or including the adjusting load forecast to account for extreme winter.

MS. THOMPSON: Okay. Thank you.

Can you indicate whether or not the utility conducts practices -- or practice runs with extreme winter plans to keep staff trained and ready for these types of events?

MR. WHITLEY: Yes. FPL does conduct those event regularly, and I know there is obviously going be to increased focus on those event

following the Texas event.

MS. THOMPSON: Can you tell us if the utility is of the opinion that of the winterization procedures that are currently in place for FPL's integrated system are not sufficient to serve FPL's load in those instances?

MR. WHITLEY: In regard to the winterization, I think there is a couple of categories there. The existing winterization of its nuclear and fossil fleet, which I mentioned earlier, I believe that's being conducted to temperatures that are even beyond what we are planning for until our 1989-like scenario.

And so in regards to the resource availability in extreme winter event, FPL, by to the mere inclusion of its recommended plan, is indicating that it would require additional resources to meet that load going forward.

MS. THOMPSON: Can you identify when the utility decided to create a resource plan focused on the possible occurrence of an extreme weather event?

MR. WHITLEY: I am not aware of any utilities that are currently planning for an extreme weather event. I do know that the 2021 Texas event would

likely cause many utilities to reexamine their planning processes, but I am not aware of any that are currently looking at an event similar to that.

MS. THOMPSON: Okay. Referring to slide two of the presentation, would it be correct to say that the difference between the two plans is approximately 75 megawatts of additional solar generation, and 1,400 megawatts of batteries?

MR. WHITLEY: That's correct in part. The recommended plan also includes the near-term resource additions, which includes putting units on a winter only status, which is approximately 800 megawatts -- 1,800 megawatts of capability; and also includes roughly 700 megawatts of upgrades to our existing combined cycle fleet.

MS. THOMPSON: Okay. Thank you.

Do you know the cost of this incremental capacity?

MR. WHITLEY: I am sorry, could you repeat that question?

MS. THOMPSON: Do you know the cost of this incremental capacity?

MR. WHITLEY: For the incremental capacity in terms of the additional batteries we are adding, I don't have the installed cost off the top of my

head. I do know that it equates to roughly a 50-cent impact on per thousand kWh per customer.

For the additional near-term resources, the cost to bring the units back to winter only status I know is minimal. I don't know the exact cost. And I believe the cost estimates for the additional 700 megawatts of capacity are still being examined, but I believe it equates to roughly $140 million in installed cost.

In discussing some of the financial analysis that others have done on those objects. That equates to roughly another 50 cents on a thousand kWh bill. So the total impact would roughly be a dollar to a thousand kWh bill, when factoring in both the near-term and long-term.

MS. THOMPSON: Okay. Thank you.

If you look at pages 21 and 22 of your 10-year site plan.

MR. WHITLEY: Okay.

MS. THOMPSON: Does this show that the additional 75 megawatts of solar capacity is added in 2031?

MR. WHITLEY: Yes. That's correct. There is one additional solar site being added in the recommended plan.

MS. THOMPSON: And the first additional batteries start in 2027?

MR. WHITLEY: Yes. That's correct.

MS. THOMPSON: Thank you.

Referring to slide three, could you please explain how the utility determined that delaying unit retirements, combined cyle unit upgrades and adding additional batteries were the best solutions for addressing a potentially extreme winter event?

MR. WHITLEY: Sure. Yeah. The -- and after the 2021 Texas event, FPL examined the effects of a possible extreme weather event in Florida. And in looking at a 1989-like event, it was determined that in order to serve all our customers in an event like that, we would need additional capacity both in the near-term and long-term.

And so in the near-term event, that was -- there was input from our other departments regarding the availability of bringing these units back to winter only status, as well as upgrading existing units. And after accounting for those units, our integrated resource planning department conducted modeling exercises to determine when we would need to add additional capacity in regards to the long-term addition such as batteries.

MS. THOMPSON: Okay. And were those the least cost alternatives of all the alternatives considered?

MR. WHITLEY: We examined a variety of options to serve those, and those were one of the most cost-effective options. There was other options we looked at along the way that did not provide some of the additional benefits that I mentioned in regards to batteries in terms of reducing future solar curtailment and providing additional carbon free generation throughout the year.

MS. THOMPSON: Okay. Also on slide three you showed 1,828 megawatts of units coming out of retirement for winter only operation. Is it correct that Manatee Units 1 and 2, approximately 1,638 megawatts, have already been converted to winter only operation?

MR. WHITLEY: That is correct. Yes.

MS. THOMPSON: Okay. Can you indicate how long the utility has known that it would potentially delay retirement of those units?

MR. WHITLEY: I don't know exactly how long FPL is planning on keeping those units in winter only operation at the moment, no. It would be at least through the 10-year period that we are in in

the current site plan.

MS. THOMPSON: Was the decision to delay retirement of these units the result of creating a resource plan focused on the occurrence, or the possible occurrence of a winter -- extreme winter event?

MR. WHITLEY: Yes. It was a result of looking at possible customer outages with an extreme weather event. And that was one of the solutions that was identified to mitigate those outages from an event like that.

MS. THOMPSON: Okay. Thank you.

I have no further questions, but I think my colleague does.

MR. WOOTEN: Hello. Orlando Wooten, engineering staff.

In response to staff's third data request number three, the utility stated that if its recommended plan is not found suitable for planning purposes, FPL will plan for the immediate retirement of Manatee's Units 1 and 2, is this correct?

MR. WHITLEY: I think, absent any other direction from the Commission regarding on planning for extreme winter events, FPL interpreted that

question to mean that there was no future planning for extreme winter events. And as such, the resource additions, including the delaying the retirement of these units, would not be carried out, but that would be dependent on the direction the Commission provides to us regarding the recommended plan.

MR. WOOTEN: In the same data request, in response to question number four, the utility stated that if the recommended plan is not deemed suitable, FPL will not continue to add backup fuel capabilities to existing units, is that correct?

MR. WHITLEY: That's -- I believe that's correct. Yes. FPL has not proceeded with the addition of that backup fuel capability as of yet. And again, that would be contingent upon the direction that the Commission provides regarding planning for extreme winter events in the future.

MR. WOOTEN: In response to question number 27 from that same data request, staff asked FPL to estimate the winter peak load for each of the five subregions that FPL reports as available energy prices. However, the response only stated that FPL's forecast of extreme winter peak demand was for the total system only.

Can you tell us, based on historical information, what the estimated percentage of system winter peak demand is in the south region?

MR. PARK: I don't have the winter peak impact. Just generally, when it comes to the energy sales, the south region -- and for us, when we refer to the south region is Miami-Dade. I seem to recall that's about 25 percent or so of the FPL system sales.

MR. WOOTEN: How about for the southeast region?

MR. PARK: Southeast would be Broward County. And, again, off the top of my head, I want to say somewhere around maybe 10-ish or so percent.

MR. WOOTEN: Say that again. I am sorry.

MR. PARK: I believe about 10-ish or so percent. But again, these are numbers that are just off the top of my head. They are subject to check.

MR. WOOTEN: West, northeast and northwest regions?

MR. PARK: The west region would be Fort Myers area. And that's one that I am a little bit weaker on, so I don't have an answer to that.

Generally, though, I do know that Miami-Dade

is the largest single division that we have, which is south. And that's roughly a quarter. The others are going to be smaller than that. They are not going to be much different in size, though, between the, say, Broward County then Palm Beach County, which is the south central -- or excuse me, southeast. So I don't have a number, but it would be roughly around there.

MR. WOOTEN: On slides eight and nine of your presentation, could you please verify that the additional capacity in the recommended plan as compared to the business-as-usual plan increases summer capacity by approximately 748 megawatts from 2027 through 2031, although, this additional capacity is intended to address potential extreme weather events?

MR. WHITLEY: Subject to check, I would have to add up the numbers in the right-hand column there regarding the additional battery additions. But the -- this is summer capacity resulting from adding additional batteries to meet that extreme winter event.

So the differential would be between the business-as-usual plan and the recommended plan. That would provide kind of a metric for what the

additional firm summer capacity being added in the recommended plan is.

MR. WOOTEN: That's all my questions.

CHAIRMAN FAY: Great. Thank you.

Next -- oh --

MR. BALLINGER: Sorry.

CHAIRMAN FAY: Mr. Ballinger, you are recognized.

MR. BALLINGER: Yeah. I can't help myself. I have just a couple of questions. This is kind of to follow up.

We talked a lot about the impact in Texas. This is kind of the precedent for this. And I just want to go through a few things and highlight some differences if you agree with the Texas and Florida systems.

Is it true that in the Texas event, that they -- part of the reason for outages was the loss of power to gas compressor stations and wellheads?

MR. WHITLEY: It is my understanding that was one of the root causes of customer outages?

MR. BALLINGER: Right. It was one factor, and it was part of -- it was tied in with rotating feeders that interrupted power to some of these facilities, is that correct?

MR. WHITLEY: I believe that's correct. Yes.

MR. BALLINGER: Okay. And FPL has gas infrastructure, if you will, as a critical facility, a top tier in terms of rotating blackouts. In other words, it's right up there with your dispatch center. It will not be interrupted. It's not part of the scheme for a rotating blackout, is that correct?

MR. WHITLEY: I would have to double check with our system operations and power delivery folks, but I believe that is correct. I do know that they are considered critical facilities.

MR. BALLINGER: Was another factor in Texas was some of the generating units -- they are in a different regulatory scheme than we are -- had non-firm fuel contracts, which were interruptible fuel contracts which got interrupted because some wells froze, things of that nature, so they were unable to get fuel, is that -- and that's not the case in Florida. I believe most of your units have firm gas contracts?

MR. WHITLEY: We do have firm gas contracts for our units in Florida. Yes.

MR. BALLINGER: Okay.

MR. WHITLEY: I am not particularly well

versed in how that -- how the non-firm contracts operated in Texas.

MR. BALLINGER: And if you know, has Texas experienced events like this, like Uri, similar, maybe not as catastrophic as that, but recent years, in 2011, 2014, 2018 and 2021, where they had loss of power due to winter storms coming through Texas, do you agree with that or do you know?

MR. WHITLEY: Yeah, I am aware, at least in 2011, that there was another extreme winter event in Texas.

MR. BALLINGER: Okay. And Florida hasn't had a rotating blackouts since 1989, at least from what I heard today. You didn't have them in 2010, correct?

MR. WHITLEY: You are correct in that they did not occur in 2010. I don't know if there have been rotating blackouts in between, for other events other than 1989.

MR. BALLINGER: Probably not for extreme winter events. It might have been for some other events, some operational things, a plane hitting a transmission line or something like that, you had to rotate feeders to accommodate the system.

MR. WHITLEY: That may have been the case,

yes.

MR. BALLINGER: And just if you could, I think the question came up of the current system today, could you handle an '89? What would be the scenario, if you will, if we had an extreme winter event this winter coming up, what would FPL do? You would go through your dispatch, and then it would entity end up rotating feeders, and I think that's outlined in your 10-year site plan, correct?

MR. WHITLEY: Yes, it is.

MR. BALLINGER: Okay. And it would go through -- and these rotations would be 15 to 20, maybe 30 minutes at a time, and vary between customers?

MR. WHITLEY: Yeah. I think the general to determine kind of how many customers would be affected and how long those outages would be, we assume a 30-minute rotating black out.

MR. BALLINGER: Okay. And one final question.

Is this -- what about this, that this is to improve the reliability for customers and mitigate potential outages in the winter -- actually it's two questions. You were asked earlier about a probability of this, and you have not done one. Which I understand. It's difficult to do. But would you agree that the likelihood of Florida

getting hit by hurricanes is greater than an extreme winter event?

MR. WHITLEY: Again, as we haven't conducted a probability of what an extreme winter event would be, it's kind of hard to compare. You know, I do know that there are landfalls of hurricanes in Florida every year --

MR. BALLINGER: Okay.

MR. WHITLEY: -- that's something to prepare for.

MR. BALLINGER: And I am just curious, have your customers approached you about increasing reliability in winter events? Have they expressed a concern to FPL about the vulnerability of an extreme winter events?

MR. WHITLEY: I am not directly involved with our customer service operations or with our external affairs department, so I am not aware if any customers have approached us about this issue or not.

MR. BALLINGER: Okay. Thank you.

Thank you, Chairman.

CHAIRMAN FAY: Thank you.

Anybody else? Keith? Anybody? No.

Okay. We will move on, then, to Southern

Alliance for Clean Energy and Vote Solar. Mr. Wilson, you are recognized.

MR. WILSON: Thank you. Good afternoon.

So I am James Wilson. I am an independent consultant doing as Wilson Energy Economics, and I was invited to speak because I have got a lot of experience on these issues. I have worked on load forecasting and resource planning, including extreme cold events in North and South Carolina, in Georgia, Alabama, Virginia, in the PJM region in the middle Atlantic for quite a few years, so I was invited to speak here. And other qualifications are later in my presentation.

I want to thank you for the opportunity to participate in this workshop, and thank staff for their three data requests. That provided a lot of very useful information.

And to go forward. I would like to -- oh, there we are. Yeah. So just four topics, but really it's the third one.

Real briefly about the Texas events that have already been discussed a number of times, causes and recommendations. And then I will outline the standard in the industry practices for load forecasting and resource adequacy analysis, taking

into account extreme cold. Third, I will comment on Florida Power & Light's proposed approach to the extreme winter peak and resource planning. And finally, just briefly on a demand response opportunity for extreme cold preparation.

So I have seen that from Virginia to Texas, and beyond, electricity loads can spike under extreme cold. And as was mentioned, rarely used electric resistance heating gets plugged in, pulled out of the attic and plugged in, and that can spike loads. And it's sort of surprising that we don't see that in the northern part of the country, because space heating is generally natural gas or oil based. So it's very much a southern phenomenon that you can get, under extreme cold, you can get these spikes.

And they tend to all have the same shape. I have seen is that same shape that I am showing here for Florida Power & Light. I have seen that in the Carolinas and in Alabama and Georgia, Southern Company, of a rather steep morning peak around 7:00, 8:00, 9:00 a.m., with the overlap of, I guess, residential and commercial heating, and then a lower and somewhat flatter evening peak. I am showing here FPL's highest six load days over the

2013 to 2021 period.

And of course forecasting how high those load spikes might go under extreme cold is challenging, because we just don't have very many recent examples of that extreme cold, so that makes it very challenging. And I will note that temperatures down in the teens or the single digits can also lead to cold related power plant outages.

So the next slide, a lot of talk about Texas February '21. Temperatures actually fell to the single digits for about 100 consecutive hours below freezing, and power plant outages over the two days averaged 49 percent of the Texas peak load. So a very large fraction of the capacity was out and some of those causes have been discussed.

Nobody was paying them to winterize, so a lot of the plants weren't winterized. And then, as was mentioned, you also had problems very reverberating back and forth between electricity and natural gas. So there were a lot of problems there, and I have an appendix slide that kind of lists some of the recommendations. But the main point is that lack of adequate installed capacity is really not considered one of the causes. It's more about that capacity not being available; nor is building more

installed capacity one of the many, many recommendations that came out of those events.

So that's pretty much what I wanted to say about Texas. A lot of discussion of Texas, but it's really not very applicable to what we are dealing with here.

So moving on to the standard practices in load forecasting and resource adequacy analysis. And I think probably a lot of you know this. But typically the capacity requirement is a peak load forecast plus a reserve margin. And we've seen that listed today.

Peak load forecasting, typically there is two key elements to it. One is a long-term 50-50, or P50, or median forecast, which has been accurately described as, you know, a forecast that, in the actual year, it's about equally likely that the actual peak will be greater than or less than the forecast. So typically that's the starting point, is a P50, or median forecast.

But then around that, a really important element is analysis of how high the peak load might be around that P50 forecast. And the typical approach is to gather a lot of historical weather data and to analyze how the extreme weather can

make loads rise, and then to come up with a full probabilistic representation of what the peak loads might be. That's the standard approach.

And then that probabilistic representation of peak loads goes into a probabilistic simulation of the system to determine the reserve margin over P50 that's needed to maintain an adequate level of capacity. And typically, the criterion is one day in 10 years is often applied. And this probabilistic will also represent the possibilities of power plant outages, which are probabilistic, and a lot of other assumptions, such as the amount of assistance that might be available from neighboring regions. Shared resources was mentioned earlier.

So that probabilistic simulation is a really key element of the analysis. Many assumptions go in there, of course, and stakeholders can disagree about those assumptions, but it's a key step, and it determines a reserve margin to meet a criterion.

So comments on FPL's proposal. They haven't followed the standard approach, as we've already discussed. They developed a recommended plan of extreme winter peak load forecast, which is shown in their Schedule 4, employing what I consider to

be a questionable methodology. And the value is, of course, very extreme, as we've seen. It's 43 percent above the business-as-usual.

And perhaps most important is they didn't perform the probabilistic simulation that I think is a critical step to figure out what is the reserve margin over business-as-usual P50 that is appropriate to meet an accepted, approved resource adequacy criterion like one day in 10 years. That step just has not been applied here. Instead, the extreme winter forecast is proposed as a capacity requirement.

And again, I think that probabilistic simulation adds a lot of value. It requires coming up with a probabilistic representation of how high the peak load could be, and that is challenging. But it also includes probabilistic representation of plant availability and possible outages. And outages can increase under extreme cold. There is typically a representation in there of how much assistance might be available from neighboring systems. And, you know, that's an important assumption that needs to be in there. And many other assumptions go into that probabilistic analysis. So that's what, in my opinion, is

completely missing here.

So FPL's extreme winter peak forecast touches briefly. It's already been noted that it's much higher than business-as-usual, so I don't need to belabor that point.

The estimate of extreme winter peak load, it's typical to use a regression approach. And I show in this graph a regression I did. I did not have the 2010 data. I don't have 2010 hourly data. I still don't have it, so I used 2013 to 2021.

And in doing this regression -- the point here is to understand how will additional extreme cold cause loads to continue to rise? That's the key question we are asking here.

So we have evidence on some recent events. Those blue dots are all recent events of how cold it got, and how load -- how high load went. But to extrapolate it to something like 1989, you need to extrapolate down to some temperatures that you just don't have any data points for.

So typically in doing these, the company used daily minimum temperature. I found that other measures have more explanatory power. For this graph, I found that a three-hour average had the most explanatory power for this dataset. They used

below 46 degrees. In other regions, I have used below 17 degrees. That wouldn't work here because there is no observations. But the regression really needs to focus on the low temperature end of the distribution, because that relationship between extreme cold and load does tend to change as the temperatures get lower.

What I have seen elsewhere is, at some point, pretty much all of the heating equipment is turned on, and if you get an additional degree, or two degrees, or three degrees, there isn't really too much more than can be turned on, so the impact on load tends to weaken. And then the other thing that happens in other places anecdotally -- I don't have any data on this, but certainly it happens anecdotally, which is that when you get this extreme cold, that some schools stay closed, and some other commercial establishments will decide to open late, because under that extreme cold, they won't have any customers. And that also will tend to suppress the impact of incremental cold on loads.

So a key step in the process is to estimate just how high loads will go under very extreme cold. And, again, it's challenging because we have

so few instances.

So to summarize my observations on the FPL approach, they haven't followed the standard practices. Their extreme winter forecast is based on what was a nontransparent methodology under Step 3 of the data request. I got some more information about it. We actually got their regression, and I was able to recreate the regression. I still don't have the 2010 hourly data, so how they grafted the '89 and the 2010 together, I don't have that, but it's, to me, a very ad hoc and questionable methodology.

And of course, the key thing is the usual probabilistic analysis simulation of resource adequacy that all utilities do, where you put in the probabilistic representation of loads, and resources, and outages, and everything, that has not been performed here at all. So that's the key thing.

And their proposal, which really is just one scenario, could potentially lead to the construction of unneeded one-day-in-30-year power plants and unnecessary cost to consumers.

So the other aspect of this is that those winter morning load spikes tend to be relatively

brief. The graph I showed earlier for Florida Power & Light, and in other regions, a very similar pattern. And that raises the question of the possibility, to me, of focusing on the demand side to deal with these.

And I don't know about Florida conditions, but certainly in other regions, the extreme cold, it does not catch you by surprise. In Texas, they had forecast more than a week in advance of the extreme cold that was coming. So typically, the extreme cold, really extreme cold that we are talking about here, when it's coming, you have days and days of advanced warning.

And in other regions, as I mentioned, you might have school closings, you might have other businesses close, so you might actually be able to approach a lot of your customers and get voluntary commitments from them, that if, you know, the forecast is for 29 in Miami, and they will say, 29 in Miami? 29 in Miami, that they would agree that they are going to, you know, hold their school closed, or keep their business closed. I mean, they might be willing to agree to something that they don't really think is very likely to occur, and you would probably give them an annual bill

discount for that, and probably also have to do some measurement and verification. But you might be able to really save that potential very rare load spike by voluntary commitments with your customers based on a trigger that's probably a temperature that won't concern them very much because it's so unlikely to occur.

So that concludes my presentation. I have four appendix slides. One with kind of the laundry list of NERC and FERC recommendations. Another is more detail forecasting. Another I am showing the 50-year history of minimum annual temperatures in Miami.

And this is my slide 15, just real briefly. It shows an upward trend in those minimum temperatures of about one degree every five or six years. And I have seen that in many other areas, that temperatures, those minimum extreme temperatures are trending upward at about one degree every five or six years. So 29 degrees in 1989, 30 years on, that's kind of 33 or 34 degrees if you take that trend seriously.

And then the last one is just pointing out that what's called extreme temperatures in Alabama and North Carolina, and even Dallas, Texas, is

temperatures in the single digits; whereas, you know, in Florida, you don't get that low.

So that's my presentation, and I would be very happy to answer any questions.

CHAIRMAN FAY: Great. Thank you, Mr. Wilson for your presentation.

We will start with the Commissioners. Any questions?

Seeing none, we will move to staff? Any questions to the presenter?

Mr. Wilson, I thought you did a good job with your presentation. I will just have to mention to you, as a Floridan, Ft. Myers is M-Y-E-R-S. It's a simple mistake that could occur for anybody, but I do, once again, appreciate your testimony today, or your presentation today.

With that, we will move on to the Office of Public Counsel. Mr. Rehwinkel, you are recognized.

MR. REHWINKEL: Thank you, Mr. Chairman and Commissioners. And I was born in Ft. Myers, and I still put that E in there sometimes.

CHAIRMAN FAY: Don't bail him out, Mr. Rehwinkel.

MR. WILSON: I think it was auto spellcheck.

MR. REHWINKEL: My name is Charlse Rehwinkel,

and I am the Deputy Public Counsel appearing here on behalf of the customers of the utilities here. The OPC thanks you for the opportunity to provide some remarks on this unusual review of the 2022 10-year site plans.

As you know, the OPC rarely participates in this process, and there is a reason for this, as the 10-year site plan process has been a relatively routine, objective, transparent and disciplined one that has been conducted according to established principles and expectations. This is important.

We understand the reason for this annual review process, and appreciate the benefits that are provided by an orderly resource planning process that is required by the Legislature and supervised by this commission. The Commission's review and oversight of the plans, and the plans themselves, should be objective and transparent. These principles give the entire process credibility and acceptance.

Your staff has a wealth of experience, and, thus, is able to advise you as to the suitability of these plans for evaluation -- for evaluating the prudence of the utilities' efforts to meet its generation and transmission needs and obligations.

Historically, this reliance on the staff's competence in the process has enabled the Public Counsel to advocate in the rate-making process comforted in the knowledge that the site planning process is in good hands. We still feel this way, Commissioners. Your staff today retains a tremendous wealth of experience, expertise and institutional knowledge.

So you might ask if all of this is true, why is the Public Counsel here today? There must be something different. Well, there is something new in the process, and it is one that today might look like a ripple, but it is actually the beginning of a tsunami, we fear.

You have heard about the proposal from one utility to deviate from the accepted normalized weather data load forecast approach that has served the process well. It is worth noting that only one of the utilities has made such a proposal.

Public Counsel is here now to ask you to reject this proposed deviation from the process. Don't rush, it has been 33 years since 1989, and there is no reason to hurry to some kind of judgment. If you believe a deeper dive is needed, you have the tools, the staff expertise and the

informal and formal process to learn more.

Commissioners, I would like to read you a passage from page 22 of your review of the 2021 review of the 10-year site plan filing from just seven months ago.

As previously discussed, Florida is normally a summer peaking state, and was for the past 10 years. This trend is anticipated to continue, with the next 10 forecasted years all anticipated to be summer peaking. Based upon current forecasts using normalized whether data, Florida's electric utilities anticipate a gradual increase in both summer and winter firm demand during the planning period.

Now, against this background, FPL has asked you to classify its recommended plan suitable for planning given the possibility -- possibility of extreme winter weather in the FPL service area. This request for you to greenlight this hypothetical winter peak demand came out of nowhere and historically inconsistent with the gradual growth assumptions that the Commission recognizes apply to load forecasting in Florida.

We have serious concerns about the proposed, abrupt and unsubstantiated hypothetical change to

the winter peak load forecast assumptions, and that is why we are here today. Frankly, Commissioners, we are concerned that this workshop is inadequate to fully address the matter if you are seriously considering approving this proposal.

Yes, you have received some good preliminary information in this early process. The fact that the Commission has taken the unusual step of holding this meeting within 60 days of the filing of the 10-year site plans is a good thing on the one hand, and we appreciate that the staff has sought to initiate an urgent early discussion, and has asked thoughtful questions here and in data requests; however, on the other hand, this preliminary look will, of course, not satisfy the requirement that the Commission perform the preliminary study required by Section 186.809 of Florida Statutes.

This workshop should not be a one-and-done process, to borrow a phrase from Kentucky basketball. Something more, maybe a lot more needs to happen before an informed decision can be rendered on this novel hypothesis of an usual winter storm revisiting Florida more than 33 years later.

To our knowledge, the fact that planning has, for many years, been presented to acknowledged by the Commission based on the conventional normalized weather data assumptions has served the state well, and made it unnecessary in past years to hold formal proceedings that invoke the due process provisions of the APA and require agency action in the form of a point of entry, expert testimony and final orders to be issued. This winter extreme weather proposal certainly appears to change that, and I am not sure that all parties to all dockets that could be affected by this proposal are on notice that this process could affect their substantial interests.

FPL has postulated a capacity shortfall for some undetermined time in the future based solely on the fact that 33 years ago there was some unusually cold weather that made its way into Florida, and even into South Florida. What is missing from the analysis in this year's plan is any reasonable evidence that such weather might reasonably be expected to occur in the future. This is problematic.

In the past 33 years, neither FPL nor any other utility has seen fit to apply this historical

event to its expansion plans, so why now? Well, the answer is there is no good evidence-based reason to change the process.

We recognize that in February 2021, hundreds of miles away in Texas, a winter storm, the likes of which has never hit Florida, negatively impacted the vastly different and far away Texas bulk electrical system and other energy supplies. That was a painful event for Texas, and our sympathies are with them. No one has connected the dots, however, between a unique, highly individualized isolated Texas regulatory construct the circumstances hundreds of miles away here in Florida where the state's reasonable load forecasting needs are met with your transparent, objective and thoughtful evidence-based integrated resource planning process.

There has been no evidence presented here or in the 10-year site plan that was filed demonstrating that it is reasonable to assume that Florida will experience this 1989 winter weather event again, or demonstrating that what Texas experienced in 1921 -- in 2021 means that Florida is expected to experience a repeat of something that happened 33 years ago. There just is no

evidence behind this 1989 notion.

This workshop process is not the place to adjudicate the future based on arcane testimony that is not before you today about changing weather patterns, global warming, climate change, and how warming temperatures might somehow bring colder weather to Florida.

We took the deposition of an FPL expert -- IRP expert last week, and he admitted that FPL did no studies of the probability of an extreme weather event. He also acknowledged that the term eventual that you see on page eight of the 10-year site plan they filed did not mean that FPL had determined that a repeat of 1989 will occur. This is significant.

In this plan, FPL has presented you, Commissioners, with a specter of rolling blackouts based on this purely hypothetical recurrence of a long ago event. This fear-evoking scenario would only be realistic if there was some evidence that the actual weather threat was real, and that evidence is not here.

The Winter Storm Uri events in Texas did cause the NERC and industry everywhere to evaluate capacity constraints, but nowhere in this call to

action were there -- was there an accompanying directive to assume that the weather in Texas meant that places hundreds of miles south and east of Texas should expect a new round of colder weather, or colder peak weather, or modify their planning assumptions. This evidence is just not here.

The leap of logic you are being asked to take is unwarranted. And the Public Counsel asks you to decline to accept FPL's proposed classification.

If anything, and only because they asked, we ask you to expressly reject the proposal to adopt the unrealistic and unsubstantiated effort to reach decades back in time to justify overbuilding of the generation and transmission system. At a minimum, Commissioners, you should indicate that this is not the proper forum for addressing FPL's request.

And before I close, I want to go off my script and just read a statement by somebody downtown said recently.

Given the United States has experienced its worst inflation in 40 years, and that consumers have seen steep increases in the price of gas and groceries, as well as escalating bills, the State of Florida should not contribute to this -- to the financial crunch that our citizens are

experiencing.

These are words to head. Greenlighting this proposal means that hundreds of millions of dollars in the form of investments will be spent. It will affect pending dockets now and future rates. And I would like to note that if it's approved for FPL, even though the other utilities didn't ask you to do it, they will also plan accordingly, and build accordingly.

So that will end my remarks, and I am happy to entertain any questions. Thank you.

CHAIRMAN FAY: Thank you, Mr. Rehwinkel. I know we added you a little bit late, so I don't know if anyone -- are there any questions? To staff, any questions? Nope.

Okay, with that, next I was going to go to Mr. Wright, and then we have a few for public comment. I want to make sure our court reporter, do you need a break for -- a couple minutes? Yeah. We are going to take just a quick five-minute break for our court reporter, and why don't we say we will start back right back at 3:50 with Mr. Wright and then a few public testimony.

Thank you.

(Brief recess.)

CHAIRMAN FAY: All right. Mr. Wright, I have you next, you are on my notes. If you can, just make to speak to the content of the workshop here today. Thank you so much.

MR. WRIGHT: I wouldn't consider doing anything else. Thank you, Mr. Chairman.

Most of you know me. I am Schef Wright. I have worked in the energy space in Florida since December of 1980, when I the started work for Governor Bob Graham's Governor's Energy Office. I continued my energy career here at the Florida Public Service Commission, where I worked for about seven years. As far as I put it, I got a nice break and got to go to law school. I have worked for private sector and public sector clients in the energy space and the utility space continuously since that time.

My comments today are my own; although, I may provide written comments on behalf of clients if I am allowed to do so after this workshop.

In brief, I would like to talk about the legal context of this workshop. The Commission is charged by Section 186.801 Florida Statutes with conducting a preliminary review of 10-year site plans, and classifying each plan as suitable or

unsuitable. The Commission's 10-year site plan rule includes the incorporated form PSC/ENG 043-E, which states that each 10-year site plan shall provide sufficient information to assure the Commission that an adequate and reliable supply the electricity at the lowest cost possible is planned for the state's electric needs. And that's a quote from your rule.

In the first instance, I submit to you that a 10-year site plan that does not include cost information for major power supply additions. In this context, generation and storage cannot be deemed suitable, and accordingly, neither FPL's nor Duke's 10-year site plans can be deemed suitable.

By my count, FPL has about 34 solar units in its plan, accounting for about 7,800, 7,900 megawatts that for which no cost information is given. And their battery -- their out-year battery additions in the 3,000 plus or minus megawatt range, likewise, have no cost addition -- cost information provided.

Duke has eight solar projects in its 10-year site plans in its Schedule 9s that have no cost information, and three battery additions that have no cost information.

I will observe that Tampa Electric's 10-year site plan does, indeed, include cost information for all of its proposed solar and battery additions in its 10-year site plan.

FPL's proposed switch in planning criterion is unnecessary to ensure reliable service. In prior years -- like I said, I have been doing this a long time -- in the 1980s and the 1990s, Florida and the Florida Public Service Commission and the utilities followed, as a general proposition, followed a planning criterion of one day in 10 years, a loss of load probability criterion of one day in 10 years, or 0.1 day or 2.4 hours of outage as the planning criterion.

Since the Commission, around the year 2000, I think it was '99 or 2000, it was around the time of the merchant power excursion, the Commission approved going to a reserve margin of 20 percent, LOLPs have become minuscule, and reliability, at least as far as power supply goes, leaving aside T&D issues, has been very, very high. The LOLPs are now offered magnitude less than 0.1.

Under FPL's plan, FPL would have 3,200 megawatts of battery storage, again, at unknown cost. My guess is using Tampa Electric's cost, or

some earlier FPL cost somewhere between three-and-a-half billion and $5 billion, that it may or may not be necessary. Certainly, there is no evidence, as Mr. Rehwinkel has eloquently pointed out, there is no evidence that the change in planning is justified on any evidentiary basis at all.

Allowing this change should only be permitted, if at all ever, after a full evidentiary vetting, a full proceeding to follow the prescription in your 10-year site plan rule, i.e., to assure that Florida's electricity supply is met at the lowest cost possible, investments of this magnitude must, at a minimum, be thoroughly vetted in evidentiary proceedings before commitments are made.

You need to know what you are getting and what you are being -- what customers are being asked to pay for it. I think FPL acknowledged that they haven't been approached by customers talking about this. I think it's a fair question. What would customers say about this? How much would this really cost? The revenue requirements associated with $4 billion of additional investment is a bunch of money. Spread that kind of -- convert that to revenue requirements, put it on a thousand kWh

bill, it's not chump change.

In summary, a full evidentiary evaluation of any change of this magnitude is necessary, and full evidentiary evaluations of expenditures, commitments of billions of billions -- billions and billions of dollars in revenue requirements terms of customer money must be done, in my view of the world, before commitments are made. Neither FPL's nor Duke's 10-year site plan can be deemed suitable.

I will submit written comments if I am given the opportunity to do so.

Thank you very much.

CHAIRMAN FAY: Great. Thank you, Mr. Wright.

And we will allow for, essentially, two weeks following this workshop for additional written comments to be submitted, so you will be able to do that.

MR. WRIGHT: Thank you.

CHAIRMAN FAY: Next, Commissioners, we will, assuming there are no questions for Mr. Wright, next we will move into the public comment portion of the workshop.

The first name I have here is Kim Ross, Executive Director of ReThink Energy Florida. If

you could, you can come up here to this chair right here near the computer, and then just make sure, Ms. Ross, that your green light is on in front of you so we can hear you. And I just will ask you to stay within the three-minute time period for public comment.

MS. ROSS: Absolutely. Thank you so much.

As you said, my name is Kim Ross. I am the Executive Director of ReThink Energy Florida. I am here to represent the thousands of rethinkers who are based in Florida Power & Light's territory, specifically in Brevard, Broward, Escambia, Walton and Miami-Dade Counties.

While FPL cites Texas as a reason to adopt an extreme winter peak demand load forecast in its 10-year site plan, I think the one thing that we can agree on this in this room is that Florida is not Texas.

During the Texas winter storm in 2021, temperatures dropped and stayed below freezing for five consecutive days, and some cities reported lows below zero. There was significant snowfall and ice accumulation; meanwhile, we get excited here in North Florida when we can see flurries for a few seconds. A lot of the problems in Texas

stemmed from several unplanned gas units being off-line, freeze related generation outages, which has already been pointed out.

Texas -- the Texas grid is set up as its own independent system. It's not connected to the western or eastern internet connection; therefore, the impact of the winter storm was felt more severely. What might have been shorter outages turned for some into six-day outages with skyrocketing costs after that.

FPL assumed in its forecast that the temperatures would go down to 27 degrees in Miami, a temperature not recorded since NOAA began keeping regular records in 1931. In 1989, according to NOAA, it went down briefly to 30 degrees. In 2010, according to NOAA, the low was a balmy 35 degrees.

FPL, as has been pointed out, has done no probability analysis, so it can't even answer if such an extreme winter weather event will occur in its service territory. That is no way to do resource planning.

What we do know is that FPL is proposing some $467 million in transmission and distribution improvements alone. The company also wants to keep gas units on-line that were supposed to be retired,

and another 700 megawatts of additional power capacity. These winterization plans will absolutely raise bills at a time when so many Floridians are struggling to make ends meet.

Didn't FPL just get an hefty increase for transmission and generation improvements? Florida families can't take any more bill impacts. Instead of laying groundwork for additional infrastructure, FPL should invest in energy efficiency and help families make their homes more efficient and secure, while helping lower bills for all customers as we reduce our reliance on fossil fuels.

FPL and the Florida Public Service Commission on this first day of hurricane season to continue -- to concern themselves with the storms that are coming in the form of hurricanes. To that end, for our state and its largest utility, it should be a much hire priority to lead on climate canning and reduce our carbon emissions. While this extreme winter event may never happen, hurricanes will get stronger and more frequent as a result of climate change.

Thank you very much.

CHAIRMAN FAY: Thank you.

Next Bradley Marshall. And you are with

Earthjustice. You are recognized, Mr. Marshall.

MR. MARSHALL: Thank you.

Good afternoon. Bradley Marshall with Earthjustice on behalf of Florida Rising and the Environmental Confederation of Southwest Florida addressing the FPL 10-year site plan.

The Commission has historically caveated its review and role in this process as, quote, not a binding plan of action for electric utilities. The Commission's classification of these plans as suitable or unsuitable does not constitute a finding or determination in docketed matters before the Commission. The Commission may address any concerns raised by a utility's 10-year site plan at a public hearing, end quote. In other words, findings made as to suitability are not precedential, the parties' substantial interests are not at stake in this proceeding.

If the Commission is going to try and change that approach to give a finding of suitability precedential weight, it needs to say so, so that parties know their substantial interests are at stake in this proceeding and proceed accordingly under Chapter 120.

Now on to the substance. What FPL has

proposed is not sensible utility planning. They would plan their system for an event which may or may not happen. No probability is assigned to that event. One reliability criteria that has been discussed is the loss of load probability criterion, i.e., the blackout risk. FPL uses a 0.1 per one year standard, or once every 10 years, but their best forecast for summer and winter peaks are their best forecast what they expect the coldest and hottest weather to be experienced will be, their lost of load probability currently stands at 0.000001 for once every million years. And it is worth noting that FPL's consistently over-forecasted their winter peak almost without exception, and often by quite a lot, usually by thousands of megawatts.

FPL would like to prepare their system for an event which we don't know if it will happen. It hasn't happened since 1989, which is a lot more than 10 years. To put that in context, I was two years old at the time. Based on the 10-year standard, which is a sensible and conservative standard, since it isn't something that is happening at least every 10 years, it isn't something that we should be planning to meet 100

percent load for.

And as to the January 2010 event, FPL exported hundreds of megawatts to Duke's predecessor during that event, met all its load, and still had some capacity left over.

We can keep allowing FPL to overbuild their system, which generates more profits for them and higher rates for the people of the state, but we have seen what happens as electric bills become unaffordable. People making hard choices as to whether to buy tell or medicine.

Enough is enough. A once every million years of loss of load probability is proof that FPL's system has become overbuilt. Incremental reliability improvements are worthless if people can't afford to be connected to the grid. If FPL's plan is adopted, costs will, no doubt, only go up as FPL finds the need to make ever increasing investments in gas to meet these hypothetical extreme winter peaks.

Please do not find FPL's recommended extreme winter plan suitable. Thank you.

CHAIRMAN FAY: Thank you, Mr. Marshall.

Next I have Natalia Brown.

Welcome, Ms. Brown. If you can hit that

button in front of you, you will see the light will turn green for you.

You are recognized.

MS. BROWN: Thank you.

Good afternoon. My name is Natalia Brown, and I serve as the Climate Justice Program Manager for Catalyst Miami. Our organization works with low wealth communities and communities of color to address the issues that are adversely impacting their lives. It focused primarily throughout Miami-Dade County.

Energy affordability is a significant concern for a lot of the residents that we work with, and that's why I am here today, to ask that you deem FPL's 10-year site plan unsuitable, particularly until measures are added to help reduce cost burden and to eliminate the winter peak proposals that would enable increased and unnecessary costs to customers.

Just last weekend, as I was listening to you all speak, I was thinking about some residents that I visited. Last weekend I visited a gentleman who lives in North Miami, and he has been caring for his grandmother. He was talking to me about energy and heat, and he was talking about how he has been

trying to stretch out prescriptions for himself and his grandmother, and creating new health risks that he really wasn't sure what was going to happen, but he was -- his main priority was just mitigating the immediate risk of disconnection or mounting on his existing utility debt.

Just weeks before, I spoke with a mother of three who was talking to me about a new job that she took on because of the rising cost of energy, now that we are approaching the summer months, and as bills are going up, and how that's pulling her even more away from the time that -- the little time that she is spending with her kids.

And I also thought about my own grandparents, who, at this stage in their life, can physically -- physically cannot be in a room that is uncomfortably hot, and so they've gotten to a point where, as a matter of dignity, they will sacrifice meals, several meals a week just to be able to make ends meet on their own for themselves.

And this pattern in their households is all too common. Those are just three examples. And people, when Floridians don't have access to affordable electricity, they start to make these tradeoffs. They are forced to make these

tradeoffs, between basic necessary expenses, childcare, groceries, medications. And there are a few things within the scope of this plan that I believe can be done to address energy affordability for my community, as well as so many other households across the state.

First, as has been discussed at length, you can reject FPL's irresponsible winter peak proposal. South Florida hasn't seen a snow flake since my mother was a toddler, literally, and I mean, let alone, considered the type of prolonged extreme cold events that have been described today.

In Miami-Dade, residents are experiencing nearly three times as many days over 90 degrees as were recorded 50 years ago. And that number is projected to more than double in the next three decades.

Year round, both temperature minimums and maximums are increasing based on our state's National Weather Service data. And extreme heat is increasingly affecting our ability to maintain habitable indoor spaces. That's the temperature extreme. It's really impacting our energy affordability and our energy access at the household level.

As we are in, the winter peak proposal is more likely to just impose added costs to customers and become relevant or be needed over the next 10 years. Maintaining that generating capacity will be the real cause for disconnections when customers can't make the payments to meet their energy needs.

CHAIRMAN FAY: Ms. Brown, I am going to let you go over your time, but I am going to need you to wrap it up.

MS. BROWN: Okay. I also just wanted to talk a little bit about the overreliance on gas, because at the household level, people realize that major resource changes really needs to be focused on shifting the means of generation to improve affordability. And we know that fossil fuels have been uneconomic and unsustainable for decades. And transitioning off of gas is an important way to mitigate the impacts of price volatility and the burdensome rate increases that come from that.

I also wanted to urge you to invest in energy efficiency. There is a lot that can be done. FPL is capturing less than one-tenth of one percent of the company's annual sales through energy efficiency, while we are seeing that other large utility companies, not as large but large, are

investing four or five times the amount, and generating much more meaningful savings for themselves as producers, and also for all of their customers to be able to meet their energy needs.

CHAIRMAN FAY: Ms. Brown, we have other speakers.

MS. BROWN: Uh-huh. Yeah.

CHAIRMAN FAY: I am going to need to go ahead and cut you off there. Thank you for your time today.

MS. BROWN: Thank you.

CHAIRMAN FAY: Next I have Christian Wagley.

Mr. Wagley, she left that light on there for you, so you are good to go.

MR. WAGLEY: Very good. Thank you.

Again, Christian Wagley, representing Healthy Gulf. We are a nonprofit organization that works on a range of energy, water and environmental issues along the Gulf Coast. On behalf of our members and supporters in Florida, we wish to comment on the FPL 10-year site plan.

And just a foundation of my comments I want to mention is that our organization advocates for what we call a just transition, which is that as we transition to renewable energy, that transition

needs to be fair and equitable for ratepayers.

I am also here as a resident of Pensacola and Northwest Florida to speak on behalf of the residents of Northwest Florida who are suffering tremendously under the rate increase from FPL that took effect in January. Many of them would be here today if the meeting weren't in the middle of the week.

I echo so many of the comments you have heard today about concern about the type of modeling that's been used, the extreme event that's been looked at, that doesn't seem to be scientifically valid or very likely to occur. It's also been well pointed out by multiple speakers that there are other ways of dealing with this, through efficiency, through conservation, through demand-side management if there are any issues with capacity.

Looking at the situation in Northwest Florida, and I think it's important to comment on the context of where I live. We -- income levels are lower in Northwest Florida, yet we pay the highest, or among the highest rates in the state right now, and have for some number of years. So when we look at something that's going to raise our rates, the

people can't handle this. And they have been very upset about this for months.

There are over 17,000 signatures on a petition to the Public Service Commission that's been sent to you that those signatures were collected in just the first couple months of the year, asking for a rehearing on the rate increase of what was approved last summer.

We have had dozens of people showing up at city council meetings, county commission meetings, I think we've had close to 10 jurisdictions in Northwest Florida that have signed a letter of support for a rehearing on that case. So we look at something like the recommended plan from FPL that would potentially -- it doesn't raise rates, obviously, but it would raise our bills, because those costs get passed on to ratepayers. And in fact, there is an incentive in the system for FPL to build more, right, because you can pass that cost plus profits on. And so in the end, we know that that would raise our bills at Northwest Florida. We simply can't handle that, especially when there are other options.

So on behalf of Healthy Gulf, on behalf of those thousands of ratepayers in Northwest Florida,

we ask you to reject that recommended plan.

Thank you very much.

CHAIRMAN FAY: Thank you, Mr. Wagley.

With that -- are there any other members of the public here to comment?

With that, I would like to thank all of our presenters and our speakers today.

Commissioners, unless there is anything else to add, that will conclude this workshop today, and we are adjourned. Thank you so much.

(Proceedings concluded.)

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 15th day of June, 2022.

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