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BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

In the Matter of:

DOCKET NO. UNDOCKETED

CUSTOMER-OWNED
RENEWABLE GENERATION.

_____ /

PROCEEDINGS: COMMISSION WORKSHOP

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

DATE: Thursday, September 17, 2020

TIME: Commenced: 9:30 a.m.
Concluded: 12:33 p.m.

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

REPORTED BY: ANDREA KOMARIDIS WRAY
Court Reporter

PREMIER REPORTING
114 W. 5TH AVENUE
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A P P E A R A N C E S

ANASTACIA PIRRELLO - Office of Public Counsel

TERRY DEASON - Florida Power and Light Company,
Gulf Power Company, and Tampa Electric Company

BILL ASHBURN - Florida Power and Light Company,
Gulf Power Company, Tampa Electric Company,
and Duke Energy Florida, LLC

LON HUBER and TAMARA WALDMANN - Duke Energy Florida, LLC

KATIE CHILES OTTENWELLER - Vote Solar

STEPHEN SMITH and BRYAN JACOB - Southern Alliance for
Clean Energy

JUSTIN HOYSRADT - Florida Solar Energy Industries
Association

TYSON GRINSTEAD - Sunrun

PSC STAFF:

ADRIA HARPER

SAMANTHA CIBULA

MATTHEW VOGEL

CAYCE HINTON

MARK FUTRELL

1 P R O C E E D I N G S

2 CHAIRMAN CLARK: All right. Good morning,
3 everyone. I think everybody is online. I think
4 we've tested -- like I said, we've tested the
5 system with all of our presenters, and everyone is
6 online and prepared to go this morning. We've
7 sound-checked all the Commissioners. So, we'll go
8 ahead and get started.

9 Before I call the meeting to order, just to
10 take a couple of housekeeping notes here and a
11 moment of personal privilege to just stop and thank
12 our -- all of our utility workers that are out
13 right now that are working to restore the
14 devastating effects of Hurricane Sally.

15 Our thoughts and prayers go with our friends
16 in South Alabama, Louisiana, also our colleagues in
17 Escambia County, Santa Rosa, Okaloosa, Walton, all
18 of the impacted counties in our immediate area, and
19 to just show our appreciation and thanks for the
20 devoted employees that are on the front lines
21 working to restore service.

22 I know Escambia County has -- about 90 percent
23 of the individuals that live in that county are
24 still without power this morning. You can rest
25 assured help is on the way. On my way over this

1 morning, I probably passed somewhere around three
2 to 400 utility trucks headed your way. So, the --
3 the cavalry is coming. So, rest assured they're on
4 the way.

5 But again, just our -- our thoughts and
6 prayers go with everyone that has been affected by
7 this storm. And just want everyone to know that
8 resources that are available are -- are on the way
9 to help you guys.

10 In terms of our workshop this morning, I just
11 want to lay out a couple of ground rules up front.
12 First of all, as an informational item, what we are
13 seeking here today is information. This is not a
14 decision-making workshop. This is -- we're not at
15 a point where we are fixing to do anything to
16 change current policy. It is a fact-finding
17 mission.

18 There's been a lot of discussion over the last
19 couple of months regarding what actually -- the
20 actual effects of our current net-metering policy
21 and the effects that the renewable energy that is
22 being produced in our state is having, the positive
23 impacts it is having.

24 And so, we wanted to take an opportunity to
25 explore where we are, exactly how it is impacting

1 our system, and take a look at -- at several
2 specific issues. And, at that point in time, if
3 the Commission feels there is a need to go further,
4 we may look at any changes that need to be made.

5 We -- Florida was a leader in net metering,
6 coming out with net-metering 1.0. I think that it
7 is certainly time to look and see if there are any
8 revisions that need to be made. It could be very
9 well determined this Commission has no desire to
10 change policy; this policy could be changed in a
11 number of ways and a number of ideas. And I think
12 that my intention is to make certain that we are
13 all dealing with the facts; that we are looking at
14 the same information when we do begin to make a
15 decision.

16 So, with that in mind, we're going to call the
17 workshop to order. And I'm going to ask staff, if
18 they would, to please read the notice.

19 MS. HARPER: Yes, good morning. I'm Adria
20 Harper with the General Counsel's Office.

21 Pursuant to notice, this time and place has
22 been set for a workshop to discuss customer-owned
23 renewable generation and net metering in Florida.
24 The topics set forth for discussion were in the
25 revised agenda, which is available on the

1 Commission's website.

2 Thank you.

3 CHAIRMAN CLARK: Okay. Thank you, Ms. Harper.

4 The Commission has laid out an agenda that we
5 are going to be going by today. And what we have
6 done is asked staff to prepare a presentation to
7 open with. And we're going to discuss the -- the
8 statute and the rule background. We're going to
9 look at the development of the customer-owned --
10 customer-owned renewable generation in Florida.

11 We're going to talk about interconnection
12 issues, system-capacity sizing, insurance
13 requirements, net metering -- specifically, how we
14 are dealing with excess energy that is being
15 produced -- and the components that actually make
16 up net metering.

17 To the extent possible, we're going to ask
18 that all of our presenters please avoid any
19 discussion regarding any open dockets that are
20 currently before the Commission.

21 I'm going to ask Mr. Helton -- Ms. Helton, if
22 she would, to please kind of keep an eye on that
23 for us and, at any point in time, if our staff
24 feels like we are crossing into an area that is
25 related to an open docket, we will redirect that

1 discussion.

2 We are also going to run up against a pretty
3 hard deadline for adjournment today. It is my
4 intention that we be concluded with this workshop
5 by noontime today. I think we have allowed an
6 adequate amount of time for all of the presenters
7 and for the Commissioners to address any issues,
8 concerns, and questions they might -- excuse me --
9 that they might have, but with that in mind, I do
10 want to try to wrap this hearing up by noon today
11 at the very latest. If we get through sooner, that
12 is perfectly fine as well.

13 We've had a couple of questions right up
14 front. I believe Commissioner Brown has requested
15 a point of personal privilege.

16 And you're recognized, Commissioner Brown.

17 COMMISSIONER BROWN: Thank you so much,
18 Mr. Chairman. I appreciate your opening comments
19 regarding what we're -- the purpose is here today
20 and appreciate also having this moment of personal
21 privilege for just some brief comments.

22 I also reiterate and express gratitude to our
23 state utilities who are helping each other restore
24 power during this -- what looks like a very active
25 hurricane season. And you know we are all much

1 more resilient together than we are alone. So,
2 thank you, utilities, in our state.

3 Secondly, I do feel compelled to just say a
4 few words kind of underscoring some of the comments
5 that you made earlier, before we proceed with
6 the -- the workshop at hand. I think there may
7 have been some public confusion when we set up this
8 workshop. Personally, my office has received over
9 2,600 e-mails. And I know the Clerk's office has
10 about 16,400 e-mails. Many of them are, however,
11 in fact, form e-mails, but some are not.

12 And the basic premise behind those e-mails,
13 about 99 percent of them, is to reject any changes
14 to our existing net-metering rule -- which, as you
15 stated clearly, Mr. Chairman, that is not what
16 we're doing here today.

17 This is very informational. The Commission
18 has not had an opportunity to really look at
19 this -- our rule since it was passed in 2009. This
20 is one of the hottest and most-prevalent and
21 relevant topics across the nation in the energy
22 arena.

23 So, I think that this -- it's very pertinent
24 to gather information as interconnections continue
25 to increase and grow and have it -- you know, the

1 appropriate information so that we can continue to
2 thrive in our state.

3 So, with that, I just wanted to make some
4 comments. We are reading those e-mails that are
5 coming in. And I know the other offices have
6 received some, too, and really appreciate the
7 public participation in this process. It's really
8 vital. So, thank you for your comments.

9 CHAIRMAN CLARK: Thank you, Commissioner
10 Brown.

11 Commissioners, any other opening comments?
12 Commissioner Polmann.

13 COMMISSIONER POLMANN: Thank you,
14 Mr. Chairman. And, to your first point, I also
15 want to recognize the situation up in the
16 Panhandle. We have personal friends there and --
17 and this is one of the first times that -- that
18 I've been aware that they've actually watched water
19 entering the utility system.

20 So, it's truly an extraordinary circumstance
21 and remarkable, the amount of damage there. And
22 the responsiveness of the utilities is -- is very
23 much appreciated.

24 To your -- to your second point, Mr. Chairman,
25 not only are we receiving e-mails, communications,

1 and contact through our office, I've been receiving
2 personal calls directly from friends and neighbors
3 very concerned about this issue, folks that are
4 contemplating installation of -- of solar power at
5 their homes, but calling specifically about today's
6 workshop and -- and asking, well, is the Commission
7 going to change its policy because of all the
8 attention to this matter.

9 And -- and if we could, Mr. Chairman -- not to
10 distract the proceedings, but I think there may be
11 some value here to make the distinction between
12 what -- what is being referred to as policy and, in
13 fact, how the net metering, as it was set up -- and
14 that was by rule.

15 And I'm concerned that maybe there's not a
16 clear understanding that, in order for us to do
17 anything, there would need to be a change in rule,
18 in agency rule. And that is a rather lengthy, very
19 deliberative process and would engage all of the
20 stakeholders.

21 And, as I said -- I'm sorry -- not to distract
22 us from that, but hopefully we'll touch on that
23 today and make it clear, through today's event
24 here, that, as you mentioned, we're not here to
25 make decisions; we're here to gather information.

1 But the rulemaking process is quite lengthy,
2 quite engaged. And I hope folks appreciate that we
3 take this very, very seriously. And nothing is
4 going to be done without complete and total
5 engagement from the public and the parties.

6 Thank you, Mr. Chairman. I appreciate the
7 opportunity.

8 CHAIRMAN CLARK: Thank you, Commissioner
9 Polmann. And to add to that, just to reiterate, I
10 think that point has been made perfectly clear, but
11 we would -- if there was a decision to make any
12 type of change, it would go through the rulemaking
13 process.

14 Based on the calendar that we currently have
15 and the statutory requirements for rulemaking,
16 there could not be a decision, based on our timing
17 right now, for at least a year. We would be
18 looking at -- at pretty much a year before we could
19 actually get to that -- to that point in time,
20 primarily because of the statutory requirements for
21 rule change and fitting those into a -- what is
22 looking like a very busy first quarter of 2021 with
23 the number of open dockets that we have.

24 So, this is not something that is immediate.
25 Again, I don't know how many times we can reiterate

1 it is strictly a fact-finding workshop for today.

2 Okay. Other questions, comments from any
3 Commissioners before we begin? All right. Seeing
4 none, we will move along.

5 At this time, we're going to hear from our
6 first presenter, Mr. Matt Vogel, with Commission
7 staff from the Office of Industry, Development, and
8 Market Analysis.

9 Mr. Vogel, are you the line?

10 MR. VOGEL: Yes, sir, I am.

11 CHAIRMAN CLARK: All right. Thank you.

12 MR. VOGEL: Good morning.

13 CHAIRMAN CLARK: Good morning.

14 MR. VOGEL: All right. We'll start today --
15 good morning, Commissioners and parties. My name
16 is Matthew Vogel with Commission staff. This
17 morning, I will be reviewing the history of
18 Florida's interconnection and net-metering rules
19 and statutes, and then I'll review the structure
20 and function of the current rule.

21 If you move to the -- the next slide in the
22 presentation, Slide 2, I'd like to start by
23 reminding everyone about a few key points about
24 customer-owned renewable generation. These
25 behind-the-meter technologies act as a conservation

1 measure, no different than any other measure that
2 can affect customers' load.

3 These systems are not generators that sell
4 energy to the utility at a wholesale. Any energy
5 generated from a customer-owned renewable-
6 generation system is first used by the customer at
7 their premises to meet their energy needs.

8 If the customer needs additional energy, that
9 energy is provided by their utility. Now, if the
10 customer does not exceed energy generated by their
11 system, that energy flows back to the utility and
12 is measured by the meter.

13 This energy is accounted for and reflected on
14 the bill, per the net-metering policy established
15 by Commission rules or by the policy established by
16 a municipal electric utility or a rural electric
17 co-op. There is no sale of electricity. Net
18 metering is only a billing function for the excess
19 energy.

20 If we move to the next slide, we'll get into
21 the history of the rules and statutes. So, 2002,
22 the Commission adopted Rule 25-6.065, which
23 expedited the interconnection of small-solar-
24 photovoltaic, or PV, systems up to 10 kilowatts.

25 A few years later, in 2005 and 2006, the

1 Florida Legislature enacted Sections 366.91 and
2 366.92, respectively, which established the intent
3 and policy to encourage renewable energy in
4 Florida.

5 In January of 2007, the Commission held a
6 workshop to explore opportunities for the
7 development of renewable energy in Florida. The
8 Commission collected information from a wide range
9 of interested parties and, through that process,
10 the Commission identified expedited interconnection
11 and net-metering customer renewables as a potential
12 method to encourage that renewable-energy
13 deployment.

14 In April of that same year, staff conducted
15 workshops to gather further information to
16 determine whether the small-PV rule should be
17 expanded to include these -- these changes.

18 Following the April workshop, staff drafted a
19 rule that addressed both the interconnection and
20 net metering of customer-owned renewable
21 generators. Staff conducted two rule-development
22 workshops and reviewed comments from a wide variety
23 of stakeholders during the remainder of the year.

24 The Commission addressed the rule in December
25 of that year, resulting in further revisions and,

1 at the end of the process, the Commission adopted
2 Rule 25-6.065 in March of 2008, completely
3 replacing the small-PV rule.

4 If we move on to the next slide, in 2008, the
5 Florida Legislature amended Rule 366.91 to include
6 requirements for interconnection and net-metering
7 customer-owned renewables for investor-owned
8 utilities as well as municipal electric utilities
9 and rural electric co-ops.

10 I do just want to highlight a few definitions
11 that were pretty meaningful to the rule. The first
12 is customer-owned renewable generation, which is an
13 electric-generating system located on a customer's
14 premises that is primarily intended to offset part
15 or all of the customers' electrical requirements
16 with renewable energy.

17 The second definition is net metering, itself,
18 which is a metering or billing methodology whereby
19 customer-owned renewable generation is allowed to
20 offset customers' electricity consumption on-site.

21 And lastly, just some information, the
22 Legislature gives the Commission the authority to
23 establish requirements relating to the expedited
24 interconnection and net metering of customer-owned
25 renewable generation by public utilities or

1 investor-owned utilities, and may adopt rules to
2 administer this section. That's why this is here
3 in front of us at the Commission.

4 If you move to the next slide, this is --
5 these next few slides are really just a breakdown
6 of how the rule is structured, but we'll go through
7 this pretty quickly. One idea that I would like to
8 highlight is that renewable energy is not limited
9 solely to solar PV. Renewable energy can be in the
10 form of biomass, geothermal, wind, hydroelectric,
11 hydrogen not from a fossil fuel. There's --
12 there's many different forms of renewable energy
13 that can be net metered.

14 If we move on, the next slide is just, again,
15 more -- more structure of the rule. So, if we move
16 to the next slide, we're going to get into the
17 rule, itself, and highlight some -- some areas that
18 staff found pretty notable.

19 The first is the standard interconnection-
20 agreement section of the rule. Within the standard
21 interconnection-agreement section are the
22 engineering standards. The IEEE 1547 standards
23 have recently been updated to include standards for
24 smart-meter and smart-grid technologies.

25 Staff would just like to note this -- this

1 point, that those have been updated. It doesn't
2 mean that these -- these rules are obsolete; it
3 just includes smart-meter technology and the smart-
4 grid technology.

5 The next would be -- the next section of this
6 would be customer qualifications and fees. Staff
7 would like to highlight the Gross Power Rating
8 sizing requirement as a topic of note. A renewable
9 system's GPR, or Gross Power Rating, must not
10 exceed 90 percent of the customer's utility-
11 distribution-service rating, which is basically the
12 capacity of the grid at the connection point. This
13 is also a topic of note for staff.

14 Next, I'll get into the customer tiers. I do
15 have the qual- -- qualifications for the tiers
16 listed below, but the next three slides will get
17 into more detail on each tier.

18 So, if we want to move to the next slide --
19 okay. So, Tier 1 systems are systems with a
20 generating capacity of 10 kil- -- 10 kilowatts or
21 less. There's no application fee, there's no
22 interconnection-study requirement, there's no
23 insurance requirement, and there's no manual-
24 disconnect-switch requirement. These systems were
25 also a part of original small-PV rule.

1 If we move on to the next section -- all
2 right. So, Tier 2 systems are systems with a
3 generating capacity greater than 10 kilowatts, but
4 less than or equal to 100 kilowatts. And, now,
5 there can be an application fee if the utility gets
6 one approved by the Commission. And I believe all
7 of the investor-owned utilities do have these fees.

8 There's no interconnection-study requirement
9 for this tier. There is an insurance requirement
10 for this system of no more than \$1 million. And
11 these systems are required to have a manual-
12 disconnect switch that's installed at the
13 customer's cost.

14 If we move on to the next tier, Tier 3 systems
15 are systems with a generating capacity of greater
16 than a hundred kilowatts, but less than or equal to
17 2 megawatts, which is actually the maximum allowed
18 for net metering in Florida. There is an
19 application fee.

20 There is potentially an interconnection study.
21 It may be required and, if it is, an
22 interconnection-study charge may be applied, if
23 that charge is approved by the Commission.

24 There is an insurance requirement, and it's
25 actually double from the Tier 2. It's no more than

1 \$2 million for Tier 3 systems. And these systems
2 are required to have a manual-disconnect switch,
3 installed at the customer's cost, as well.

4 COMMISSIONER BROWN: Matt?

5 MR. VOGEL: Yes, ma'am.

6 COMMISSIONER BROWN: If you don't mind me
7 interrupting you -- Mr. Chairman -- when was the
8 last time the Commission was actually presented
9 with the -- the Tier 3 and -- what type of fee are
10 we talking about here?

11 MR. VOGEL: Actually, I don't know of -- of a
12 system that large. Maybe one of the IOUs would
13 know of one.

14 When we do the net-metering rules every year
15 and we update the numbers, they don't -- they don't
16 usually order them by size. And it's -- it's not
17 something that -- that comes up too often. That's
18 a -- that's a pretty large system. They are
19 probably becoming more common, though.

20 I believe that charge, that interconnection-
21 study charge, is a charge that is approved
22 beforehand. I believe that's the case, so --

23 COMMISSIONER BROWN: Thank you.

24 MR. VOGEL: Yes, ma'am.

25 If we move on to the next slide, we'll get

1 into the actual net-metering policy. Okay. So,
2 this is the policy and the rule. First, utilities
3 shall install a bidirectional meter at no cost to
4 the customer. That's the first section.

5 If we move to the next, each month, the
6 customer's bill is determined by netting energy
7 taken off the grid with energy delivered to the
8 grid. So, I have an example here. If the customer
9 produces two kilowatt hours of energy, but uses
10 three kilowatt hours of energy, their bill is
11 determined using that net one kilowatt hour of
12 usage.

13 And the next example, excess customer
14 generation at the end of the month is carried over
15 as a kilowatt-hour credit on the next month's bill.
16 So, if the customer produces three kilowatt hours
17 of energy, but only uses two kilowatt hours of
18 energy, their one kilowatt of excess energy is sent
19 to the grid and will become a credit that is rolled
20 over into the next month's bill.

21 And at the end of each calendar year, the
22 utility shall pay the customer for any remaining
23 excess energy credits at the utility's COG-1 tariff
24 rate or as available energy rate.

25 So, those -- those are the examples of net

1 metering. You can create more energy and you'll
2 have a credit that rolls over. If you create less,
3 your bill is determined by that netted amount.

4 If we move on to the next slide, this is just
5 a map from DSIRE. This was from 2016. This is
6 their most-recent map that we could find, but it
7 shows the general net-excess-generation policies
8 for each state. So, if you do have an excess that
9 rolls over to the next -- to the next month, this
10 is how each state handles that, that excess.

11 As you can see, Florida's IOU's are required
12 by the Commission's rule to provide a kilowatt-hour
13 credit for excess generation, but the credit does
14 eventually expire and is paid at a wholesale rate.
15 This is the most-common practice in the U.S. during
16 this time. Now, some states have updated their
17 net-metering policies, but they're few and far
18 between.

19 Also, I'd like to note that municipal electric
20 utilities and rural electric co-ops are permitted
21 by Florida Law to establish their own net-metering
22 policies that may differ from the Commission's
23 rule, but most do follow the Commission's rule.

24 If we move to the next side -- okay. This
25 chart -- and this is the last slide. This chart

1 shows the number of renewable-generation systems
2 and the total kilowatt-generating capacity of those
3 systems since the amended rule took effect in 2008.
4 As you can see, adoption was -- was slow at first,
5 but, over the last three years, Florida has seen
6 over 50-percent increases each year.

7 And that concludes staff's presentation.
8 Thank you, all.

9 CHAIRMAN CLARK: All right. Thank you,
10 Mr. Vogel.

11 Any questions for Mr. Vogel from our
12 Commissioners?

13 Commissioner Graham.

14 COMMISSIONER GRAHAM: Thank you, Mr. Chairman.
15 Mr. Vogel, how are you this morning?

16 MR. VOGEL: I'm pretty good. How are you,
17 Mr. -- Commissioner Graham?

18 COMMISSIONER GRAHAM: Good. Back to your
19 tiers, Tier 1, Tier 2, and Tier 3, my understanding
20 when that was passed, that Tier 1 was basically --
21 the 10 kilowatts was the -- the average household
22 wouldn't go over that tier, that -- that 10
23 kilowatts. So, they wanted to make sure that all
24 the extra fees and burden weren't putting on that
25 single-family home that wanted to put a solar array

1 up on their roof; is that correct?

2 MR. VOGEL: That was the idea. At that time,
3 kilowatt was around the average in Florida. So,
4 because it was part of the old rule and they
5 figured that was around the average, they didn't
6 want to limit the average household from being able
7 to put that up. They didn't want to have a fee or
8 an insurance requirement, some type of -- some type
9 of barrier for that -- that solar system.

10 COMMISSIONER GRAHAM: Now, is there any
11 consideration to upping that; like, the Tier 1,
12 from the 10 kilowatts to, like, 15 kilowatts?
13 Because, back in '02 or 2000, when this was even
14 being considered, that's back before everybody had
15 the EV cars -- and we just had this presentation on
16 Tuesday talking about EV cars.

17 So, you would think that -- and I don't know
18 the strain that it puts on the system and the risk
19 that's tied to that put on the system, but I would
20 think that number should go to maybe 15 kilowatts
21 to 20 kilowatts.

22 MR. VOGEL: Actually, I believe one of the
23 presenters later will have a little more
24 information on that. I know, from my own research,
25 EVs put around -- from what I've found -- around

1 2,500 watts, or two and a half kilowatts. So, if
2 you were to have one EV, it would add, you know,
3 two and a half kilowatts to your system.

4 The average household does use more energy now
5 as well. So, with that number increasing and
6 potentially, you know, the expansion of EVs in
7 Florida, that would -- that would potentially be
8 something to -- to look at.

9 I know, when the rule was first put into
10 place, there was a lot of discussion on that size,
11 the 10 kilowatts and the Tier 2 hundred kilowatts.
12 That was -- there were different opinions: maybe it
13 should be 25 to 250, maybe it should be ten to a
14 hundred, but -- the rule was set at 10 and 100 for
15 those systems.

16 COMMISSIONER GRAHAM: Now, would it be
17 necessary to go -- to start and go through
18 rulemaking just to change -- to tweak the -- the
19 tier levels?

20 MR. VOGEL: That -- that's -- I think that
21 would be -- if -- a Commissioner's decision. If --
22 if you found it was necessary to increase those
23 levels, that would be definitely an item to -- to
24 look at.

25 CHAIRMAN CLARK: Commissioner Graham --

1 COMMISSIONER GRAHAM: Would -- would --

2 CHAIRMAN CLARK: -- Ms. Harp- -- Ms. Harper is
3 going to answer that question for us immediately.

4 MS. HARPER: Yes, we'd have to go to
5 rulemaking for that.

6 COMMISSIONER GRAHAM: Okay. That's my
7 question. Thank you.

8 CHAIRMAN CLARK: Mr. Vogel, I have a couple of
9 questions -- thank you, Commissioner Graham.

10 In relation to Commissioner Graham's line of
11 questions regarding the insurance requirements, the
12 difference between Tier 1 and Tier 2, two specific
13 questions. What is the purpose of us requiring
14 insurance on a system that is 11 kW as opposed to a
15 system that is 10 kW? What's the difference? What
16 does the insurance serve -- what purpose does the
17 insurance serve?

18 MR. VOGEL: At the time that the rule was
19 developed, there wasn't a lot known about net
20 metering and solar systems at the time. Different
21 states had different policies. Some required
22 insurance; some didn't.

23 It was -- basically, the 10 kW was set at --
24 as the average household and they didn't want to
25 have a burden of insurance. And there was found

1 that there really wasn't much risk in having a
2 10-kW system put onto the grid.

3 Now, the fact that an 11-kW system does
4 require insurance and a 10-kW system doesn't, it's
5 simply the marginal -- the marginal customer --
6 that marginal amount of energy puts you in the
7 higher tier; therefore, you do require insurance.

8 CHAIRMAN CLARK: So, what specific risk is our
9 insurance covering in this case? And what --
10 what's the -- Mark, would you like to address that?

11 MR. FUTRELL: Mr. Chairman, this is Mark
12 Futrell with the staff. Let me just add on to
13 Matt's comments, is that, at the time, the
14 discussion and the Commission's decision-making and
15 the rule to set that 10-kilowatt level was that, at
16 that level and below was going to catch your,
17 primarily, residential systems.

18 And the thinking was that homeowners'
19 insurance policies would be adequate to cover the
20 risks of potential liability that would extend from
21 anything that might happen with a -- with a solar
22 system and that, beyond that, you're looking at
23 systems, at the time, that were probably going to
24 be more commercial institutions, things like that,
25 that would have additional risk -- may not have

1 necessarily have the types of insurance that
2 homeowners would have.

3 And so, there was a -- it was -- it was a --
4 just a -- you're right, electrically, there's not a
5 lot of difference between 10 and 11, but as Matt
6 said, it was -- we were trying to strike a balance,
7 at the time, what was thought to be primarily
8 residential systems.

9 As everybody knows, as time has gone on, the
10 economics of solar has changed and many residential
11 folks are putting in larger systems or would like
12 to put in larger systems.

13 CHAIRMAN CLARK: Okay. So, more specifically,
14 what I am -- the answer I am looking for is what
15 liability does the insurance cover? What is the
16 inherent risk of the system that changes between a
17 9-kW system and an 11-kW system? Is there one?

18 MR. FUTRELL: I don't believe there is,
19 electrically, as far as the potential risk to --
20 for example, any kind of back-feed that could go
21 back onto the system and potentially injure a -- a
22 line worker.

23 CHAIRMAN CLARK: And -- and that also leads to
24 my second question regarding a manual disconnect.
25 Is there a reason, from an engineering perspective,

1 that you would not require a manual disconnect on
2 the 9-kW system as opposed to an 11-?

3 MR. FUTRELL: If Matt would like to take that
4 one, I --

5 MR. VOGEL: If --

6 (Simultaneous speakers.)

7 MR. FUTRELL: I think he's maybe ready to
8 speak to that one --

9 MR. VOGEL: Yeah, in 2008 -- actually, when
10 they created the rule, they had an expert come in
11 who was working in New Mexico who actually did a
12 lot of studies with systems. And he actually found
13 that anything below a 250-kilowatt system really
14 had no harm to the grid. It really couldn't affect
15 the grid in a way that you would require insurance.
16 So, there were people who were saying you didn't
17 need insurance up until that point.

18 We decided to -- to go ahead and just make
19 Tier -- Tier 2 the -- the 100-kilowatt systems or
20 10 to 100 kilowatts so we did require insurance,
21 but there have been studies that show there really
22 isn't much risk up to a certain point with these
23 systems.

24 And, as times have gone on, there's a lot more
25 evidence showing that there -- there really isn't

1 much risk to the grid when you have a smaller
2 system, whether it be a 9-, 10-, 11-, 25-kilowatt
3 system.

4 MR. FUTRELL: Mr. Chairman --

5 CHAIRMAN CLARK: Mr. Futrell.

6 MR. FUTRELL: If I may add on to --

7 CHAIRMAN CLARK: Please.

8 MR. FUTRELL: -- Mr. Vogel's comments -- and
9 Mr. Hinton may wish to speak up, too, just to fill
10 in the -- the gaps.

11 At the time of the discussion on the rule,
12 there was also information about the -- the
13 inverters that are part of the system would -- for
14 these small systems, would be able to island the
15 solar system in an event the electric utility
16 system was de-energized for any reason, and that
17 that would allow for another level of protection
18 and -- and limit the risk of back-feed, such that a
19 disconnect switch not required.

20 CHAIRMAN CLARK: Thank you. That's -- that
21 was more the answer I was looking for. So, we know
22 for a fact that all inverters that are installed on
23 10-kW systems or less have the ability to isolate
24 the system and pull it off the grid.

25 MR. FUTRELL: That was our understanding when

1 the rule was developed. I think this is a good
2 opportunity, in this workshop setting, to hear from
3 some of these experts that are -- that you've got
4 coming up to, perhaps, address those questions --

5 CHAIRMAN CLARK: Okay.

6 MR. FUTRELL: -- with more-current
7 information.

8 CHAIRMAN CLARK: Great. Great point. Thank
9 you, Mr. Futrell.

10 All right. Any other questions for Mr. Vogel?
11 Commissioner Brown.

12 COMMISSIONER BROWN: Thank you.

13 And thank you, Matt. You're always a great
14 resource to the Commission. So, appreciate all the
15 work you -- you do all the time.

16 Looking at your Slide 13, though, customer-
17 owned renewable-energy generation -- it -- it does
18 kind of capture the entire state of Florida rather
19 than just the IOUs that we directly regulate, which
20 is about 45,000 interconnections from looking at
21 the 2019 interconnection report that we have,
22 right?

23 MR. VOGEL: Yes. Yes, ma'am, that is correct.

24 COMMISSIONER BROWN: So, I'm curious about the
25 rule. Does the rule -- like -- like DSM, requiring

1 audits and -- and providing that information to
2 customers -- does the rule -- does the rule require
3 the utility and the IOUs to provide information
4 about our net-metering policy?

5 MR. VOGEL: The only requirement is a -- an
6 annual -- this is how many systems are connected,
7 these are the size of the systems -- basically
8 everything in that net-metering rule -- that
9 net- -- net-metering annual report that we do --
10 that's the only required information.

11 There isn't a required information from the
12 utilities based on their level of cost or -- or
13 any -- anything like that. It's simply how many
14 systems, this is how much we paid to them, this is
15 how much energy was transferred, and -- and that --
16 that type of information.

17 COMMISSIONER BROWN: Or required advertising.
18 I -- I was -- I was a little surprised -- you know,
19 I know we get these annual reports, these net-
20 metering reports, but it's very interesting, if you
21 look at our most-recent 2019 report and look at
22 IOUs and the munis and there -- there's a muni that
23 is as much as Gulf Power.

24 And, for example, you know, Duke Energy seems
25 to have the most interconnection. It's just

1 interesting to see how I would think that we would
2 have -- there's such a flavor and an appetite for
3 solar, just -- it -- it's really quite modest, if
4 you look at just the data, quite frankly.

5 So, I would be interested in seeing how the
6 utilities really promote the solar net-metering
7 policy that we have in place. Regardless of -- of
8 our current policy or whatever, I think it's very
9 important for the utilities to promote this type of
10 initiative.

11 CHAIRMAN CLARK: All right. Thank you,
12 Commissioner Brown.

13 All right. Any other questions for Mr. Vogel
14 before we move to our next presentation? All
15 right. Thank you.

16 All right. Thank you, Mr. Vogel. Greatly
17 appreciated this morning. And just hang in there;
18 we're probably going to have some more questions
19 for you later.

20 Next up, we're going to have some comments by
21 Office of Public Counsel, Anastacia Pirrello.

22 Anastacia, are you here? Thank you. There
23 you are. You're recognized.

24 MS. PIRRELLO: Thank you. Good morning,
25 Commissioners. My name is Anastacia Pirrello and

1 I'm here to deliver comments on behalf of the
2 Office of Public Counsel.

3 The Office of Public Counsel fully supports
4 the expansion of solar generation in Florida, which
5 is why we entered into settlement agreements in
6 2016 and 2017, which authorized Duke and FPL to
7 build 175 and 300 megawatts of new solar generation
8 each year and effectively jump-started solar
9 generation in Florida.

10 Today, these agreements resulted in the
11 installation of over 2,500 megawatts of new solar
12 generation. Settlements also authorized each
13 company to engage in a battery-storage pilot
14 program to establish 50 megawatts of battery
15 storage, which will increase the efficiency of
16 solar generation.

17 The OPC believes that solar generation is an
18 important part of expanding portfolio of generation
19 sources across the state of Florida and recognizes
20 the need to diversify energy sources and reduce
21 greenhouse-gas emissions; however, OPC feels -- the
22 utilities feel solar, alone, is not able to meet
23 the needs of Floridians now or in the future.

24 Utility-scale solar installations of
25 1 megawatt require about four acres of land for the

1 panels and the supporting equipment. The TIA solar
2 installation in Tampa is 1 megawatt and is able to
3 power about 175 homes per year.

4 Even though the 2019-census estimates for
5 Florida suggests about 9.6 million households in
6 the state, we would need over 221,000 acres of
7 solar installation to power every Florida household
8 for one year.

9 We also need to recognize that utility-scale
10 solar installations of this nature can destruct
11 local eco-systems and cause the removal of hundreds
12 of acres of land from agricultural and other
13 productive uses because, unlike other sources of
14 renewable generation, such as wind, solar panels
15 are not able to co-exist with other land.

16 Therefore, OPC believes the expansion of
17 solar -- rooftop solar is an equally-important task
18 to promote green energy for our state. Rooftop
19 solar puts otherwise-empty rooftops to use without
20 requiring the additional destruction of trees,
21 habitats, or displacement of wildlife.

22 Furthermore, analysis from the Brookings
23 Institute and a number of states indicates that
24 rooftop solar is a net benefit to ratepayers and
25 does not impose significant net costs on ratepayers

1 who are not net metering their systems.

2 A study from the Nevada Public Utility
3 Commission concluded that net metering resulted in
4 a benefit and cost savings of \$36 million to all
5 Nevada energy customers, and estimates suggest a
6 benefit of over \$166 million over the lifetime of
7 these solar systems.

8 Given the constantly-increasing need for
9 energy in our state and the environmental impacts
10 associated with the utility-scale solar, OPC
11 believes that supporting the existence of the net-
12 metering rule that promotes rooftop solar is
13 important, and we do not think that a change to the
14 rule is necessary at this time, but we look forward
15 to hearing and considering the comments and
16 concerns of the other interested parties.

17 Thank you.

18 CHAIRMAN CLARK: Okay. Thank you very much.

19 Any questions for OPC? All right. Thank you.

20 All right. Next, we're going to move on to
21 additional presentations by particular stakeholder
22 groups. We're going to begin with the IOUs. I
23 would also note that the IOUs have folks on the
24 phone that are available to assist in answering
25 questions that may come up. I would ask that, if

1 you do plan to answer a question, please identify
2 yourself prior to making any comments. Please be
3 recognized.

4 We have, I believe -- one, two, three, four
5 five, six -- seven presentations. I would like to
6 try to hold each one of those to right around ten
7 minutes for a presentation and the Q & A, if we can
8 kind of keep that in -- in our -- our goal of being
9 around ten minutes for -- for the presentation and
10 the Q & A period.

11 So, with that said, Mr. Deason, you're
12 recognized this morning, representing Florida
13 Power & Light, Gulf Power, and TECO. Thank you for
14 being with us this morning.

15 MR. DEASON: Thank you, Mr. Chairman. It's a
16 good opportunity and I appreciate the opportunity.

17 Let me say at the beginning that this type of
18 meeting is new for an old-school fellow like myself
19 and this technology, but I -- I am learning. If I
20 do something improperly, some- -- I hope someone
21 corrects me.

22 I want to make it clear that I'm making a
23 presentation today on behalf of FPL, TECO, and
24 Gulf. And the information I provide is publicly
25 available or is derived from publicly-available

1 information. And I'm happy to answer questions
2 during the presentation or following.

3 And if the Chairman thinks it's helpful, I
4 would be happy to provide the presentation in a
5 written form after the fact.

6 CHAIRMAN CLARK: Yes, please. We would
7 appreciate that.

8 MR. DEASON: Okay. Thank you.

9 Staff did a wonderful job providing the
10 history of the rule and the background of the rule,
11 so I certainly won't try to recite that.

12 Let me state that, since the rule has been
13 adopted, solar has come a long way in Florida. I
14 think Florida should be proud of the
15 accomplishments that it has made both in terms of
16 customer-owned solar or renewable energy, as well
17 as the utilities and their willingness to em- -- to
18 deploy a utility-scale renewable generation.

19 When solar was in its infancy, back when the
20 rule was adopted, rooftop solar systems were
21 significantly more expensive than they are today.
22 And the Commission rightfully determined that it
23 could help jump-start this technology by requiring
24 utilities to provide a retail credit as an
25 incentive to deploy these systems.

1 A lot of things have changed since then.
2 Residential solar is -- it now costs about half of
3 what it did in 2008. And that's a wonderful thing,
4 and it helps lots of -- lots of people; however,
5 there is a challenge presented.

6 And the challenge present- -- that is
7 presented is that customers who don't have rooftop
8 solar are paying more than their fair share of the
9 fixed costs required to provide service to
10 customers, including generation, transmission, and
11 distribution.

12 When there were only a handful of these
13 customers, the cost shift or cost subsidization was
14 very small, but we see that that is no longer the
15 case and, as the rooftop systems continue to grow,
16 that cross-subsidy only continues to grow.

17 I want to also reiterate that to promote
18 rooftop solar does not mean that there has to be a
19 subsidy. It is a tool and it does result in more
20 rooftop solar, but there's a question as to whether
21 that needs to continue.

22 As Mr. Vogel indicated in his presentation
23 there are now about 60,000 net-metering customers.
24 And that is as of June 2020. And from 2008 to June
25 of 2020, that represents about a 55-percent

1 compound annual growth rate, which is quite
2 remarkable.

3 And then -- but that growth rate seems to be
4 only accelerating. In the three years between 2013
5 and 2016, it grew at an average rate of 34 percent,
6 but between 2016 and 2019, the latest period, it
7 grew at 58 percent.

8 In just the first six months of this year, we
9 see that acceleration continuing. FPL had almost
10 17,000 customers in 2019 -- at the end of 2019.
11 That is now up to 20,624. Gulf had 2,229 at the
12 20- -- at the end of 2019. That is now up to over
13 4,000, which --

14 COMMISSIONER BROWN: Terry --

15 MR. DEASON: -- is nearly double --

16 COMMISSIONER BROWN: Terry, do you mind me
17 interrupting you really quickly?

18 MR. DEASON: Yes.

19 COMMISSIONER BROWN: Thank you, Mr. Chairman.

20 Since you offered to take questions during, I
21 appreciate that. And I -- I love the data. The
22 data is great, but it's still very modest. Okay.
23 When you're -- when you're talking -- FPL has
24 five million -- almost five million customers. You
25 know, it -- it is still a modest number.

1 So, explain to me what the utilities are doing
2 to promote the -- the solar interconnection as a
3 benefit to so many. It benefits the utility. It
4 benefits the customer. It does benefit everybody.

5 So, what are the utilities doing that you're
6 representing here today?

7 MR. DEASON: Okay. First of all, I think what
8 the com- -- utilities are doing -- they're
9 following the rule. And by following the rule,
10 that is certainly promoting renewable energy and,
11 particularly, rooftop solar.

12 You indicated that the numbers are small. I
13 agree, Commissioner Brown. The numbers are quite
14 small, but I think what the -- the point is is that
15 these numbers are continuing to grow and --
16 exponentially, in fact, which is a good
17 accomplishment, but at some point, the question has
18 to be asked, how can this be sustained in the long
19 run when you continue to have more rooftop solars
20 and those customers who do not deploy rooftop solar
21 for various reasons -- and we can go into those --
22 but there is a cost shift.

23 And when that cost shift happens, it continues
24 to accelerate the divide, so to speak, in that
25 there's more costing put on -- more fixed costing

1 put on the remaining customers.

2 And I'm not here to say the sky is falling --
3 by no means -- but at some point, we need to
4 recognize the mechanics, the economics of it, and
5 how it works and how there is a cost shift. And,
6 at some point, it needs to be addressed.

7 And I congratulate the Commission for having
8 this workshop and -- and teeing up some of these --
9 these issues. I think it certainly is the
10 appropriate thing to do.

11 Let me reiterate that the -- the three
12 utilities that I'm here speaking on behalf of --
13 they're not here advocating a change in the rule,
14 but they are -- they are cognizant of the economics
15 and the cost shifts. And they think it's incumbent
16 upon them to point that out to the Commission and
17 give the Commission needed information as it goes
18 on, this process, which may lead to rulemaking and
19 it may not lead to rulemaking.

20 COMMISSIONER BROWN: Thank you. And I've
21 heard this issue for -- for many, many, many, many
22 years. So, it's -- it's not some novel issue,
23 from -- from both sides.

24 And my crux, my issue, is really the promotion
25 of the renewable energy, though, and -- and what

1 our rule currently provides for. And I mean, I'd
2 like to see the utilities push for more
3 interconnection. And so, I'm curious about your
4 thoughts on that.

5 MR. DEASON: Well, I think there's a vibrant
6 industry out there. And it would -- and there's
7 plenty of promotion going on. I'll be honest with
8 you, I can't speak to the individual utilities and
9 what they're on -- own efforts are in promotions.
10 I would encourage you to ask that of each
11 individual utility.

12 I feel confident that they are providing the
13 information to customers and are making sure that
14 those installations are done correctly and
15 facilitate all of the -- all of the requirements to
16 get the systems connected.

17 I think that the utilities, if you ask them --
18 I think they have some very compelling statistics
19 on how long it takes to connect a customer and how
20 easy that transition is for customers.

21 So, I think the Comm- -- the utilities are
22 doing quite a bit, but I -- I can't point to a
23 specific program or initiative and raise that up
24 the flagpole and say, look at this, but I would
25 encourage you to ask those questions of those

1 utilities.

2 COMMISSIONER BROWN: Absolutely, and -- and
3 they're doing substantial utility-scale solar,
4 so -- and SolarTogether, SolarNow -- all these
5 great projects, but really with regard to the --
6 the end user, what type of programs are they doing
7 to encourage net metering and solar
8 interconnection. That's my biggest concern, quite
9 frankly.

10 MR. DEASON: Okay. I think you're expressing
11 that very well. And I'm sure there are folks at
12 the utilities making notes right now, Commissioner.

13 COMMISSIONER BROWN: Thank you.

14 CHAIRMAN CLARK: Could -- Mr. Deason, I'd like
15 to follow on to Commissioner Brown's question there
16 and -- and just kind of two questions. With the
17 three companies that you're representing today, can
18 you give me a dollar estimate of what that subsidy,
19 on a yearly basis, is equivalent to, just maybe in
20 rough numbers? Is it a thousand dollars? Is it a
21 million dollars? Is it 50 million?

22 MR. DEASON: As of the end of 2019,
23 Mr. Chairman, it's -- it was determined that there
24 is a total cross-subsidy for all -- all four
25 utilities, the three I represent here today, and

1 information provided from Duke Energy as well, that
2 it totals \$39 million.

3 CHAIRMAN CLARK: So -- so, it's 30- --

4 MR. DEASON: That is a substantial sum, but
5 it's not huge in relation to the size of the
6 utilities, but it continues to grow. And it's also
7 been determined that it's -- for the average net-
8 metered customer that the -- the subsidy they enjoy
9 is about 75 to \$80 per month.

10 CHAIRMAN CLARK: So -- so, that total for
11 2019, the customers who are not receiving solar, do
12 not have their own solar system, their self-
13 generating system, are subsidizing those who do to
14 the tune of \$40 million a year. Is that -- is that
15 what you're saying?

16 MR. DEASON: Yes. Yes, Mr. Chairman. That's
17 correct.

18 CHAIRMAN CLARK: Okay.

19 MR. DEASON: But let me be -- be very clear on
20 that. We all know that there is a lag in the time
21 period --

22 CHAIRMAN CLARK: Yes, sir.

23 MR. DEASON: -- between when rates are set and
24 costs are incurred.

25 CHAIRMAN CLARK: Right.

1 MR. DEASON: This number probably won't be
2 manifest until there's another resetting of rates,
3 but when that happens, there are -- there's --
4 there's insufficient -- not -- insufficient is
5 probably too -- not probably correct.

6 There's not a proper contribution from net-
7 metered customers to cover fixed costs, and we all
8 know, when we calculate rates, the fixed costs has
9 to be recovered and they get included in rates.

10 So, there is a shift of costs to the non-net-
11 metered customers in that process. And right now,
12 it's estimated to be approximately 40 million. And
13 it's continue- -- it continues to grow.

14 CHAIRMAN CLARK: My second question -- and I
15 just wanted to question off of Commissioner Brown's
16 question because I think she's right on target, and
17 I think that there are so many things that our
18 utilities can do to promote the addition of solar
19 generations that are separate from net metering.

20 I -- I think that one of the things I see here
21 is that we -- we keep tying these two -- two issues
22 together and they're not necessarily -- they don't
23 necessarily have to be connected.

24 The promotion of solar resources, the
25 promotion of renewable generation, and the subsidy

1 that exists within the current net-metering
2 policy -- do you see those as two separate issues?
3 And -- and I ask that question to follow up with
4 what can the utility company do to continue to
5 promote solar generation, residential solar
6 generation, without having a subsidy within the
7 net-metering component?

8 MR. DEASON: Well, I know we're not here to
9 actually propose a change to the rule and I'm not
10 here for that, but there's going to have to be,
11 Mr. Chairman -- to be quite frank, there's going to
12 have to be changes in the way fixed costs are
13 covered if you want to eliminate the subsidy and
14 still provide the net metering at a -- basically at
15 a retail rate.

16 I don't have specifics on that, but the -- the
17 problem, Mr. Chairman, is that the way rates are
18 set now, we all know that of -- the vast majority
19 of fixed costs are recovered through volumetric or
20 kilowatt-hour charges. And that makes the
21 kilowatt-hour charges higher than -- than they
22 otherwise would be, if those fixed costs were
23 recovered by a different mechanism.

24 So, that's one of the things that I would -- I
25 would encourage you to explore, maybe in a future

1 workshop or with your staff -- I think that's one
2 of the fundamental reasons why we have the subsidy
3 as it exists is that so much of the fixed costs are
4 recovered through kilowatt-hour charges.

5 And when I -- when you reimburse or compensate
6 net-metered customers at the retail rate, they're
7 being compensated for fixed costs, which they still
8 enjoy the benefits of, but they're not making their
9 contribution to recover those fixed costs that
10 otherwise would occur.

11 CHAIRMAN CLARK: My -- my last question for
12 you, Mr. Deason, is related to the -- the kilowatt-
13 hour credit that is paid back to the consumer. And
14 I realize we -- we don't settle those up,
15 typically, until the year-end, but the value --
16 trying to place the value -- if you're looking at
17 a -- a retail-rate payment for even a wholesale-
18 rate payment to that customer, can you figure or
19 calculate what that unit should be discounted,
20 based on the fact that it's paid at the end of the
21 year and the kilowatt hour may not have been
22 utilized by the -- should we be valuing the
23 kilowatt hour that's credited based on a real-time
24 number or should -- is the current system adequate?

25 MR. DEASON: To be quite honest, that's a

1 question I've never really contemplated before.
2 You know, there is a -- a time value of money.
3 We're all aware of that. And that could be a
4 component that could be entered in. I'm just not
5 sure how significant that would be when you
6 consider that, you know, it's going to be averaged
7 over the entire year, but you know, I think it's
8 something that could be looked at, for sure.

9 CHAIRMAN CLARK: Okay. I may have -- I think
10 I -- I had two separate questions going on there
11 and I think I may have even confused them.

12 What is the value of a kilowatt hour that is
13 put back on the grid at the time that a typical
14 solar system would be putting energy onto a grid as
15 opposed to what that kilowatt hour is really worth?

16 If you're paying retail rate for that kilowatt
17 hour and it's being put back on the system at
18 9:00 in the morning, what would a typical kilowatt
19 hour at 9:00 in the morning cost you?

20 Have you looked at those differentials
21 between -- and looked at the real-time value of the
22 kilowatt hour as opposed to a fixed, set price?

23 MR. DEASON: I have not looked at that. I'm
24 sure that there are many smart people, some on your
25 own staff and I'm sure at the utilities themselves,

1 that could do a study of that.

2 I think what it would take would be to look at
3 when solar systems produce the kilowatt hours, what
4 time of day, what season of the year, what the --
5 what the peak hours are for that period, and look
6 to see what is contributing.

7 It may -- if it's contributing kilowatt hours
8 during a peak time, it's probably more valuable,
9 but I still -- it's not going to be at a full
10 retail rate because of the fact that there are
11 fixed costs associated with the full retail rate.

12 So, if there were some analysis looking at
13 basically time-of-use rates and the value of a
14 kilowatt hour produced at a certain time, that may
15 be one way of looking at the kilowatt hours
16 generated and giving a proper recognition of the
17 benefit of those kilowatt hours to the system.

18 CHAIRMAN CLARK: My final question,
19 Commission- -- Mr. Deason is related to the -- the
20 subsidy that we referred to a few moments ago.
21 Have you extrapolated the numbers out over the next
22 four or five years if you continue the exponential
23 growth of residential solar to look at what we
24 would be looking at in, say, 2025 for a potential
25 subsidy?

1 MR. DEASON: Yes, we -- we have looked at
2 that. And if you look -- if you make some
3 assumptions -- because every time you do a
4 projection, you're going to base them -- have to
5 have some assumptions -- but you make some
6 reasonable assumptions, we're looking at an amount
7 of \$700 million over that period of 2020 through
8 2025. So, that's -- that's a cumulative number,
9 but --

10 CHAIRMAN CLARK: Was -- was that -- I'm sorry.
11 Was that number 700 million?

12 MR. DEASON: 700 million, yes. That's the
13 cumulative subsidy from the period 2020 through
14 2025.

15 CHAIRMAN CLARK: Okay.

16 MR. DEASON: Not an annual number, but a
17 cumulative for that period.

18 CHAIRMAN CLARK: I'm still shocked that the
19 number is that high. I just wanted to -- to
20 clarify that. Great. All right. Thank you.

21 Commissioner Brown.

22 COMMISSIONER BROWN: Thank you, Mr. Chairman.
23 Great questions, by the way.

24 Just a follow-up. I'd love to see how you
25 quantify that number. If -- if that would be

1 something that you would all be interested in
2 providing to the Commission, that would be helpful
3 in us looking at the holistic picture.

4 Quite frankly, 700 million over that five-year
5 period -- it does seem massive when we're talking
6 40,000 interconnections right now.

7 MR. DEASON: Well, actually, it's six years,
8 cumulative through 2020 to 2025.

9 COMMISSIONER BROWN: (Unintelligible.)

10 MR. DEASON: Yeah, but there is a growth rate
11 assumed that it continues to grow. And I think the
12 growth rate assumed in that calculation is
13 29 percent, which is actually lower than what it's
14 been historically.

15 But I would be happy to provide that
16 information as to the -- the basis for the
17 calculation, what the assumptions were, what the
18 growth rates that were assumed.

19 COMMISSIONER BROWN: That would be very
20 helpful, Terry.

21 MR. DEASON: Okay. Thank you, Commissioner.

22 CHAIRMAN CLARK: Commissioner Polmann.

23 COMMISSIONER POLMANN: Thank you,
24 Mr. Chairman. And thank you, Mr. Deason, for your
25 presentation here.

1 And to everyone -- to me, it gets back to
2 the -- to the purpose of this workshop. And -- and
3 the discussion here at this moment validates, very
4 strongly, the need, going forward, for the -- the
5 collection of -- of data and -- and the -- the
6 depth of the analysis that is really required.

7 The -- the comment Commissioner Brown just put
8 forward, that the collection of the -- the data and
9 the -- the gathering of real information,
10 understanding of how the -- the types of numbers
11 that Mr. Deason just put forward is -- is required.

12 If I could just reflect on -- on a few of the
13 comments here for a moment, what we have right now
14 is -- from my perspective, is a rule that is --
15 I'll use the word "permissive;" that everything is
16 in place for people to -- to install and utilize
17 renewable energy for their own purposes.

18 And, as I understand it, the rule for net
19 metering was put in place really with -- with the
20 rate as it was set and the credit to -- to
21 encourage. And that's been very successful. And
22 what we have now is, in the most-recent time, very
23 rapid growth, as Mr. Deason has referred to, with
24 an expectation that that's going to continue.

25 And now what we're anticipating is this very-

1 large dollar amount and significant dollars that's
2 being referred to now as a subsidy and -- and a
3 cost shift and a burden and -- and representing
4 IOUs, what's being discussed here is an issue.

5 That may or may not be a problem because their
6 cost shifts and subsidies and averaging across the
7 entire general body of ratepayers, as we -- as we
8 look at rate-mak- -- rate-making and how tariffs
9 are set and so forth. This is not unique. So, it
10 becomes a question of what are the data and how do
11 we interpret that.

12 So, again, very long process that -- that
13 needs to be examined that really comes down to who
14 benefits and who pays. And, from my perspective,
15 it's not whether or not the IOU benefits or pays
16 because that all comes out, as Mr. Deason
17 identified, when you get to a rate case. The IOU
18 is going to be made whole.

19 And it's a question of which of the actual
20 retail customers on -- within the system even have
21 an opportunity to enjoy self-supply. And that
22 becomes a real part of the question, in my mind, as
23 this entire issue is looked -- looked at over the
24 next year or two, whatever it takes.

25 There are significant numbers of customers who

1 don't and won't have an opportunity for solar or
2 any other, and I think that's a critical aspect of
3 this.

4 You know, there are tens of thousands or maybe
5 even hundreds of thousands of -- of people on -- on
6 the grid who will eventually have their own supply,
7 but there are many, many, many more who -- who
8 won't for -- for a variety of different reasons.
9 They don't have the -- the housing stock. They
10 live multi-family. They -- they rent, all these
11 other things, and they will continue to pay a
12 portion of the fixed costs, no matter what.

13 So, I think that's the more-important thing
14 that needs to be considered in terms of who
15 benefits and who pays. So, Mr. Chairman, this is
16 an excellent conversation, but I'm very hesitant
17 for anyone to -- to focus on, you know, what are
18 the numbers, what are the dollars, in the
19 discussion today. I -- I appreciate that they're
20 important, but there are so many other factors that
21 underlie a true understanding.

22 This is a great discussion. I'd like to move
23 it forward, Mr. Chairman, because the -- the
24 meaning behind them -- I think it's misconstrued,
25 and I would hate for the media and folks to be --

1 to be focused on dollars at this point. I don't
2 want to dismiss them. They're important, but
3 that's not the story, Mr. Chairman.

4 Thank you so much.

5 CHAIRMAN CLARK: Thank you, Commissioner
6 Polmann, for those comments.

7 All right. We need to wrap up with Mr. Deason
8 pretty quick to keep us on our schedule. Any other
9 questions, Mr. -- Commissioner Graham, Commissioner
10 Fay, any questions? This is your opportunity.

11 All right. Mr. Deason, thank you so much for
12 being here with us today. Thank you for your
13 comments. And, if you would, just kind of hang
14 around. There may be follow-up we need to have in
15 a few moments.

16 MR. DEASON: Thank you, Mr. Chairman.

17 CHAIRMAN CLARK: All right. Next up, Mr. Bill
18 Ashburn for TECO. He's also representing FPL and
19 Gulf Power Company and Duke Energy.

20 Mr. Ashburn, good morning.

21 MR. ASHBURN: Good morning, Commissioners.
22 I'm Bill Ashburn. I'm director of pricing and
23 financial analysis at Tampa Electric. And I'm --
24 as the Commissioners said -- the Chairman said, I'm
25 representing all four investor-owned utilities on

1 this.

2 The topic of my presentation is not the net-
3 metering part of the net-metering rule -- we always
4 call it the net-metering rule -- but it's also the
5 interconnection and net-metering rule. And so, I'm
6 really going to talk about the interconnection part
7 of it.

8 As was discussed by the staff, the net-
9 metering rule and the interconnection part of it
10 goes back, frankly, all the way to 2005 or two and
11 the -- the actual current one really goes back to
12 2008 or so.

13 And so, over that time period, there have been
14 things that we have learned about interconnecting
15 net- -- net-metered customers. There have been
16 changes in the market. There have been changes in
17 the equipment.

18 And so, what I've got is a list of about six
19 or seven items that are part of the interconnection
20 part. And you've discussed some of them already.
21 So, I'm -- I'll just try to bounce through them
22 quickly and then open up to questions, if that
23 works.

24 CHAIRMAN CLARK: Thank you.

25 MR. ASHBURN: First thing, the -- yeah. The

1 first thing to recognize is, the rule, as I said,
2 started -- it's really from about 2008. There are
3 some new types of interconnected equipment
4 associated with net metering that we should think
5 about that weren't contemplated at the time.

6 One is batteries. We're starting to see
7 batteries installed often in -- in connection with
8 solar arrays, but sometimes on their own. And so,
9 that -- they provide similar-type opportunities for
10 customers to store and then export or import power.
11 So, that's an element, that's a -- a piece of
12 equipment that was not contemplated at the time.

13 We brought up also the inverters at the time
14 of the rule in 2008 -- and I had the -- the great
15 pleasure of being part of that whole rulemaking
16 back then. Is -- at the time, the inverters were
17 believed to only ne- -- never allow islanding. And
18 newer inverter equipment does permit islanding of
19 the house when the utility service has ended.

20 And so, that -- that is now a concern that --
21 that leads us to even more concern about having
22 switches and things like that, and I can address
23 that as well as we go along.

24 The second big category, which we have talked
25 a lot about so far here, is the insurance

1 requirements. And I think we described them pretty
2 well. One of the things that has been a -- a
3 challenge is that, particularly people in Tier 2,
4 who are residential, have trouble getting a
5 million-dollar policy for their house. And so,
6 that's something we might address or think about.

7 I'll say that the -- it does not specify who
8 has to have the insurance, whether it's the owner
9 or, for a -- a tenant in the building, it's not
10 very clear who has to have the insurance. And so,
11 that's a -- that's a -- that's something that
12 wasn't addressed in the rule as well.

13 We talked about the switch a little bit. The
14 rule states that we may require a manual switch,
15 but if it's a Tier 1 system, Tier 2 system, then
16 the utility would have to pay for it. I'll say
17 that there's a mixed bag between the utilities
18 about what has happened.

19 Tampa Electric has required a switch all --
20 even on Tier 1 customers, but has paid for the
21 switch, or at least has given an offer to pay for
22 it for the customer. They have to sort of let us
23 know what they pay for and then we reimburse them.

24 The switch is -- is an issue. It's a safety
25 issue. And we've gotten a lot of positive comments

1 back, particularly from first-responding-type --
2 type people, fire and EMTs. If you come up to a
3 house and it's on fire and the lights are on
4 because, even though we turned off the power, one
5 of the things that the fire department wants us to
6 do is disconnect the power from the house so, when
7 they throw water on top of it, it's not going to
8 cause a problem or exacerbate the fire.

9 But if we turn the power off at our meter and
10 the pow- -- and the util- -- and the house
11 continues to run because it's got an islanding
12 function, then having a switch is a very important
13 thing that we can, then, lock out the inverter,
14 lock out the PV, and the power goes off. So, it's
15 something we've been very important -- we have
16 done -- and gotten good, positive feedback from
17 first-responder people.

18 Okay. So, next thing is the interconnection
19 requirements with the current rules. You did --
20 the staff brought up the issue that the rule refers
21 to IEEE 1547 and 1547.1, and UL 1741. Since then,
22 an awful lot of updates have happened to 1547. I
23 think it's already up to 1547.7 or .8 or something
24 now. So, there has been a lot of changes to those
25 rules.

1 He did mention that -- addresses things about
2 smart inverters and control settings, in
3 particular. We would -- although it's not in the
4 rule, if -- if the rule is going to be changed, we
5 would like to update it to the current status of
6 those rules.

7 Particularly, we are going to be looking at,
8 in the future -- not right now, but in the future,
9 the utilities are going to be looking at how can we
10 do more controls over these -- these inverters to
11 maybe change things like bar export from the solar
12 arrays for local conditions and so forth. So, we'd
13 like to think about that.

14 More and more, we are -- we are seeing -- and
15 this is for all -- and all new installations, the
16 fact that it's affecting the local-distribution
17 network. When we first started the rule, it was
18 very few -- as was mentioned by Mr. Deason, we had
19 a few-every-month kind of thing.

20 We're -- Tampa Electric is up to over 200 a
21 month pretty regularly. And, now, as they're
22 starting to be installed, they're starting to look
23 for, hey, there's a solar on this house, let me
24 market to the house next door.

25 And as those second and third houses on the

1 same transformer start interconnecting, it is
2 causing us to have to look at upgrading the
3 transformer or upgrading the service.

4 The other thing that's happening is falling
5 panel prices, as -- as Mr. Deason mentioned, and
6 increasing energy density of the PV panels.
7 Customers are putting more capacity on their roofs
8 than they did in the past.

9 That additional capacity sometimes is
10 affecting us to take a look at their service or
11 their transformation. And so, we're more and more
12 running into a condition where we have to evaluate
13 every one of these and look at whether we have to
14 do something about the transformation or the
15 service or even down the road to distribution
16 lines.

17 And that's -- that's just an issue that we're
18 going to have to deal with. And part of the
19 problem -- yes, I'm sorry, Commissioner. I'll
20 stop.

21 COMMISSIONER BROWN: Mr. Chairman, if you
22 don't mind.

23 CHAIRMAN CLARK: Yes.

24 COMMISSIONER BROWN: Mr. Ashburn, (technical
25 interruption), but you just said a very interesting

1 point about affecting the local-distribution
2 network. And I know Tam- -- General -- I mean --
3 pardon me -- Tampa Electric has been very active in
4 delivering utility-scale solar arrays. I'm -- and
5 you said some type of a number, what was it,
6 200 per month for interconnect- --

7 MR. ASHBURN: We -- we have -- we have well
8 over 200 -- 250 applications a month.

9 COMMISSIONER BROWN: I -- I personally know
10 people that -- that are interconnected in the Tampa
11 Bay area. And you -- you did explain that the more
12 capacity and the volume on the roof is requiring
13 Tam- -- Tampa Electric to upgrade transformers for
14 service.

15 Can you kind of elaborate on the reasoning,
16 the rationale behind it? Because we're -- looking
17 at the numbers, still, as I said, I alluded to
18 earlier, it's still quite modest in terms of
19 self-generation. So, why --

20 MR. ASHBURN: Right.

21 COMMISSIONER BROWN: Why -- why do you think
22 that there's a necessity to upgrade transformers on
23 the -- on the grid?

24 MR. ASHBURN: Sure. So, we -- we usually put
25 trans- -- let's talk about residential. That's the

1 one we mostly focus on, right. So, residential --
2 you usually have more than one house hooked up to a
3 transformer. It could be three, four, five of
4 them. And we recognize that there's going to be
5 diversity between those homes when we install the
6 transformation capacity.

7 But when you have -- if those two, three, or
8 four homes put a very large array on each roof, 10,
9 12, 14 kW, when you add them up -- and they all
10 could be running in the middle of day and all those
11 people might be off at work somewhere -- not
12 anymore, but in prior years -- that capacity can
13 overload the transformer. And so, the -- we have
14 to look at upgrading the transformer to a larger
15 transformer to make sure that exporting capacity
16 doesn't actually burn it up.

17 COMMISSIONER BROWN: You have data to --

18 MR. ASHBURN: Another -- yeah. And -- and --

19 COMMISSIONER BROWN: (Unintelligible.)

20 MR. ASHBURN: And services, as well, right --
21 I'm sorry. Go ahead.

22 COMMISSIONER BROWN: Do you have data to
23 support that that you could provide the Commission
24 with?

25 MR. ASHBURN: Well, one of the data elements

1 you might have at the Commission is we've been -- a
2 lot more this year, for example, calling the
3 Commission staff to review before we charge
4 customers for this upgrades.

5 Our tariff requires us -- it's part of the
6 rule, too, that when we have to charge a customer
7 for an upgrade, we go to your -- your staff to ask
8 for a review of our estimate before we charge it.
9 And so, you're seeing us a lot more coming in and
10 asking.

11 Cayce Hinton, for example, we've been talking
12 to quite regularly. And so, I think he can report
13 that we're doing it more frequently. It's happened
14 so much now, that we used to -- if it was a smaller
15 array, under 10 kW or so, we just didn't do a look.
16 And now, our engineers are looking at all of them
17 because they're beginning to be next to each other
18 in the same transformer.

19 COMMISSIONER BROWN: So, Mr. Ashburn, that
20 kind of data is so relevant to this type of forum.
21 So, if you guys could come up with, you know, some
22 type of tangible information for us to look at --

23 MR. ASHBURN: Sure.

24 COMMISSIONER BROWN: -- I think that would be
25 (technical interruption).

1 MR. ASHBURN: Sure. If you think about it, I
2 mean -- one of the things probably to mention is
3 there's a lot more contractors putting solar in
4 our -- than they were in the past.

5 When we first started doing this, in '08,
6 there might have been three or five or seven that
7 are doing. We have now over 150 contractors
8 putting solar on roofs in the Tampa Electric area.
9 I'm sure it's a comparable number for FP&L and
10 Duke. And so, there's just a higher volume of
11 them.

12 And there's more and more coming from out of
13 state. We have contractors from New Jersey, from
14 Texas coming in. And often, they don't know the
15 rules here. And so, one of the things we do -- you
16 asked for outreach.

17 We have -- on a regular basis, do training for
18 contractors so that they understand the rules, so
19 that they can see what would work best, to try to
20 educate them that they should call us early in
21 their process so that we know what they're about to
22 do before they put things on roofs in case we have
23 to do an upgrade.

24 So, we -- we do some of that outreach to try
25 to educate them to facilitate the process.

1 CHAIRMAN CLARK: Mr. Ash- --

2 MR. ASHBURN: But we can provide more
3 information, as you requested.

4 CHAIRMAN CLARK: Mr. Ashburn --

5 MR. ASHBURN: Another element to think --

6 CHAIRMAN CLARK: Mr. Ashburn, let -- if I
7 could --

8 MR. ASHBURN: Go ahead. I'm sorry,
9 Commissioner.

10 CHAIRMAN CLARK: If I could ask one question
11 to follow up, again.

12 MR. ASHBURN: Sure.

13 CHAIRMAN CLARK: You made a -- the comment
14 that in a Tier 2 or Tier 3 system, that the cost of
15 the manual disconnect that you -- that, I guess,
16 Tampa Electric picks that cost up. Is that what
17 you said?

18 MR. ASHBURN: We pick it up for Tier 1 and
19 Tier 2; Tier 3, they pay.

20 CHAIRMAN CLARK: And yet our rule, according
21 to Mr. Vogel earlier -- the manual disconnect is
22 required at customer cost. Why are we -- why are
23 you picking that up --

24 MR. ASHBURN: We --

25 CHAIRMAN CLARK: -- in a Tier 2 system?

1 MR. ASHBURN: So, it's required for Tier 3
2 that the customer pick up the cost. It's not
3 required for Tier 1 and 2, but we require it, and
4 then we pick up the cost.

5 CHAIRMAN CLARK: Ah.

6 MR. ASHBURN: So, the customer is not burdened
7 by the cost of the switch, but we require the
8 switch and we pay -- we reimburse them for the cost
9 of putting the switch in because it's our opinion
10 that we should have a switch everywhere.

11 CHAIRMAN CLARK: I -- I agree -- I agree with
12 your assessment on -- on the requirement for the
13 switch. I'm just questioning -- I guess staff
14 could look at that -- the rule a little more
15 carefully, but the information that we have said
16 that a Tier 2 system -- the cost of the switch was
17 being put on the consumer. So, it just --
18 conflicting information. We'll get that sorted
19 out, though.

20 MR. ASHBURN: Okay.

21 CHAIRMAN CLARK: All right. Let's wrap up
22 pretty quick, Mr. Ashburn, and -- and follow up --

23 MR. ASHBURN: Sure. Sure.

24 CHAIRMAN CLARK: -- with Commission questions.

25 MR. ASHBURN: Sure. Another element of this,

1 when we talk about the upgrading and so forth,
2 the -- the rule talks about the capacity of the
3 solar array, the renewable-generating system, up on
4 the roof.

5 What we have discovered is some customers are
6 putting a lot more capacity on the roof than there
7 is capacity of the inverter. And the inverter is
8 actually the item that determines how much power
9 hits our grid.

10 So, something to think about down the road is
11 should we be looking at the capacity of the
12 inverter system rather than the capacity on the
13 roof for customers who overbuild solar on their
14 roofs.

15 We have had issues with customers not telling
16 us -- we're trying to keep to the rule as far as
17 number of days of service, and we do pretty well on
18 that, but on occasion, the -- we don't hear about a
19 customer putting solar on the roof until late, and
20 by that time, they have already put solar on the
21 roof. It's sitting there. And they're -- they've
22 got a contract with a contractor.

23 And then -- and suddenly, they call us and now
24 there's something like, oh, we've got to do an
25 upgrade or we've got to do something and you

1 haven't finished. And they -- they -- it's
2 frustrating for them that they have put out a bunch
3 of money and put it on the roof and they can't
4 operate the system until they've met all the rules
5 of the interconnection.

6 And so, that's something we train
7 contractors -- but particularly newer contractors
8 that come in are not as amenable to doing that
9 quickly or alerting us earlier.

10 Finally, I'll just add that -- and this is
11 kind of really just a cost issue. As I said,
12 we're -- we're getting a couple-hundred of these a
13 month -- comparable numbers, I'm sure, at FPL, Duke
14 and Gulf. And it's just meaning more work on our
15 part. It used to be we could handle this with a
16 couple of people. Now it's getting to be a lot
17 more volume.

18 And so, Commissioner, you asked about whether
19 we're encouraging or promoting this. We're -- it's
20 hard to believe we're not promoting it because the
21 growth rate has been so much and it's putting much
22 more burden on us to -- to manage it.

23 We use software, we use online application
24 forms, all that kind of stuff, and we have a
25 lot of -- on our website, how you do solar, what

1 you should be doing, how you make sure that the
2 process is -- goes smoothly, but there's -- the
3 volume is such that it's including an awful lot of
4 activity.

5 So, I'll leave it there and let -- let you ask
6 questions.

7 CHAIRMAN CLARK: All right. Commissioners,
8 questions.

9 Commissioner Graham.

10 COMMISSIONER GRAHAM: Thank you, Mr. Chairman.
11 Mr. Ashburn, welcome. How are you this
12 morning?

13 MR. ASHBURN: I'm doing good. Thank you, sir.

14 COMMISSIONER GRAHAM: Earlier in your
15 presentation you mentioned batteries.

16 MR. ASHBURN: Yes.

17 COMMISSIONER GRAHAM: What -- with our current
18 net metering the way it is, what's the advantage of
19 having batteries? I mean, maybe a couple of hours
20 after a hurricane, if there's an outage -- because
21 if there's no time-of-use rate, what's the
22 advantage of having batteries?

23 Doesn't -- doesn't net metering just work as a
24 batteries, kind of a free battery on your roof?

25 MR. ASHBURN: Yes, the net-metering process

1 without a battery is kind of using the utility as a
2 battery, right. I mean, they export when they
3 don't need it and we keep track of it and then we
4 net it against a future load. So, in a sense, the
5 utility is operating as a battery.

6 But some people are just enamored with
7 technology. And while it may not be something
8 that's going to help them through a hurricane or a
9 long outage, some people are wanting to buy these,
10 Tesla or other versions of batteries, and hook them
11 up and -- and see how they work.

12 What it gets them is, like you said, maybe a
13 couple of hours if they're going to try to run
14 their air conditioning, but they're only going to
15 use them to help keep their freezer from work- --
16 keep their freezer working through an outage. They
17 can probably hook up much less loads in the house
18 and at least the refrigerator might stay cold and
19 the freezer may stay cold through a longer time
20 period.

21 But people are experimenting with this, so
22 much so that I'll say we just discovered a customer
23 who lives on Davis Island who has completely
24 disconnected from our system and has only solar and
25 batteries in their home.

1 And so, there are people starting to go down
2 that road. It may not be an economic choice, but
3 it's a -- it's a -- it's a choice of theirs to
4 experiment with.

5 COMMISSIONER GRAHAM: Yeah, but if you can
6 afford to live on Davis Island, you can afford to
7 do all that stuff.

8 MR. ASHBURN: Perhaps. I know I can't.

9 COMMISSIONER GRAHAM: Thank you.

10 CHAIRMAN CLARK: Mr. Ashburn, you -- you
11 mentioned that --

12 MR. ASHBURN: Yep.

13 CHAIRMAN CLARK: I want to follow up with a
14 question about that kilowatt hour you were talking
15 about, the kilowatt hour that is produced that
16 comes back to the utility company. The utility
17 company is accounting for that kilowatt hour. I am
18 trying to establish the value of that kilowatt
19 hour.

20 And, from an engineering perspective, that
21 kilowatt hour that is produced during most of the
22 day by a solar system -- is that kilowatt hour
23 displacing production that you are having to do via
24 another means, be it gas or some other energy
25 source, from a generations perspective?

1 MR. ASHBURN: Yes, you're now -- you're now
2 touching my main job, which is being a rate guy,
3 right. So -- so, in the past, the solar was
4 operat- -- well, the solar continues to operate, as
5 you know. It rises up in the morning. It's pretty
6 heavy production in the middle of the day. And
7 then it drops off in the afternoon.

8 Typically, the middle of the day has been a
9 high-cost period for utilities as far as an avoided
10 energy-cost basis because that's when the -- the
11 loads are high and we're running our -- our peakers
12 and our more-expensive units. And that -- that is
13 starting to change. We haven't gotten that far
14 yet, but we're almost there.

15 You know, the utilities, as you know, you
16 mentioned it earlier -- we're all building an awful
17 lot of solar, ourselves. And, oddly enough, that
18 solar is going to track the solar on the roofs as
19 well. And that solar is going to add an awful lot
20 of, essentially, zero-incremental-cost kilowatt
21 hours to the -- to the grid during the same hours
22 that the home solar is operating.

23 And so, I'm anticipating, down the road, as we
24 add more and more solar, seeing kind of a reduction
25 in the costs or a shifting of our incremental costs

1 to later in the day, which may mean that the --
2 when the solar is exporting a lot in the middle of
3 the day from a home, that may be a lower-cost
4 period than it has been in the past, and it may be
5 that the costs are shifting to later in the day.

6 CHAIRMAN CLARK: So, you -- the addition of
7 solar units is actually having -- is causing a
8 shift in your generation costs?

9 MR. ASHBURN: It's going to shift the
10 incremental costs of generation because we're
11 putting so much solar in that -- and that has zero
12 fuel costs during the middle of the day. So,
13 you're going to see some of our incremental fuel
14 costs in the middle of the day decline, and the --
15 the incremental fuel costs that are higher are
16 going to be later in the day as the solar starts to
17 decline in output.

18 CHAIRMAN CLARK: Well, how does that -- how
19 does that compare to your coincident peak time?
20 Are you still peaking at, summertime, 4:00, 5:00 in
21 the afternoon?

22 MR. ASHBURN: Yes.

23 CHAIRMAN CLARK: Is that same -- is that
24 the same --

25 MR. ASHBURN: In the same -- well, 4:00 or

1 5:00 in the afternoon, in the summer, right. In
2 the winter -- that's another interesting element of
3 that, right. In the winter, if we have a cold
4 winter -- and we haven't had that many of them
5 recently -- but in a normal cold winter down in
6 Tampa, you know, the winter peak is going to be
7 early in the morning, 7:00 in the morning, which
8 there -- there will be no solar on.

9 CHAIRMAN CLARK: And -- and are all four of
10 the utilities basically in the same boat there or
11 does the geography of the locations of each of
12 these utilities play a variant there?

13 MR. ASHBURN: Yeah, I'm not an -- as much an
14 expert on the other companies, but I would imagine
15 there's a pretty substantial difference in when
16 their peaking times are up in the Panhandle
17 compared to Miami.

18 CHAIRMAN CLARK: And so, your -- your total
19 cost is -- is basically laid out -- your -- your
20 maximum peak -- is it summer or winter?

21 MR. ASHBURN: Well, that depends on if we have
22 a winter. When we have temperatures down in the
23 twenties, pretty much winter is going to be the
24 peaking time period, but we haven't had that many
25 cold winters. I don't know if that's just simply

1 cyclical or related to other things, but if we have
2 any kind of a cold winter, it's a winter peak, but
3 the most of the time, it's now in the summer.

4 CHAIRMAN CLARK: And how are you meeting that
5 current winter peak? Are you purchasing most of
6 your peak capacity or do you have enough generating
7 capacity to -- to generate your own peak demand?

8 MR. ASHBURN: We -- we build to try to meet
9 our expected peak, whether it's winter or summer.
10 I'll tell you that, if it gets really cold in the
11 winter, it's going to be hard to buy power from
12 anybody because everybody in Florida is trying to
13 meet their peaks.

14 So, we try to make sure we have enough
15 generation available -- and that's one of the
16 reasons why the company is starting to -- if you
17 looked at our ten-year site plan, you're starting
18 to see us looking at a lot of batteries.

19 We're experimenting with larger batteries at
20 the utility scale. And the -- the goal there is
21 for those batteries to fill up with solar power
22 during the day and be available to export battery
23 power in the mornings of a winter peak.

24 CHAIRMAN CLARK: So -- so, go back to -- to
25 your winter peak again. So, you're trying to build

1 all of your own internal winter-peak needs. You're
2 not going to rely on -- you're not going to try to
3 rely on purchase power or anything. So, you're
4 going to have to have --

5 MR. ASHBURN: That -- that --

6 CHAIRMAN CLARK: -- capacity -- you're going
7 to have to have generating capacity to meet that
8 winter peak. No matter what type of renewable
9 systems are in place, you still have to have
10 generating capacity of some fossil-fuel source; is
11 that correct?

12 MR. ASHBURN: Yes. There are -- there are
13 some times when we purchase capacity long-term from
14 neighbors, but that's long-term, not just in the --
15 at the moment, so we -- but we try to make sure we
16 either have our own generation resources or a long-
17 term purchase for -- to meet all of our needs at
18 all months.

19 CHAIRMAN CLARK: So, in -- in the recent SOBRA
20 cases where we've talked about the addition of
21 solar resources, I've always asked the question
22 regarding capacity and how much capacity we are
23 giving to the solar installation. And the numbers
24 I keep getting are somewhere between 40 and
25 50 percent.

1 So, do you -- you don't have that resource
2 available to you, even if you give it a 40- -- or
3 50-percent capacity factor to the solar
4 generation -- you still don't have that available
5 in -- to meet your winter peak. And you said
6 you're trying to build all of your peaking needs
7 out of some fossil fuel, correct?

8 MR. ASHBURN: Well, yes, as -- as -- let me --
9 let me -- let me cover that. So -- so, your 40- or
10 50-percent number that you're quoting is usually
11 talking about the summer peak. And because our
12 summer peaks, like you said, are later in the
13 afternoon, the solar resources -- the sun has
14 started to go down. So, they're not as -- at a
15 hundred-percent capacity when that happens.

16 We are starting to try to build -- or the plan
17 is to build more battery capacity at the solar
18 arrays and then pack-capture that energy and be
19 able to re-dispatch it later in the afternoon in
20 the summer and early in the morning on the winters,
21 but the plan is to try to meet all of our capacity
22 needs, including on a cold winter day.

23 CHAIRMAN CLARK: Right. But -- but none of
24 your -- none of the capacity costs of a solar
25 system is going to benefit you on a solar day. You

1 st- -- and if you have a maximum peak, summer,
2 winter, combined, is a winter peak, you have to
3 build to that number; is that correct?

4 MR. ASHBURN: Yes, sir.

5 CHAIRMAN CLARK: And so, none of the capacity
6 that a solar system brings would actually count
7 toward what your entire generation need is, if it
8 is a winter-peak maximum.

9 MR. ASHBURN: If it's a winter peak and -- and
10 we have battery capacity available to soak up some
11 of the excess solar energy during the day, then,
12 it -- arguably, the solar energy in the winter is
13 available to serve the winter peak in the morning.

14 CHAIRMAN CLARK: Okay. Great. Thank you very
15 much, Mr. Ashburn.

16 Any other questions for --

17 MR. ASHBURN: Sure.

18 CHAIRMAN CLARK: -- Mr. Ashburn? All right.
19 Let's move right along. Thank you so much.

20 MR. ASHBURN: Thank you.

21 CHAIRMAN CLARK: Next up is --

22 MR. HINTON: Mr. Chairman, this is Cayce
23 Hinton. Can I chime in?

24 CHAIRMAN CLARK: Yes. Cayce, you're
25 recognized.

1 MR. HINTON: Thank you. Just to, real quick,
2 provide some information for you. First, you were
3 correct, the rule does require that customers
4 install and pay for a manual-disconnect switch for
5 Tiers 2 and 3. Tier 1 is exempted from the
6 requirement unless the utilities pay for it
7 themselves.

8 Second point of information, Mr. Ashburn
9 mentioned interconnection charges. You know, the
10 rule requires that customers systems can't exceed
11 90 percent of the utilities' service rating. If
12 the -- a system does, then they either have to
13 decrease the size of the system or pay for the
14 upgrade of facilities to serve their house.
15 Generally, we're talking about a transformer
16 upgrade.

17 Prior to this year, I think we only approved
18 one interconnection charge for FPL. This year,
19 alone, as Mr. Ashburn has said, TECO had come in
20 six times. And, of note, I think the last -- one
21 of the last ones that came in, it was a situation
22 where there was already a couple of solar arrays in
23 the neighborhood that pushed the transformer up to
24 a particular limit, and the last guy in ended up
25 having to pay the interconnection charge to upgrade

1 that transformer, but, yes, they've been in six
2 times. That's all I have.

3 CHAIRMAN CLARK: Great. Thank you,
4 Mr. Hinton. I appreciate that bit of information.

5 Okay. Let's move on to Mr. Huber, Lon Huber
6 representing Duke Energy. Welcome.

7 MR. HUBER: Great. Thank you. Chairman
8 Clark, Commissioners, staff. My name is Lon Huber.
9 My remarks will be brief, but I would like to start
10 with a little bit of an introduction. I'm the vice
11 president of the Rate Design and Strategic
12 Solutions at Duke Energy. I actually joined the
13 company less than a year ago, to lead up the
14 pricing modernization efforts and customer solution
15 strategies around distributed energy resources.

16 So, while I may be new to my role here at
17 Duke, the core issues at hand are not new to me at
18 all. As a former consultant, I have worked across
19 the country on net-metering reform for both
20 commissions, consumer advocates, and states such as
21 Hawaii, New York, Maine, New Hampshire, just to
22 name a few. I was also the lead employee of the
23 Arizona Consumer Advocate Office tackling these
24 issues, so that's the equivalent of OPC here.

25 So, modernizing rooftop solar compensation is

1 a subject I've spoken a lot about, you know, many
2 times at NARUC and AZUCA. And my work on this
3 topic continues in my current role.

4 In fact, just yesterday, Duke Energy Carolinas
5 announced a comprehensive net-metering-reform
6 settlement in South Carolina that I led in
7 partnership with Vote Solar, Sunrun, SACE, and --
8 and others. So, thank you for giving me the -- the
9 time to -- to speak today and the opportunity to
10 share the perspective of Duke Energy on this topic.

11 So, first and foremost, DEF is committed to
12 providing safe, reliable, affordable, and now
13 increasingly-clean electricity to over a quarter of
14 Florida's population. Our customers and
15 communities depend on us really every minute of
16 every day, rain or shine, to deliver.

17 And we are -- are clearly a strong supporter
18 of renewable energy, and we walk the walk on that
19 as we advanced solar-energy markets, creating jobs
20 and making Florida a leader in innovative and
21 energy investments.

22 And, as we all know, our customers are very
23 interested in bringing more solar to Florida and
24 installing private solar generators at their homes
25 and businesses. At the end of 2009, when Florida's

1 interconnection and net-metering policies were just
2 over a year old, DEF had about 281 private solar
3 customers connected to the grid. As of the end of
4 last month, DEF has a little over 30,500
5 interconnected customers, totaling about
6 250 megawatts.

7 So, we are clearly leaders in promoting solar.
8 We created a specialized renewable-energy center,
9 an automated interconnection portal, up-to-date
10 notification pushes -- pushes, updated meter
11 technology, and -- and, of course, helpful
12 information on our website. So, all this is
13 driving adoption.

14 Further, our residential customers are now
15 installing solar that is actually much larger than
16 the average 5.6 kilowatts AC about a decade ago.
17 In 2020, we're actually averaging 8.6 kW AC. And,
18 now, that size nearly offsets all an average
19 residential customer's annual usage, but, of
20 course, as we heard, not necessarily their winter-
21 peak demand. And so, this trend will lead to us --
22 and it's a good amount of exports that we're --
23 we're just going to have to manage to keep the grid
24 reliable.

25 Now, when the net-metering rule's

1 administrative requirements were established, DEF
2 was interconnecting an average of about 23 private
3 cust- -- solar customers per month. By early this
4 year, we've been able to interconnect over a
5 thousand private solar customers per month. And,
6 in fact, in March, we hit our all-time high,
7 probably leader in the nation, with almost 1,500
8 installations in just a month.

9 So, where does that leave us? Well, we've
10 seen a 43-percent increase in the number of our
11 net-metering (unintelligible) in just eight months.

12 CHAIRMAN CLARK: Mr. Huber --

13 COMMISSIONER BROWN: (Unintelligible).

14 CHAIRMAN CLARK: Mr. Huber, hang on one
15 second. Commissioner Brown has a question for you.

16 COMMISSIONER BROWN: Thank you.

17 I'm sorry. I have to interject because you
18 absolutely are the leader in terms of distributed
19 solar arrays and -- in our state, just looking at
20 the numbers, even from the 2019 report.

21 What are you doing that's different from the
22 other IOUs? You're obviously doing something to
23 encourage net metering on the individual scale.
24 So, what are you all doing that is so robust that's
25 promoting the attraction to interconnection?

1 MR. HUBER: Well, you know, I -- I think it's
2 some of those -- those topics that I just
3 mentioned. I'm not -- I didn't do a benchmark of
4 some of the other utilities in the state to see
5 what they're doing, but I also think it could be
6 demographics as well and, you know, just cost
7 structures that are in place out there, and
8 word-of-mouth.

9 I mean, you know, so, I pass -- I -- I worked
10 in the technology sectors and can tell you that
11 word-of-mouth can really spread. And so, when you
12 see one -- you know, one neighbor have solar, the
13 other sees it, and the other, and it has this
14 autocatalytic effect that's really powerful.

15 And so, what we've done is really streamline
16 that for customers and really made it a simple
17 process to, you know, quickly interconnect and --
18 and install rooftop solar and, of course, you know,
19 we -- we've tried to put as much helpful data out
20 there for both our solar community and customers.

21 COMMISSIONER BROWN: Well, I am impressed with
22 your numbers. So, it -- you do look to be growing
23 exponentially. So, kudos to Duke Energy Florida.

24 MR. HUBER: I -- I appreciate that. And, in
25 fact, we have about 1.9 percent of our customers

1 now with renewable generators at their homes. And
2 again, as you mentioned, this appears to be growing
3 exponentially. And if you compare that, actually,
4 to our South Carolina jurisdiction, DEF has
5 34-percent more residential customers with solar
6 generators.

7 So, really are leading the way, just -- you
8 know, not just in Florida, but Duke as -- as a
9 whole. So, you know, really --

10 CHAIRMAN CLARK: Mr. -- Mr. Huber, if I
11 could -- I'd ask a question as well. This is a
12 question that I plan to ask for several of the
13 other folks that are online. I missed it with the
14 first two.

15 Have you surveyed -- have you established any
16 demographics of your typical renewable-generation
17 customer?

18 MR. HUBER: That's a -- that's a great
19 question. I'm joined by my colleague, Tamara
20 Waldmann, who's -- who's been on the ground on this
21 for years.

22 Tamara, do we kn- -- do we have any -- any
23 demographic data?

24 MS. WALDMANN: Yes, good morning,
25 Commissioners and staff. The -- the -- whatever we

1 collect on our requests and our application or
2 sometimes as part of our DSM program would be, you
3 know, all the demographics that we have.

4 You know, one of the issues that Mr. Ashburn
5 alluded to was notification. And I think a common
6 theme that we hear is -- also involves privacy
7 issues. So, we try to be very mindful of that as
8 well.

9 But, of course, we have our -- our public
10 information that's available. We know the customer
11 that's interconnecting, right. We have their
12 account. We have their -- their -- their
13 information associated with our system that is
14 protected under privacy laws, and -- yeah, and
15 then, of course, what we used for load forecasting.

16 CHAIRMAN CLARK: All right. But you -- you
17 have not -- you have not developed a target market
18 for renewable generation? I -- I realize you're
19 the utility side. That's why I intended to ask
20 this of the folks that are more on the contractor
21 side, but I am looking to establish some
22 demographic basis for an existing solar customer.

23 You haven't tested that in any of your
24 surveys, any of your random blind surveys?

25 MS. WALDMANN: I would say that the -- when we

1 looked at the interconnection requests that we are
2 receiving, these are, you know, 90 percent,
3 95 percent residential customers, Tier 1, at this
4 point. So, I think we get that demographic as
5 the -- as the interconnection requests and
6 applications are received on where the greatest
7 interest is.

8 As Mr. Huber alluded to, our promotion is
9 across all customer classes, right. We're talking
10 to our large-account customers. We're talking to
11 customers who are -- are not even customers yet as
12 part of our economic-development conversation.

13 And, of course, we've put up a renewable-
14 service center that predominantly receives all
15 residential-related calls about what is the
16 incentive, what is the process, how do I
17 interconnect.

18 And some places, it's well ahead of when they
19 have installed the system, but then it's after
20 they've installed the system and they're trying to
21 figure out the process, then, for interconnect- --
22 you know, to get through their -- their
23 interconnection formally, and they're on the net-
24 metering tariff.

25 CHAIRMAN CLARK: Yeah, okay. I was just

1 looking for basic, generic -- your marketing
2 department would be doing customer surveys and
3 cross-referencing the data for demographics, but --
4 okay.

5 Mr. Huber, can you wrap it up for me pretty
6 quick?

7 MR. HUBER: Sure. We'd be -- we'd be happy
8 to. So -- so, again, you know, we're managing,
9 we're preparing for this growth. We're working
10 hard to refine our forecasts. We're under- -- you
11 know, we're undertaking the studies of battery
12 technology and -- and also making sure that we
13 fully understand the impact of -- of the customer
14 clusters that you've heard today.

15 So, you know, again, you know, overall, you
16 know, it might look like a modest number, but
17 there's pockets that really do create some local --
18 some local considerations there. So, we are
19 talking to customers and stakeholders.

20 The -- the grand and comprehensive
21 net-metering settlement in South Carolina, as
22 recently announced -- that was -- that was part of
23 a mandated proceeding there, illustrates our
24 willingness to be solution-oriented to -- to roll
25 up the sleeves to create win-win outcomes,

1 recognizing each stake is -- state is unique, of
2 course, in its approach to advance renewable
3 energy.

4 I offer -- so, that -- that same spirit here
5 and look forward to working with -- with all of you
6 on this issue. Again, happy -- happy to take any
7 further questions.

8 CHAIRMAN CLARK: Great. Thank you, Mr. Huber.

9 Any other questions before we move on?

10 All right. Thank you for being with us today.

11 Next up, Ms. Katie Chiles Ottenweller with
12 Vote Solar. Katie, are you with us?

13 MS. OTTENWELLER: Yes, I am.

14 CHAIRMAN CLARK: Welcome.

15 MS. OTTENWELLER: Good morning, Mr. Chairman.
16 Thank you so much for the opportunity to talk with
17 y'all today.

18 I want to start by just saying that my prayers
19 and my family's prayers are with the communities
20 that are affected by Hurricane Sally and just thank
21 you to all the utilities and everyone involved in
22 helping to meet the immediate needs there. Being
23 from the Panhandle, definitely praying for those
24 folks today.

25 Next slide -- oh, sorry. Are my slides up --

1 oh, perfect.

2 COMMISSIONER BROWN: They're up right now.
3 And the Chairman has stepped out and asked me to
4 step in. So --

5 MS. OTTENWELLER: Okay.

6 COMMISSIONER BROWN: -- you're ready to go.

7 MS. OTTENWELLER: Thank you.

8 Next slide, please. Vote Solar is a non-
9 profit organization. We were active participants
10 in the 2008 net-metering discussion in Florida and
11 happy to be able to speak on this issue today. And
12 please feel free to ask me any questions that you
13 have throughout the presentation.

14 Next slide. I know I have a lot PowerPoint
15 slides. I'm going to talk quickly, but I wanted to
16 make sure that this conversation is really grounded
17 in hard data. And so, I've got a lot of numbers
18 that I'm going to throw out there. And hopefully
19 this is a helpful resource, even going beyond the
20 ten minutes that I have this morning.

21 A quick mention of where we are at on solar in
22 Florida -- so, this is across utility-scales,
23 community solar, and rooftop solar -- we're at
24 about 1 percent. These numbers are from 2018. So,
25 it -- you know, that's gone up a little bit since

1 then in terms of how much of our electricity needs
2 are being met by solar compared to about 70 percent
3 from natural gas. So, we've got a long way to go
4 in the Sunshine State.

5 Next slide. I want to take one minute and
6 just talk about how cool solar power is, the fact
7 that the Sunshine State can generate electricity
8 from the sun. This is an amazingly abundant,
9 locally grown and freely-available resource, and it
10 creates jobs that cannot be exported.

11 Out of all of the different sources of
12 electricity, rooftop solar creates the most jobs
13 per megawatt hours. And all of the dollars that
14 are invested in solar stay right here in the state
15 of Florida. Compare that to the \$5 billion that
16 Florida consumers are sending out of state every
17 year to purchase natural gas that comes from other
18 places.

19 I want to highlight a few of the solar stories
20 that I heard as folks reached out when they heard
21 about this workshop happening. These folks would
22 love to address you directly, themselves, but I'm
23 going to do my best to highlight a couple of folks
24 and really bring to light the fact that there are
25 real people in Florida that are seeing real

1 benefits from these technologies.

2 One story that I wasn't able to share a
3 picture of, but I'm happy to share after the fact
4 is of Shareeka Smith. And we talk a lot about the
5 folks who are installing solar; we don't talk about
6 the folks who are working in this industry.

7 Shareeka lives in Fort Lauderdale. She's a
8 mom of three kids. Her family lost most of their
9 savings after the last recession and she had to
10 stop working because they couldn't afford good
11 childcare.

12 Now, she's working in the solar industry and
13 that job is helping her family get back to
14 financial stability. And this is just one of the
15 many stories that we heard as we were getting ready
16 to talk to you all this morning.

17 Next slide. You've heard a lot already about
18 what net metering is. So, I'm not going to spend
19 time on that except to point out that, you know,
20 the foundation of this is to create legal
21 safeguards that protect customers' ability to go
22 solar without undue delay and undue cost, and to
23 govern how utilities treat those customers when
24 they make their own investments in solar resources.

25 This is a policy that is similar to rollover

1 minutes on your cell phone. It's easy for
2 customers to understand, and it's been proven to
3 encourage solar adoption in 42 states.

4 Next slide. I want to talk for a minute about
5 how many customers have actually gone rooftop
6 solar. So, out of that 1 percent of generation
7 that's coming from solar across the board, you
8 know, what is rooftop solar spliced in that, and
9 how does that compare to what we're seeing around
10 the country.

11 So, to put this in context, there's about
12 60,000 homes and businesses that are net metered
13 out of 10.6 million total electricity customers in
14 Florida. I was trying to find a helpful statistic
15 on that. Of course, I thought about college
16 football. More people can pack into the Ben Hill
17 Griffin Stadium at University of Florida -- Go
18 Gators -- than have rooftop solar today.

19 Next slide. And let's talk about how that
20 breaks down across the various utilities because
21 there's a really big spread in Florida. And you
22 can see here, Duke Energy, as of the end of last
23 year, is about 1-percent solar adoption, definitely
24 leading the pack. And you can see where the other
25 numbers fall from there.

1 Next slide. So, adding all of that up, across
2 all of the Florida utilities, about a half a
3 percent of Florida customers have net-metered
4 systems.

5 Next slide, please. And let's talk about
6 where that puts Florida in the lineup. Florida is
7 in the bottom half, nationally, with 25 states that
8 have higher solar adoption than our state does
9 right now. And this is looking at systems
10 2 megawatts and under, which is where Florida's
11 net-metering threshold falls.

12 Next slide. A little bit of background -- and
13 you know, staff did a great job summarizing this.
14 The Florida Legislature adopted this net-metering
15 protection for customers unanimously in 2008. And
16 I wanted to include the goals of the statute
17 because I think it's a really important part of
18 this conversation.

19 The goals were to address the growing
20 dependence on natural gas, something that is still
21 very much at issue today; minimize volatile fossil-
22 fuel costs, which is absolutely relevant; encourage
23 investment within the state, which we're starting
24 to see in Florida, but really just scratching the
25 surface of; reduce pollution, which I think speaks

1 for itself; and make Florida a leader in new and
2 innovative technologies. And those technologies
3 are just beginning to really come on the horizon.

4 I'll also note that the Florida Legislature
5 did not provide a cap on the number of rooftop
6 solar customers who are eligible to participate in
7 this policy, unlike some other states that passed
8 legislation around the same time.

9 Next slide. We saw similar enthusiasm from
10 the Commission in terms of the rules that were
11 adopted in 2008. And a consistent theme that I saw
12 as I went back through and was reading all of these
13 filings, is a focus on conservation.

14 Next slide. And for all of the reasons that
15 the Legislature cited in 2008, net metering is
16 still a very important issue for Florida voters.
17 This is from a 2019 poll by Public Opinion
18 Strategies with 81 percent of Floridians saying
19 that net metering was very important policy to
20 them -- I'm sorry -- 81 percent important;
21 48 percent very important. Make sure I got that
22 right.

23 Next slide. There's been a little bit of talk
24 about battery storage and solar, so I want to spend
25 a minute about -- on that and clarify some things.

1 One is, we are seeing some increase in
2 battery-storage adoption, but it's still a pretty
3 expensive proposition.

4 That being said, Florida has a particularly
5 unique and vulnerable population when it comes to
6 electricity outages. We have the highest
7 percentage of solar -- of senior citizens in the
8 U.S. and the second-highest number of the Medicare
9 recipients that are electricity-dependent due to
10 medical conditions. That's 169,000 people. So,
11 resilient power is vital to the health and safety
12 of these folks.

13 You know, somebody earlier today talked about
14 the benefit of having power for a couple of hours
15 if you have solar and battery storage. When
16 Hurricane Michael hit in 2018, 182,000 customers
17 were without grid power for over a week. When Irma
18 hit, a hundred thousand still had no power nine
19 days after the storm hit.

20 Next slide. So, what does this have to do
21 with pairing these technologies? When households
22 and institutions like schools, hospitals, and
23 nursing homes get access to solar, they can provide
24 back-up services to community members even in the
25 midst of an emergency, and we've seen net metering

1 be the foundational platform that allows folks to
2 be making these investments.

3 Next slide. And a quick example of what this
4 looks like in real life -- this is Kathy Kirkland's
5 home in Apalachicola. During Hurricane Michael,
6 she was able to host her neighbors, provide them a
7 place to cool off in air conditioning, charge their
8 cell phones, and store food.

9 We have not even begun to quantify the
10 economic and human value of having these systems in
11 our communities, not just for the person who lives
12 in that house, but for everybody who lives around
13 them.

14 Next slide. This is just an anecdote that
15 I've received about Michael Cohen, who talks about
16 how solar is helping him in his retirement to give
17 back to his community.

18 Next slide -- and I wish I had time to talk
19 more about all of these great stories. Thad Barnes
20 is a construction supervisor in Tampa. He loved
21 solar so much that he decided to put solar and
22 Tesla batteries at his home and now they can power
23 through outages.

24 Next slide. So, getting to one important
25 question that we sort of touched on today a little

1 bit, but haven't actually talked about many hard
2 numbers. In 2008, the Commission staff pointed out
3 that solar systems effectively act as a
4 conservation measure. We wanted to know is that
5 actually true. And what we found when we look
6 looked at the data that was filed with the
7 Commission, is, yes, that is the case.

8 70 percent of the solar generated never
9 crosses the meter onto the grid at all. It's pure
10 conservation. And you can see from this graph the
11 reality is that because solar users are typically
12 larger-than-average electricity consumers before
13 they go solar, even after they add solar as a
14 conservation measure, Florida solar homeowners are
15 still paying more on their utility bills than the
16 average residential customer. And those systems
17 are only meeting a part of their usage need,
18 similar to other energy-efficiency measures.

19 Chairman Clark, to specifically answer your
20 question about the demographics, we know that these
21 solar adopters today are larger-than-usual
22 electricity generators to begin with. We also know
23 that 61 percent of them make less than a hundred
24 thousand dollars.

25 So, we're doing a good job at starting to

1 reach the middle class in Florida. We still have a
2 long way to go before we are providing access to
3 this technology for everyone who needs it,
4 particularly at the lower income. Only a quarter
5 of solar adopters in Florida have incomes below the
6 area median income. So, you know, we've got some
7 work to do on that front.

8 Next slide. And there's still ten times as
9 much electricity being sold to -- being sold by
10 utilities to the solar customer as is being
11 exported out onto the grid by the solar customer.

12 So, why is this important and -- you know,
13 with all respect to Mr. Deason and the utilities'
14 presentations, this \$39-million value is not a
15 publicly-available number. There's been no data to
16 quantify that.

17 And to the extent that that number is based on
18 a presumption that utilities are entitled to
19 guaranteed revenue from customers, I would have to
20 take issue with that. These types of monopoly
21 abuses are why we have these protections in place
22 in the first place.

23 The appropriate question when we're talking
24 about the solar customers is are they actually
25 paying what it costs to provide them electric

1 service. And that question has been answered in
2 the affirmative time and time again.

3 In Florida, even after going solar, these
4 customers are still paying more on their utility
5 bills than the average residential customers,
6 because they were larger-than-average users before.
7 So, definitely important to be having a sol- -- a
8 data-specific conversation.

9 Next tr- -- next slide. We know that customer
10 rates are going up due to big utility capital
11 expenditures. There's no surprise there. I wanted
12 to point out this slide because basically what this
13 is showing -- and this is a study by Lawrence
14 Berkeley National Labs -- is how negligible any
15 potential impact on rates is from rooftop solar
16 even up to 10-percent penetration rates.

17 So, the very top bar represents the levels of
18 rooftop solar that we have in Florida today, even
19 under the worst-case scenarios of solar's value or
20 the best-case scenarios of solar value, the impact
21 on Joe Smith's electric bill is a blip on the
22 screen right now, and any sincere concern about
23 upward pressure on customer rates should honestly
24 be directed elsewhere.

25 Next slide. We've talked a few times about

1 some of these emerging technologies and other
2 products that are available. I wanted to put those
3 in context. We have -- this shows here -- you
4 know, solar is creating new revenue opportunities
5 for the utilities, too. You have these community
6 solar programs that we absolutely supported and are
7 happy to see. Those are projecting more revenue
8 increase to the utilities than we're actually
9 seeing in terms of their alleged cost shifts.

10 Next slide. And this is why data is so
11 important. We learn really interesting things.
12 And one of those things is some Florida utilities
13 are actually projecting more increase to load from
14 electric-vehicle adoption than they're projecting
15 decrease in load from solar power. And a lot of
16 times, these are actually the same exact customers
17 who are adopting both of these technologies at the
18 same time.

19 Next slide. So, bottom line, customers have
20 choices right now and we think that's a good thing.
21 We're really happy to see options in the market,
22 and these community solar options are dwarfing what
23 we're seeing in terms of rooftop solar adoption.
24 Just one phase of one project from one utility the
25 SolarTogether program has had three times as much

1 capacity as rooftop solar in the state of Florida
2 today.

3 Next slide. I want to flag that there are a
4 lot of other issues that were raised. And we are
5 really eager to participate in the conversation
6 about all of these various issues -- obviously,
7 more than I had time to address today -- and also
8 flag that we're seeing more and more overlaps
9 between solar and electric vehicles, efficiency
10 offerings, demand-response programs, so many
11 technologies that we really couldn't foresee a
12 decade ago and that we're just really starting to
13 understand and collect data on in Florida.

14 Next slide. My next several slides, which we
15 can go through very quickly, is --

16 CHAIRMAN CLARK: We're -- we're running out of
17 time, Ms. Ottenweller. If you would --

18 MS. OTTENWELLER: Okay.

19 CHAIRMAN CLARK: -- wrap it quick, please.

20 MS. OTTENWELLER: Absolutely.

21 So, I included a few slides just for your
22 reference. In terms of why process matters, being
23 able to get stakeholders to the table leads to
24 better outcomes. Requiring data sharing also leads
25 to better outcomes. And so, we would encourage

1 that approach in Florida.

2 And you can -- you can flip through the next
3 few slides and go to the end. And utilities
4 obviously have an important role in that. I wanted
5 to end -- and you can go to the last side now.

6 Just reiterating what Mr. Huber said about the
7 settlement that was just announced yesterday in
8 South Carolina. Net metering is a contentious
9 issue, but yesterday, I think we had a real
10 breakthrough. Vote Solar, Duke Energy in the
11 Carolinas, and Sunrun engaged in nine months of
12 conversations leading to yesterday's rooftop-solar
13 agreement in South Carolina. We believe this is a
14 win for rooftop solar, the grid, and all customers.

15 And we're turning that focus on Florida. We
16 want to continue this collaborative conversation,
17 and eager to explore areas of common ground to
18 unlock even more benefits to rooftop solar and
19 other distributed energy resources for all
20 customers.

21 Similar to South Carolina, some of the
22 solutions being explored could be implemented prior
23 to others. And among concepts being explored for
24 more-near-term implementation would be low-income
25 customer access, minimum bills, non-bypass-able

1 funding of public benefit programs and fair
2 assessments to recover grid costs, all of this
3 laying the foundation for a longer-term study that
4 could explore time-of-use rates and other tools.

5 And we would ask for the opportunity to
6 consult with staff after the workshop and propose a
7 schedule for advancing this conversation. And our
8 goal would be that any ongoing post-workshop
9 discussions with stakeholders could inform any
10 future rulemaking process that the Commission would
11 deem worthwhile.

12 And Mr. Huber might want to add something --
13 something -- something to this before I turn it
14 over to any questions that y'all have.

15 MR. HUBER: Yeah, thanks, Katie.

16 CHAIRMAN CLARK: Mr. Huber, you're recognized.

17 MR. HUBER: Yes, just briefly, Chair. You
18 know, we -- we definitely feel that, you know, a
19 reas- -- reasonable policies, like a minimum bill,
20 (unintelligible) for low-income, non-bypass-able
21 on -- on public benefits and, you know, fair --
22 fixed costs -- (unintelligible) fixed cost-recovery
23 are solutions that can be explored with parties
24 with quick implementation. And then a longer-term
25 process can be outlined to study rate designs and

1 other key elements of that solar transaction.

2 Of course, we defer to the will, you know, of
3 the Commission on what action is taken when, but as
4 the representative from Vote Solar mentioned, that
5 we've had just great success in getting the
6 opportunity to have open dialogue and cooperation.

7 CHAIRMAN CLARK: Okay. Thank you, Mr. Huber.
8 Thank you, Ms. Ottenweller.

9 Any Commissioner questions? We need to keep
10 them quick. We have 30 minutes before our hard
11 deadline.

12 Commissioner Brown, you're recognized.

13 COMMISSIONER BROWN: Super quick, more of a
14 comment really to thank Katie and Vote Solar for
15 their participation in these proceedings, really
16 integral. You -- I love your parables and your
17 examples. They're very educational for us. We
18 wouldn't really know of them, but for your
19 representation here. So, thank you so much.

20 Also, if there are any recommendations that
21 you may have to our rule, please feel free to send
22 them to our staff. I do understand that South
23 Carolina repre- -- settlement that just came
24 about -- we're not here to open up the rulemaking
25 proceeding, but if there are provisions that you

1 have concerns with that you would like to address,
2 I would absolutely welcome your input, as they're
3 always valuable. Thank you.

4 MS. OTTENWELLER: Thank you.

5 CHAIRMAN CLARK: Thank you, Commissioner
6 Brown.

7 Ms. Ottenweller, I would just say, again,
8 thank you, too, for your presentation today. You
9 always do a great job.

10 One of the things that -- that I am interested
11 in is how we are making an impact in our low-income
12 communities when it comes to renewable-energy
13 resources. We continue to talk and advocate for
14 the additions of resources. And everybody likes to
15 talk about the positive effects and -- and how this
16 can help low-income customers, but I never see
17 substantive data that proves that we're doing so.

18 And -- and one of the things -- thank you for
19 your answer on what the average income is because
20 that is one of the things that I -- I'm very --
21 most interested in is more of a median income -- a
22 median-income answer for our customer -- our solar-
23 customer installers.

24 I would like to know a little bit more about
25 who is buying this system now. That will help

1 us -- and that will say more about what we are
2 doing to impact low-income customers and -- and
3 that's where I -- I'm most concerned when it comes
4 to the way the costs are being calculated and the
5 way the current rate system calculates and spreads
6 cost around is just who is getting the most benefit
7 from this system; not the fact that we are
8 promoting or advocating for the addition of solar
9 systems, but how those costs are spread among the
10 classes.

11 So, any additional information that you could
12 provide me about customer make-up in the state of
13 Florida would certainly be appreciated. I'm
14 actually surprised our utility companies have not
15 done more in-depth analysis into their own customer
16 bases to provide that, but you've given me the best
17 answer so far. Thank you.

18 Other questions --

19 MS. OTTENWELLER: Thank you.

20 CHAIRMAN CLARK: -- for Ms. Ottenweller?

21 MS. OTTENWELLER: We'll keep working on it.

22 CHAIRMAN CLARK: Thanks. Okay.

23 Let's move on to our next presenter. Our next
24 presenter is going to be Mr. Stephen Smith and
25 Bryan Jacob with Southern Alliance for Clean

1 Energy.

2 Guys, I would remind you, please hold us to
3 the ten minutes. We've got two more presenters to
4 try to get through. Unless the Commission is
5 drilling you with questions, keep it under ten for
6 me.

7 MR. SMITH: Thank you very much, Chairman.
8 We'll do our best. And -- and thank you,
9 Commissioners. Appreciate the opportunity.

10 I, too, want to say how much we appreciate the
11 work that's going on in the Panhandle and -- in
12 spite of Hurricane Sally. I'm a homeowner in the
13 Perdido Key area and very appreciative of the
14 gratitude of that work that's going on.

15 I wanted to -- as the executive director of
16 Southern Alliance for Clean Energy, I wanted to
17 just share SACE's philosophy on how we're
18 approaching solar development in Florida, which has
19 been very successful, particularly in the last few
20 years.

21 You know, we're committed to seeing all the
22 solar-market segments thrive and grow, the large-
23 scale utility-scale market segments, the mid-scale
24 community of solar programs, and today's topic, the
25 smaller-scale customer-owned rooftop net-metered

1 programs. They should all thrive together. Net
2 metering is a critical policy rule mechanism that
3 enables the last of these segments to move forward.

4 As many of, you know, SACE was a founding
5 organization in Floridian's for Solar Choice that
6 led a coalition of groups into 2015 to lead a
7 ballot effort that was meant to help grow this
8 market segment and other solar segments in the --
9 in the market in -- in that time frame.

10 That -- through 2015 and 2016, that same
11 coalition worked with the Legislature and others to
12 pass tax abatement and what was known as
13 Amendment 4 and then also led the coalition that
14 helped defeat a deceptive ballot amendment that was
15 known as Amendment 1.

16 But in that time frame, literally millions of
17 Florida voters voted twice in 2016 to support
18 strong solar policy in the state. And since that
19 adversarial time, we've seen a tremendous growth in
20 solar. And I think that's a good thing for the
21 Sunshine State.

22 And we, as an organization, have collaborated
23 and participated in what I would sort of call a
24 détente with the leading utilities in reaching a
25 settlement agreement on several rate-case-related

1 issues and various solar programs.

2 With these agreements, one of the things that
3 we have done in support of the large investor-owned
4 utilities' shared solar offerings is we always
5 preliminarily indicated to them that we want these
6 shared solar programs to -- and offerings to be in
7 addition to net metering and the customer-owned
8 offerings, not in replacement of or in any way
9 undermining this particular market segment.

10 And so, to separate some of the fact from
11 fiction, my colleagues have -- will dive deeply --
12 more deeply into this, but as has been already
13 mentioned, net-metering penetration is
14 extraordinarily low in the state of Florida. And
15 any economic threats are largely exaggerated and I
16 would characterize as largely de minimis.

17 And as you know -- you may not know -- but
18 early in my career, I was a -- a practicing
19 veterinarian. And one of the -- the axioms of
20 veterinary medicine is first do no harm. And the
21 takeaway from the first do no harm is that, in
22 certain cases, it may be better to do nothing
23 rather than intervening and potentially causing
24 harm -- more harm than good with your patient.

25 And while net metering growth is going on,

1 there are actually some real important things on
2 the horizon that may actually cool the market, and
3 these include, and are not limited to, the step-
4 down of the federal-investment tax credit. And
5 these shared solar programs at a lot of the large
6 investor-owned utilities now are putting into the
7 marketplace that give customers more options.

8 And so, while we've seen some of this growth,
9 I would caution you that we may actually be on the
10 verge of now starting to see some significant
11 cooling of the market in Florida.

12 Given that, you know, I would encourage you to
13 practice the axiom of first do no harm. And we
14 have reached out and continue to reach out and work
15 with the investor-owned utilities and other
16 stakeholders to begin down-the-road conversations
17 about what a net-metering 2.0 may look like, but,
18 again, in the spirit of first do no harm, let's not
19 kill this valuable patient at a time when it's so
20 important to both Florida's consumers and Florida's
21 natural environment.

22 So, with that I'm going to turn it over to
23 Bryan Jacob and let him just talk through a couple
24 of quick slides. And thank you for the
25 opportunity.

1 MR. JACOB: Thank you, Steve. Thank you,
2 Mr. Chairman. Bryan Jacob for Southern Alliance
3 for Clean Energy. With our compressed schedule, I
4 would ask that we jump ahead two slides, skipping
5 over the one that just introduced who SACE is. I
6 think you're familiar with us.

7 And I'll go quickly on -- on a number of them,
8 including this one. I put this slide in really to
9 say thank you to the Commission for the letter that
10 you put forward in the FERC docket recently, the
11 NEERA petition.

12 And, several quotes in here, but in
13 particular, I was pleased when you emphasized that
14 the relationship between the customer-owned solar
15 customers and their utility is a retail
16 transaction, not a wholesale one. You know, it's
17 very important to emphasize.

18 Let's go on to the next slide. SACE puts out
19 an annual "Solar in the Southeast" report. I've
20 got a few graphs in here that emphasize a few
21 things, kind of where we stand as of 2019. Florida
22 was second in the southeast in installed solar
23 capacity behind North Carolina and forecasts to
24 overtake North Carolina.

25 Next slide. But it's really important to

1 distinguish the segmentation of that and the
2 growth. What's driving the growth in the
3 southeast -- and Florida is no exception -- is
4 utility scale.

5 There is a relatively little amount of
6 distributed solar in Florida that is almost
7 exclusively net-metered solar. And the reason I
8 mentioned this is that I know that the Energy
9 Fairness Report on net metering has been
10 recommended to you. And so, I wanted to quickly
11 illustrate how things can be simultaneously
12 accurate, but also misleading.

13 The header on the cover of that report says
14 "Net Metering," in big, bold letters, all capitals.
15 So, when a reader encounters a statement in the
16 report that solar accounted for 1.65 percent of
17 Florida's electricity needs in 2018, the reader
18 might automatically presume that is referring to
19 net metering since that's the title of the report,
20 but the fact is net metering only represented
21 .2 percent of the retail sales of all the utilities
22 in Florida in 2018. A very low penetration, very
23 small number.

24 Next slide. In our report, we also emphasize
25 that the absolute capacity of solar may not be the

1 best way always to look at things. So, we use a
2 quantitative metric of watts per customer so that
3 we can compare large utilities and small ones,
4 states with large populations and states with small
5 ones, so when we look at watts per customer,
6 Florida is well below the average now and is even
7 forecast, with all the growth over the next four
8 years, only to get caught up to the region average.

9 When -- another state that might be
10 instructive would be South Carolina. South
11 Carolina has already -- already been referenced in
12 terms of the settlement that was announced
13 yesterday, but on this metric, watts per customer,
14 South Carolina has two and a half times the
15 penetration of solar that Florida does. And,
16 again, that is a combination of the utility scale
17 as well as net-metered solar.

18 Next slide.

19 COMMISSIONER BROWN: May I interrupt you,
20 please?

21 MR. JACOB: Yeah, absolutely.

22 COMMISSIONER BROWN: Thank you so much. Does
23 South Carolina have any enabling legislation to
24 encourage the deployment of net metering?

25 MR. JACOB: Yes, in fact, dating back to Act

1 236, which was the original legislation that
2 created net metering for the State of South
3 Carolina and imposed a target threshold that
4 ultimately became referred to as a cap, which
5 ultimately, then, was lifted with Act 62 last year,
6 the cap is no longer in play. And, instead, the --
7 retail net metering, as it currently stands, got
8 some additional run room.

9 And then the settlement that was announced
10 yesterday is what is being proposed as the
11 successor to that to be able to continue net
12 metering in the state with a different kind of
13 economic compensation structure.

14 So, Act 236 and then Act 62 both have been the
15 enabling legislations for net metering in South
16 Carolina.

17 COMMISSIONER BROWN: Thank you so much. And
18 what was the impetus to lead to an ultimate
19 settlement with a variety of stakeholders in South
20 Carolina?

21 MR. JACOB: Act 62 ex- -- well, removed the
22 cap, as I mentioned, and then gave a date certain
23 in the future through which the current version of
24 net metering would be offered. And that's up until
25 June 1st of next year.

1 And so, there has been many, many months of
2 conversations between stakeholders and utilities
3 to -- to -- to kind of co-create what the
4 replacement for that would be, the so-called solar
5 choice net metering that was announced yesterday.

6 COMMISSIONER BROWN: Was it a directive by the
7 South Carolina Commission or the Legislature or
8 none of the above?

9 MR. JACOB: It's -- the date was put together
10 in Act 62, itself, in the legislation.

11 COMMISSIONER BROWN: Thank you.

12 CHAIRMAN CLARK: Mr. Jacob, follow-up
13 question: In relation to the adoption rates and --
14 and how successful we see each state, I'll -- lots
15 of different groups are showing different numbers
16 and how different states are adopting solar or
17 renewable energies at higher rates.

18 Do you have a comparison of the same states in
19 terms of the average residential retail rates that
20 they're paying? For example, is South Carolina an
21 average residential rate? What's the difference
22 between that and the one in Florida for our IOUs?

23 MR. JACOB: I trust that we can get that to
24 you. That is not part of the Solar in the
25 Southeast report. We don't focus on -- on rates.

1 CHAIRMAN CLARK: But would you consider that a
2 driver in the adoption rate of solar systems, is
3 retail rates?

4 MR. JACOB: I -- I think it is fair to assume
5 that that's one of many aspects that goes into a
6 customer's decision on whether to choose solar,
7 yes.

8 CHAIRMAN CLARK: Okay. Thank you. You may
9 continue.

10 MR. JACOB: Perfect. Thanks.

11 So, in addition to that watts-per-customer
12 ratio that we use as the primary metric in our
13 report, we think it's a good one, but it's
14 certainly not the only metric. So, I've compiled
15 several others here that you could consider in
16 terms of gauging solar penetration.

17 The 43,000 customers that are represented
18 between these three utilities and 60,000 statewide
19 is still a very low number relative to the more-
20 than-ten-million retail customers that are served
21 across the state of Florida.

22 As has already been mentioned, Duke is well
23 ahead of the other utilities in the state in terms
24 of penetration, but even when you look at Duke's
25 numbers here, they are relatively low, wh- -- and

1 that's true whether you're looking at the ratio of
2 net-metered customers to retail customers they
3 serve or the capacity of the net metering versus
4 the (technical interruption) or the generation from
5 those systems relative to their total retail sales.
6 So, I've put all those there for your
7 consideration.

8 Next slide. I also wanted to offer a little
9 more context -- and I'll go back to that Energy
10 Fairness report that I referenced earlier. Another
11 statement that's in that report is that there has
12 been a 6,400-percent increase in customer
13 interconnections since 2008.

14 And if we just use a quick analogy, if you had
15 a milliliter of water and you amplified that by
16 6,400 percent, that would get you to
17 65 milliliters, which is a little over a quarter
18 cup.

19 So, that, to me, is kind of a classic example
20 of a statistical exaggeration. It may look like a
21 significant increase from your starting point, but
22 a quarter cup of water is insignificant relative to
23 a -- bathtub or a swimming pool. So, context is
24 really important.

25 The state of Florida has 60 gigawatts of

1 installed capacity, 60,000 megawatts. So, yes,
2 when we talk about the growth and up to
3 500 megawatts of net-metered solar now, that's a
4 good thing, but in -- in comparison of the total
5 capacity, in particular, the over-reliance on gas
6 capacity, which is a point that my colleague made
7 to you when she presented at the ten-year-site-plan
8 workshop -- and that's why I put this graph
9 together for you.

10 Next slide. Steve mentioned that there are a
11 few headwinds that we know we will be anticipating
12 in the coming years and it might actually be an
13 indication why the current run rate of net-metered
14 solar may not actually be indicative of the future
15 run rates.

16 This is a graph of the production tax credit
17 for wind and what happened on the multiple
18 occasions when it was allowed to expire. What
19 jumps out on the graph is it expired in 2012 and
20 then it was reinstated in 2013, but I would submit
21 that the real run rate for wind development is
22 probably more aligned with the average of that 2012
23 bar and the 2013 bar.

24 There was, no doubt, a rush because of the
25 expiration to get the projects in while they could

1 qualify for the production tax credit. Same thing
2 may be happening with, last year, people wanting to
3 take full advantage of the 30-percent investment
4 tax credit for solar and even now, at 26 percent.
5 And I do expect that with the phase-out in 2022,
6 that will have a significant decrease in -- in
7 solar penetration for net-metering.

8 Next slide. The other thing that Steve
9 mentioned is that the utilities in Florida are just
10 now really introducing the shared solar programs.
11 Tampa Electric has a small one. Florida Power &
12 Light has a huge one, and Duke has one that is
13 pending your approval right now.

14 And SACE supported all three of those. We --
15 we filed documents in support of those, but with
16 the expectation that they would be complimentary to
17 and not compete with existing net-metering
18 offerings, but the -- the reality is it is inherent
19 in them that there will be competition and
20 customers will be making a judgment on which
21 program is most suitable for them, whether to put
22 solar on their own properties or source it through
23 one these. And we don't know yet how much of that
24 customer base may be get pirated away from net-
25 metering into these shared solar programs.

1 Next slide -- in fact, you could even skip
2 this next one because so much has been talked about
3 with the -- South Carolina already, and I'll just
4 go ahead and conclude.

5 Net metering is, in fact, growing in Florida,
6 no doubt about it, but that's a good thing, not a
7 bad thing. And there are these countervailing
8 factors, potential headwinds that we will encounter
9 in the future, but even with the growth that we've
10 seen, net-metering penetration is really still very
11 low in Florida.

12 And then I would reiterate that SACE is very
13 eager to work with the utilities when the time is
14 right -- as we've demonstrated with South Carolina,
15 that is a perfect example of where stakeholders and
16 utilities have collaborated to create a net
17 metering 2.0, but the penetration rates in Florida
18 would indicate that it's premature to do that. So,
19 that's why I put this statement over here on the
20 side: Now is not the time to fix something that's
21 not even broken.

22 Thank you very much.

23 CHAIRMAN CLARK: All right. Thank you very
24 much, Mr. Jacob.

25 Any questions for Mr. Jacob before we move on?

1 We're running hard up against our deadline.

2 Commissioner Brown.

3 COMMISSIONER BROWN: I -- I know we are and I
4 am sorry, Mr. Chairman, but I -- I do have to ask
5 SACE a question since they're so integral to our
6 process.

7 Mr. Jacob or Smith, is there anything that you
8 would recommend to our existing rule?

9 MR. JACOB: My recommendation would be that
10 it's working, and so, continue it as is and let it
11 fulfill the -- the stated intent from the
12 Legislature when they put together their renewable-
13 energy statute.

14 COMMISSIONER BROWN: Obviously, you've heard
15 some data, though, we -- we -- we are gathering
16 data. So, it's very important to have that
17 information, including insurance requirements,
18 things of that nature.

19 So, to be premature and prejudge a -- a
20 modification to the rule -- I just want to make
21 sure we're clear on SACE's position.

22 MR. JACOB: Yeah, no modification is
23 necessary. It's working as is and should be
24 continued.

25 COMMISSIONER BROWN: Thank you.

1 Thank you, Mr. Chairman. Sorry.

2 CHAIRMAN CLARK: No problem. Thank you very
3 much.

4 All right. Thank you, Mr. Smith and
5 Mr. Jacob.

6 Next up, we're going to hear from Mr. Justin
7 Hoysradt with Florida Solar Energy Association.

8 Mr. -- Mr. Hoysradt, we are -- we are running
9 on a pretty quick time schedule here. If we can
10 condense things a little bit and give the
11 Commission time for questions.

12 MR. HOYSRADT: Absolutely. I appreciate that
13 and I will do my best to move along as quickly as
14 humanly possible.

15 Thank you for -- for having us here. It's
16 been a while since I've been before the Commission.
17 Commissioner Brown, Commissioner Graham, good to
18 see you again. My name is Justin Hoysradt. And
19 I'm the president of Vinyasun, a local solar energy
20 contractor, as well as the Florida's Solar Energy
21 Industries Association.

22 You can go to the next slide. Since 1997,
23 Florida SEIA has been the leading and only local
24 non-profit and trade organization to represent the
25 solar industry. And we're an affiliated chapter of

1 National Solar Industries Association.

2 So, our membership includes licensed solar-
3 energy contractors, a specialty license in Florida,
4 electricians, roofing contractors, engineering
5 firms, equipment distributors, manufacturers,
6 financial companies, and even end users.

7 In the early days, Florida SEIA was primarily
8 comprised of contractors participating in solar
9 thermal, domestic water installation, recreational
10 pool heating, but since 1980, the solar policy and
11 lawmakers have a long-standing policy of supporting
12 the reduction of our state's reliance on foreign
13 and domestic scarce fossil fuel, and this includes
14 intentionally promoting the development of
15 customer-owned renewables like solar PV.

16 The industry, you know, was referred to
17 consistently over the number of years, since -- you
18 know, as long as I can remember -- as a cottage
19 industry. Just a few -- few specialty contractors
20 doing business heating pools.

21 And, you know, I tell you that because, in the
22 old days, I remember -- because my father was one
23 of those contractors. And his competitors and
24 colleagues were those other small specialty
25 contractors heating pools.

1 Now, Commissioner Fay, that college -- cottage
2 industry helped put my sister through school at
3 FSU, and it afforded me the opportunity to graduate
4 from UCF, you know, the 2017 National
5 Championships. And you know, Commissioner Graham,
6 that is not a license-plate slogan that is up for
7 debate.

8 And as --

9 COMMISSIONER BROWN: (Unintelligible.)

10 MR. HOYSRADT: You got it. All right.

11 Next slide, go.

12 You can go to the next slide. In the
13 beginning, solar was expensive. We all get it,
14 right. But the cornerstone policy of net metering
15 is really what has driven this state forward. You
16 know, all of the other policies that we've tried
17 have failed.

18 The state-run rebate program failed pretty
19 miserably leaving a lot of people without getting
20 their rebates. The pilot programs were mismanaged
21 pretty terribly. And we found that, you know, the
22 Commission removed them and things started to move
23 on pretty aggressively towards what we now have as
24 just standard net metering.

25 And you can go to the next slide. But now, we

1 have over 12-thous- -- well, had over 12,000 jobs
2 in the state of Florida, and an extremely diverse
3 workforce, and over, you know, 60,000 customers now
4 with rooftop solar. You can go to the next slide.

5 And even so, we have manufacturing coming back
6 to Florida. You know, Katie already said this, but
7 these are the jobs that can't be outsourced to
8 places like China and India. And, again, I
9 overemphasize the diversity of the men, women, and
10 variety of races, colors, and creeds that work in
11 this industry. So, we're working hard to keep
12 Florida moving.

13 So, next slide. And, you know, local solar
14 energy is universal solar energy. It's all over
15 the state of Florida. There is now approaching 400
16 solar contractors in the state of Florida. The
17 fella from Tampa mentioned there might be even 150
18 local to his area. And those contractors are all
19 within 50 miles of every city in Florida, not every
20 major city, but every city in Florida. And that's
21 just with a couple of large multi-state contractors
22 and folks that had mentioned there are some out-of-
23 state people coming in and some small public
24 companies.

25 But the vast majority of those are small,

1 bootstrapped companies that grew their company
2 through profit; you know, home equity loans,
3 traditional bank financing, or just simply loans
4 from friends and family. These are real, home-
5 grown businesses.

6 You can go to the next slide. And, today, you
7 know, we're improving technology. Costs of solar
8 are obviously coming down. The Legislature
9 unanimately approving the ballot campaign that
10 effectively put tax policy back in line with where
11 we were in the 1980s, and meaningful growth in the
12 solar-energy industry.

13 But it -- it's not that meaningful, as Bryan
14 had just alluded to. You know, it's taken 12 years
15 to get to where we are today, and it took three
16 months for the Coronavirus to eliminate 100 percent
17 of the gain that we saw since 2017.

18 You can go to the next slide. You know, and
19 I'm -- I'm proud to say where we are today and
20 where we can go, but we are very slow. The
21 industry is moving at, effectively, a sloth's pace
22 in order to grow solar technology. And Bryan
23 ultimately emphasized that manipulation of numbers.

24 Katie stole my thunder with my football
25 analogy, but you know, Doak Stadium holds way more

1 people than ones who have gone solar.

2 Go ahead to the next slide. What's more
3 important to consider in this particular process is
4 that, under the consideration that, every day, more
5 than a thousand people are moving to Florida, and
6 NextEra maintains in their public filings that they
7 alone are adding more than 65,000 new meters to
8 their customer base each year, that basically means
9 that the industry adds approximately 59 new
10 installations a day for solar where NextEra, alone,
11 is adding 178 new meters to their grid. And that's
12 likely to increase with the new addition of the
13 Gulf FPL.

14 Next slide. So, that's -- that said, it is --
15 it is my opinion that the solar industry -- we do
16 support the mention that Commissioner Graham
17 requested to increase the Tier 1 system side, and
18 we would definitely support staff's comments about
19 increasing it to 250 kW. That's for sure. And
20 that could likely be done in a proceeding as simple
21 as when FPL specifically requested to remove their
22 manual-disconnect requirement.

23 The ind- -- industry doesn't necessarily need
24 any headwinds either. You know, as Bryan
25 mentioned, there's not a whole heck of a lot that

1 we -- we need to do to this net-metering rule. And
2 there's a lot going on, as Steve mentioned, with
3 the fact that the step-down in the investment tax
4 credit is coming, but what most people don't really
5 bring up is the cost of permitting, the costs
6 associated with building codes, and there's
7 building-code changes that are going into effect
8 over the next couple of years that are definitely
9 going to increase the cost of solar to the end --
10 end user.

11 And even still, today, we deal with, you know,
12 HOA restrictions that are illegal, but are still in
13 place. We have disallowed financing models and, of
14 course, you know, new competition from the net-
15 metering alternative from our friends at the
16 utilities.

17 You can go to the next slide. And demand from
18 residential customers in one week surpassed the
19 total residential private solar capacity that was
20 installed over the last ten years. And that's a
21 direct quote from Rebecca Kujawa regarding
22 SolarTogether in a NextEra filing.

23 So, you know, Commissioner Brown, when you
24 asked Mr. Deason what the utilities are doing to
25 promote customer-owned renewables, I can tell you

1 that they are doing exactly what he said; they're
2 not doing anything more than simply following the
3 rule.

4 You know, as an installer, I can only imagine
5 what the impact would be and what it would make to
6 customer perception if only a single investor-owned
7 utility provided a bill insert that specifically
8 described how net metering worked.

9 Just today, I received an FPL bill that
10 specifically said, no up-front costs, no contracts,
11 no installation, no maintenance, and no worries to
12 participate in SolarTogether. So, I -- I echo what
13 you were saying.

14 So -- next slide. That said, I don't believe
15 that there is any threat to the utility business as
16 usual. They're doing -- they're doing just fine.
17 And they don't seem to care about rooftop solar
18 when it comes to their corporate filings.

19 But -- next slide -- more importantly, there
20 is really no known threat to safety. There's no
21 known threat to reliability. There is no --
22 literally no known threat to cost. And I -- I even
23 take offense to the \$700-million cumulative subsidy
24 over what is seemingly the next six years as
25 literally impossible. That is -- that assumption

1 is giving this industry way more credit than it
2 deserves in the ability to find people enough to
3 deploy that much solar capacity.

4 So, either they are expecting, you know,
5 something in the assumptions that -- in their next
6 rate case that they're intending to increase rates
7 so exponentially that will serve as a way to scare
8 customers away from doing business with them, or
9 there's something else that I'm not fully
10 understanding about how this industry works.

11 Next slide. You know, Bl- -- go ahead to the
12 next slide. Black & Veatch provided a study that,
13 at one point in time, helped commissions understand
14 the variability of renewables and the effect to the
15 grid. That's why it is -- it is referenced in the
16 end of my PowerPoint.

17 And it came as a result of California ISO
18 where 73 percent of their energy was coming from
19 variable renewables, and that was really one of the
20 things way before the advancement of battery
21 storage. And what they had determined was that the
22 right tools and guidance from policymakers and --
23 would enable the Commission to work directly with
24 stakeholders to provide benefits to both the
25 utility and the customer.

1 And I feel like that's sort of what we're
2 hearing from Lon, in South Carolina, where
3 lawmakers were able to provide their Commission and
4 the utilities and the stakeholders an opportunity
5 to work together. And that's something that we've
6 heard over and over, that our Commission doesn't
7 necessarily have the tools in their tool kit to
8 provide.

9 You can go to the next slide. So, with
10 73 percent possible, I would say that one-half of
11 1 percent in Florida is invisible.

12 And the next slide is, effectively, you know,
13 what does the future look like of Florida. And,
14 hopefully, it is that we continue this policy of
15 net metering. In the beginning of our
16 conversations, we discussed about not rolling
17 anything back and that this was just a discussion.
18 And I'm really excited that the industry is part of
19 that discussion right now and look forward to
20 continuing it in the future.

21 CHAIRMAN CLARK: All right. Thank you,
22 Mr. Hoysradt.

23 Any questions? Anybody have any questions?
24 Commissioner Graham.

25 COMMISSIONER GRAHAM: Quick question, how does

1 one become a licensed solar contractor?

2 MR. HOYSRADT: That's a -- that's an excellent
3 question. There's a -- a process through DBPR, a
4 testing process, a qualifications process. And the
5 solar-energy-contractor license covers a variety of
6 scopes.

7 So, it's -- it's a mishmash of skills:
8 electrical, plumbing, strangely enough, and roofing
9 all combined together as well as the business-
10 acumen portion of it and the financial
11 requirements, similar to electrical contractors,
12 roofing contractors, and other trades. It's a
13 process.

14 COMMISSIONER GRAHAM: So, do the utilities --
15 do the utilities require for a licensed solar
16 contractor to put the roof -- to put your solar
17 array -- connect your solar array to your house
18 before they accept it?

19 MR. HOYSRADT: I believe what you're asking is
20 does the system have to be connected to the home
21 before the utility will turn it on?

22 COMMISSIONER GRAHAM: Well, I mean, can Joe
23 Smith put it on his own house and hook it up or do
24 you have to be a licensed solar contractor to do
25 that?

1 MR. HOYSRADT: You -- you would either have to
2 be a -- you would either have to have a licensed
3 solar-energy contractor or an electrician to
4 interconnect the system to the home and receive an
5 inspection from your local building department,
6 which is, then, provided to the utility.

7 And even then, the utility still has, under
8 the net-metering rule, the ability to perform their
9 own self-inspection.

10 COMMISSIONER GRAHAM: Thank you.

11 CHAIRMAN CLARK: All right. Thank you,
12 Commissioner Graham.

13 Any other questions?

14 We have one last presenter we're going to try
15 to get in here.

16 All right. Thank you, Ms. Hoysradt. I
17 appreciate your presentation today.

18 Our last presenter is Mr. Tyson Grinstead with
19 Sunrun. Mr. Grinstead, are you on the line?

20 MR. GRINSTEAD: I am. I hope everybody can
21 hear me. I'm up in -- I'm actually up in South
22 Carolina, where we're getting a lot of the effects
23 of the storm right now, so I hope you all can hear
24 me.

25 CHAIRMAN CLARK: Yes, sir, we can hear you

1 fine.

2 MR. GRINSTEAD: And I can be brief. If you
3 will go to Slide 4. My name is Tyson Grinstead.
4 I'm the director of public policy for Sunrun. I've
5 been doing this for about five years, cover the
6 southeast market. I've worked with Lon in the --
7 in the back room to come up with the South Carolina
8 deal that we announced yesterday.

9 I have a couple of points -- because I know
10 we're short on time. Number one, you know, is
11 Sunrun -- to answer -- well, to answer Commissioner
12 Brown's question from a -- from a few minutes ago
13 to Duke, one of the reasons we -- you see Duke
14 as -- as a higher penetration than the other
15 utilities is simply because, you know, Sunrun has
16 been there for a while.

17 We're a leader in the industry. And, not to
18 toot our own horn, but, you know, we -- we do -- we
19 are a bigger percent of the market than we are --
20 and we are not in some of the other utilities.

21 One of the reasons we're in Duke is because
22 Duke works with us, quite frankly. Our
23 interconnection team and their interconnection team
24 meet a couple of times a month on Friday to talk
25 about problem projects. We -- they came to us and

1 talked about South Carolina to make sure we came --
2 we came up with a win-win solution.

3 So, you know, we just went into FPL last
4 Thursday, actually. Haven't been in that utility.
5 We have been in TECO and OUC, but those are the
6 only four utilities that we are now serving, but we
7 have been glad to see that there have been some
8 positive stakeholder conversations. And I think we
9 can be creative when we work together offline to
10 come up with -- with solutions. So, just wanted to
11 answer that question.

12 As -- as to the slide that you all are seeing
13 right now -- now, one thing that folks haven't said
14 yet is what has COVID-19 done to the solar
15 industry. In Florida, we feel like, based off the
16 numbers we're seeing, there's around a 37-percent,
17 give-or-take, drop in the amount of solar capacity
18 being installed right now.

19 For rooftops specifically, that is -- and for
20 our company, that's around average as well. We are
21 actually a little bit higher than that in what
22 we've seen, in terms of the effects. And so, you
23 know, to anybody who would say we are growing
24 exponentially in Florida, that's changed, quite
25 frankly.

1 It's -- we -- if you look go down to Slide 8
2 and look at our trade groups, what their
3 project- -- projections are -- we may have been
4 growing in Florida, but we suffered a lot of
5 furloughs, a lot of folks who were laid off because
6 of COVID-19, and we're trying to do creative things
7 to come back in Florida in the Sunshine State.

8 One of those was to expand into FP&L and try
9 to sell to some customers that we were not
10 previously offering our -- our lease to. And --
11 and -- so, we're proud to be doing that. And I
12 think, you know, that's an important standpoint
13 because what happens to this industry doesn't
14 necessarily happen in a vacuum.

15 As Mr. Hoysradt said, and others have touched
16 on, federal policy is changing. We're looking at
17 an IPC step down. And that, coupled with COVID, is
18 going to be a major setback for the industry in
19 Florida and for -- and for many others states,
20 including South Carolina. It's one of the major
21 reasons that drove us to settle in South Carolina
22 was to get ahead of those changes and make sure
23 that we had a stable policy going forward.

24 You know, I -- I think, when you're talking
25 about net metering, and you're talking about, you

1 know, the inevitable conversations of subsidies and
2 that \$39 million that was sent -- that, you know,
3 was stated earlier, it's important to look at
4 outside factors as well as what the benefits maybe
5 are to the utilities.

6 One of the interesting things about having a
7 very robust net-metering fight for about three
8 years in South Carolina is that stakeholders have
9 really looked into data and been creative. One of
10 the stakeholders put out a month ago an economic-
11 impact study because the Legislature here in the
12 Palmetto State really wanted to understand, okay,
13 what are the costs and benefits, but not only what
14 are the costs and benefits to the grid, what --
15 what -- what are the cost and benefits to the
16 economy if we make a change.

17 And so, they actually put that the Public
18 Service Commission and the parties needed to look
19 at the direct and indirect economic impact to -- to
20 the economy up here in South Carolina.

21 And a stakeholder, Audubon Society, just did a
22 study that came out about a month ago that showed a
23 \$58.5-million tax benefit, direct and indirect, to
24 the -- to little old South Carolina, based off the
25 solar industry.

1 And that's not any other economic -- the
2 entire all-in costs was almost a billion dollars of
3 findings in that report. So, I would encourage you
4 all, as you're thinking about this, to look at
5 the -- look at the economic impact, the jobs,
6 and -- and the spending that's created in the state
7 as a result of having an industry.

8 For -- for all intents and purposes, this
9 industry is still very new. Yes, net metering has
10 been around for a while, but solar leasing really
11 has only been around for two years. And that was
12 probably the major driver towards Sunrun growing
13 our presence in Florida before COVID-19. And it's
14 also a way to market to a very diverse -- to a very
15 diverse customer base.

16 Anecdotally, we have low-income and moderate-
17 income customers who don't have to come out of
18 pocket, who are happy with the solar lease, but at
19 the end of the day, the green that matters to them
20 is the green that's in their pockets; and that's
21 that they're saving money on a lease with
22 economics.

23 And so, we are trying very hard to make sure
24 that we offer very good deals, that we give them a
25 very good customer experience. And we thank the

1 utilities who are working with us to -- to ensure
2 that customers do have a good experience.

3 If I could leave you all with one thought,
4 based off the South Carolina deal -- because you've
5 heard it a lot: Penetration -- solar penetration
6 matters. States that have done creative things
7 with solar, who have come up with win-win
8 solutions -- you know, TECO mentioned that winter-
9 morning peak. Part of the South Carolina deal is
10 that we are a help to the winter-morning peak for
11 Duke in the Carolinas, you know, to -- but -- but
12 that didn't happen until there was a robust market
13 and the penetration, you know, levels were -- were
14 higher, more than double what they are in Florida.
15 We're doing very innovative things with batteries
16 across the country now.

17 And, you know, the ultimate goal for us is to
18 help create community-style grids where we are a
19 help to resiliency where we can really be a benefit
20 to the grid, but to do that, we have to have a
21 healthy company in Florida. And, for that to
22 happen, we need certain levels of penetration.

23 You know, NARUC has said, no changes to net
24 metering really are needed until 10 percent. We've
25 done that, you know, at 5 percent, at 3 percent in

1 other states, but -- to be, you know, positive,
2 working stakeholders, but at the end of the day, I
3 think we're less than 1 percent or right at 1
4 percent in some utilities in Florida, but we need
5 time to grow, we need time to be able to talk
6 offline with utilities and get creative.

7 And the -- when we are allowed to do that, the
8 result is that we can benefit all ratepayers
9 through creative solutions. And that's -- that's
10 ultimately my hope for Florida, that we can get to
11 that point in a couple of years.

12 CHAIRMAN CLARK: Great. Thank you,
13 Mr. Grinstead. I -- I appreciate that comment.
14 It -- it's a recognition that what we have done
15 is -- has been working and that it needs to
16 continue, whether or not there are certain
17 subsidies for the systems or not. I think your --
18 your comments are right on target.

19 One question I do have, you -- you indicated
20 you're contributing to the winter peak in South
21 Carolina. Can you just briefly tell me how you do
22 that?

23 MR. GRINSTEAD: Sure.

24 CHAIRMAN CLARK: Is it through batteries?

25 MR. GRINSTEAD: Yes, so -- so, it's actually

1 the smart thermostat that is going to phase in
2 first. And this is part of the South Carolina deal
3 that was announced last night. So, great timing, I
4 know, to have all the details. And, of course, I
5 would be happy to come back in and -- and share
6 with you all the details of the South Carolina
7 settlement.

8 But to quickly summarize it and -- and to
9 focus the point on something that fine, you know,
10 they have a sharp winter morning peak that -- that
11 exists in the Carolinas, both for North and South
12 Carolina. The idea behind the settlement is to
13 preserve net metering, the hallmarks of net
14 metering, but really allow the utility to call
15 certain critical-peak pricing events to allow them
16 to preheat and levelize that peak.

17 And so, in that regard, it's a win-win
18 solution, both for Sunrun and for Duke because we
19 are able to offer a product that saves money for
20 our customers in South Carolina, if it's approved,
21 and -- and Duke is incentivizing us to add a -- add
22 a smart-thermostat feature that they can control
23 and call upon to -- to just help levelize that
24 peak.

25 So, you know, we're benefiting all ratepayers

1 in the outcome of this. And we're very optimistic
2 that both the South Carolina and North Carolina
3 commissions will approve this deal in the next
4 year.

5 CHAIRMAN CLARK: Okay. Thank you very much.
6 Commissioners any questions? Commissioner
7 Brown.

8 COMMISSIONER BROWN: Thank you so much for
9 your presentation. And, by the way, thank you for
10 participating in Florida proceedings, too. I think
11 you've really made a difference in terms of leasing
12 and opportunities in our state. So, really excited
13 about Sunrun's potential in Florida.

14 MR. GRINSTEAD: We're excited to be here.

15 COMMISSIONER BROWN: That being said -- so, as
16 part of that settlement agreement in South
17 Carolina, I'm -- I'm curious more about the
18 details, though. Wa- -- was the retail rate
19 changed?

20 MR. GRINSTEAD: So, at the time-of-use rate
21 that's netted monthly -- so, it is changed
22 slightly, and then, it's --

23 COMMISSIONER BROWN: -- slightly. Can you
24 elaborate a little bit more?

25 MR. GRINSTEAD: So, in South Carolina, there's

1 sort of annual netting to -- to make it -- to make
2 it simple. So, essentially customers get full
3 dollar-for-dollar net metering at the retail rate.
4 That -- the credit that -- if they have any -- if
5 they produce extra credits at the end of the month,
6 that rolls over until the end of the year and at
7 the end of the utility year.

8 At the end of utility year, they cash -- those
9 credits are cashed out at the avoided cost rate.
10 So, the difference here is that, if a customer has
11 excess credits such that they would start the new
12 month with -- with a positive bank of credits,
13 those credits would be adjusted down to avoided
14 cost. And -- and that's what we refer to as
15 monthly netting.

16 It's not unlike some interim changes that
17 other states have made. And that, of course, is --
18 is sort of paired with a TOU and with a critical-
19 creek -- critical-peak pricing that allows Duke to
20 control a thermostat -- smart thermostat for a
21 couple -- for 20, 25 times a year.

22 COMMISSIONER BROWN: Was there a valuation
23 placed on solar?

24 MR. GRINSTEAD: Not yet. So, if you go down
25 in my slide deck, down to Slide 13, when the

1 Legislature passed Act 62 in South Carolina, it is
2 the most-comprehensive list of cost and benefits in
3 the country that need to be looked at.

4 So, we have come up with this settlement
5 before -- before the -- the proceedings to look at
6 what comes next in South Carolina, happened. And
7 that's for a number of reasons, but mostly because
8 Duke and -- and Sunrun and other parties were --
9 were willing to sit down for the last nine months
10 and talk, but --

11 COMMISSIONER BROWN: It's pretty amazing, by
12 the way. Thank you for that -- that leadership
13 because it -- it's a very controversial issue.

14 MR. GRINSTED: It absolutely is. And we've
15 been a part of the controversies in almost every
16 state that's had it in the -- in the years that
17 it's taken states like Nevada and Louisiana and all
18 these states to figure it out.

19 But what I was -- what I was going to say is
20 that there is a -- the Commission is supposed to,
21 in the net-metering docket in South Carolina, look
22 at the cost and benefits, including all the factors
23 that are on -- on my Slide 13.

24 So -- so, there is a value of solar. That is
25 one factor that is on equal footing with several

1 other factors, including, as I mentioned, the
2 direct and indirect economic impact to the state,
3 so --

4 COMMISSIONER BROWN: And I -- yeah.

5 MR. GRINSTEAD: Yeah.

6 COMMISSIONER BROWN: So, I've seen some
7 valuations of solar around the country. So,
8 that -- that's why I'm curious about how that
9 settlement arrived.

10 And then, in terms of process for South
11 Carolina, what was the -- what was that process
12 like? Was it including --

13 MR. GRINSTEAD: Right.

14 COMMISSIONER BROWN: (Unintelligible).

15 MR. GRINSTEAD: In 20- -- in 2018, parties
16 kind of basically had a -- had a big fight because
17 we thought we were going to hit the caps and, you
18 know, we were able -- we -- we -- legis- --
19 legislation did not pass eliminating the cap in
20 2018.

21 We -- we all decided to get together in the
22 off session, in part because of policymakers
23 pushing us to the tables. The Speaker of the
24 House, the energy caucus, that is the legislative
25 energy caucus -- they passed Act 62. We knew that,

1 as of June 1st, 2021, there would be some sort of
2 new net-metering policy.

3 Again, that's probably going to be when the
4 utilities are around three to -- I'm not sure what
5 penetration level they will be at that point, but
6 the caps were at 2 percent. Those caps were hit in
7 the -- the summer of 2018, I believe. So, we're --
8 we're well beyond 2 percent now.

9 But we were able to sit down with Duke
10 beginning in mid-December of last year before the
11 COVID-19 -- we were able to sit down in person,
12 which was nice, for one meeting. I think we talked
13 probably twice a week, three times a week, you
14 know, pretty frequently after that for -- for
15 several months.

16 And we're -- had some peaks and valleys in
17 those conversations, but ultimately, we stuck with
18 it because we felt like the parties could do
19 something creative, and that South Carolina could
20 be an example and -- and we were glad that we were
21 able to get to the finish line.

22 COMMISSIONER BROWN: I'm going to tell you,
23 I'm -- I'm super excited that you are a participant
24 in the state of Florida. I think you provide a lot
25 of opportunities for folks that can't otherwise

1 afford solar. So, appreciate you even
2 participating in these proceedings. Thank you.

3 MR. GRINSTEAD: Thank you. We're happy to be
4 a part of the community.

5 CHAIRMAN CLARK: All right. Other questions
6 from Commissioners? Any other questions?

7 All right. Thank you very much,
8 Mr. Grinstead. Appreciate that -- that
9 presentation.

10 Again, I want to thank all of our presenters.
11 You guys did a great job. You almost met my
12 12:00 hard noon deadline. You're only 24 minutes
13 past it, but I'm going to count that as a win for a
14 all of us. Thank you for being concise and helping
15 us to get through the morning.

16 Commissioners, do you have any final comments,
17 questions, or observations? It's been a great
18 opportunity for us to learn and to listen to the
19 different presentations and begin to evaluate
20 the -- the things that I think we may determine
21 that we want to see for the next round of
22 presentations, the type of information that we're
23 going to be looking for as we begin an evaluation
24 process of whether we move forward or not, so I
25 think today was a great starting point.

1 Commissioner Graham.

2 COMMISSIONER GRAHAM: Thank you, Mr. Chairman.
3 Two things. Number one, I -- I agree with
4 Commissioner Brown. It is such a small number, it
5 may -- it's de minimis, but I can tell you, from
6 being on the -- the electric committee at NARUC,
7 many of our colleagues in other states are dealing
8 or have dealt with net metering. So, at some
9 point, it doesn't matter if it's this year, five
10 years from now, ten years from now, it needs to be
11 addressed.

12 My concern is somebody makes a financial
13 decision that they're going to put a solar array on
14 their roof, knowing that the payback is going to be
15 in ten years -- it's really not fair for them for,
16 the next year, us to change net metering and now we
17 change the game for them.

18 When and if we ever do address it, I'd like to
19 see it from this-point-forward sort of thing so
20 that people -- people who have already made the
21 investment still get to keep the investment that
22 they thought that they knew that they made.

23 So, whenever this body addresses that, I think
24 that's something we should definitely look at, to
25 look at the -- legally, if we can handle that

1 because I'd hate to see somebody that made a
2 financial choice and then, all of a sudden,
3 government comes in and changes the rules on them.

4 And, you know, I -- I just don't think that's
5 a -- a fair way of handling it. I don't have an
6 opinion on when we do it. I just hope or ask, when
7 we do it, that we do it that way.

8 The second thing is the insurance issue or the
9 setting of the tiers, one, two, and three. I don't
10 know if there's a way that we can narrowly reopen
11 the rule so the only thing we address is just
12 either the setting of the tiers or the insurance
13 requirement because I don't want to send that panic
14 through the industry that, if we're going to reopen
15 the rule, the fear is that we're going to touch
16 everything.

17 I mean, I just -- I think there's got to be a
18 way that we can just address that and not have to
19 send everybody into an uproar. I think that should
20 be an easy fix that we should be able to address,
21 and not send that panic through the industry.

22 That's the only two things I had.

23 CHAIRMAN CLARK: Thank you, Commissioner
24 Graham.

25 Commissioner Polmann, did you -- Commissioner

1 Polmann.

2 COMMISSIONER POLMANN: Thank you,
3 Mr. Chairman. And thank you for bringing this
4 topic into workshop. I want to thank all the
5 parties for participating. It's been an excellent
6 opportunity for -- for open discussion and -- and
7 questions.

8 Commissioner Graham raises two excellent
9 points. As I mentioned, I had calls, to me,
10 personally. One of them was right on point with
11 his first question, and that is folks asking
12 whether or not there was going to be a rule
13 change -- change to the credit because that -- part
14 of their analysis was the return on their
15 investment, whether it was financially a good
16 choice for them.

17 So, I had not thought along the lines of
18 Commissioner Graham. I don't know how that would
19 be implemented, but I think that's a -- that's a
20 question immediately for our staff, legal folks, to
21 consider and -- and as this moves forward, whenever
22 it does, but that's a very important question.

23 To Commissioner Graham's other point about
24 narrowly revising the rule, in my experience, over
25 many years, I don't know how to do that. I don't

1 know that it's even possible. I think, once you
2 open a rule, there are going to -- any party who's
3 involved in that can come forward and propose rule
4 changes broadly across the entire thing.

5 And that's always a challenge to -- to an
6 agency when they -- when they go into rulemaking.
7 And that's always been, in my experience, one of
8 the reasons why nobody wants to revise the rule
9 because they don't know if they can -- that they
10 can limit that.

11 So, I -- I think that we need to be aware of
12 that and have all the information, all the answers
13 to -- to all the potential questions before we
14 enter into this. And I think that's part of what
15 we're doing here today is -- is anticipating that
16 it will be a long process, which I think is a good
17 thing. So, we've talked about that.

18 There -- there have been many issues, I think,
19 to this. I think we've made clear that we're only
20 beginning the discussion. We're not even beginning
21 a process to modify anything. We -- we're simply
22 starting a process.

23 I would encourage all the parties to -- to
24 raise questions, to raise concerns, and do that --
25 not a formal process -- an informal process. And,

1 Mr. Chairman, I would ask for coordination of our
2 staff, back through your office, perhaps, back
3 through our administration, however, whatever is
4 appropriate, to open an informal process for -- for
5 gathering the questions and the concerns and
6 identifying what -- what may be the scope of
7 tackling the mountain of questions to try to figure
8 out for -- for the Commission.

9 You identified, you know, there would be no
10 action on rulemaking this year, maybe not next
11 year. That gives us plenty of time to know, you
12 know, how big, how broad is that scope. I think
13 there's a lot of work that can be done informally,
14 so that the Commission has some handle and done in
15 a very- -- very-well organized and laid-out process
16 to take on, however broad or narrow, but I think we
17 should be prepared. It -- it may be well be a
18 broad set of issues.

19 Thank you, Mr. Chairman.

20 CHAIRMAN CLARK: Thank you, Mr. Polmann.

21 And -- and that is kind of my intent is that's our
22 purpose today to get a lot of information now and
23 take the opportunity to narrow that down and find
24 out what the real concerns and the real issues that
25 the Commission is interested in addressing.

1 And, yes, if you can pose those questions back
2 to my office, we'll certainly begin to do some
3 research. This may require us to have a second
4 workshop that focuses on some very, very specific
5 portions of the items that we have discussed today.
6 So, that's -- point is well-taken.

7 Commissioner Fay.

8 COMMISSIONER FAY: Thank you, Mr. Chairman.
9 I'll be really brief. Your last comment, I think,
10 hit the nail on the head. I -- I came into this
11 not necessarily knowing there was any problem with
12 the rule or that it needed to be changed. And now
13 I'm educated on the caps and the potential issues
14 with insurance and all the things that have been
15 brought up.

16 And what really interests me is this South
17 Carolina settlement that -- that, I guess, got
18 completed yesterday. And so, if there's a way for
19 our staff to get with Mr. Grinstead, I guess,
20 Mr. Huber, whoever, to get more information on that
21 to help educate us -- because I know -- I know
22 other states have addressed some of these things
23 through the rate process, but this sounds like
24 there were some creative ideas and discussions
25 about how to move forward with it.

1 And I don't think, you know, our posture
2 impacts these parties because it sounds like, in
3 South Carolina, based on maybe some caps and some
4 other components, they felt some urgency to bring
5 something like this forward. And I'm not sure we
6 would have that same structure.

7 So, if there's a way for staff to get us some
8 of that information, either through another
9 workshop or directly, I would appreciate that.

10 CHAIRMAN CLARK: Absolutely. All right.

11 COMMISSIONER FAY: Thank you.

12 CHAIRMAN CLARK: Last word, Commissioner
13 Brown.

14 COMMISSIONER BROWN: I think data pretty much
15 drives this whole dialogue, quite frankly. So,
16 what I would encourage the Chairman and the
17 Commission is to continue to see -- receive
18 comments and information from the utilities about
19 how our net-metering rule is operating and some of
20 the dialogue and the questions and the discussion
21 that we had today. I think that is integral so --
22 before we even consider any other opportunities.

23 CHAIRMAN CLARK: Good comments. All
24 well-taken.

25 Anything else? Anybody have any other input?

1 Staff, anything? Ms. Harper, you had one --
2 did you have one final note?

3 MS. HARPER: Nope. It --

4 CHAIRMAN CLARK: Okay. All right.

5 MS. HARPER: I was gonna -- I was just going
6 to add, if -- if you're concluding, that if people
7 do want to submit comments or any -- answer any of
8 the questions that have been asked today, we'd
9 like -- and this is to anybody, as well, who might
10 be watching on live stream.

11 If you could, please submit comments or
12 materials to us by October 8th. We were hoping
13 that we could get some of that back by then so we
14 can keep moving forward with the information-
15 gathering process.

16 And we would ask that you submit it to the
17 undocketed docket, which is Docket No. 2020000.
18 And staff will continue to make these documents
19 available on our website.

20 CHAIRMAN CLARK: Great. All right. Thank you
21 very much.

22 Staff, anything else?

23 All right. Commissioners, thank you so much.

24 And, again, thank you to all of our presenters for
25 your diligence today. And I look forward to seeing

1 you at our next meeting. We stand adjourned.

2 (Whereupon, the proceedings concluded at 12:33

3 p.m.)

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CERTIFICATE OF REPORTER

STATE OF FLORIDA)
COUNTY OF LEON)

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

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

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

DATED THIS 1st day of October, 2020.



ANDREA KOMARIDIS WRAY
NOTARY PUBLIC
COMMISSION #GG365545
EXPIRES February 9, 2021