

STATE OF VERMONT
PUBLIC UTILITY COMMISSION

CASE NUMBER 21-3883-RULE

PROPOSED CREATION OF VERMONT PUBLIC UTILITY
COMMISSION RULE CONCERNING ENERGY STORAGE

January 20, 2022
9:30 a.m.

Workshop held before the Vermont Public Utility
Commission via Go To Meeting on January 20, 2022,
beginning at 9:30 a.m.

P R E S E N T

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John Fiske, GMP
Doug Smith, GMP
Karly Carrara, GMP
Amber Widmayer, BED
Craig Kieny, VEC
Dan Potter, VEC
Cyril Brunner, VEC
Kris Smith, VEC
Shawn Enterline, VPPSA
Mark Sciarrotta, VELCO
Justin Schoville, VELCO
Bill Powell, WEC
John Woodward, Goodenough, LLC
Morgan Casella, Dynamic Organics
Kyle Wallace, Sunrun
Jonathan Dowds, REV
Victoria Westgate
Paul Quackenbush
Emma Marshall-Perez, Emergent Energy
JJ Vandette, Efficiency Vermont

1 MS. WHITE: So this is a workshop in
2 Commission Case Number 21-3883-RULE, the proposed
3 creation of the Vermont Public Utility Commission
4 rule concerning energy storage. I'm Joan White, one
5 of the Commission staff working on this matter, and
6 with me today are Commission staff John Cotter, Mary
7 Jo Krolewski, our DOE Fellow Veronica Ung-Kono, and I
8 believe another Hearing Officer, Jake Marren, was
9 going to join us this morning. I don't see him on
10 yet, but he'll be on in just a minute.

11 So first we'll start by having people
12 introduce themselves and I would ask when you're
13 introducing yourself, if at all possible, if you
14 could turn your camera on. That way we can put a
15 face to the name. That would just be extraordinarily
16 helpful, and if you talk fairly slowly, I'm going to
17 be taking notes and we've also got the court
18 reporter. So we're going to start with the
19 Department. So I think I'll call on Ben Civiletti
20 and if the Department people want to put their
21 cameras on, that would be great.

22 MR. CIVILETTI: Thank you. Good
23 morning. Yes this is Ben Civiletti with the
24 Department. With me is the same team as last week;
25 Anne Margolis, Bill Jordan, and Lou Cecere.

1 MS. WHITE: Okay and I believe Lou is
2 relatively new so welcome to the party, Lou. Great.
3 So next we're going to move to ANR and is there a
4 representative from ANR on today's call? Oh there's
5 Lou. Good morning to you.

6 MR. EINHORN: Hi. Don Einhorn with the
7 Agency of Natural Resources.

8 MS. WHITE: Okay and then we'll go to
9 the other state agencies. Is someone from AAFM on
10 and is anyone from any other state agency here?

11 MS. TISHER: This is Elizabeth Tisher
12 with Agency of Agriculture, Food and Markets. Sorry
13 I'm unable to put my camera on at the moment.

14 MS. WHITE: Totally fine. So glad you
15 could join us, Elizabeth. Wonderful and is anyone
16 from ACCD here? I wasn't expecting. They weren't
17 here last week, but I just thought I would ask.
18 Okay. Great. So now we're going to move onto the
19 utilities and we'll just go in alphabetical order.
20 So let's start with BED. Is a representative from
21 BED here today?

22 MS. WIDMAYER: Yes. Hi Amber Widmayer
23 for BED.

24 MS. WHITE: Wonderful. Thank so much,
25 Ms. Widmayer. We're glad you're here. Next we'll

1 move onto GMP. If someone from GMP could hop on and
2 introduce everyone who is joining us.

3 MS. CASTONGUAY: Good morning. This is
4 Josh Castonguay from Green Mountain Power. We have
5 Karly Carrara and Ryan Jarvis, John Fiske from our
6 engineering team, Chris Cole and Doug Smith from our
7 power supply team, and Carolyn Anderson from the
8 regulatory team.

9 MS. WHITE: Great. Wonderful. We
10 really appreciate the time you have all taken out of
11 your day to be here. Good. So okay. So next we're
12 going to go to Stowe. Is anyone from Stowe here
13 today?

14 MR. HALL: Mike Hall from Stackpole &
15 French representing Stowe. I can't turn on my
16 camera. I'm actually in the car.

17 MS. WHITE: Yes. The trials and
18 tribulations of COVID. I want to let everyone know
19 if you have kids home, if you're in your car, some
20 place, we really understand. So thanks for showing
21 up. So next we're going to go to VEC. Is anyone
22 from VEC here?

23 MR. KIENY: Good morning. Craig Kieny.
24 Also with me are Dan Potter, who works in power
25 supply, and Cyril Brunner and Kris Smith who work in

1 the engineering department.

2 MS. WHITE: Wonderful. That sounds
3 good, and for people who have a big team here just
4 feel free to direct questions to other members of
5 your staff. That's always helpful. Thank you so
6 much for being here today. Great. Okay. So next
7 we're going to go to VPPSA. I saw Mr. Enterline here
8 a little bit earlier.

9 MR. ENTERLINE: Good morning. Shawn
10 Enterline here from VPPSA.

11 MS. WHITE: Thank you so much for
12 joining us. Good and we'll go to VELCO. I know
13 VELCO is having some staffing issues involving some
14 health issues today so I think -- I don't want to say
15 anything about it.

16 MR. SCIARROTTA: Thanks. I'm Mark
17 Sciarrotta obviously here for VELCO. I'm supposed to
18 be off today so I'm going to probably be dropping off
19 midway through or maybe earlier, and Hans Presume had
20 to be at a meeting today for some important
21 transmission business. Shana, who has been staffing
22 this, is juggling some child care/COVID issues at
23 home so we are very, very lucky to have Justin
24 Schoville, who is a third year Vermont Law School
25 student who started his internship two days ago, take

1 the lead here. So please ask him very complicated
2 questions about the transmission system and how this
3 all works together because he will be able to answer
4 any of your questions. I'm kidding about that. He's
5 going to be taking notes. So if there are VELCO
6 specific questions, just direct them to Justin and we
7 will be happy to answer them offline and circle back
8 with the Commission and others as needed. Thank you.

9 MS. WHITE: Wonderful. Okay. We will
10 be sure to prepare some real curve balls for you, Mr.
11 Schoville, but that being said I think we'll have
12 reply comments at the end of the session. We'll talk
13 about when, probably about a month out, so people
14 will have plenty of opportunity to answer all of our
15 tough questions later. So I think our next is going
16 to be WEC. I see Mr. Powell on the line. Do you
17 care to introduce yourself?

18 MR. POWELL: Good morning. Thank you,
19 Joan. Bill Powell for Washington Electric Co-op.

20 MS. WHITE: Great. Okay. I think that
21 covers all the utilities. Any utilities that I
22 missed? Okay great. So next we're going to move on
23 to kind of developers, consultants who submitted
24 comments. So let's start with Goodenough Consulting,
25 although, Mr. Woodward, you can correct me if I have

1 the pronunciation wrong.

2 MR. WOODWARD: That is correct. John
3 Woodward. Also I think here who signed onto the
4 comments as well is Morgan Casella from Dynamic
5 Organics.

6 MS. WHITE: Great. Okay. We're so
7 glad. We're going to have loads of questions on the
8 communications protocol so I think you're our local
9 experts on that. That will be really helpful. So
10 next we're going to go to Sunrun who also submitted
11 comments. Anyone from Sunrun here today?

12 MR. WALLACE: Kyle Wallace. I'm here
13 for Sunrun.

14 MS. WHITE: Wonderful, Mr. Wallace,
15 thank you so much. Okay, and I believe that we did
16 not get comments from REV, but I believe that they
17 are also in the room. So if someone from REV would
18 care to introduce themselves, that would be really
19 helpful. I think it's Mr. Dowds if you're here.
20 Okay. Radio silence from Mr. Dowds, but if you ever
21 are interested in speaking up, we're very interested
22 in your perspective. So great. I think -- are there
23 any other developers here in the room? Okay, and
24 then I know there are a number of kind of attorneys
25 that are just kind of monitoring the case for their

1 clients so let's maybe go to those people next. I
2 see maybe we'll start with Ms. Westgate from Dunkiel
3 Saunders.

4 MS. WESTGATE: Good morning. Victoria
5 Westgate from Dunkiel Saunders, and with me today is
6 my colleague Paul Quackenbush, and we're just
7 listening in today on the discussion.

8 MS. WHITE: Great. Always glad to have
9 you. Okay. I think we've got everyone. Is anyone
10 else on the call who we haven't had a chance to
11 introduce?

12 MS. MARSHALL-TORRES: Hi. Sorry. Was
13 unable to come off mute to call for developers, but
14 I'm Emma Marshall-Perez. I'm from Emergent Energy
15 and Power.

16 MS. WHITE: Wonderful. Thank you so
17 much. Sorry. I was talking over you. Go ahead.

18 MR. DOWDS: Jonathan Dowds battling a
19 few technical difficulties this morning, but I think
20 we are on for the duration now.

21 MS. WHITE: Great. I'm so glad you
22 could troubleshoot that. I appreciate it and I see
23 we've got Mr. JJ Vandette from Efficiency Vermont.

24 MR. VANDETTE: Good morning, Joan and
25 everyone. JJ Vandette, Efficiency Vermont.

1 MS. WHITE: Great and I promise I will
2 put you in my list of utilities next time we have one
3 of these. Okay great. I think everyone on the call
4 has had a chance to introduce themselves so I'll just
5 go over a couple of kind of technical issues. So if
6 you could keep your microphone on mute, that will
7 really minimize background noises which is very
8 helpful, and every time you speak, if you can
9 remember to identify yourself for the court reporter,
10 that's very helpful.

11 So if you have any trouble with Go To
12 Meeting, just let me know in the chat and we will try
13 to troubleshoot. If for some reason you get booted
14 out of the meeting or you're having issues, you can
15 contact the Clerk's Office and they will let us know
16 and we can pause the workshop until we're able to get
17 you back online.

18 So the agenda for today is that we've
19 got the topics listed here on the screen and we will
20 take about a 10-minute break around 11 o'clock and
21 then we're hoping to wrap at 12:30. So that's the
22 plan, and how we're going to do this is as we move
23 through each topic I'm going to ask the Commission
24 staff person who was the point person on that topic
25 to ask their questions first and then we'll open it

1 up to the rest of the Commission and staff, and we'll
2 open it up to the whole floor if anyone else has
3 questions on that topic or things that they want to
4 raise.

5 So I did want to take a minute and just
6 acknowledge all the utility line crews that were
7 working so, so hard over the weekend when we had
8 extra cold weather, and right on the heels of that we
9 had a really significant snowstorm. So it's easy
10 when we're sitting in a nice warm room. So utilities
11 in the room thank you so much for your hard work and
12 pass our gratitude to your line crews, and I also
13 want to encourage everyone to just, you know, really
14 be lively, ask questions, consider this like a low
15 stakes environment. We're just trying to get ideas
16 out there. The design space for this rule is very
17 much open so please engage as much as you can, and I
18 think how we're going to do things this time is we'll
19 direct questions to a particular person. So we'll
20 say that person's name and then if you can turn your
21 camera on while we're asking the question, that way
22 there's a little bit -- I hope it gives it a little
23 bit more sense of a living event. So I know we're
24 all two years into the pandemic world we're a little
25 bit zoomed out. So if you have like a comment or a

1 question, if you could just turn your camera on or
2 turn yourself off mute, I will call on you and you
3 can ask your question at that time and I'll just ask
4 the other hearing officers to kind of keep an eye on
5 the list of participants, and if you see someone
6 coming off mute to ask a question that I don't catch,
7 just let me know.

8 Let's see. If we run out of time today,
9 what we may do is just take comments on the remaining
10 topics by, you know, written comments and we probably
11 will have like a followup reply comments type
12 deadline after this workshop. So does anyone else
13 have anything to go over before we get started on the
14 substance? Any of the other Commission staff or
15 Commissioners have anything that I missed you would
16 like to add? Okay. Seeing none any participants
17 have any questions or anything to add to that spiel?
18 Great. Okay. So seeing none we are just going to
19 jump right into our first topic which is net
20 metering, and we're just going to spend a very brief
21 amount of time on this topic because last time we had
22 this issue came up, which was raised in the
23 Department's comments, we hadn't really -- anyway the
24 Department kind of put forward this chart here that
25 Mass DPU has adopted in terms of the new question is

1 how does storage interact with the net metering
2 program if you have got a site where you have say a
3 solar installation and a customer is adding a
4 battery. You know there are some real opportunities
5 there in terms of peak shaving and shifting renewable
6 generation. At the same time there may be many some
7 opportunities for gaming like taking on grid power
8 and passing it through the production meter. So Mass
9 DPU did some work on how to prevent that. So we
10 briefly went over that last week, and I think this is
11 just a very wonky technical area. So I think the
12 best way to handle this is that the Commission will
13 come up with some language on this and we will
14 publish it either in this draft rule or in the net
15 metering rule, and we'll notice the service list for
16 both dockets so that everyone knows that language is
17 out there and then we'll take comments, but before we
18 start drafting I did just want to make sure that we
19 had a little bit of an opportunity -- I think that
20 reasonable people can disagree on this topic. So if
21 there are any utilities out there who, you know, want
22 to make a few comments on this, I think that we would
23 find that really helpful as we're drafting. So hang
24 on one second. Is that Josh? Okay great.

25 MR. CASTONGUAY: Yes.

1 MS. WHITE: I'm going to stop sharing
2 and it looks like GMP is wanting to make a comment.
3 Go ahead.

4 MR. CASTONGUAY: Yeah sure. I have a
5 couple PDF's I was hoping to show and I apologize.
6 We tried to load it on ePUC yesterday, but I think
7 we're struggling to get it up there. So as soon as
8 we can we'll put these up there or I'm happy to send
9 this entire group or whatever is best. It's a couple
10 metering drawings. A little technical, but I think
11 basically what I would love to highlight is I think
12 we're in a little bit different position than
13 Massachusetts, and from a more of a storage
14 philosophical standpoint I would hate to see us move
15 to a position that limits the use of storage frankly
16 in terms of its ability to export to the grid to not
17 export while also completely understanding we can't
18 charge the battery with grid power and treat it like
19 solar or some other renewable power.

20 What I was hoping to show here the way
21 we have our metering set up in Vermont I believe
22 under the most common scenarios, I'm sure there's
23 some others, we have to look at those on a
24 case-by-case, but the vast majority of systems are
25 connected in a way with the solar meter being the way

1 it is I think we're able to differentiate. I can
2 show a couple of GMP's metering diagrams for how
3 these go in for this team if that's -- if that works.
4 If that's okay with folks.

5 MS. WHITE: Yeah I would find that
6 incredibly helpful. Yeah I think I just need to make
7 you the presenter. Okay. So I think if you have
8 some slides -- and I apologize about ePUC. We're
9 having some global outages at the state so it's
10 affected ePUC so I apologize for that, but we're not
11 really sure when it's going to be up and running
12 again, but if you could load these into ePUC when
13 that's ready, that way people have a chance to review
14 and comment.

15 MR. COTTER: Mr. Castonguay, before you
16 start I wanted to clarify. You started your comments
17 by saying we were in a different place than
18 Massachusetts. When you say we do you mean Green
19 Mountain Power or are you generalizing that you
20 believe all of the utilities -- retail utilities in
21 Vermont are in the same different place from
22 Massachusetts that GMP is?

23 MR. CASTONGUAY: Yeah great question and
24 should clarify. I believe all DUs are in that same
25 different place and that's because of the way that

1 the metering is structured in Vermont in terms of the
2 solar PV metering. That being said, there can
3 certainly be nuances and some strange battery
4 connections I'm sure could exist. So I don't want to
5 say it's a hundred percent and if somebody comes to a
6 DU with a funky battery connection there would need
7 to be a look, but the vast majority would be covered
8 basically because we use a PV meter. We have a meter
9 that's dedicated to solar for the Vermont net
10 metering system in order to track the solar PV and
11 apply the appropriate adders and adjusters and that
12 sort of thing, and, Ms. White, I apologize now that
13 you asked me to share it's asked me to restart Go To
14 Meeting so I can do the sharing thing.

15 MS. WHITE: Okay. Let's see. Let me --

16 MR. CASTONGUAY: I can probably restart
17 and come back in a second if that's okay.

18 MS. WHITE: Yeah if you want to just
19 e-mail them to me, I can probably pull them up. Let
20 me just --

21 MR. CASTONGUAY: Sure. I also want to
22 be clear if other DUs have a different opinion, don't
23 hesitate. We drew up some metering diagrams because
24 we've been doing a lot of residential battery storage
25 so it's been important to help customers and

1 developers how to connect the metering and basically
2 we're looking to do two main things; make sure that
3 we're not providing -- oh perfect. Okay -- that
4 we're not providing solar credits when it's grid
5 power, but also that we're finding a way to not limit
6 the flexibility of the use of the battery storage to
7 every extent possible because it can be such a great
8 tool for the system.

9 So what you're looking at here -- thank
10 you, Ms. White, for putting this up -- is a -- this
11 is like one of the more simpler approaches which is
12 like how we do a powerwall program currently for GMP.
13 On the left side of your screen you have a grid
14 feeding in through the house meter. The main meter
15 to the home. There's a disconnect switch and then
16 the main load panel in the house, and from there you
17 go -- you have your solar array on the home and you
18 have your battery storage system. They are two
19 separately connected things. We call this AC
20 coupled. Just means that the battery and the solar
21 are separate from each other. They don't share an
22 inverter. So you'll see the gross meter right there.
23 That is measuring all of the production from the PV.
24 So all the production coming out of the solar is
25 measured there. Whether that solar energy flows into

1 the battery, flows out to the grid, flows into the
2 home, it almost doesn't matter because that meter is
3 measuring everything and that's how any adjusters,
4 adders, and that sort of thing.

5 So then as we use the battery system
6 that battery is drawing energy could be from the
7 grid, it could be solar energy coming through to it
8 discharging that energy back and forth, but there is
9 no potential to give that battery solar credits, if
10 that makes sense, and this drawing is intended to
11 kind of show simply how that's connected. So before
12 we get to the next one I'll stop there, Ms. White, if
13 there's any questions.

14 MS. WHITE: Please go right ahead.

15 MR. WALLACE: Just wanted to clarify for
16 all of the net metering credits they are all
17 calculated based on the gross meter and not the
18 readings from the net meter?

19 MR. CASTONGUAY: For the credits, that's
20 right. The net meter basically is looking at energy
21 in and out and at the end of the month there's a
22 netting that goes on there as well. There's an --
23 excess is at the blended residential retail rate or
24 something like that. It's about the residential
25 retail rate of customers, but any REC adjustments,

1 siting adjustments, those happen at the gross meter.

2 MR. WALLACE: Under that I guess
3 theoretically if you were charging the battery from
4 the grid and then discharging more and so your net
5 meter had more export readings than say the solar
6 produced that month, would they still be getting net
7 metering credits at that blended residential rate for
8 that power above what the solar actually produced or
9 I assume there could be some type of calculation to
10 cap it.

11 MR. CASTONGUAY: You would net.
12 Exactly. So any of the energy -- if you just charge
13 the battery from the grid and discharge the battery,
14 what we're doing is make sure the customer isn't
15 paying for energy and then giving it back for free.
16 We're basically netting that energy out. So at the
17 end of the month it would be very, very small if you
18 think about it because every time you charge and
19 discharge that battery you're essentially netting
20 those things to zero. There's a little bit of
21 losses, but for the most part so you're not -- but
22 the key is you're not giving the battery any solar
23 credits, any solar adders or incentives or adjusters
24 with grid power or any power for that matter because
25 the gross meter is handling that separately, and this

1 is -- again I have one other connection that I think
2 Sunrun and folks have done a little more which is DC
3 connection. It's a little more complex, but I want
4 to just start with this just to show that the
5 metering -- and I'm not a hundred percent sure.
6 We're trying to check if Massachusetts actually does
7 direct solar metering. I know they have a couple
8 different programs and maybe that's why there's this
9 difference. We're just trying to run that down and
10 maybe Sunrun has a better sense there, but --

11 MR. WALLACE: Yeah I would say in the
12 smart incentive program any system that participates
13 in that also has a production meter just like this
14 setup, same requirements, and I assume it will
15 probably be the same for DC. So any system that is
16 there they have the same capability. If they are
17 just participating in net metering and not smart,
18 then there would be no production meter. It would
19 just be the net meter.

20 MR. CASTONGUAY: Okay. So that's the
21 big difference I think from the Massachusetts program
22 is for net metering anyway.

23 MR. COTTER: I had just one question. I
24 think I understand your diagram and why it makes
25 sense, but -- correct me if I'm wrong, but doesn't

1 this presume, and I'm not trying to telegraph
2 anything here because I don't know what the future
3 holds, but does this presume that the credit for net
4 metered power, so solar power that you generate in
5 excess of what you're using, is always equal to the
6 retail rate?

7 MR. CASTONGUAY: For excess flowing back
8 to the grid that is correct, yup. This is under
9 today's net metering. So if that were to change that
10 the excess on the meter is based on time or some
11 other variable, that's correct, this would need to
12 look differently. There would potentially need to be
13 an additional meter going forward or something
14 different, but that's correct. Right.

15 MR. COTTER: Thank you. Appreciate
16 that.

17 MS. WHITE: Okay. I had just one
18 followup question on this. You may not know, but if
19 systems are wired this way is the battery still
20 eligible for the federal ITC?

21 MR. CASTONGUAY: It is. As long as --
22 so you have to show that you're charging the battery
23 -- if a homeowner -- let's say you own the battery
24 and the solar. You have to show you're charging the
25 battery one hundred percent from the solar which

1 means basically showing that when I'm charging the
2 battery the PV production is matching at the same
3 time each hour or 15 minutes or whatever it is, and
4 you can -- they are set up -- if you decide to go
5 with an ITC, you can set up the system to say solar
6 charging only, but you can still do that. That's
7 correct.

8 MS. WHITE: Okay. Really helpful and
9 then just to be clear this setup requires two
10 inverters and two meters?

11 MR. CASTONGUAY: Correct. That's right.
12 So the same -- it's the same number of meters as a
13 regular just solar PV net metering obviously, but
14 your battery system will have its own inverter. Sort
15 of the powerwall 2.0 program has an integrated
16 inverter and that's sort of like this.

17 MS. WHITE: Okay. So helpful. So are
18 there any other questions on the floor right now?
19 I'm sorry, Josh, do you have something to add?

20 MR. CASTONGUAY: No. Just going to say
21 we can hit the next one, but whenever you're ready.
22 This next one is just -- the other one it's a little
23 more -- little more complicated, but just the other
24 one I wanted to highlight what we call is DC coupled.
25 I don't know if you're able to scroll down, Ms.

1 White, sorry, next PDF, perfect, so this is where the
2 solar and the battery share an inverter. So this one
3 gets a little trickier because you have to do some
4 calculation basically through the billing system
5 because in this case the PV and the battery are
6 together. They have a common inverter and you still
7 have a gross meter measuring all of the production
8 coming out, but you can also have energy flowing the
9 other way through that gross meter. So essentially
10 what we need to do is use that meter as well to do
11 some netting there. So if any energy is flowing
12 through the meter to feed the battery, that's grid
13 power and you can't count that as solar energy coming
14 out. So we do the netting on that. The bottom line
15 is the metering still allows you to differentiate
16 between the solar and battery storage energy if it's
17 grid power flowing in. This also adds one slightly
18 more layer of complexity because there's a critical
19 load panel in this case. So the inverter acts as a
20 switch and just critical loads in the home in this
21 case are backed up and during normal operation
22 there's still energy flowing to those loads as well
23 so you need to meter those. Wanted to make sure
24 you're getting the PV credits if energy is flowing
25 that way, but also to make sure you can get the total

1 value.

2 So the point is these are the two most
3 common connections that we see in our system. It's
4 mostly the -- at least for GMP -- I think the vast,
5 vast majority, over 90 percent of the installations
6 are that AC connected one that we just talked about,
7 but there are a number of these DC connected systems,
8 and we have the metering in place to measure that in
9 and out energy flow to make sure you can
10 differentiate.

11 MS. WHITE: Okay. That's really
12 helpful. I'm going to ask kind of a 101 question so
13 pardon me. So this DC coupled system you basically
14 have to back out what power was charged from the
15 grid. You do that in the billing system, right?

16 MR. CASTONGUAY: That's correct. It's
17 going to be a little bit of an eye chart probably,
18 but the next slide down is the same thing that we
19 just kind of show the math, and we don't need to
20 spend too much time on that because it will make your
21 brain hurt a little bit, but basically this is the --
22 it's a different drawing, but it's the same showing
23 the same DC coupled system, and basically you're just
24 doing math on the in and out channels of this. The
25 gross meter is the one in the middle with the B and A

1 flowing in different directions, and the meter on the
2 right with the A next to it is what we call that
3 critical load meter, and top left shows you the math
4 you're doing, but it's happening in the billing
5 system as you said, Ms. White, and what you are left
6 with is just the solar energy to apply the credits
7 to.

8 MS. WHITE: Okay. This is incredibly
9 helpful. So, Mr. Wallace, I see you have your camera
10 on. I want to make sure -- why don't we go to you
11 next. Go right ahead.

12 MR. WALLACE: I really appreciate
13 running through this. I guess I still -- I
14 understand under these configurations any of the
15 adders or adjusters and the monthly excess credits
16 would be solar, but I guess I'm still a little unsure
17 of if you're still charging for the battery and
18 exporting back to the grid and kind of netting that
19 usage out at that full retail rate -- I guess that's
20 my question -- is that energy that's non-solar
21 actually eligible for the netting ability to receive
22 that full residential retail rate essentially? I'm
23 just not clear whether that fits under the statute or
24 not given it's not necessarily from solar.

25 MR. CASTONGUAY: So we're netting that

1 energy. We're not applying any of the net metering
2 adders or subtracters or anything like that. We're
3 just making sure that energy in and energy out to the
4 grid is not -- basically the customer isn't giving it
5 back for free. So when we started these programs we
6 did do a check with our own FERC team as well to make
7 sure the battery program made sense from that
8 perspective and it did. So that's -- yeah you had it
9 correct. That's how we do that now.

10 MS. WHITE: The take away is like the
11 customer pays a retail rate when they purchase the
12 power to charge the battery and then they are given
13 that rate back if they discharge to the grid.

14 MR. CASTONGUAY: That's exactly right.

15 MS. WHITE: Nets out to zero. Got it.

16 MR. CASTONGUAY: That's right. That's
17 right.

18 MS. WHITE: Okay. I know, speaking for
19 myself, it's going to take me a little while to kind
20 of digest this, but I'm glad we have a technical
21 alternative.

22 I have one final question which is this
23 landscape is moving so quickly that I would hate to
24 encode a specific wiring requirement into a PUC rule.
25 I'm more kind of -- a general approach might be hey

1 please file tariffs that show us how you are doing
2 that through your kind of wiring requirements or
3 interconnection requirements. Something like that.
4 So I just wanted to get a sense as far as how do we
5 take what you told us today and kind of
6 operationalize it how would that work.

7 MR. CASTONGUAY: Again I would
8 definitely like to hear from the Department, other
9 DUs. To us that makes a ton of sense. I should say
10 any of these metering drawings, diagrams, whatever,
11 we can share that to anybody obviously. I think a
12 lot of folks are doing this, this way already just
13 because that's how we have to set it up, but I
14 completely agree not dictating the intricacies of
15 metering because a DU may want a different piece of
16 equipment in the line there too or something, but
17 just to say it has to be done in a way that you
18 cannot mistakenly give solar credits to grid power or
19 battery or something to that effect. You can't
20 double count and make sure that the metering is set
21 up in a way that assures that.

22 MS. WHITE: Great. Okay. That's really
23 helpful. That gives us like actually some kind of
24 what do we do next. So I want to make sure if other
25 utilities have a different take on this or some kind

1 of color to add that they have got a chance. So any
2 of the other utilities have something they would like
3 to add? Here comes Dan Potter. Please go right
4 ahead.

5 MR. POTTER: This is Dan Potter with
6 Vermont Electric Cooperative. All I'm going to add
7 is that I would say the majority of the systems in
8 our aggregation program are also AC coupled. So with
9 Josh's first diagram. We do have a handful of
10 systems that are DC coupled that we know about. They
11 are not in our aggregation program and are
12 investigating them. The metering scheme here that's
13 shown in the second diagram it's a challenge we
14 haven't solved yet, but we're working on it.

15 MS. WHITE: Okay. That's really helpful
16 context. One thing that really struck me about this
17 is that it's an awful lot of equipment, but then also
18 kind of it requires a lot on the utility backend.
19 You have to have a pretty robust billing system built
20 out, and for the smaller utilities I can see that
21 being a challenge and I'm loathe to impose
22 requirements on them that might be hard to meet. So
23 I don't know if you have any thoughts on that.

24 MR. POTTER: I think we can do this. We
25 have a meeting set up next week to talk about it a

1 little further, and so if we develop any further
2 insights from that meeting, we will include that in
3 our reply comments, and also the approach you
4 described where you're saying, you know, in the rule
5 just to prohibit grid power from receiving net
6 metering credits and then allowing utilities to
7 figure out metering or whatever makes sense to apply
8 that. I think that makes sense from our perspective
9 as well.

10 MS. WHITE: Okay. Really invaluable.
11 So we're going to bring in Mr. Cotter next. Go right
12 ahead.

13 MR. COTTER: Just a followup for Dan.
14 Dan, when you were describing the majority of your
15 interconnections as being the AC coupled and then you
16 were looking at the DC coupled you said in Vermont
17 Electric Co-op's aggregation program, and given that
18 we're not really at the world of aggregation yet, as
19 I understand it, I was curious what you meant by
20 that, and just to make sure that I'm not getting
21 confused here.

22 MR. POTTER: Sure. Perhaps my
23 terminology could have been better, but we have a
24 bring your own device program whereby we allow people
25 with home batteries to participate. We communicate

1 with the battery and dispatch it during peak events,
2 and the majority of the systems that have enrolled to
3 date -- we've launched this in September -- the
4 majority of the systems that have enrolled to date
5 are those AC coupled systems.

6 MR. COTTER: Okay. Thanks. When you
7 used the word aggregation it made my antennas go up.
8 I wanted to make sure I wasn't missing out on
9 something. I appreciate that.

10 MR. POTTER: Sure.

11 MS. WHITE: We've all been very much
12 living in a world of 2022 lately so there's some lots
13 of fun to be had there. Good. Okay. I would love
14 to maybe move on from this topic unless anyone's got
15 something urgent they would like to add. Chairman
16 Roisman, go ahead.

17 CHAIRMAN ROISMAN: I had a question for
18 Mr. Castonguay and that is can you give us some idea,
19 not necessarily specific numbers, but some order of
20 magnitude numbers how much more expensive will it be
21 to have the kind of metering that you're using to
22 accomplish the goal which is to not allow double
23 counting on the net metering? Can you give us some
24 idea of that?

25 MR. CASTONGUAY: Sure. So the AC

1 coupled system that we mentioned there actually is no
2 additional metering. So if you're installing a solar
3 PV net metered system today, you need that additional
4 meter today as a requirement and there's no
5 additional metering so you're left with just the
6 installation of the battery costs.

7 For that DC coupled system there is one
8 additional meter. I'm not a hundred percent sure on
9 cost, but I would guess that's in the two to five
10 hundred dollar range to get that socket in and meter.
11 There's a meter charge, but it's probably somewhere
12 in the ballpark. Maybe an installer has a better
13 sense, but that would only be on that DC coupled
14 drawing that we showed for the second one, but the
15 AC, which is what we're currently seeing the most of,
16 there's no additional metering cost there.

17 CHAIRMAN ROISMAN: Okay. Just a
18 followup now to all the DUs. We heard pointed out
19 that there has to be a billing system that can
20 adequately process the information that comes from
21 these meters. How many of the DUs are equipped to
22 use existing billing systems to accomplish this, and,
23 if not equipped, how much of a lift is it to put in a
24 billing system that can do the distinguishing that
25 these metering systems allow?

1 MS. WHITE: To answer that question
2 let's put in Mr. Enterline for VPPSA and Mr. Powell
3 from WEC, and also I saw Mr. Kieny turn his camera
4 on. So if you folks are here, I think you would be
5 the perfect people to answer that question. Go
6 ahead, Mr. Powell.

7 MR. POWELL: Well I would say I concur
8 with Josh relative to the AC convention. You're
9 already buying the meter. The range of cost would be
10 in the range that Josh cited. For the DC couple it
11 would require essentially a third meter and the cost
12 per unit is in the three hundred dollar range. So
13 it's a similar additional cost is what the member has
14 already paid for to just equip their system with the
15 production meter times two would be the general
16 answer.

17 I can also offer that our billing
18 system, and I think we and VEC share the same billing
19 system, were there to be additional DC couple battery
20 storage those steps -- maybe GMP has made this an
21 automated system, I would imagine that we would
22 struggle with the manual system which is part of our
23 concern with the existing extent of net metering.
24 It's a fairly manual system until we get to a faster
25 metering technology which is also something WEC is

1 planning to do in the near future. I hope that
2 answers your question.

3 MS. WHITE: Next let's go to Mr.
4 Enterline. Go right ahead.

5 MR. ENTERLINE: I agree with WEC. What
6 they said is consistent with my understanding of the
7 configurations and costs to VPPSA.

8 MS. WHITE: And, Mr. Kieny, anything
9 else to add?

10 MR. KIENY: Yes. I had actually turned
11 my camera on because I have another question, but
12 I'll address your questions. The cost of the meter
13 we concur with WEC and GMP.

14 With respect to the billing system I
15 don't think anybody on our call today is
16 knowledgeable enough about that to answer that, but
17 we can get back to you.

18 MS. WHITE: That's very helpful. We'll
19 put that on our list for followup. So, Mr. Kieny,
20 you had another question. Go ahead.

21 MR. KIENY: I had a question for Josh.
22 This concern about grid -- the grid energy is unique
23 to net metering or might it apply to standard offer
24 also?

25 MR. CASTONGUAY: Standard offer.

1 Standard offer. I'm not sure, Craig. Do you mean if
2 you charge the -- so you're saying you charge the
3 battery -- you got a standard offer project with a
4 battery, charge the battery with grid power and
5 discharge it and treat it like standard offer solar
6 energy?

7 MR. KIENY: Correct from a 30 cents
8 kilowatthour standard offer project.

9 MR. CASTONGUAY: Yeah I would assume you
10 would want -- we would want to make sure that the
11 meter is in such a way that couldn't happen again.
12 So I think you would want to have the same -- I think
13 it would be a different metering scenario. They are
14 usually different scale projects and that sort of
15 thing, but you would want to do the same sort of
16 thing to assure you couldn't have that.

17 MR. KIENY: Thank you.

18 MS. WHITE: What a marvelous
19 contribution. Thank you, Mr. Kieny. Really
20 appreciate that. So I'm going to close this topic
21 now and we're going to move onto our next item which
22 is equity and access. You know I think it's no
23 secret that historically people of color or certainly
24 disadvantaged communities, also low income people,
25 have a lot less access to clean energy technologies.

1 So in the comments that we received we had several
2 suggestions which were to try to simplify permitting
3 for multi-family units, trying to make sure that kind
4 of credits, however they work out in net metering
5 land, can be taken advantage of by renters, things
6 like that. So let's see. My first question is for
7 DPS and I'm going to assume that Ms. Margolis is the
8 lead on this particular topic, and I had a question.
9 In DPS comments you had mentioned the equity and
10 access issue is best handled at a programmatic level
11 rather than at the rule level, and so I wondered
12 aside from the sort of simplifying for multi-family
13 and things like that is there anything we need to be
14 aware of for this rule, for this rule to improve
15 access and I think running it through the
16 programmatic when we look at tariffs and IRPs and
17 things like that. So I wonder, yeah, does that
18 question make sense? I feel like I'm rambling a bit.

19 MS. MARGOLIS: I think so, but I have to
20 actually caveat that. The lead on this section of
21 comments was Clare MacIlveny of our Department
22 Planning Division and she couldn't be here today for
23 this workshop. So I think I would like to enable her
24 the opportunity to follow up on that question more
25 specifically kind of being one of the Department's

1 leads on the equity work under the climate council,
2 for example. So sorry to punt, but I would rather
3 give her that opportunity if I could.

4 MS. WHITE: Yes. That's absolutely
5 fine. Yes this is a topic that will be with us in
6 many dockets for many years and so getting some
7 comments in a few weeks from Clare or Ms. MacIlveny
8 is really helpful. So I think probably some other
9 Commission staff have questions. I want to make sure
10 that we have made space for that. So does anyone
11 else have -- Commission staff want to add to that?
12 Okay. Seeing none does anyone from just the floor
13 have any kind of questions or comments they want to
14 make on this issue? Okay. Seeing none I think what
15 we'll do is move onto the next topic on the agenda
16 which is the ever evolving topic of aggregation. So
17 we'll go there first and our lead on this topic
18 really is Mary Jo Krolewski. She's our regional
19 person so she's been following this development for
20 2222 and so on. So I'm going to turn the floor over
21 to you and if you want to manage questions as they
22 go, that would be really awesome.

23 MS. KROLEWSKI: Okay. Thanks, Joan. I
24 actually just have some general questions on the
25 discussion of registrations and I have a couple other

1 questions, but -- and I'm not sure who to direct this
2 to. Maybe it's the Department, maybe it's one of the
3 distribution utilities, but, you know, there was talk
4 about registration and I guess I just wanted to
5 understand how people were envisioning that. Would
6 that be part of the interconnection process where you
7 register that you are part of an aggregation and
8 exactly who would register. Would it be the
9 aggregator who is registering a bunch of devices or
10 is it the individual devices registering, and how
11 would that work as people move in and out of
12 aggregations over time? So with more clarity to the
13 question if the registrations are taking place, it
14 seems that that would probably -- DUs would need to
15 know that at the time of the interconnection process
16 because that seems to affect -- maybe affect that and
17 so would that information and the requirements be in
18 our interconnection rule only or would it be in this
19 rule, and just any thoughts with regard to the
20 registration process and who would be responsible and
21 how would people move in and out of aggregations
22 which I envision that would probably happen over
23 time. Anne Margolis, do you have some thoughts?

24 MS. MARGOLIS: Thanks, Ms. Krolewski. I
25 have lots of thoughts. Probably been taking a deeper

1 dive into the world of FERC order 2222 than anyone
2 should have to do and by no means an expert in it. I
3 think we've offered the 2222 kind of details and
4 construct in our comments just to do this because
5 that's the closest kind of moving action there is on
6 the wholesale aggregation front, which just to draw
7 the distinction between the wholesale aggregations
8 and then the sort of retail run aggregation programs
9 where there's more opportunities for the regulators
10 to kind of go under the hood and make sure that those
11 are kind of, you know, in the best interests of
12 ratepayers, and then the distribution utilities would
13 be running those to make sure there's no undue
14 adverse impact of those aggregations on the grid and
15 on ratepayers, and then moving into the wholesale
16 aggregation world we have the potential under FERC
17 2222, and from the reading I've been doing it sounds
18 like there's a registration process that the
19 aggregator is going to be going through with ISO-New
20 England that involves a communication pathway between
21 the aggregator, ISO-New England, and the distribution
22 utility or the distribution utility will have an
23 opportunity to look at the aggregation and also will
24 have an opportunity to look at resources added into
25 an aggregation and will have a period of time in

1 which to, you know, respond; basically to say -- I
2 think there's a sort of a tech list. We'll say we
3 affirm this isn't part -- it isn't providing dual
4 services under a retail and wholesale program or it's
5 not already booked for the service under a retail
6 program, that it's, you know, there's no system
7 stability and reliability issues introduced.

8 So I think the one area we've been
9 mulling is sort of where does that construct and that
10 process sort of take the lead and where does the
11 state 231 for aggregators and the interconnection
12 process also how do they kind of feed into that
13 overall construct, and I think we're still trying to
14 figure this out and waiting to see what's put out on
15 February 2nd by ISO-New England and then also how
16 FERC responds to that and how the actual tariff
17 changes look and see how other states kind of
18 implement this.

19 So I'm not sure we have a complete
20 understanding of sort of if you're adding a resource
21 to an aggregation is that just going through the
22 ISO-New England registration process and that
23 communication pathway between the DU and the
24 aggregator or is there a need for, and role for,
25 either the 231 CPG or the interconnection process to

1 -- maybe the resource that already has an
2 interconnection agreement with the distribution
3 utility would then -- it would trigger a re-review.
4 It would maybe need to go in and check a box that
5 says now I'm part of an aggregation I'm going to be
6 behaving differently, and so that's sort of a
7 re-review that's sort of dual interconnection process
8 and part of the ISO-New England and aggregator and DU
9 communication pathway around that. So I guess that's
10 all to say that it's not quite clear. I think it
11 could go a number of different ways and we're hoping
12 to see a little bit more of the final proposal by
13 ISO-New England, and then I think if we have the
14 opportunity to see that and then offer comments based
15 on that, we could try to sketch out a few options.

16 MS. KROLEWSKI: That's helpful. So, you
17 know, maybe stay tuned. I realize for 2222 -- for
18 FERC order 2222 implementation by ISO is being filed
19 with FERC in February and then for FERC approval and
20 the actual implementation timeline right now I think
21 is 2024, 2026, you know, depending on which market
22 you're talking about participation in, but I also
23 kind of have a -- because you raised that whole
24 participating in wholesale market and this is a
25 little -- touches on aggregation, but also just

1 touches on wholesale market participation.

2 Currently battery and storage devices
3 can participate in the market and so I don't know if
4 any of your comments kind of relate to that as well
5 about registrations and those understanding who is
6 participating currently in the market and who is not.
7 I mean I don't know if anybody is at the Vermont
8 level, but they are already allowed as a
9 non-aggregated battery to do that, and then my second
10 question is there's a little bit of aggregation of
11 demand-side management, active demand-side management
12 resources that participate in the market or can
13 participate in the market and an aggregated resource
14 and would batteries ever fall into that and is that
15 something we have to think about sooner than the
16 timeline of 2022?

17 MS. MARGOLIS: I'm happy to take a stab.
18 Others may have comments as well. So in terms of
19 batteries potentially already participating in
20 existing markets my understanding is there are some
21 residential solar storage systems that are not part
22 of a distribution utility kind of aggregation
23 program. I don't really know the details on those
24 and I think it was the sort of prospect of, you know,
25 I think I go back and forth between 2022 being this

1 really big deal and we have to pay a lot of attention
2 to it to oh maybe it will just not affect Vermont or
3 Vermont distribution utilities or customers very much
4 at all, and so it gets -- we're in a place of kind of
5 paying attention and trying to make sure that we're
6 not missing opportunities like this rulemaking to be
7 able to either capitalize on what's going on with
8 that or just be aware of it in the various
9 rulemakings. So I think that the idea that we think
10 that there are some of those systems that aren't in a
11 utility program out there participating in capacity
12 markets maybe is a -- even makes us want to even more
13 create some structure around that because we don't
14 know and it would be good to know. It would be good
15 to know I think what those systems are doing and, you
16 know, ISO-New England is trying to get a handle on
17 residential storage and storage in general and what
18 it's doing and how they should count that in their
19 planning and their markets, and I think they have
20 kind of made the comment we don't know what -- we
21 could get a sense of how much storage is out there
22 that we're not seeing directly participating in the
23 markets, but we don't know what it's doing and we
24 don't want to make any presumptions about what's it's
25 doing. So they are trying to gather more information

1 from the DUs now about storage and how it's operating
2 in order to try to start figuring it in, but I think
3 overall my point is that I think we're trying to --
4 knowing that it's happening a little bit now may be
5 the tip of the iceberg, who knows how big the iceberg
6 is, but let's try to put some structure around that
7 so it doesn't get ahead of us. And then on the
8 storage and demand response programs I think -- I'm
9 not an expert in demand response participation in the
10 markets. I think there's like 11 participation
11 models right now that storage can already participate
12 in and 2222 adds five more. So it's not -- it may
13 just be evolutionary instead of revolutionary, but
14 the fact that there is, you know, this process taking
15 place through 2222 and we're talking about an
16 aggregator CPG for non-utilities gives us the
17 opportunity to at least piggyback on that I think was
18 maybe the point we were trying to make, but we may
19 want to think about it sooner and get some input from
20 -- I don't know if folks from Efficiency Vermont
21 might have comments on the demand response sort of
22 bids that they are aware of, but that's all I can do
23 for right now before consulting colleagues.

24 MS. KROLEWSKI: Yeah and I was
25 definitely thinking rather than passive I was

1 thinking active. So maybe not necessarily resources
2 Efficiency Vermont would be involved with, but the
3 idea that you might be able to participate as an
4 active, and again I don't know if that's the case.
5 It was just one place where aggregation is currently
6 going on in the ISO-New England market and so just
7 wanting this rule or interconnection rule to
8 recognize that possibility rather than just thinking
9 oh we're just waiting for the implementation of 2222.
10 Joan, I don't really have any other questions.

11 MS. WHITE: Great. Okay. I had a
12 couple on this topic so maybe I'll go to those and
13 then we'll sort of jump to other staff or Commission.
14 Let me just look here. So this is a question
15 actually specifically for Mr. Civiletti from the
16 Department. It's a question on the comments filed.
17 I don't know, Mr. Civiletti, if you are still here.
18 So on page 21, this is under aggregation, you had
19 recommended that as part of a requirement for 231 CPG
20 -- I'll just give you a minute to get there -- that
21 aggregators be required to kind of submit data about
22 and utilities could evaluate whether the operation of
23 the aggregation had an impact to the utility's
24 ratepayers and that the Commission should consider
25 ratepayer impact when they are deciding whether to

1 approve a 231 CPG, and this might be a question to
2 punt on for now, but my understanding -- let's see.
3 I'm trying to figure out a way to read this.

4 I'm interested to hear on where our
5 authority to grant and deny aggregation CPG's kind of
6 starts and ends, and what I mean by that is that like
7 2222 and E41 grant Public Utility Commissions very
8 clear jurisdiction over anything related to system
9 stability reliability. So requiring aggregations to
10 describe their use case, give the utilities an
11 opportunity for interconnection review that's all
12 very clear. I am interested in exploring the extent
13 of our regulatory authority to look at aggregation
14 from a ratepayer impact point of view and potentially
15 make decisions on that basis. So if you have got an
16 answer today, great. Also fine for a followup.

17 MR. CIVILETTI: Thank you. Yeah
18 absolutely. I will have to say I don't have a good
19 answer today. I think it's a great question and this
20 is in line with some of the things that we've been
21 thinking about as well over the last couple weeks and
22 I would like to regroup with some colleagues and do
23 some more thinking on that. So we will definitely
24 get back to you.

25 MS. WHITE: Okay yeah. It's an issue I

1 just started exploring myself so I think we're all
2 feeling our way into it, and then my next question
3 which was -- it tags a little along the conversation
4 Ms. Margolis and Ms. Krolewski were just having, you
5 know, I think we can -- in the 231 CPG we can kind of
6 point to the ISO tariff for most things and say hey
7 you got to follow the ISO tariff like in addition to
8 providing us some information. Is that your general
9 sense?

10 MR. CIVILETTI: I think so, but I would
11 also want to defer to my other colleagues who are
12 more knowledgeable if they have anything to add on
13 that as well.

14 MS. WHITE: Sure. Maybe I just wasn't a
15 hundred percent kind of following the last
16 conversation. I don't know, Ms. Margolis, if I got
17 that correct. I'm worried as it exists now and we
18 write our rule based on it that in two years or six
19 months things are going to change. So I would rather
20 just incorporate it by reference and I wonder if you
21 are having a reaction to that.

22 MS. MARGOLIS: I think that's generally
23 what we were thinking. There are a couple areas, I
24 think we can actually cite to them in followup
25 comments, but where ISO-New England has said our line

1 of what we're looking at ends here and the state
2 regulatory retail authority may want to be
3 considering these other aspects, and I think some of
4 those have to do with -- I don't know if they are
5 disputes, but kind of the relationships between the
6 aggregator and end use customer in terms of use of
7 the distributed energy resource or any disputes that
8 might arise there, and I think ISO is saying you know
9 we don't -- that's not us. That's the state should
10 they choose to do that, and I think our comments
11 pointed to there are maybe even being a line between
12 what the Commission might consider under its
13 jurisdiction versus what might be a consumer
14 protection issue that might be a better place than
15 another agency. Attorney General, for example. So
16 there could be those sort of relationships with the
17 customer types of issues that would go above and
18 beyond to sort of citing to the ISO requirements.

19 MS. WHITE: I'm glad you touched on
20 that. Yeah seems like this is a grey area and I'm
21 wondering, I don't know, DPS had recommended in
22 comments that we, from each aggregator, kind of
23 collect the contract that they are offering and then
24 evaluate that contract and make sure that it kind of
25 complies with wholesale and retail programs and has

1 certain consumer protections in place, and it just
2 strikes me that would be a fairly significant kind of
3 new area for us, and I wondered if you had further
4 thoughts on how and whether we could best do that or
5 the role of AG. Sorry it's all very amorphous right
6 now, but if you have anything else to add to that I
7 would find it really helpful, and then there's the
8 tack on now we have the retail aggregation programs
9 like VEC and GMP are offering. Is there going to be
10 consumer confusion when they are approached by
11 another aggregator and is it our job to disentangle
12 all of that or is that on the utilities and
13 aggregators to figure out. So that's a lot of
14 amorphous thoughts we don't have concrete answers to
15 yet, but we can keep thinking about. Does that feel
16 right?

17 MS. MARGOLIS: Right and I think it goes
18 really well to the question you asked about the scope
19 of the Commission's authority and where that kind of
20 starts and ends, and I think it would be good for us
21 to kind of spend more time on that thinking at the
22 Department seeing what we can dig up in terms of
23 something helpful in terms of that paradigm under
24 state statute and you know regulatory precedent, but
25 also what kind of ISO-New England is saying states

1 might want to think about this or that or the other
2 thing to see if there's a good match between sort of
3 those -- that wish list or potential wish list of
4 items and the scope of the aggregation authority, but
5 we can respond in comments to that.

6 MS. WHITE: Okay. That would be just
7 really, really helpful. Yeah that would be really
8 helpful, and if the utilities could think a little
9 bit about that question too, just the messiness of
10 having retail aggregation programs existing in the
11 future side by side with wholesale aggregation
12 programs and how you be really clear with customers
13 and make sure they know what their rights are under
14 those different programs. Either we can take
15 followup comments on it, but also just to be thinking
16 through it for their own programs and tariff sheets
17 and so on.

18 Okay. So those are my only two
19 questions on aggregation. I want to make sure that
20 other PUC staff and the Commissioners have a chance
21 to ask questions and weigh in on aggregation. Let's
22 go to Mr. Cotter.

23 MR. COTTER: I had one question. This
24 is more a process question that springs out of the
25 discussion that Ms. White was just having with folks,

1 and in terms of -- I mean a lot of these questions
2 people need an opportunity to get back to us on which
3 is completely understandable. We obviously don't
4 have answers for them, that's why we're asking them,
5 and also the timeline that seems to be involved with
6 the implementation of aggregation for the wholesale
7 markets with ISO-New England submitting a draft next
8 month about the actual implementation being perhaps a
9 couple years down the road still and Act 54 requires
10 the PUC to establish a simplified process for CPGs
11 for smaller systems. It does not even require that
12 we adopt rules on aggregation. Additionally it does
13 not impose any timelines on us, but, as Ms. White has
14 pointed out to me several times, there is an
15 important date coming up in Act 54 which is at the
16 end of this year the threshold for requiring a CPG
17 for a battery storage system drops from 500 kilowatts
18 to 100 kilowatts. So it certainly seems important
19 that we have a simplified procedure in place by the
20 end of the year. We don't apparently need to do that
21 by rule the way I've been reading the statute.

22 So my question is whether people have
23 given any thought to should we be focusing our
24 shorter term efforts on clarifying the simplified
25 procedure and then taking a little bit more time to

1 actually adopt a rule that deals with aggregation and
2 all of these other important issues and then when
3 that rule takes effect incorporate the simplified
4 procedure into it and not to get it all done by
5 December and just try to do a more thorough job as
6 opposed to doing something and maybe having to go fix
7 it because the ultimate ISO-New England tariff
8 suddenly conflicts with the rule that we adopted. I
9 have no idea what the right answer of this question
10 is, but thought I would just throw it out there
11 generally and, Joan, I'll let you juggle any
12 microphones that turn green. Thanks.

13 MS. WHITE: That sounds great. No one
14 is like jumping right up to volunteer so I am going
15 to do that terrible law school thing. Here comes Ms.
16 Margolis. God bless you. Go ahead.

17 MS. MARGOLIS: Just going to put out
18 some of my -- share more of my sort of lack of
19 clarity around FERC 2222. This is just me saying
20 this might be an issue to consider. I guess I'm just
21 sort of checking out some of what came out of the
22 ISO-New England December Reliability Committee
23 meeting and this is a slide that's been in some of
24 their other proposals, but they have talked about the
25 proposed timeline for implementation where they talk

1 about effective changes for the energy and ancillary
2 services markets being in the fourth quarter of 2026,
3 but the proposed effective date for the forward
4 capacity market changes being the fourth quarter of
5 2022 so that the changes can be made in time for FCA
6 18 which is the qualification process which would
7 commence in the spring of 2023.

8 So -- but then they have also discussed
9 sort of requirements for utilities to have processes
10 in place to review potential aggregations having a
11 longer timeline than that sort of in time for the
12 energy and ancillary service markets changes. So I
13 am unclear and I think we will seek further clarity
14 and try to share it with everyone on exactly what
15 procedures the utility would need to have in place,
16 look at aggregations and what sort of registration of
17 aggregators when that timeline with ISO-New England
18 kind of takes effect because that could have
19 implications for at least the 231 getting that kind
20 of process up and going. It's sort of like well it
21 seems like it could wait, but maybe it can't wait.
22 That's the only conclusion I've been able to draw so
23 far, but if there's a way to slow down on the
24 aggregation 231 piece at least to enable the rule --
25 the ISO rules to come out, the tariffs to come out,

1 FERC to have a look at those, the implementation to
2 take effect, see kind of what other states are doing,
3 I think that would be helpful from our perspective in
4 terms of trying to use our time wisely.

5 MS. WHITE: Ms. Krolewski next.

6 MS. KROLEWSKI: Yeah I just wanted to
7 add again that -- this is for Anne Margolis.
8 Currently you can participate not as an aggregated
9 resource in the market. So -- and you know you don't
10 have to answer this now, but that's something to
11 think about too with regard to the -- what we're
12 enacting now, right. So just how we handle that as
13 well just in your comments and thoughts. You know
14 how -- essentially how would people register and how
15 would we be interacting with regard to that.

16 MS. WHITE: That's kind of a more of a
17 comment. I don't know if that was a question or just
18 pointing out gee it's happening now maybe we kind of
19 need to get --

20 MS. KROLEWSKI: That's probably a better
21 summary of what I tried to say. Yeah, yeah, it can
22 happen now regardless of aggregation. So we need to
23 think about this process recognizing that.

24 MS. WHITE: Requiring people what their
25 use is for the battery in the wholesale market needs

1 to happen sooner rather than later. So I see, Anne,
2 you have your mike unmuted and then we have Mr.
3 Castonguay who wants to jump in maybe if we're still
4 on this previous topic. We'll go to Anne for one
5 last thing.

6 MS. MARGOLIS: We'll definitely put more
7 thought around that question and it seems like more
8 pressing for the smaller systems and, you know, what
9 they might do and how we're keeping an eye on that
10 because you know the larger systems that we've seen
11 so far that have some sort of energy storage service
12 agreement with the utilities often go through the 248
13 process. We can see sort of what their ESSA is and
14 you know we can look at those contractual terms and
15 see the services that the utility is contracting the
16 battery for, and then oftentimes the petition will
17 spell out sort of the utility's using the battery for
18 X, Y, and Z. You know they are using it to reduce
19 peak associated costs, but they have the option on a
20 certain number of hours a year to call in this
21 battery and then when they are not using it the third
22 party battery owner or operator will be using it for
23 these other functions, maybe frequency regulation,
24 and so I think we have some sort of insight into that
25 and understanding that there's not double counting or

1 understanding how the storage will charge and
2 discharge and what the ratepayer impacts of that
3 might be, but I think if we go smaller and smaller,
4 that gets a little more difficult and we don't
5 necessarily have that transparency. So I hear what
6 you're saying.

7 MS. KROLEWSKI: And to be clear I think
8 market rules -- at least the implementation order for
9 841 was 100 kW and above. So I don't think we would
10 have smaller systems in the market -- individually in
11 the market currently.

12 MS. WHITE: I'm going to bring in Mr.
13 Castonguay to the conversation. He's got something
14 to add.

15 MR. CASTONGUAY: Thanks. Just want to
16 hit two things, one just to make sure when we do talk
17 wholesale markets that I think, as folks know,
18 there's a number of them and there's some that do
19 work in concert with retail services and some that
20 don't. So we're doing, for example, an aggregation
21 of small batteries in the frequency regulation market
22 which is a separate sort of non-conflicting --
23 there's a registration process with ISO-New England,
24 there's an aggregation that goes on, and then those
25 systems it's currently a pilot. It's a small -- you

1 know I think it's still a minimum of a megawatt is
2 what you need to participate in frequency regulation
3 of a megawatt of resource, and so -- but I also want
4 to get back to Mr. Cotter's initial question. I
5 think from the -- at least from GMP's standpoint the
6 big thing is making sure we know where they are and
7 it's an interconnection. So at the same time we're
8 having these discussions there is an interconnection
9 rulemaking going on too which we are involved in and
10 making sure there's a -- those size buckets we're
11 talking about there's a streamlined process, those
12 smaller systems it's quick and easy, but we always
13 knows where they are and we have a process to see
14 where they are going and what they are doing. So we
15 want to make sure we continue to have that if that
16 overlaps into this rule or registration process so at
17 least their length -- I'm not entirely sure on the
18 regulatory framework, but just making sure that that
19 is -- that's what's key to us right now knowing where
20 they are, having a way they feed into the
21 interconnection world, and we're thinking in the
22 interconnection world that's obviously an ongoing
23 rulemaking, but you would have these size groupings
24 as well to have more streamlined processes in there.

25 MS. WHITE: Okay. That's really, really

1 helpful, and yeah I think if you're working up like a
2 redlined file in the interconnection docket, what
3 we're trying to do is really pull everything in from
4 all the different programs and house interconnection
5 just in the interconnection rule, but as far as the
6 231 CPG that might be a little different, but knowing
7 where they are, understanding their use case, and
8 assessing impact and grid stability reliability, I'm
9 speaking off the cuff, but I think that would all
10 live in interconnection, but if folks have different
11 thoughts, we're interested.

12 I want to make sure we return to Mr.
13 Cotter's question on gee we really got to get going
14 on siting. Maybe we can wait a little longer and
15 make sure we have all the comments on that. Does
16 anyone else have anything to add in response to Mr.
17 Cotter's question? I'm thinking about some of the
18 developers who have been really active in the siting
19 space. Mr. Dowds and perhaps Mr. Wallace, if you
20 have any comments on what the Commission should
21 prioritize, siting or getting aggregation up and
22 running. I know Mr. Dowds was having some technical
23 difficulties earlier so since he's looking like not
24 available -- oh here he comes. Great.

25 MR. DOWDS: I stepped out for just a

1 minute. Could you repeat? I would be happy to
2 respond.

3 MS. WHITE: Okay yes. A few minutes ago
4 Mr. Cotter had asked a question we've got really two
5 big hefty things we're trying to deal with in this
6 rule. One is siting and creating an expedited siting
7 process and the other is kind of aggregation and
8 dealing with some of the technical considerations
9 around aggregation, and I think we're on a little bit
10 more of a clock for the siting because in December
11 the threshold for who has to get a CPG drops down to
12 100 kW. So I think there's a little more time
13 pressure to get that in place than the aggregation,
14 but I wanted to make sure that we took some time to
15 get developers' thoughts on which of those two things
16 we ought to be prioritizing. If we can only get one
17 done over the summer and into the fall, what should
18 we focus on.

19 MR. DOWDS: Yeah I would be happy to
20 reach out and survey our members about that. I think
21 the general notion of that siting process might be
22 the priority makes some sense to me, but I'll reach
23 out to our members and we'll follow up with a broader
24 consensus of their opinion what's a priority.

25 MS. WHITE: Thank you so much. That

1 would be very valuable. Thank you, Mr. Dowds.
2 Great. Now we've got Mr. Wallace to give us an
3 opinion on that matter. Go ahead.

4 MR. WALLACE: Yeah I have to agree with
5 what Mr. Dowds said. Sunrun being residential the
6 CPG change doesn't really -- shouldn't really affect
7 us, but you know I think we're just interested in
8 ensuring that anything that happens on the
9 aggregation space matches whatever is coming out of
10 FERC 2222 which is a mystery to everyone or difficult
11 to fully grasp at this time. So I think we're
12 supportive of ensuring that there's maybe a better
13 longer process there to make sure we get it right.
14 So I don't think we're opposed to that kind of
15 approach.

16 MS. WHITE: Okay. Great. So we have
17 had several people kind of say just make sure we get
18 siting taken care of early and then wait a little bit
19 for the FERC kind of stuff to develop and ISO tariff
20 to get finalized with the note that we may have some
21 things happening now so think about minimal framework
22 for that. Anyone want to express an opinion that's
23 different than that, something new or fresh we
24 haven't heard on that question? Okay. Seeing no one
25 I think we're done with questions on aggregation, but

1 I want to make sure that that's the case. So does
2 anyone from the Commission or Commission staff have
3 any additional questions on aggregation? Anyone from
4 the floor have thoughts, ideas, questions, comments
5 on aggregation that they want to make sure we're
6 aware of? Seeing no one I am just going to take a
7 few minutes to return to the topic of equity then
8 access. I meant to say this when we were on that
9 topic, but the Commission -- I think I'm speaking for
10 the Commission, but they are on the call so I want to
11 encourage them to jump in -- that we're very
12 concerned about the equity access issue, and it kind
13 of occurred to us that in this meeting we're missing
14 some of the major players that we need to be talking
15 to about that issue. So people who represent low
16 income communities or kind of the environmental
17 justice research community. There are a lot of
18 people who would have something to say and something
19 to add on the topic who aren't in this meeting. We
20 didn't really want to make them sit through two hours
21 looking at online diagrams talking about ISO-New
22 England tariffs. So what we're planning to do is
23 hold a very in-depth separate event where we're
24 really inviting in the stakeholders to ask questions
25 about and we will likely address -- none of this has

1 been finalized yet, but we will likely address a
2 whole range of clean energy programs. So that could
3 be EV and charger access, it could be residential
4 solar and net metering systems, definitely battery
5 storage, kind of all weatherization and efficiency.
6 We want to just make sure that across our programming
7 that those concerns are being integrated into dockets
8 and recognizing that people representing those
9 concerns are not sort of our usual frequent fliers
10 and that their time is extremely valuable and in very
11 high demand; and so if there's a way to kind of
12 consolidate our ask to them, which is to provide
13 comments on clean energy programs, so we're planning
14 to do that. If anyone in this group has thoughts on
15 who we should invite or topics that need to get
16 addressed, feel free to file something with us. It
17 could be in this docket. You know it could also be
18 just a general comment. We're going to do something
19 a little more far reaching, but I did want to key
20 people into the fact the Commission is really diving
21 deep on that topic and we're thinking globally about
22 our kind of programs across the board there.

23 So before I move on I want to make sure
24 does anyone from the Commission, specifically the
25 Commissioners, have anything to add to that? Okay

1 I'm not seeing anyone jump right up and how about
2 staff. Anyone from staff want to piggyback on what I
3 just had to say about equity and access? Okay. So
4 seeing none so we're almost at 11 o'clock so we're
5 going to break just a little bit early and it's --
6 I'm showing 10:54. Because some people might plan to
7 come back from break at 11:10 we're going to take a
8 little bit longer break than we planned and we will
9 resume the meeting at 11:10. So if anyone has any
10 troubles or concerns, feel free to put them in the
11 chat and we will see everyone at 11:10. Thank you so
12 much.

13 (Recess.)

14 MS. WHITE: I just want to take a minute
15 to remind people where we are in our day. Our next
16 topic is communications and telemetry. I think the
17 main stakeholders who filed comments on that were
18 from the consultants Dynamic Organics. So we will
19 maybe have them come on and we have a few questions
20 for them. After that we'll go to system
21 optimization, utility visibility and control. Then
22 we'll do some distribution system planning and
23 geotargeting, and then consistency with the CEP and
24 348(B)10 which is the transmission impact criterion,
25 and then finally we'll wrap up with carbon intensity.

1 So it looks like, Mr. Powell, you've got a question.
2 Go ahead.

3 MR. POWELL: No I'm sorry, Miss White.
4 I just -- no questions.

5 MS. WHITE: Great. No problem at all.
6 So we're going to jump into communications and
7 telemetry. You know I hate to put you on the spot,
8 Ms. Krolewski, but I think you were the lead on that
9 topic as well. This is a heavy day for you. So do
10 you want to start with questions for Mr. Woodward or
11 Mr. Casella?

12 MS. KROLEWSKI: I think -- are you sure
13 I'm the lead on that topic?

14 MS. WHITE: I could have that wrong.
15 That's fine. I have some questions I can start with.

16 MS. KROLEWSKI: Okay.

17 MS. WHITE: I'll go first in this case.
18 We'll start. Hi Mr. Woodward. It is just so lovely
19 to see you. Thank you for filing such robust
20 comments. I know you always have a lot on your
21 plate. Actually I'm going to stop sharing my screen.
22 So my first question to you, like I think what we
23 were sort of envisioning is this working group that
24 you described in your comments which would be
25 essentially I kind of see it as maybe a subgroup of

1 VSPC could go off and do some really in-depth
2 technical work, and maybe that's an ongoing project
3 and come back to us with some recommendations,
4 specific recommendations, that could get integrated
5 into -- either into the interconnection rule or
6 storage rule TBD, but I wanted to ask you maybe we're
7 ready now to sort of require that inverters are
8 implementing IEEE 2030.5. Is that ready to fly? Is
9 that something the Commission should just put into
10 the interconnection rule now or do we need to have a
11 subgroup go off and work on that for a bit?

12 MR. WOODWARD: Hi. Probably not 2030.5.
13 So let's just sort of maybe get our bearings here.
14 Hitching our wagons to 1547, right, does narrow down,
15 you know, the number of protocols that any --
16 communication protocols that any inverter needs to be
17 capable of that is at the device interface level. So
18 that's literally the device needs to be capable of
19 coughing up a data packet formatted per one of those
20 communication protocols. So 2030.5 is one of those
21 three. To say we should just go all in on it in a
22 rule right now I think is probably premature. I mean
23 trying not to sound cocky, but having probably looked
24 at this stuff more than most people, which, you know,
25 is more a burden believe me than a boost, you know

1 there's still questions I have about whether or not
2 that would be the right move for Vermont, and it's
3 definitely, you know, a conversation that utilities
4 need to be taking stock of too and adding to the pros
5 and cons on both sides of the ledger. So that
6 working group idea is a good venue for that
7 conversation and coming to maybe consensus -- ideally
8 to consensus on whether or not following California
9 in that way, which they have done, you know, making
10 IEEE 2030.5 the default protocol choice, whether or
11 not that makes sense or not.

12 So if I was wondering if -- so I don't
13 even know how much of what I just said makes sense,
14 but it might be useful to just flash a graphic even
15 to just clarify what it means and doesn't mean to
16 adopt 1547 the way the rule currently reads.

17 MS. WHITE: Okay. That's helpful. I
18 just made you the presenter. So if you want to put
19 up a slide or something, did you get that?

20 MR. WOODWARD: Yes. Do you see my
21 screen?

22 MS. WHITE: Yeah I've got like a subway
23 station.

24 MR. WOODWARD: Cool. Okay. So this is
25 actually, you know, an EPRI, Electric Power Research

1 Institute, graphic. It lays out pretty cleanly. So
2 what would be in the scope of IEEE 1547 is off on the
3 right. So these are the individual DR's. You know
4 not very revealing graphics here, but just imagine
5 smart inverters. The device interface has to be
6 capable of one of those three prescribed and the
7 standard itself. Utility SKADA systems, suspect
8 modbus, pretty well known throughout the inverter
9 industry, inverter manufacturing industry or IEEE
10 2030.5 which is kind of a new player and a whole sort
11 of much bigger kettle of fish to just pose, but, you
12 know, that's -- this is the boundary. I don't know
13 if you see my mouse mousing around, but how, you
14 know, how those data packets find their way to the
15 utility. To the left side of this graphic that's
16 completely out of scope of IEEE 1547 and would be
17 something that would be decided, you know, and
18 figured out probably case-by-case by utilities, you
19 know, making decisions about, you know, what kind of
20 networks they are going to deploy to communicate with
21 these devices. If they are under aggregations, that
22 raises all the questions we were sort of stepping on
23 and around in the last few segments, but if there
24 might be requirements to connect through to the
25 utility through a certain communication network that

1 maybe doesn't exist today. You know those are future
2 looking conversations.

3 GMP and VEC can speak to how they are
4 doing this now with their, you know, BYOD programs,
5 but in the absence of a dedicated network it's most
6 likely the public internet. So all that to say this
7 out of scope communication network, specifically they
8 call it, lots of questions. I think they, you know,
9 pretty -- they would certainly be taken up naturally.
10 They would come up naturally in a working group
11 environment, whatever the venue, if -- I don't know
12 if they would be settled and I don't know, you know,
13 I think what could be settled is the extent to which
14 there's a need for a statewide rule that clarifies
15 these out of scope specifics. So I will stop sharing
16 and you can ask me anything you want.

17 MS. WHITE: It's not the most intuitive
18 thing. There should be a sidebar that has a picture
19 of a computer screen. I might be able to do it for
20 you too. Hang on. Okay. That's really helpful. So
21 I'm going to recap. IEEE 2030.5 not ready to fly
22 yet. Maybe in the future. There's lots of other
23 stuff; infrastructure, networks, software platforms
24 that might have to get developed. Potentially VSPC
25 or another working group could work on some of that

1 and possibly come back to us when and whether they
2 need the PUC to implement any rules related to the
3 universal communications protocols. Does that sound
4 about right?

5 MR. WOODWARD: Yeah roughly that sounds
6 right. I mean I do think there's things to be
7 learned from the way other states have kind of taken
8 up these questions sort of in parallel processes.
9 Minnesota has an interesting handbook that might be
10 worth reviewing. What do they call it? Technical
11 interruptibility and integration -- I don't know. I
12 can only remember TIIR. It's pretty thorough and was
13 developed I believe through a similar kind of process
14 with the one we're contemplating right now.

15 The Massachusetts Technical Standards
16 Working Group is another example. Obviously
17 California has been doing this through multiple
18 efforts that converge onto Rule 21. Rule 21
19 proceedings just never end really so I'm not sure
20 we're trying to do that here in Vermont. So yes, in
21 general yes, but yeah we have -- we have potentially,
22 you know, existing institutions that we can -- we can
23 draw on here and VELCO is a very well positioned
24 convening body.

25 MS. WHITE: Okay. So my next question

1 is like what rule does the Commission have in forming
2 or directing a technical working group like you're
3 describing which should we put out an order saying
4 VELCO gee gosh it would be great if you did this or
5 just like how can we accomplish what we're talking
6 about or what do we need to be doing I guess is what
7 I'm wondering.

8 MR. WOODWARD: Well I dare say you have
9 done what you can do at this moment in time by
10 putting out the call for comments on the idea of the
11 working group. I will -- we will certainly be
12 replying to those that are due on the 28th in support
13 of the idea. You know I think it's -- there's
14 possibly a place to, you know, institutionalize some
15 report out -- or not institutionalize, but, you know,
16 make places for reporting out of what the group is,
17 consensus it's coming to, findings, et cetera. I
18 think all of that is sort of -- all those details are
19 within what you've allowed for those kind of details
20 to be included in your request for comment, and it
21 seems like the Commission is thinking about opening a
22 proceeding to even maybe get a little deeper into
23 those types of details or ask about them. I don't
24 know. My reading of that.

25 MS. WHITE: I don't know. That's a good

1 question. Let me circle back and see. Yeah I'm just
2 not sure. Let me just see, but it seems like the
3 most helpful role we could play would be to create a
4 little bit of a time pressure to say like gee get
5 this group going, report to us every six months or
6 once a year on what you have done and accomplished
7 and recommendations you have for us to kind of
8 implement your rules. Sometimes you just need an
9 outside entity to create the time pressure for people
10 to make it happen, but if you think it's helpful for
11 us to open a proceeding, if you think that's helpful,
12 maybe file that with your comments on the 28th on
13 interconnection because I don't know that anyone has
14 really floated that idea as a stand alone -- as a
15 stand alone proceeding.

16 MR. WOODWARD: Yeah. The only other
17 thing I would say is in my experience yeah sure
18 deadlines are incentives, but also, you know,
19 utilities are very lean and people with operational
20 responsibilities don't have a lot of latitude to just
21 show up for, you know, think piece type, you know,
22 discretionary meetings. So that, you know, having --
23 I don't know what it takes to sustain, you know, a
24 collaborative effort, you know, of the type that, you
25 know, was assembled, you know, when we were dealing

1 with the smart meter rollouts before I was even
2 paying attention to this industry in Vermont, but
3 there were efforts there and some precedent there for
4 a utility collaboration and thinking and sort of
5 envisioning and planning. It wasn't sustained, I
6 don't think, beyond the actual smart meter rollout
7 deployment. Everyone went into operation mode after
8 that, but I forget what it was called. E energy
9 collaborative or something like that. It's history
10 to me, but we have some precedent here possibly for
11 something like this.

12 MS. WHITE: Okay. So that's helpful. I
13 think I'm going to -- let's see. I have one followup
14 on this, but actually let's go to Mr. Cotter first.
15 Go right ahead.

16 MR. COTTER: Thank you, Ms. White. I'm
17 just curious on sort of a larger spectrum question is
18 that Act 54 not only talks about storage it has a
19 little piece about the interconnection rule, and it
20 says that we need to go back and redo our
21 interconnection rule and as part of that we need to
22 be accommodating battery storage, and so I'm curious
23 if this whole question about communication protocols
24 is it really an interconnection issue and that should
25 live in the interconnection rule or is it something

1 that's so unique about batteries that we need to do
2 something about it here, and the reason I'm asking is
3 because we have -- if we have it living in two
4 different places, something needs to be changed in
5 the future. We need to amend two rules, whereas, if
6 we can actually just have it live in one place and
7 cover all the necessary issues and then something
8 comes up that needs to be changed we only have to
9 change one rule, and I know a lot of people on here
10 are familiar with the rulemaking process but some
11 might not be, but it is a fairly involved process and
12 it does take quite a bit of resources to get it done.

13 So I was curious if maybe it belonged
14 more appropriately in the interconnection rule space.
15 Not that we would stop discussing it here and having
16 input in that process. This is more just an
17 efficiency concern I guess you would say, and I would
18 really like to hear from Mr. Woodward, but also from
19 any of the distribution utilities that have a view on
20 that. Thank you.

21 MR. WOODWARD: Yes I think it is -- it
22 does belong in the interconnection rule and therefore
23 applicable to everything that's interconnecting.
24 What I think is now -- what we're calling projects
25 right now in the current draft, right, which the open

1 question how -- how far that definition goes. It
2 seems possibly you're thinking even electric
3 vehicles, supply equipment anyways, but definitely,
4 you know, to the extent that like we're just handling
5 communications protocol requirements through IEEE
6 1547, then I mean that covers all of those projects.
7 Those types of DER. So I would say yes if it's not
8 something that there's unique storage, I don't at
9 this moment see anything unique to storage that needs
10 to be -- communication wise that needs to be handled
11 independently of the interconnection rules.

12 MS. WHITE: That is really, really
13 helpful. That's I think my intuitive sense as well.
14 I'm going to just say if there's anyone who has a
15 different view, that is to say there's some aspects
16 of communications of telemetry that needs to live in
17 the storage rule not in the interconnection rule, if
18 there's anyone that has a different point of view
19 let's make some space for that now so you can go
20 ahead and turn your camera on. Okay. Seeing nobody,
21 you know, also feel free to file followup comments.

22 This is my last kind of topic on this
23 and this is I guess for Mr. Schoville who is taking
24 some notes for VELCO. I think they are probably on
25 top of this already, but I want to make sure if we're

1 tasking VSPC to form a working group on
2 communications -- Mr. Schoville, are you still here?
3 Turn your camera on. Great. -- make sure to take
4 that question back to VELCO for them to file comments
5 on either in this docket or in an interconnection
6 docket whether VSPC could host the kind of working
7 group on communications protocols that Mr. Woodward
8 was just talking about.

9 Great. Okay. Sounds good. We'll look
10 forward to hearing on that. I think I'm going to
11 move us onto the next topic unless anyone has
12 anything pressing on this topic. Mr. Roisman, please
13 go ahead.

14 CHAIRMAN ROISMAN: Yes. I sort of want
15 to harken back to something I think Mr. Castonguay
16 said it earlier today and the question of, as I
17 remember his expressing it, was should we be setting
18 the goal and let the relevant parties work out the
19 details, and this seems like a perfect topic for us
20 not to try to write some detailed whether in the
21 interconnection rule or here about how we
22 communicate. Plus if I understand correctly, if the
23 communication doesn't work, the economic advantages
24 to those people who are interested in selling or
25 using batteries is not going to be achieved. So it

1 looks like the kind of place where sort of free
2 enterprise ought to be allowed to get to the final
3 stages of what needs to happen and then come in, if
4 they want to have it written into a rule, with that;
5 and because everything is changing so fast I wonder
6 whether it doesn't make sense to make sure that the
7 rule just says make sure you can communicate properly
8 and then leave it to everybody else to figure out how
9 to do that, and I would be interested in what others
10 think of that; and sort of as a second minor question
11 if there's a need to get some people urging a
12 collaborative effort to come up with a solution, is
13 it appropriate for the Public Utility Commission to
14 be the instigator or is that really a task for the
15 Department of Public Service?

16 MS. WHITE: Okay. We've got two really
17 great questions from Chairman Roisman. I am going to
18 cold call Mr. Civiletti on the second question which
19 is does the Commission need to kind of task people
20 with creating this group or where is the Department
21 on that? Could be Mr. Civiletti or maybe Ms.
22 Margolis on that question. I saw your camera come on
23 for just a second, Mr. Civiletti.

24 MR. CIVILETTI: Apologies. Thank you.
25 Yes. My initial impression is the Department can

1 assist with this, but I'm not I guess prepared to
2 talk about the details just with my own knowledge
3 base. So I'll defer to someone else on the call
4 wants to add to that and I think we can definitely
5 explore that.

6 MS. WHITE: Okay. So let's bring in Ms.
7 Margolis then.

8 MS. MARGOLIS: Thanks, Ms. White. You
9 know I think we support the idea of this being sort
10 of under the mantle of potentially working group of
11 the Vermont Systems Planning Committee under VELCO if
12 the answer comes back that they have the sort of
13 bandwidth and capacity to do this. I definitely
14 sympathize with the thought that everyone is running
15 lean and if it's discretionary it becomes less of a
16 priority, but if it's not, if it's, you know, go
17 forth and do this by this certain date, that's
18 helpful and maybe that kind of push can come from the
19 Department or the Commission, and we've definitely
20 made some pushes in some areas where, you know,
21 there's been a little bit more discretion like the
22 working through the generation constraints working
23 group of VSPC. I think that was a big push and then
24 it kind of fizzled because people kind of ran out of
25 steam there, and hopefully this wouldn't meet the

1 same fate, but that does seem the appropriate venue
2 to do it, and we would support and do our part in
3 kind of making that come to fruition.

4 MS. WHITE: Okay. That's helpful and
5 just recognizing that maybe there are some things
6 that, as Mr. Woodward's diagram showed, that are in
7 scope as in should we go with California 2030.5 or
8 not, that could be resolved in sort of a more
9 discrete type time frame, whereas, those longer
10 questions of which utilities have networks and which
11 don't and who can afford a big software platform and
12 who has control rooms and who doesn't that's going to
13 be a longer question; and given that most of our
14 utilities will not need to implement -- necessarily
15 be required by FERC to implement aggregation, that
16 raises some questions too. So let's do a little more
17 thinking on that.

18 So, Mr. Woodward, you have got your
19 camera on. Go ahead if you had a response to that.

20 MR. WOODWARD: I do feel a little bit
21 compelled to reply to Chair Roisman's first comment
22 about not -- not being prescriptive in a context of
23 fast industry change, and I think that's -- you know
24 those are wise watch words for this moment, but it's
25 also the case and I'm suggesting just, you know,

1 simply stopping at adoption of IEEE 1547 in its
2 entirety is in fact doing that, but it does it kind
3 of in a way that wasn't necessarily -- or at least
4 the way I understood Chair Roisman to be saying
5 should be done because it does it by in fact limiting
6 the amount of possible protocols that can be used to
7 a productive like subset that has been really well
8 thought out by, you know, industry, academia,
9 consultants, and the standards development
10 organization ecosystem. It is in fact what will
11 create the long term possibility for a little bit
12 more free enterprise, as free as we can probably get
13 in subjectiveness, but ensuring that, you know, the
14 devices that are out there will work across any given
15 type of network that ends up being built by utility
16 and communications network. So I think I'm saying
17 we're doing the right thing.

18 MS. WHITE: Okay. That's helpful. I
19 want to see, Chairman Roisman, if you got your
20 questions answered or if we should cold call some
21 other people to respond to those few questions.

22 CHAIRMAN ROISMAN: Well I think buried
23 in the first question was this question about how
24 prescriptive we should be, and I would still be
25 interested is this an area in which people feel once

1 a communications protocol is developed by the various
2 stakeholders should we be requiring the
3 implementation of a particular protocol assuming that
4 we agree that it's a good one or should we be setting
5 goals of what a proper protocol does and allow it to
6 evolve without having to keep coming back to us and
7 saying we now need a new rule because that old
8 standard doesn't work any more. So I would be
9 interested in people's thoughts on that.

10 MS. WHITE: Okay. That's a helpful --
11 that's a helpful distinguishing factor. So let's
12 see. I think we are going to maybe cold call some
13 people. I think probably, Mr. Castonguay, you're the
14 person with the most experience in kind of
15 interoperability between systems. So if you are
16 still on the line, maybe we'll get you to respond.
17 Would it be helpful for the PUC at some point down
18 the road whenever one is ready to say all right guys
19 either IEEE 2030.5 or something else or do we want to
20 say if you want to participate in Vermont in
21 aggregation or other regional programs you need to be
22 able to communicate with the utility period, end of
23 story, and then it's up to the private players and
24 the utilities to work out what that all looks like.

25 MR. CASTONGUAY: Yeah I would need to

1 probably discuss this a little more with the team.
2 My immediate reaction would be the latter in terms of
3 less specificity in the rule itself. I'm still --
4 and we can have these conversations after. I'm still
5 trying to wrap my head around a little bit what the
6 problem we're trying to solve is and then
7 understanding that go from there, but I would lean
8 towards less specificity to avoid having to make a
9 rule change every time there's a 2030.6 or you know
10 what I mean. So I mean that's where my mind is at.
11 I will confer with our team and we can definitely
12 circle up with others as this gets going and offer
13 additional feedback there, but that's where I am
14 initially.

15 MS. WHITE: Okay. That's helpful. Is
16 there anyone else in the room who wants to comment on
17 that particular issue like how prescriptive should
18 the PUC be in regards to communications protocols?
19 All right. We've got Mr. Wallace. Go right ahead.

20 MR. WALLACE: I'll just make a short
21 comment. I don't think being too prescriptive is
22 helpful. One question I would have we talked about
23 2030.5, but my understanding is there's two other
24 communication protocols that fit under IEEE, 1547 and
25 2018. So one of my questions is are those other two

1 protocols not acceptable. I know some inverter
2 manufacturers use one instead of other as their
3 primary and some may use modbus and some use 2030.5.
4 So that was one concern I had for too specific saying
5 it's one specific protocol are we blocking equipment
6 manufacturers who are certified to that standard
7 unnecessarily, and that's where, I don't know, I
8 think that's probably a lot of what can the utility
9 systems handle more so than maybe issues with those
10 specific protocols, but that was one note I wanted to
11 make.

12 MS. WHITE: Okay. That's actually
13 really helpful. Yeah I think I kind of have 2030.5
14 in my head just because I read a lot about it, but
15 there are kind of competing protocols and we're not
16 sure which one is going to dominate the market in the
17 end. Okay. I think we better leave this topic
18 behind because we're running short on time for the
19 rest of our topics. I do want to encourage people to
20 file as followup comments kind of thinking about
21 those two questions that Chairman Roisman posed just
22 really what is the PUC's role in this space. So the
23 way that Mr. Castonguay just phrased it what is the
24 problem we're trying to solve, and then my question
25 is like what can we do or what do we need to be doing

1 right now. Sorry. Go ahead, Mr. Castonguay.

2 MR. CASTONGUAY: Just a process question
3 I think. I have -- just curious. These types of
4 followups and the last workshop do you anticipate the
5 PUC issuing like a list of these things or should we
6 just be taking these and recording them down and then
7 responding?

8 MS. WHITE: I've been keeping like a
9 pretty detailed list from last week and this week.
10 So my plan was to get that together in like an
11 information request, but I think it's a good idea to
12 keep taking notes on your own too so that if there
13 are things like that I have missed on my list or that
14 that's not what you wanted to say, I think it would
15 be really helpful. Also it might be a week or two
16 until I can get that out, and so if your team wants
17 to start working in advance on certain questions, I
18 know it's a lot. We're really asking a lot of
19 everyone in this docket and in interconnection. So I
20 feel like the industry is changing so fast and we're
21 just running frantic trying to keep up. So I'm quite
22 sorry about the work load.

23 MR. CASTONGUAY: No problem and we're
24 doing the same. I just wanted to make sure we didn't
25 miss something that the Commission wanted us to hit.

1 So that sounds great. Thank you.

2 MS. WHITE: Sure. We'll do our best to
3 kind of corral everything so there's a clear list for
4 everyone to take a look at. Good. So we're going to
5 move on to the next topic which is system
6 optimization, utility visibility and control. Okay.
7 So I'm talking entirely too much. Let's go to
8 Veronica. Okay. Ms. Ung-Kono, go right ahead please.

9 MS. UNG-KONO: Actually, Mr. Castonguay,
10 my first question is for you and GMP. First of all,
11 thank you so much for the oneline diagrams that you
12 presented this morning. That was extremely helpful.
13 It's good to know there's AC and DC coupled systems
14 that we can be pulling from here and to consider
15 those in light of all the other DUs, but my question
16 for you is in light of the BYOD and ESS programs of
17 GMP and how exactly does GMP choose when to charge
18 and discharge the batteries for on-site customers to
19 promote reliability? Is that really dependent on
20 whether it's during a peak event or are there like a
21 slew of factors that GMP considers every single time
22 they choose to charge or discharge? I'm asking, one,
23 because this was a concern raised in some of the
24 comments from some of the other stakeholders that are
25 on the line, but, two, I also wonder if some of the

1 other DUs could also learn from the factors that you
2 use and other utilities use in making these decisions
3 so that everyone is more or less on the same page?

4 MR. CASTONGUAY: Sure and I should just
5 -- maybe, Ms. White, like there's an active tariff
6 also going on in front of the PUC so I want to be
7 careful to make sure -- I'm happy to explain how we
8 do it currently. Is that the best approach?

9 MS. WHITE: Yeah I think so. I think if
10 we can shy away from that tariff -- I think there's
11 some open questions so if we can shy away from any of
12 the controversial stuff, we're okay to talk about the
13 current existing program that was approved in -- I
14 forget the docket number, but a few years ago.

15 MR. CASTONGUAY: So, Ms. Ung-Kono, we
16 have the two programs where it's more direct control
17 of the batteries. We partner with Tesla and those
18 are being discharged and recharged based on
19 essentially automation -- automated algorithm. So
20 its first priority is looking at the State of
21 Vermont's load and New England's load every 15
22 minutes and making a decision on is there a potential
23 peak coming, should we discharge these batteries, and
24 as soon as that has passed and there's no threat of
25 creating a peak then recharging will occur. It's all

1 automated, and then, second, a little lower on that
2 stack is this frequency regulation that we're also
3 doing with a small subset of batteries currently in a
4 pilot, and that is dictated by ISO-New England. They
5 literally send a signal every four seconds that flows
6 to the batteries, tells them to charge or discharge
7 by a certain amount, and that's how that is
8 happening. And then on the bring your own device
9 program we manage the discharging and we leave the
10 recharging up to how the customer wants to do that.
11 So that can be recharge immediately off the grid,
12 that can be recharge only from solar. It's -- that
13 is on the customer and the battery supplier/installer
14 to decide how to recharge those following an event.

15 MS. UNG-KONO: Thank you. That's great,
16 and for the automatic program you have with Tesla is
17 that a Tesla specific program or is that GMP specific
18 program?

19 MR. CASTONGUAY: So --

20 MS. UNG-KONO: I'm sorry.

21 MR. CASTONGUAY: No problem. So they
22 have built the algorithm. It's a Tesla like
23 automation platform that's running. The program that
24 we run in Vermont is specifically set up for the
25 Vermont program, but it's their software that's

1 running it.

2 MS. UNG-KONO: Okay. Thank you for
3 clarifying.

4 COMMISSIONER ALLEN: Veronica, I had one
5 followup question from your prior question if I
6 could. Josh, you mentioned kind of two use cases, if
7 you will, around storage, but my question is whether
8 there are essentially subsequent use cases that may
9 kind of unfold in the future and you're kind of
10 holding your powder on those until you kind of work
11 through the optimization around the system use cases.
12 I can imagine any number in the future. Can you shed
13 any light on that for me?

14 MR. CASTONGUAY: I think the short
15 answer is we anticipate more use cases for sure. I
16 think the balance that we're going to be looking at
17 is the more you use -- especially in the home battery
18 side, a little different on the bigger scale
19 batteries, but home battery side the more you're
20 using the battery keeping in mind how often it's
21 available for the customer in the event of an outage.
22 So balancing those things continues to be the focus.
23 How do we maximize the financial value of the battery
24 for the customer, for the rest of our customers, and
25 how do we keep that battery as available as possible

1 for an outage or something like that.

2 So right now the demand peak reductions
3 and frequency are the two primary ones. There's a
4 little bit what we call energy arbitrage. So when
5 the price is high you discharge. When it's low you
6 charge. That's in there and those are the primary
7 ones. We were watching -- I wouldn't be surprised if
8 we see more markets come out of ISO-New England
9 especially around the wintertime and things like
10 that, that we would be able to use these resources
11 in. There's nothing I'm aware of right now
12 specifically on the horizon that we're looking to get
13 into, but certainly as they arise and we're able to
14 leverage the batteries we'll work with customers to
15 decide if it's worth it for them in exchange for
16 using the battery for those things.

17 COMMISSIONER ALLEN: Thanks, Josh, and,
18 Veronica, I apologize for the interruption. Back to
19 you.

20 MS. WHITE: Ms. Ung-Kono, do you have
21 any other follow-up questions you wanted to ask Mr.
22 Castonguay or on this topic more generally?

23 MS. UNG-KONO: First of all, no apology
24 necessary, Commissioner Allen. I appreciate your
25 insight into this, and to your point, Ms. White, I

1 just invite all the other utilities to perhaps
2 comment on the ability of DUs to be able to discharge
3 and charge for on-site reliability in the coming
4 comments that we've been asking for. So if everyone
5 could please make a note of that, that would be
6 greatly appreciated.

7 MS. WHITE: Okay, and just to clarify
8 you're kind of thinking around the topic of like the
9 utilities and the retail aggregation programs are
10 using the batteries to kind of play in markets and
11 reduce costs, but the customer has an interest in
12 reliability and backup power in the event of an
13 outage and how are they balancing those competing
14 interests, is that the heart of what you're kind of
15 asking for?

16 MS. UNG-KONO: Yes. That's correct.

17 MS. WHITE: Okay. I've got that on my
18 list and if the utilities want to put that on their
19 list as well, that would be really helpful. Good.
20 Does anyone else have anything else on system
21 optimization, utility stability and reliability, sort
22 of the look into the grid who's doing what when.

23 I had one question on this which I guess
24 again, Mr. Castonguay, sorry we've been picking on
25 you a little bit, but I think it's partially because

1 GMP is kind of the furthest ahead in terms of
2 integrating some of those DRs into your operating
3 room. So my question was really about aggregation.
4 I think GMP is the only utility who is going to be
5 required under FERC 2222 to allow aggregation in its
6 service territory, and as I was reading through the
7 draft ISO tariff there is this laundry list of things
8 that DUs are going to be required to do. There's
9 like evaluate aggregation as they coming in for
10 system stability reliability. We might be a few
11 years out from implementation, but I wanted to get a
12 sense of whether GMP is prepared to implement that
13 kind of utility visibility and control over
14 aggregations that are not its own that might be third
15 party aggregations and, if not, sort of what are the
16 steps to getting there and the resources that are
17 going to be required to implement that ISO tariff.

18 MR. CASTONGUAY: Sure. Yeah. So I
19 think the short answer is probably not yet in terms
20 -- so I mean partially. So we have these platforms.
21 We're communicating with devices and we're
22 communicating directly to customers and others that
23 might be doing other flexible load types of things to
24 even stuff as simple as e-mail and that sort of
25 thing, demand response program. So there's a base

1 there. A lot of it is going to come out of what
2 we're obligated to do under all those points you
3 mention in terms -- you know what's going to be
4 important for us is really back to the
5 interconnection side of things, at least making sure
6 that we've got -- we know where the aggregation is
7 and we know what it's doing, and then in terms of
8 communicating with directly it's either going to be
9 directly to the devices or to an aggregator
10 themselves and that communication can be automated.
11 It can be literally e-mail alerts type of things. So
12 I still I think a little bit to be determined. We do
13 have the platforms in place to allow that to happen,
14 but we need to configure them appropriately and then
15 also make sure, and I think we mentioned this in our
16 comments or it was a question of the Commission, just
17 at any point in time there is the ability to in an
18 emergency situation either override something or send
19 a signal to the aggregator there's a system condition
20 that we need to change something in the aggregation
21 temporarily.

22 So yeah that's where we are at today,
23 but I would anticipate not being too much -- at least
24 for GMP, I'm sure the other DUs might have a
25 different view there, but some of the systems we have

1 in place really look at leverage.

2 MS. WHITE: Okay that's helpful, and as
3 we're looking forward to the -- I think in
4 interconnection we've really enabled a lot of utility
5 visibility control, like more than we had before, but
6 I imagine we haven't gotten things quite right in
7 that docket, so I think the PUC wants to make sure
8 that our rules are working in concert with the
9 ISO-New England tariff in relation to aggregation.
10 Our rules aren't getting in the way or that they are
11 actually facilitating what the DUs are obligated to
12 do. So maybe as your team is reading through this
13 towards that end -- it's not going to be picture
14 perfect toward that end because that's a slow moving,
15 you know, series of dockets that ISO has. So I think
16 we may be in and out of the interconnection rule over
17 the next few years related to that, but to have it in
18 mind.

19 MR. CASTONGUAY: Thanks.

20 MS. WHITE: Good. Anyone else have
21 anything on system optimization, utility visibility
22 and control? Seeing nothing we are going to move to
23 distribution system planning and geotargeting, and I
24 believe, Ms. Krolewski, this is an issue you had
25 raised and let's talk about topic 6 and 7 which is

1 distribution system planning, geotargeting, and then
2 also consistency with CEP and 248(B)(10). So I think
3 the concerns in this topic were really around
4 generation congested areas and how do we work with
5 storage in a way that doesn't aggravate those
6 generation congested areas but can actually maybe
7 alleviate some of that congestion. So I don't know
8 if, Ms. Krolewski, you have any questions on those
9 two topics. I put you on the spot.

10 MS. KROLEWSKI: I don't have any
11 questions. I think that general discussion was, you
12 know, we talked about how much we need to think about
13 that criteria when we were siting and you know
14 waiving it or planning the system -- yeah I guess
15 that was my general thought was, you know, do we
16 really need to have a hard think about how these are
17 interacting with the system, and so when we were
18 siting and doing that -- sorry this is after the
19 siting discussion, but you know do we -- can we just
20 not think about -- do we always have to think about
21 that criteria. Should we be waiving that criteria I
22 guess.

23 MS. WHITE: That's super helpful. That
24 was my memory too. In the simplified siting process
25 the temptation is to waive it except that we have

1 this kind of transmission congestion concern and just
2 like generation congested circuits in general. So if
3 anyone has an opinion on whether the Commission
4 should waive (B)(10) or not for systems in the
5 simplified process, that would be systems that are
6 between 100 kW and 1 megawatt, it would be a good
7 time to maybe air those opinions. I'm not super
8 excited about cold calling people on this topic.
9 Maybe I won't do any cold calling. Oh, Anne
10 Margolis, go right ahead.

11 MS. MARGOLIS: Thanks, Ms. White. I
12 think our preference would be to not conditionally
13 waive (B)(10). That that's an important
14 consideration as we're looking at both sort of
15 generation constrained areas, but potentially even
16 what are the charging impacts of storage from a load
17 perspective. That's sort of another issue that might
18 start to bubble up, the timing of the charging and
19 the extent to which we could maybe talk about that
20 under that criterion seems to be just an increasingly
21 important issue to look at, sort of broader macro
22 impacts of an individual resource or even especially
23 a resource that's part of an aggregation on the
24 distribution system and even bubbling up to the
25 transmission system.

1 MS. WHITE: And we've got Mr. Jordan on
2 as well. Did you want to add to that?

3 MR. JORDAN: I was actually going to say
4 the same thing. Ms. Margolis beat me to turning her
5 camera on, but I was going to make the same comment
6 and so I just left my camera on just so I could say
7 that so you weren't wondering.

8 MS. WHITE: Marvelous. Okay. So it
9 looks like we've got the Department in favor of
10 keeping (B)(10) on the books which means that
11 developers in that size bucket, the hundred kilowatt
12 to one megawatt, would need to file testimony on that
13 topic. Any differing views from that and anyone who
14 wants it to raise a counterpoint to that? Okay. So
15 if you rethink later, you can always file followup
16 comments.

17 Okay. Anything else on those two
18 topics, distribution system planning and
19 geotargeting? I did have a question that I don't
20 think we're going to be able to resolve today.
21 Relates to aggregators. Trying to think of who the
22 best person is to kind of answer this. It's about
23 how aggregations would move through the
24 interconnection process if they are spread around the
25 utility's territory. You know what I'm going to do

1 is save that for the after information request
2 because it's a pretty detailed question. It's if you
3 have an aggregation that exists in your territory and
4 it's applying for an amendment to the aggregation,
5 how would the utility assess system stability and
6 reliability, and then also impact, kind of
7 transmission level impact when that's happening, but
8 I kind of suspect we might not be ready for that
9 conversation based on our earlier conversation today.
10 So maybe we'll punt that question.

11 Okay, and then my last followup on this
12 was in relation to (B)(10) but not just for
13 individual projects in expedited siting, but also how
14 (B)(10) and consistency with the CEP should play into
15 the 231 CPG. So the natural there would be for Ms.
16 Margolis I think or maybe Mr. Jordan which is when we
17 are creating the criteria for assessing whether an
18 aggregator should get a 231 CPG should we include a
19 criterion that relates to consistency with the CEP
20 and then transmission level planning? Might not be
21 ready to answer that today. Go ahead, Mr. Jordan.

22 MR. JORDAN: Yes. My answer is we'll
23 have to take that back and provide an answer in
24 followup comments.

25 MS. WHITE: Okay. Wonderful. I'll add

1 it to my list as well. Good. Okay, and does anyone
2 have anything on those two topics? Seeing nothing
3 we're going to move on to carbon intensity, and I
4 think this is going to be a short one because my read
5 of the comments on this topic -- well first off let
6 me say anyone from the Commission or Commission staff
7 have any specific questions they want to ask on
8 carbon intensity? Seeing none I'll just say our
9 comments were largely in consensus on this topic
10 which is the Commission should not impose charge or
11 discharge requirements on storage systems right now
12 because the incentives that exist kind of make
13 storage, let's see, net beneficial in terms of carbon
14 emissions. So if anyone has a differing view from
15 that, please do file followup comments stating so.
16 That would be very helpful. I think we've got a
17 consensus right now that we should leave that alone
18 for the time being. So with that being said, does
19 anybody from the floor have any kind of comments or
20 thoughts or questions about the carbon intensity
21 question? Seeing none we're done with the
22 substantive portion.

23 I do want to spend just a minute or two
24 talking about process. So we've got a number of kind
25 of requests for followup. It's going to take us

1 probably two weeks to really realistically get those
2 coherent and out. That being said, people can start
3 thinking before that comes out. What is a good
4 timeline for followup comments, and I just want to
5 say out loud how incredibly stressed and busy and
6 overworked everyone in the industry is right now. So
7 whose got a pitch? I'm going to say I don't think we
8 want to ask for anything back inside of a month from
9 today. Is about a month deadline realistic for
10 people? Let's start with the Department. Ms.
11 Margolis, and don't be shy to ask for more time if
12 you need it. Oh, Mr. Civiletti, go ahead.

13 MR. CIVILETTI: Thank you. Yes I think
14 we were thinking perhaps a month from beginning of
15 February. You know a month from the second of
16 February or something like that would be really
17 helpful.

18 MS. WHITE: Okay. So early March
19 sometime for responses.

20 MR. CIVILETTI: Absolutely.

21 MS. WHITE: Okay, that's helpful, and I
22 wanted to make sure and check in with the utilities
23 because we had quite a laundry list for them as well.
24 So let's go -- first we haven't picked on WEC so much
25 today. So, Mr. Powell, do you think that deadline

1 works for WEC, early March sometime?

2 MR. POWELL: No worries about the
3 picking. Yeah that would be reasonable. Thank you.

4 MS. WHITE: Okay and I am going to go to
5 GMP because they have got a couple of just enormous
6 dockets right now. So, Mr. Castonguay, why don't you
7 tell us if early March is too soon. That's okay
8 feedback.

9 MR. CASTONGUAY: No early March should
10 work fine.

11 MS. WHITE: Okay great, and just to be
12 clear, all right, so we'll go with an early March
13 deadline for reply comments. We'll get our questions
14 out hopefully within a couple weeks and we are
15 drafting now so we will -- hopefully the reply
16 comments we can kind of integrate and hoping to get
17 -- I don't want to make any promises on timeline, but
18 yeah we are trying to get this rule out as soon as
19 possible. So I think that's the only procedural
20 issue that we have. We will let you know when we get
21 the kind of stand alone sessions on equity and access
22 together, and we look forward to reading your reply
23 comments on the third. Thank you everyone so much.
24 So, so much. I know how taxed and stressed everyone
25 is so taking some time to do this today it's just

1 invaluable to us, and we see the work you're putting
2 in and we really, really appreciate it. Hopefully we
3 get to a good place on this rule. So with that I'll
4 close the meeting unless there's anything else.
5 Thank you so much everyone. Take care and stay safe.

6 (Adjourned at 12:05 p.m.)

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C E R T I F I C A T E

I, JoAnn Q. Carson, do hereby certify that
I recorded by stenographic means the second workshop re:
Case Number 21-3883-RULE on January 20, 2022, beginning at
9:30 a.m.

I further certify that the foregoing
testimony was taken by me stenographically and thereafter
reduced to typewriting, and the foregoing 99 pages are a
transcript of the stenograph notes taken by me of the
evidence and the proceedings, to the best of my ability.

I further certify that I am not related to
any of the parties thereto or their Counsel, and I am in
no way interested in the outcome of said cause.

Dated at Burlington, Vermont, this 24th day
of January, 2022.

JoAnn Q. Carson

Court Reporter