

STATE OF VERMONT  
PUBLIC UTILITY COMMISSION

CASE NUMBER 23-3604-PET

PETITION OF VPPSA/REQUEST FOR APPROVAL  
OF PROPOSED EV/EVSE TARIFF RIDER PROGRAM

January 11, 2024  
9:30 a.m.

Workshop held before the Vermont Public Utility  
Commission via Go To Meeting on January 11, 2024,  
beginning at 9:30 a.m.

P R E S E N T

HEARING OFFICER: Andrea Poppiti, Utilities Analyst

COMMISSIONERS: Anthony Roisman, Chairman  
Riley Allen

STAFF: Micah Howe  
Jacob Davis

CAPITOL COURT REPORTERS, INC.  
P.O. BOX 329  
BURLINGTON, VERMONT 05402-0329  
(802/800) 863-6067  
E-mail: [info@capitolcourtreporters.com](mailto:info@capitolcourtreporters.com)

PARTICIPANTS

William Ellis, VPPSA  
Sarah Braese, VPPSA  
Steve Farman, VPPSA  
Apyrl McCoy, VPPSA  
Drew Clayson, VPPSA  
Erin Brennan, DPS  
Philip Picotte, DPS  
Josh Bancroft

1 MS. POPPITI: Good morning. This is a  
2 workshop in Case Number 23-3604-PET which concerns  
3 the petition of Vermont Public Power Supply Authority  
4 for a request for approval of an electric vehicle  
5 tariff. My name is Andrea Poppiti and I've been  
6 appointed to serve as the hearing officer in this  
7 proceeding, and with me today Chair Roisman is  
8 joining us and Commissioner Allen, as well as  
9 Commission staff Micah Howe and Jacob Davis. So  
10 let's get some appearances from the parties.

11 MS. BRENNAN: Good morning. My name is  
12 Erin Brennan. I'm Special Counsel with the Vermont  
13 Department of Public Service, and with me today I  
14 have Philip Picotte who is a utilities economics  
15 analyst for the Department.

16 MS. POPPITI: Thank you.

17 MR. ELLIS: Bill Ellis with McNeil Leddy  
18 & Sheahan on behalf of Vermont Public Power Supply  
19 Authority and today we have Sarah Braese, Steve  
20 Farman, Drew Clayson, Apryl McCoy all from VPPSA.

21 MS. POPPITI: Great, and before we went  
22 on the record this morning I talked to Sarah and she  
23 has a Power Point prepared and we talked about  
24 holding questions until the end of each section. She  
25 has section breaks in the presentation. So if anyone

1 -- if anyone has any other issues, we can bring them  
2 now, otherwise, I'll pass them over to Sarah and I've  
3 made you presenter.

4 MS. BRAESE: Let me just get my bearings  
5 here. Thank you.

6 MS. POPPITI: Sure. Take a moment. No  
7 problem.

8 MS. BRAESE: Thank you. Can you see  
9 that okay?

10 MS. POPPITI: Yes. I'm having a little  
11 bit of a hard time hearing you so I don't know if you  
12 can -- even though I have my volume up pretty loud.  
13 So if you can speak maybe a little bit louder, that  
14 would be great.

15 MS. BRAESE: Yes. Bear with me just one  
16 moment. It has something to do with the Power Point  
17 presentation through Go To Meeting.

18 MS. POPPITI: Take your time. It's  
19 okay.

20 MS. BRAESE: Is it better. Can you hear  
21 me now? Is that a little bit better?

22 MS. POPPITI: Yes.

23 MS. BRAESE: Okay very good.

24 MS. POPPITI: You did have it up a  
25 minute ago.

1 MS. BRAESE: Okay. Can you guys see it  
2 okay?

3 MS. POPPITI: Yes.

4 MS. BRAESE: Thank you all for having us  
5 here and I appreciate the opportunity to describe the  
6 program as we have -- as we envision it and hope that  
7 we can answer any questions that you may have and  
8 alleviate any concerns or at least get some insight  
9 into what you are thinking around our proposal.

10 So for just to give a road map of where  
11 we're going first we will cover just a little bit  
12 about VPPSA, and I had mentioned before going on the  
13 record as well that we will upload this presentation  
14 to ePUC in the docket once we're done here. We'll  
15 run through a brief summary of the program overall  
16 and then walk through some of the markets and  
17 competitive analysis performed prior to reaching the  
18 conclusion of this proposed program. We'll walk  
19 through the tariff rider structure and key features  
20 of the program and the tariff rider. We'll also call  
21 on Steve Farman to talk through some of the cost  
22 components and rate structures, and then spend a  
23 little bit of time running through how we envision a  
24 fairly ambitious timeline, and then some of the risks  
25 that will go along with that and then of course any

1 questions that you have. We can stop in between the  
2 sections or at the end as well.

3 So as you are all aware VPPSA was  
4 established by act of the General Assembly in 1979.  
5 Our membership is open to all municipalities in the  
6 State of Vermont that are engaged in the manufacture,  
7 distribution, purchase, or sale of electricity.  
8 VPPSA provides services and support to its member  
9 utilities to amplify their voice in their capacity to  
10 provide service to their customers and to operate in  
11 what can be a complicated but fully regulated  
12 environment and a rapidly evolving and changing  
13 industry overall.

14 One in seven Vermonters are served by  
15 public power and VPPSA member utilities serve over  
16 31,000 customers in 50 different communities  
17 throughout the state. Five of the 11 member  
18 utilities actually serve disadvantaged communities as  
19 defined by the climate and economic justice screening  
20 tool and that was published in November of 2022.

21 These are some of the programs or  
22 services that VPPSA offers to its members. It's a  
23 broad spectrum and one of the core services that we  
24 offer, which is why we are here today, is around  
25 legislative and regulatory advocacy as well as

1 financial services and planning and rate design and  
2 resource planning as well.

3 So with that kind of out of the way  
4 we'll go straight into, you know, the two second  
5 description. We're seeking to develop and deploy a  
6 dynamic market and formula based EV/EVSE tariff rider  
7 program to meet the compliance requirements for a  
8 EVSE rate by June 30th of this year.

9 Essentially I know we had this  
10 conversation at the very beginning of the proceedings  
11 and it's not the most common structure that we have  
12 -- that we're exploring. Instead of, you know, a  
13 full time of use rate or separate designated tariff,  
14 you know, we're seeking to get some insight and, you  
15 know, endorsement I suppose to some degree of a  
16 formula based rate, and that is based on certain  
17 dynamic and market driven price signals and cost  
18 components that are fixed and standardized across the  
19 membership, and they would be applicable to all rate  
20 classes because it is -- it leaves the underlying  
21 rate -- it does not affect the underlying rate. We  
22 have also attempted to design this program in such a  
23 way that the customer can have a broad choice around  
24 whatever device they want to enroll and we're seeking  
25 a platform as a service, technology solution as a

1 means to enable that and enable that device  
2 enrollment. Essentially that platform will measure,  
3 calculate, and help in the billing of the incremental  
4 EV/EVSE loads that a customer is using.

5 In the design, develop, analysis of  
6 reaching this conclusion and this proposed solution  
7 there are four key guiding principles that we have  
8 held strong to, and that's affordability for both the  
9 short and long term and that's affordability not just  
10 for the customers but also for customers who have EV/  
11 EVSE, but also for all customers. The concept of  
12 local energy democracy and that is at the core of  
13 VPPSA in and of itself as a community owned -- full  
14 community owned utilities, to support and ensure some  
15 sustainability and growth and also the strategic  
16 standardization. I'll pause that because I think  
17 someone had their hand up.

18 CHAIRMAN ROISMAN: Yes thank you, Miss  
19 Braese. My question is what analysis did you do to  
20 determine how much customers will be able to manage  
21 the kind of information choices they need to make and  
22 what studies you've looked at where there have been  
23 efforts to provide customers with these kinds of  
24 pricing choices versus using a more static approach  
25 such as you get this rate if you charge during this

1 period of time and that rate if you charge during  
2 that period of time, which admittedly can sometimes  
3 get you a cheaper rate when the costs are a little  
4 higher or a higher rate when the costs are a little  
5 lower. I'm trying to understand the basis for your  
6 choice between that approach and this approach which  
7 involves very active participation of customers.

8 MS. BRAESE: Yes. So we -- I attend a  
9 lot of different conferences and spend time with  
10 colleagues throughout the country who engage in this  
11 sort of program -- these sorts of programs, and we  
12 learn a lot through our own partnership with  
13 Efficiency Vermont in offering the power ship program  
14 and some of the challenges that that created for  
15 customers to actually enroll. It was a very specific  
16 device manufacturer so it was limited there, and also  
17 that you needed to have wifi or connectivity in order  
18 to participate. So there are a few different  
19 programs around the country that we have taken bits  
20 and pieces from in this design, one of which and the  
21 one that really spurred the whole conversation and,  
22 you know, the vision for it was the New Hampshire  
23 Electric Co-op who has the transactive energy rate  
24 and that is specifically around -- they have expanded  
25 it, it's not just for electric vehicles, but it is

1 also for energy storage and a number of other options  
2 for customers to engage, and so the concept and  
3 structure around publishing those data has been  
4 proven for them, but in addition to that we have seen  
5 successful programs with the Salt River Project in  
6 the west and they actually have taken it a bit  
7 further and have been exploring how to use this  
8 dynamic market based structure or informed structure,  
9 but also take into account when generation; solar  
10 generation, renewable generation is also at its peak.  
11 So there are ways to expand and grow how this works  
12 when the fundamental pieces are in place, and that's  
13 where, you know, this strategic standardization,  
14 sustainability, and growth that's what's so core  
15 about this and that's why we've opted to go this  
16 route, and the next section does actually go through  
17 some of the market scanning analysis and some of the  
18 spaces we did look at, and if that answers your  
19 question for you, I could move on to that next  
20 section.

21 CHAIRMAN ROISMAN: Okay. In answer to  
22 my question if there's going to be some more detailed  
23 discussion of the customer participation rates, there  
24 are sort of three options. There's the static rate  
25 and then within the static rate there's the opt in or

1 the opt out, and then there's the dynamic rate which  
2 you're proposing which is all opt in. There is  
3 obviously not an opt out because you have to choose  
4 arguably each day what time you want to charge your  
5 electric vehicle for the following day based upon the  
6 market information that you get. So I'm interested  
7 in the comparisons. If that's coming up in the next  
8 discussion, I'll certainly wait and listen for that.

9 MS. BRAESE: I mean I certainly  
10 encourage you to continue asking questions as we go  
11 along if what is within the slides is not adequately  
12 answering those concerns. So yeah we'll kind of go  
13 with that as we -- as we continue on.

14 MS. POPPITI: Just one question. Just  
15 to repeat what you said one of the things that you  
16 said earlier I just wanted to -- you mentioned the  
17 wifi issue. Can you just explain that again? I kind  
18 of missed what you were saying because I couldn't  
19 hear.

20 MS. BRAESE: Yes. So to participate in  
21 the power shift program it is actually engaging  
22 directly with the device, so the charging device, and  
23 in order for that charging device to prove that they  
24 are not charging off schedule, the schedule that has  
25 been agreed upon, they have to report back, and so if

1 there is not a hundred percent connectivity then they  
2 can't participate, and we've actually had a number of  
3 customers who did not have that connectivity so they  
4 couldn't actually enroll in the program, and that  
5 program in particular provided the free charger and I  
6 think \$500 off for any electric upgrades that had to  
7 be made in order to accommodate the additional load.

8 MS. POPPITI: And with the -- with this  
9 new proposed program there's no internet required?

10 MS. BRAESE: It depends on the device,  
11 but this actually is a structure that has been put in  
12 place successfully with EV telematics with the auto  
13 manufacturers, and so they have built within the coms  
14 chips of the vehicles something that can ping off of  
15 radio towers or cell phone towers. So there's a  
16 different communication structure and capacity there,  
17 and by using sort of the -- this open ADR  
18 communication protocol it actually broadens that  
19 device eligibility substantially and there are  
20 actually retrofit devices that you can add on as  
21 well.

22 MS. POPPITI: Oh great. Okay. That  
23 really clears some of my questions related to that.  
24 Thanks. I apologize if you were going to get to that  
25 later.

1 MS. BRAESE: Quite all right.

2 MS. POPPITI: I just wanted to make sure  
3 I didn't miss something that you had already said. I  
4 see Commissioner Allen has his hand up too.

5 COMMISSIONER ALLEN: Thanks, Andrea.  
6 Yeah thanks for coming in and sharing this with us.  
7 I really want to say that I kind of appreciate the  
8 work and thoughtfulness that went into preparing this  
9 and actually, you know, looking around the country as  
10 you said at other programs that seemed to kind of  
11 work.

12 I wanted to touch on one topic which is  
13 participation. I think there's really kind of three  
14 levels there and I just want to parse that a little  
15 bit. Is it your -- is the expectation that all VPPSA  
16 utilities would be essentially participating or  
17 electing or at least that's the aspiration here, is  
18 that correct, Ms. Braese?

19 MS. BRAESE: Correct. Yes.

20 COMMISSIONER ALLEN: And once they have  
21 participated would it then be up to the customer to  
22 kind of elect and nominate a device? That it is sort  
23 of an opt-in framework for the devices and their  
24 participation; is that correct?

25 MS. BRAESE: That is correct. Yes.

1                   COMMISSIONER ALLEN: And even though  
2                   it's kind of listed at least on the proposals I've  
3                   seen it as an EV/EVSE rate, I now come to understand  
4                   that it's actually more neutral and it could be  
5                   devices out there that aren't necessarily connected  
6                   to an electric vehicle; is that correct?

7                   MS. BRAESE: The solution that the  
8                   platform as a service that we are in negotiations  
9                   with is able to receive data communication from other  
10                  types of devices. So the structure itself is -- you  
11                  know the technology itself is capable of enrolling  
12                  other devices, however, the structure for this tariff  
13                  and for this compliance is for the EV in particular.

14                 COMMISSIONER ALLEN: Okay, and then once  
15                 they potentially nominated -- let's just say it's an  
16                 electric vehicle, the information would then be  
17                 transmitted to the customer, then it's essentially up  
18                 to them whether they kind of react to that  
19                 information or not. So they can participate in the  
20                 program, but not necessarily be an active participant  
21                 along the way. They could kind of lose sight of the  
22                 fact that this is going on. I'm not trying to be  
23                 negative. I'm hopeful they would be responsive, but  
24                 do I have that right? They can kind of elect to  
25                 participate or not or would there be some mechanism

1 for the utility to actually kind of participate on  
2 their behalf when certain conditions are met?

3 MS. BRAESE: That's a very good question  
4 and something that I had not clarified yet so I  
5 appreciate you raising it now. This platform and  
6 this solution is actually -- there are two ways to  
7 engage and participate. One can either work through  
8 an aggregator. So if they have -- you know if they  
9 have a Flow charger and Flow is a partner, an  
10 aggregator, Flow can participate and optimize that  
11 charging. They would receive the day -- in addition  
12 would receive the day ahead pricing, and so they  
13 would optimize to engage in the avoided load  
14 management markets and things along that nature, but  
15 -- so it can either be an aggregator. The OEM  
16 because a lot of vehicles, Toyotas or Ford, GM, they  
17 actually have their app. So if you sign up and they  
18 have a partnership, an agreement with our program,  
19 then they would be optimizing it on behalf of the  
20 customers, but the utility itself that's not the  
21 structure that we have proposed. It's not to manage  
22 that charging on behalf of a customer. It is simply  
23 to provide the real cost of that incremental load and  
24 to have it reflected. So if someone is able to  
25 charge in the middle of the night, and we have some

1 slides later on that will actually go through what  
2 that curve looks like and what the cost could be for  
3 a monthly bill based on some assumptions and  
4 estimates.

5 COMMISSIONER ALLEN: I apologize if I'm  
6 derailing your entire presentation.

7 MS. BRAESE: Not at all. It's quite all  
8 right.

9 COMMISSIONER ALLEN: I just wanted to  
10 touch on one thing. Is the aggregator under the  
11 scenario you laid out an agent of the ultimate  
12 customer or are they essentially an agent of the  
13 utility? So an individual utility might elect Flow  
14 or might elect another aggregator that might fold  
15 into the framework?

16 MS. BRAESE: It is of the customer. The  
17 utility is not owning that relationship. That's a  
18 relationship between the aggregator, the EE member  
19 and the customer, and they are simply authorizing  
20 their data, their usage data, to the VPPSA platform.

21 COMMISSIONER ALLEN: Thank you. Thanks  
22 for those explanations.

23 MS. BRAESE: Of course.

24 CHAIRMAN ROISMAN: And I have a followup  
25 question. Like Riley I'm sorry if we're disrupting

1 the orderly flow here.

2 MS. BRAESE: Quite all right.

3 CHAIRMAN ROISMAN: I am an electric  
4 vehicle owner and GMP is my utility and they have two  
5 rates that are available that I can choose, one of  
6 which is that they send me a signal and tell me the  
7 rates are going to be higher tomorrow at 2 o'clock in  
8 the afternoon and I can then decide do I want to  
9 avoid charging at that time, or they have what I call  
10 the static rate which is the one I've chosen. It  
11 simply says you get a lower rate and it's the same  
12 from 9 o'clock at night until noon the next day and  
13 any other time I pay a higher rate. Basically I pay  
14 the regular charge rate that I would pay for all my  
15 other electricity. So if I were in the VPPSA system  
16 would I need to know, let's say it's Thursday now,  
17 Friday is the date I'm going to get information on,  
18 and that data, that information comes to me and it  
19 says we're expecting a storm, we think there's going  
20 to be a much larger load so we expect the prices to  
21 be up between 11 in the morning and 3 in the  
22 afternoon, and then we expect them to go down and  
23 then they might go back up again at 8 o'clock at  
24 night. Do I need to know that information today to  
25 then make a plan for how I'm going to charge my

1 vehicle tomorrow if I want to try to avoid those high  
2 rate times tomorrow? So I need to know each day what  
3 the rates are going to do the next day and then make  
4 a plan myself as to how I'm going to charge my  
5 vehicle that next day. Is that the way the system  
6 will work?

7 MS. BRAESE: I mean in essence yes I  
8 would say that's a fair assessment and I think it  
9 will be helpful to see you know how -- it's based on  
10 the regional loads and the regional transmission  
11 class, right, the ISO-New England forecast that they  
12 publish the day before, and so it's -- there are a  
13 couple pieces that I have to comment on there. I  
14 mean I think when you have the static load you have  
15 -- or the static rate I would venture to guess that a  
16 lot of the times you are not charging or if you are  
17 charging, you may be paying more than what that power  
18 cost to be delivered to you at least during a portion  
19 of that charging time and of that demand; and so the  
20 structure here is to try and very clearly delineate  
21 where those highest cost drivers are for the power  
22 that is being delivered to charge that vehicle, and I  
23 would consider it a rare occurrence for there to be  
24 that much variability within a day, and I would --  
25 based on what we have seen and what we have

1 forecasted and tried to present a little bit later is  
2 that you know we're trying to establish something  
3 where we're meeting what the peak generally is now,  
4 which is generally the evenings on certain days, but  
5 what if that shifts.

6           When we looked at the usage reports from  
7 the power shift program we saw very clearly at 8 p.m.  
8 all those chargers come on, and so there is a very  
9 real risk that you simply shift the peak slowly and  
10 surely as more and more coincidence, more and more  
11 electric vehicles come on and are charging at the  
12 same time, and this is a way to create that informed  
13 decision on behalf of the customer so to give them  
14 the information they need to make an informed  
15 decision, and if for whatever reason it's an  
16 impossibility or they can't or there's something  
17 else, at least they are not paying for a full  
18 embedded cost. You know this is just going to be for  
19 that incremental load.

20           CHAIRMAN ROISMAN: Well let me be clear.  
21 I think the goal of matching what I pay to what it  
22 really costs is the gold standard. We would all love  
23 to have that whether it's vegetables that I buy at  
24 the grocery store or electricity that I buy at home.  
25 So what I really am hoping you will get into in some

1 detail is how many people actually are either able or  
2 willing to take advantage of that opportunity if it  
3 exists, and what the participation rates are on  
4 picking the -- ideally what you want as a utility you  
5 would like people to pick the off peak times anyway.  
6 You don't want them to always be picking because  
7 you're going to pay a lot more for the electricity  
8 and ultimately we're all going to have to pay for  
9 that. So if we could shift it so that we were not --  
10 shave the peak basically would be a great goal.

11 So at some point I'm hoping you'll be  
12 able to discuss the participation rates, the  
13 demographics of your particular population including  
14 how much they are likely to take advantage of this,  
15 and you have to have some kind of interconnection  
16 whether it's a wifi or something else to be able to  
17 know what the price is tomorrow and then to be able  
18 to make a choice. So, one, how will your demographic  
19 have that ability to know the information; number  
20 two, participation rates for a demographic like the  
21 VPPSA demographic; and, three, which of the two  
22 options, the static rate like the ones that GMP has  
23 or this more dynamic rate like yours, which of those  
24 has actually had the highest participation rates in  
25 other parts of the country where this is.

1                   You mentioned New Hampshire. That's a  
2                   state that already has a competitive electric market  
3                   which means it's already got an audience of people  
4                   who think about buying electricity with choices,  
5                   whereas, here in Vermont as you know there aren't  
6                   choices about where you buy your electricity. You  
7                   can live in GMP territory you buy GMP electricity.  
8                   You can't buy electricity from one of your members  
9                   because they have a better rate. So I would just  
10                  like to get some sense of that when you get to the  
11                  right place. Thanks.

12                 MS. BRAESE: I think -- sorry I don't  
13                 mean to interrupt. Some of the demographic  
14                 information I think we have touched on in other  
15                 filings. I do not have that as part of our  
16                 presentation. I can give updates on, you know, what  
17                 the number of EV rebates that we have issued on  
18                 behalf of our members through incentives. I do  
19                 believe that there's data available to I believe  
20                 drive electric and the municipalities themselves as  
21                 far as registered electric vehicles within their  
22                 service territory -- within a zip code although  
23                 that's challenging because you know VPPSA member  
24                 service territories cross a few different areas and  
25                 usually not the whole zip code in some cases. So I

1 think some of that information I can follow up after  
2 this. I don't have that as part of this  
3 presentation, and I think with any new program it's  
4 challenging to gauge exactly how many people are  
5 going to participate. However, I would anticipate if  
6 a customer who already has an EV charger installed  
7 and is currently paying their full kilowatt -- per  
8 kilowatthour rate to charge, then it would make sense  
9 to engage and have this rider where that incremental  
10 load is separated and billed separately at a more  
11 direct rate, and so that's -- when I use common sense  
12 that would be my thought, but you never know. Some  
13 people it's just too much of a hassle or you know  
14 they -- and that's part of what we are hoping to  
15 discover and explore through the negotiations and  
16 scope of work and implementation analysis that we are  
17 -- as part of our negotiations with the provider. So  
18 that is part of it as well.

19 CHAIRMAN ROISMAN: Good. Thank you.

20 MS. BRAESE: Yes of course. So this I  
21 tried to outlay -- so what we found as the  
22 differences between the traditional markets and the  
23 emerging markets and where they -- where they  
24 diverge, right. So the traditional systems are very  
25 device dependent, systems that are deployed by other

1 utilities throughout country. You know you have a  
2 choice of one or two devices and generally the  
3 platform that they are subscribed to you are paying a  
4 flat license fee, annual fee plus a per device fee  
5 per customer. So a customer could have two or three  
6 devices and you're paying -- the utility would be  
7 paying for every one of them, and I think it's very  
8 much predicated on the command control of those  
9 devices versus a pass through or market informed rate  
10 and so -- or that optimization by choice or capacity.

11 Also a lot of the costs for some of the  
12 more traditional load management solutions,  
13 technology solutions, are driven by the need to  
14 integrate with existing legacy technology systems.  
15 So your AMI, your SCADA, all of those things and  
16 where our members are deploying several very large  
17 projects that are building that capacity it's not  
18 something that we are tethered by at this point. Our  
19 members have the ability to really think outside the  
20 box and explore some solutions that can help  
21 transform the market really and that's what we're  
22 seeing through some of the actual manufacturers and  
23 aggregators that are trying to expand in the markets  
24 -- the regional markets as well, the ISOs and RGOs.

25 Again some of the challenges of course

1 for any EV structure, any rate is going to be around  
2 the fact that you need interval usage data which is  
3 going to be time based. You need some way to bill it  
4 and integrate that with a utility billing system, and  
5 the reliable bidirectional communication pathways  
6 which under traditional sense is wifi, right, and as  
7 we all know there is a lack of reliable service in  
8 most of the member service territories. I lose it  
9 halfway through just driving on Route 2, and as far  
10 as having AMI as that way to establish the  
11 communication pathway it would be necessary to have a  
12 separate smart meter almost for every single charger  
13 if that was going to be the solution, and that seems  
14 like not the most cost effective way to pursue this.  
15 So those are some of the issues that we were trying  
16 to avoid or at least consider while we explored how  
17 to meet the compliance deadline but also leverage the  
18 current environment and where we see the market's  
19 going in the future.

20 That ends kind of the market scan. I  
21 think we've covered a lot of those questions  
22 throughout. Are you folks okay if I move on towards  
23 the actual structure and core features? Thank you.  
24 So essentially and, Steve, I don't know if you want  
25 to come off camera too to help on this part, but it's

1 a formula based cost component structure. We base  
2 energy, the transmission cost, and an adder for  
3 certain peak hours of course. It is aligning the  
4 incremental cost with the time of use for the actual  
5 electric vehicle charging. The cost components are  
6 observable, they are transparent, and the device acts  
7 as that measuring piece of equipment and reports back  
8 that load and that usage on a daily basis and that's  
9 something that we would have -- it would be hourly.  
10 We would have that hourly data available and  
11 accessible to reconcile as we go forward.

12 This is just reiterating the same slide  
13 you saw in the beginning. Again for our members  
14 where we are trying to create those economies of  
15 scale this is a solution that can be replicated  
16 across all the member utilities and also across all  
17 rate classes because that underlying rate structure  
18 remains unchanged. This is just to measure that  
19 incremental load.

20 This describes how we envision it  
21 working and how we've seen it work with some of the  
22 other programs that exist across the country. This  
23 is taking day ahead manager market conditions, the  
24 rate would be shaped to manage the usage away from  
25 peak and expensive hours, customer chooses or

1 schedules when they want to charge based on those  
2 conditions, and the way we envision a customer  
3 participating is that they would likely see where the  
4 past higher cost hours are and simply charge outside  
5 of it which right now is going to be you know the  
6 evening or early hours of the morning, however, if  
7 they see or notice that there's going to be a  
8 particularly expensive hour that is not of the usual  
9 schedule, then they might want to change their  
10 schedule for that day. I see two hands so I will  
11 pause there and welcome questions.

12 CHAIRMAN ROISMAN: Well you should be  
13 very pleased with your presentation because it's  
14 triggering lots of questions which I assume is good.  
15 Does the customer automatically pick by pressing some  
16 button on an app on their phone or something like  
17 that when they want to charge or does the charger  
18 itself have something built into it? In other words,  
19 let's say I see the best time is 2 to 4 o'clock  
20 tomorrow afternoon. What's the mechanics of how I  
21 make that choice?

22 MS. BRAESE: So the way that we  
23 understand this is part of the exploration that will  
24 be occurring as we get to, you know, the  
25 implementation, design, and build out is to actually

1 refine those steps very clearly, but the way that I  
2 understand it is that if a customer has a specific  
3 charger and they already have their app, essentially  
4 they are authorizing their app provider, their device  
5 manufacturer's platform to communicate with the VPPSA  
6 platform, and so it's not necessarily a third piece  
7 or a third schedule that they have to manage. It's  
8 simply using the same system that they already have.  
9 It's giving authorization to share that data and that  
10 usage with VPPSA in order to measure, calculate, and  
11 bill.

12 CHAIRMAN ROISMAN: So, for example, in  
13 my case my car would be plugged in whenever it's here  
14 and this automatic system would turn on the charge  
15 based upon the fee between VPPSA and the provider of  
16 my particular charger. Is that how it would work?

17 MS. BRAESE: If it was through the  
18 aggregator, yes. If not, if it was you individually  
19 authorizing that for yourself and you're taking the  
20 reins as an individual customer, then it would be you  
21 scheduling it, but they would automatically be doing  
22 the data transfer. It's not like you have to extract  
23 it and send it over, but if you have an arrangement  
24 with that aggregator, that device manufacturer, and  
25 they have an agreement to share the data for many

1 customers, then you wouldn't have to think about it  
2 and they would optimize it based on the market  
3 conditions and pricing.

4 CHAIRMAN ROISMAN: Thank you.

5 COMMISSIONER ALLEN: Tell me if you're  
6 through. I'll jump in with my question. Ms. Braese,  
7 when I look at this it looks like you're focused very  
8 much on kind of the energy wholesale prices as a  
9 driver of the -- at least the dynamic elements that  
10 are out there. I understand there are other rate  
11 components that are relatively fixed in the short run  
12 as you point out in this last bullet, but I know that  
13 in other kind of programs from some of your sister  
14 utilities in the state they are really focused on not  
15 so much the energy component, but on a kind of a  
16 monthly peak that is really avoiding the R&S charges  
17 or managing the R&S charges out there. Is there a --  
18 does this program get at that or am I jumping ahead  
19 in your presentation somewhere?

20 MS. BRAESE: It does and that's another  
21 element of the core energy cost, right, the peak  
22 cost.

23 COMMISSIONER ALLEN: But if I could push  
24 on that a little bit that's a probabilistic issue.  
25 You can target that. You know it's a little bit of a

1 whack-a-mole thing. You can send price signal to  
2 target that, but that can actually cause  
3 responsiveness that actually shifts the peak and you  
4 might have to chase that a few times, but is that  
5 kind of probabilistic element somehow folded into the  
6 price signal?

7 MS. BRAESE: It is and it is -- it's not  
8 the largest element. It's not the largest cost  
9 component and again, Steve, if I am starting to  
10 misspeak please jump in, but we also recognize that  
11 if that is missed, then there's going -- you know  
12 we'll have to review and see how much -- how big of a  
13 miss was it, right, and try and understand how to  
14 reallocate, restructure, figure out how to make the  
15 customer and the utility whole, right; and so I think  
16 there are some elements that we discuss a little bit  
17 later in the presentation as well when we go through  
18 the full cost components in a more detailed fashion,  
19 but I think there's always risk when you're  
20 forecasting that way, and I think the conditions are  
21 not always as predictable as we would like them to be  
22 of course, and so we're trying to do our best to  
23 predict that where we can, recover the cost of course  
24 as needed, and also maintain that flexibility and  
25 variability to create a structure.

1                   COMMISSIONER ALLEN: Thanks for taking a  
2 stab at that. I'm asking questions that I understand  
3 are just tough to respond to effectively in a short  
4 conversation, but I appreciate your effort.

5                   MR. FARMAN: Go ahead.

6                   MS. POPPITI: Just a quick question. If  
7 a customer already has an EV, is there an adaptor  
8 device that would make them be able to participate in  
9 this tariff rider so that it would talk to the  
10 program?

11                  MS. BRAESE: Most devices of major  
12 manufacturers already utilize the communication  
13 protocol so I don't envision most devices having to  
14 have a special adapter or retrofit add on unless it's  
15 a pretty -- a much older device.

16                  MS. POPPITI: Okay.

17                  MS. BRAESE: So yeah most of the major  
18 manufacturers actually use this open ADR protocol and  
19 the auto manufacturers it's one of their preferred  
20 methods and that's the -- trying to recall the name  
21 of it now, but the major manufacturers have announced  
22 they are going to use energy -- something along those  
23 lines. The name is escaping me.

24                  MS. POPPITI: No problem. Thanks.

25                  MS. BRAESE: Steve, did you want to jump

1 in?

2 MR. FARMAN: For the moment why don't  
3 you just keep going forward. I mean this question of  
4 how the rate is constructed is going to keep coming  
5 up.

6 MS. BRAESE: Right.

7 MR. FARMAN: We'll come back to it.

8 MS. BRAESE: Okay. We covered this.  
9 The cost with actual time of use, price transparency  
10 and is a structure that will make it less complicated  
11 to update as the underlying usage trends shift and  
12 that's the benefit of exploring or proposing that  
13 formula rate.

14 MR. FARMAN: Let me add something right  
15 there.

16 MS. BRAESE: Sure.

17 MR. FARMAN: Part of the reason for it,  
18 the simple to update idea, is as Riley mentioned a  
19 minute ago setting these rates is an exercise in  
20 guesswork to some extent. We don't have a ton of  
21 data at this point. As we get more certain things  
22 will become clearer. You're going to want to be able  
23 to -- I think you're going to want -- going to need  
24 to update this rate. I mean I'm not talking about  
25 weekly, monthly. Periodically. For one thing a big

1 component of the rate is the R&S and forward capacity  
2 market rates. Those are -- while the forward  
3 capacity is set by auction the R&S rate gets updated  
4 every year by ISO. Things like that. If those  
5 change drastically, you're probably going to want to  
6 update this rate. That's why the simple to update is  
7 flagged here as being attractive, and as more and  
8 more EV's come on line we're going to get much better  
9 information about how they behave, what the  
10 participation rates are like, how they respond to  
11 price signals, and all those things make a difference  
12 on how you set rates. So I'll leave that thought and  
13 be quiet now.

14 MS. BRAESE: Thank you for that  
15 clarification, Steve, and, Commissioner Roisman, this  
16 talks a little bit more about that device enrollment,  
17 customer enrollment, and the optimization process.  
18 It's essentially establishing a two-way communication  
19 whereas most devices, most programs, now are simply  
20 one way in a lot of ways unless it's that command  
21 control which limits device eligibility and  
22 variability or flat rates. It would receive the day  
23 ahead pricing and that will be sent to either the  
24 individual customer, their chosen aggregator,  
25 authorized aggregator or the auto manufacturer, the

1 EU members and that's where the telematics comes in;  
2 and we've been in communication with three different  
3 auto manufacturers that have expressed interest and  
4 it's simply a matter of getting through all of the  
5 steps that are required in order to get to an  
6 established agreement, but I know that there is a  
7 large market share for at least a few of them, and  
8 there are more -- they tend to be a more accessible  
9 price point vehicle for what we believe are the  
10 demographics within our member service territories;  
11 and again I anticipate and will seek out additional  
12 information and more detailed data for a response --  
13 a more detailed response on that particular item, and  
14 as we've said before measure the device usage,  
15 calculate that usage by the dynamic time of use price  
16 signals, and then it would calculate for the billing  
17 either in a common format or through direct  
18 integration of those incremental loads, and so the  
19 customer would see that almost listed as a second  
20 meter; and again this is part of what we'll be  
21 exploring in that implementation and risk analysis as  
22 part of the scope of work with this third party  
23 partner, and that would be how -- that's how we  
24 envision the actual program and structure and rider  
25 working.

1                   The next section is going into much  
2 greater detail -- will go into much greater detail on  
3 the cost components and how the load shape and rate  
4 shape would appear.

5                   MS. POPPITI: So quick question about  
6 billing. Will there be a separate bill or will it be  
7 incorporated into the bill itself that the customer  
8 receives?

9                   MS. BRAESE: Our vision is that it will  
10 be on the one bill. That's how we've seen it applied  
11 in other -- in other programs. We also acknowledge,  
12 however, that there are varying levels of capacity  
13 with some billing systems. So I don't want to answer  
14 with any definitive authority that's exactly how it's  
15 going to work because we have not had that step yet,  
16 and I know our member utilities have been actively  
17 exploring a number of different billing and finance  
18 systems to again reach those kinds of economies of  
19 scale. A number of them are exploring systems I  
20 think that could accommodate this more seamlessly  
21 than maybe some of the older systems.

22                   MS. POPPITI: So the time frame for  
23 implementation I believe it was the end of June; is  
24 that correct?

25                   MS. BRAESE: It is and I mean we are

1 still ambitious that it will -- this will work and  
2 the goal is to find a short and a long term solution.  
3 We understand billing systems that's a much longer  
4 than six months or less to implement and that's why  
5 we are seeking that common format and we anticipate  
6 that uptake might be slower in the first few months.  
7 It may not, but we don't envision it being so  
8 overwhelming. However, we also acknowledge staff  
9 time and resources it will take, and so it's  
10 something that we are very seriously considering and  
11 need to take into consideration while we go through  
12 with the implementation plan.

13 MS. POPPITI: And when you say uptake do  
14 you mean uptake by the utilities themselves?

15 MS. BRAESE: And by the customers.

16 MS. POPPITI: By the customers. So  
17 there might be a middle ground measure that's used  
18 before the billing systems are updated, completed  
19 because each member utility has different billing  
20 systems?

21 MS. BRAESE: Steve, correct me if I'm  
22 wrong, I think there are four or five across the full  
23 membership and so --

24 MR. FARMAN: Yes at least.

25 MS. BRAESE: -- some can be integrated

1 fairly quickly and some are going to require manual  
2 intervention.

3 MS. POPPITI: And people will still be  
4 able to participate but the billing might be  
5 different for a while?

6 MS. BRAESE: On the back ends.

7 MS. POPPITI: Got you. Okay.

8 MR. FARMAN: We think the billing the  
9 pain will be in the back office for the utility.

10 MS. POPPITI: Okay. Not on the  
11 customer.

12 MR. FARMAN: Right, right. Once we  
13 process the billing data how you get it onto the bill  
14 -- into the billing system and onto the bill there  
15 may be some manual intervention at that stage.

16 MS. POPPITI: Right. So there might be  
17 some.

18 MR. FARMAN: Right now we don't have  
19 millions of EV's yet so we're hoping we'll get past  
20 that phase before there's too many.

21 MS. POPPITI: Right. Okay.

22 MR. FARMAN: It's one thing to do it for  
23 twenty or a hundred and another thing to when you  
24 start to have a thousand or so.

25 MS. POPPITI: For sure. Thanks.

1 MS. BRAESE: Steve, I'm going to hand it  
2 over to you. You just tell me when you want me to  
3 hit next slide please.

4 MR. FARMAN: Okay. This takes us right  
5 back to a couple of the questions that were -- that  
6 we didn't really answer before. I'm going to use the  
7 word hybrid here as far as what kind of rate this is.  
8 It's not a static rate like one of GMP's and it's not  
9 like -- I get confused between rate 73 and rate 74,  
10 but one of those rates involves GMP telling you  
11 tomorrow is the peak hour at 6 o'clock don't charge  
12 then. If you do, there's a 69 cents a kilowatthour,  
13 some really high rate, but then there's the one that  
14 Commissioner Roisman is on which is just an on and  
15 off peak rate. You can see from the picture here  
16 that we're using -- we're looking at a much narrower  
17 on-peak window than what GMP uses. I think GMP is  
18 like 12 to 9 p.m. for the on-peak portion of their  
19 rates. We targeted that evening area deliberately  
20 because that's -- that is basically when we see  
21 exposure from a cost perspective, the R&S and from  
22 forward capacity market charges.

23 We're looking at this and we differ from  
24 the New Hampshire Co-op program in this respect. Our  
25 proposal is to -- boy I should back up. I'm terrible

1 at this. Sorry. Sarah is a better talker. The blue  
2 area at the bottom of this represents the daily  
3 hourly day ahead LMPs. I picked one day July 23rd  
4 just to build an illustration. The orange area added  
5 above that is made up of R&S charges converted to a  
6 per kilowatthour rate for a capacity market, a little  
7 bit of O&M and small supplies related to program and  
8 ISO ancillary costs.

9 What we're basically planning here is  
10 all the components except for the day ahead pricing  
11 are going to be fixed in the short run. So they will  
12 add -- there will be an on peak or off peak adder.  
13 Obviously the large bulge in the on peak in the  
14 evening hours is really driven by the -- mostly by  
15 R&S, some by the forward capacity market. So you  
16 take -- so you have like a fixed on and a fixed off  
17 peak adder that sums up those three or four  
18 components, and you overlay that on top of the day  
19 ahead LMPs that are published by ISO about noon  
20 everyday. So from a mechanical perspective the  
21 platform is going to pick up those day ahead prices  
22 at noon on Wednesday, just for an example, from  
23 ISO-New England system and it's going to add those  
24 two adders across it every hour. That's what's going  
25 to be transmitted to the customer. The customer will

1 in effect see something that looks like this graph or  
2 they will see the numbers that underlie it. Probably  
3 both. As far as how it's exactly presented we  
4 haven't finalized that, and the idea is it's going to  
5 be relatively cheap in the off peak hours and it's  
6 going to be quite expensive in the on peak hours, and  
7 we've targeted a six-hour window for the higher on  
8 peak prices mainly because it adds a lot of  
9 uncertainty and a lot of costs and a lot of potential  
10 for failure when you try to guess the actual one hour  
11 peak. If you miss it, then you don't collect enough,  
12 and if you use a range like this, it's a little bit  
13 more stable. Your customer doesn't have to sit there  
14 and look at the computer screen every single day to  
15 see is it a peak day or not. They know that those  
16 hours from about, you know, 4 in the afternoon to 8  
17 or 9 at night it's going to be expensive if they  
18 schedule their charging then, and if they schedule  
19 outside of those hours, it will be fairly cheap, and  
20 it looks like it probably would be somewhat cheaper  
21 than your normal residential rate. So that's what  
22 we're trying to do with the structure of this.

23 I guess I don't see any hands up. Next.  
24 Okay. Three quick examples. This is what a  
25 customer's bill for one day would look like if they

1 charge for some of the on-peak hours but not all of  
2 them, and then the rest of their charging takes place  
3 off peak. So it's \$11.91 charge. The customer that  
4 charges entirely on peak it is going to cost them  
5 \$18.62 based on the illustrative rates that are  
6 embedded underneath this, and then the third slide if  
7 you completely avoid that six hours of peak time it  
8 is going to cost you \$5.48. Obviously these are  
9 illustrative numbers. They are not exact. We don't  
10 know the final answer, and of course that answer will  
11 change day-to-day because the LMP -- a new day ahead,  
12 a new 24-hour LMP schedule this is substituted into  
13 these numbers everyday. They can be very high, but  
14 you know in some respects if you're trying to  
15 encourage people not to -- not to charge during  
16 expensive times, whether it's peak or even during off  
17 peak, can be very expensive depending on what's going  
18 on in the ISO system. Day ahead LMPs, realtime LMPs  
19 can be 10, 12 cents easily and it does happen. Okay.  
20 Questions.

21 CHAIRMAN ROISMAN: Mr. Farman, I have a  
22 question. Thanks for sharing these examples. When I  
23 look at this that kind of underscores any anxiety or  
24 concern I would have on behalf of customers which is  
25 that participation in the program could be very risky

1 and very scary for lack of a better word for it from  
2 a customer perspective, and you know in my mind  
3 leveraging or relying on essentially the aggregators  
4 that Ms. Braese had talked about seems like a  
5 sensible insurance policy, but at this -- it's the  
6 clumsiness or potentially the -- you know the number  
7 of opt-in's that -- and actions the customer would  
8 have to take to kind of secure that relatively low  
9 risk of framework that has me a little bit concerned.  
10 So I don't know there's a question in there, but, you  
11 know, I'm really just highlighting an anxiety that I  
12 have that's called out by the variability of costs  
13 that customers are experiencing causing potential off  
14 ramps or ways to mitigate that.

15 MR. FARMAN: I can add a couple thoughts  
16 to that. I mean one would be it would be very simple  
17 to keep your charging cheap if you make up your mind  
18 not to charge between 4 and 9 o'clock. Your  
19 non-energy driven adder in those off peak hours is  
20 probably two or three cents if I remember right. I  
21 think we'll come to that later. So that's -- that's  
22 one strategy a customer could use.

23 Another -- another possibility is you  
24 can shift some of the cost. We've made assumptions  
25 here about how much of the R&S rate gets dumped into

1 the on-peak period versus being collected over the  
2 off-peak period. You can mitigate you know the  
3 magnitude of the peak I guess. I'm assuming there's  
4 like a whole lot of discussion and work around these  
5 kind of issues that's yet to be done collaboratively  
6 with the Department. We haven't had any discussions  
7 or feedback yet. So I understand exactly what you're  
8 worried about there. There's a couple ways to  
9 address them or you could say hey don't charge during  
10 on peak and you're okay and the time of use rate is  
11 less draconian than having a demand rate, but it does  
12 give recognition to that's the time period where  
13 electricity is going to be really expensive.

14 CHAIRMAN ROISMAN: Am I correct, Mr.  
15 Farman, that you're folding in the forward capacity  
16 market and R&S rates as essentially a relatively  
17 fixed component over, you know, whatever five or six  
18 hours that you have in that super peak period. That  
19 is it will appear on everyday of the month and  
20 everyday of the year or is it something that would be  
21 somehow targeted toward, you know, the three or four  
22 days that are most likely to be -- you know  
23 experience a peak annual or monthly peak?

24 MR. FARMAN: The way that we've  
25 reflected it at this point is the non -- the non-day

1 ahead LMP components. We're treating the on-peak  
2 period as hours I think it's 16 to 21 weekdays not on  
3 the weekends. So what we've done quite literally is  
4 taken -- if you think of one -- think of one charger  
5 or a hundred, we have to make assumptions when we --  
6 boy I get ahead of myself. Sorry. We're converting  
7 the peak rates that are normally -- they are built  
8 into the utilities based on kW but converting that to  
9 energy, but to do that you have to make an assumption  
10 about what load factor are the chargers running at.  
11 I mean that's kind of a silly conversation with one  
12 charger, but when you have a hundred of them you've  
13 got to think about how much energy they're actually  
14 going to use, is it going to fall during the on and  
15 off peak periods, what's the coincidence for both  
16 peak and energy. Some will probably always be there  
17 during the peak period. You're not going to drive  
18 everybody off the system. I don't care how high you  
19 make the rate. So there's an assumption there. So  
20 we've literally taken the R&S and forward capacity  
21 rates, I'll just use those two for an example, and  
22 made an assumption how much of that capacity is going  
23 to be there on peak. So if you've got a 7 kW charger  
24 you're going to have, what, if it's about a ten  
25 percent coincidence rate you're going to have about a

1 seven-tenths of a kilowatt present on peak. That  
2 implies a certain number of kilowatthours and all the  
3 rest of your hours are off peak and that's how we've  
4 spread those semi-fixed components between hours,  
5 between on and off peak hours, and you know how you  
6 -- how you make those assumptions, our data is  
7 primarily based on the power shift pilot that we've  
8 used so far, and this is one of the reasons I said  
9 earlier I think these rates are going to have to be  
10 updated every once in a while and I think partly  
11 because your big costs, your R&S and your forward  
12 capacity, those rates change every year. Maybe they  
13 don't change enough that you're going to worry about  
14 it and reset the rates, but that possibility is  
15 there, but the real -- the real question going  
16 forward at least in the probably first two or three  
17 years or the next few years is how fast are we going  
18 to add EV's and exactly how are they going to behave.

19 So for that -- those reasons alone  
20 you're going to -- you're probably going to have to  
21 reset these rates maybe annually. That was, like I  
22 said before, one of the reasons to want to do this  
23 incrementally because it makes that a simpler  
24 process. Anyway so that's kind of how we've put that  
25 together. There's a schedule coming up a little

1 later that does actually put some of the underlying  
2 numbers up in front of us. Probably be easier to do  
3 the rest of that conversation then.

4 CHAIRMAN ROISMAN: Got it. Thanks. I  
5 had a question. These charts for the last three have  
6 been very helpful. I'm wondering whether you all did  
7 any sort of random testing? That is you got  
8 customers now who have EV's and they are charging  
9 them under whatever their current rates are across  
10 your various utilities. Have you taken those bills  
11 and looked at when they were doing their charging and  
12 then superimposed on it what that bill might have  
13 looked like if they had had your system in place to  
14 get an idea of what the dollar differences might have  
15 been, assuming they were the sophisticated customer  
16 that you want that was looking for the best time to  
17 charge, and seeing you know are we talking about  
18 pennies, dollars, tens of dollars, conceivably  
19 hundreds of dollars differences. I just wondered  
20 have you done anything like that so you know at least  
21 based on current activity what this is going to mean  
22 in dollars and cents?

23 MR. FARMAN: At this point the closest  
24 we've come to that is to use the power shift data,  
25 the power shift pilot data, which did give us some

1 hourly profiles.

2 MS. BRAESE: I think it's important to  
3 note that just quickly, Steve, that we through this  
4 partnership VPPSA does not currently have the direct  
5 access to that data of the customers who are  
6 participating in power shift. We receive monthly  
7 reports that are an aggregate of all of those  
8 customers, and so I think there's a challenge there  
9 for us to get that deeply, but I do think that is a  
10 valuable exercise, and I know WEC also is engaged  
11 with the power shift and I think they have quite a  
12 few more customers enrolled in the program overall  
13 than we have since it's only been going on for a  
14 year, but sorry, Steve, sorry to interrupt.

15 MR. FARMAN: No that's fine. The only  
16 thing I would add if we were to try to do the  
17 exercise that you're suggesting for residential  
18 customers, we don't have hourly residential data for  
19 the most part. That will -- you know you can make  
20 some assumptions and get partway to where you want to  
21 be with a kind of analysis, but it will be difficult.

22 CHAIRMAN ROISMAN: All right and I don't  
23 mean to completely take us off topic, but I know  
24 VPPSA has been for the last couple years working on  
25 the rollout of AMI. Is that being integrated with

1 this as well so that whatever you're doing with AMI  
2 is designed to be compatible with and encouraging of  
3 this kind of pricing system? Is that a fair  
4 assumption?

5 MR. FARMAN: Yes.

6 MS. BRAESE: I think we are in a  
7 position where the deadline is coming up faster. It  
8 took a little bit longer to get the AMI project off  
9 the ground of course, but having AMI is absolutely  
10 critical in order to continue to evolve the rates and  
11 rate structures to know -- to get the sort of data  
12 necessary in order to provide that visibility and  
13 customer empowerment so that they can see and manage  
14 and address their own energy usage in a more  
15 transparent way, and that's a core feature of this  
16 program overall and as well. So they are meant to be  
17 in tandem and to support each other short and long  
18 term.

19 MR. FARMAN: Yeah once AMI is in place  
20 we'll be able to incorporate hourly customer data for  
21 like the whole house or various meter points with the  
22 data coming back from the EV's through the third  
23 party platform. Then you would have the data where  
24 you can take a customer or customers and say okay  
25 this is what the usage looked like and overlay the

1 hourly EV rate, EV usage, then you could very clearly  
2 see how much difference having that EV rate or not is  
3 making. Right now we just don't have the facility or  
4 the data to do that effectively.

5 MS. BRAESE: I think on top of that  
6 unfortunately there's not a whole lot of data out  
7 there broadly in the industry that matches very well  
8 with the nuances of Vermont and then let alone  
9 Vermont of the VPPSA member territories. So there's  
10 a lot of variability that's hard to quantify or to  
11 get data that's reliable that could be used, right,  
12 in lieu of our own. Steve and I have wrestled with  
13 that quite a bit. We're always looking for it if we  
14 can, but without the actual data yourself it's hard  
15 to provide a true apples-to-apples.

16 MR. FARMAN: Yes.

17 CHAIRMAN ROISMAN: And so what's your  
18 AMI time schedule now? When do you hope to have that  
19 in place?

20 MS. BRAESE: So the AMI project is in  
21 three trials. They are underway. They are doing the  
22 initial testing. The initial project work still  
23 envisions it to be the three-year timeline. It is  
24 just staggered so each year there's only so many  
25 utilities' members that are deploying at that time

1 and that's where we tried to find again a solution  
2 that could be implemented and stood up in the interim  
3 for all the members and all customers. All customers  
4 would have access to this as a core feature as well.  
5 This can in theory, and we've seen it elsewhere, run  
6 without the presence of AMI, however, when AMI comes  
7 on it will strengthen the structure of the program.

8 MR. FARMAN: Yeah I think it will have  
9 the ability to do more sophisticated things once you  
10 have AMI up and you have ADM to integrate the data  
11 through. It's just not quite there yet.

12 MS. BRAESE: Which actually leads to the  
13 next section is on implementation timeline and some  
14 of the potential risks that we have identified at  
15 this point. Of course there are many unknowns as  
16 well.

17 MR. ELLIS: Thank you to Commissioner  
18 Roisman's question. We are presently before the  
19 Public Utility Commission seeking approval of the AMI  
20 project. We have discovery to be served on the  
21 Department tomorrow. At this point we look to --  
22 we're probably not going to serve any discovery. We  
23 will be filing some rebuttal testimony to fill in  
24 some gaps that the Department flagged for us in their  
25 testimony as far as completing the necessary

1 components, and we hope to have it before the  
2 Commission within the next couple months. We have  
3 financing for four million dollars. There is a grant  
4 from the Department of Public Service for five  
5 million dollars. Those are pending PUC approval. So  
6 we are trying to advance the AMI project as quickly  
7 as possible.

8 MS. BRAESE: Thank you for that  
9 clarification, Bill. I didn't mean to misspeak. So  
10 these are all ambitious, but also you know an attempt  
11 to align exactly where the compliance filing deadline  
12 is, and we have been in communication with our third  
13 party developer and went through the negotiations and  
14 getting those elements in place to ensure or to  
15 provide a greater assurance of success and actual  
16 development and billed out is why it's taking a  
17 little longer, however, they have built these systems  
18 and these platforms for other utilities and utilities  
19 with some more structures, and so we don't anticipate  
20 once going through that implementation and risk  
21 analysis process with the developer the build out  
22 won't be as time consuming.

23 Again as we've discussed and touched on  
24 a few different times one of the main unknowns and  
25 risks is that manual intervention with the billing

1 system and we may be able to receive the data, get  
2 the data, transfer the data, and have customers  
3 enrolled, but the billing integration is a piece that  
4 VPPSA does not do the billing for its member  
5 utilities and we've been supporting them in any way  
6 that we can, but that's not something that we are  
7 intimately involved with in our members' operations,  
8 and so that is a place of stakeholder engagement that  
9 is yet to come and a major element of potential risk.

10 Again this is -- the implementation and  
11 risk analysis is an exercise, stand alone scope of  
12 work that is with the developer and that is intended  
13 to surface any potential risk that we're not  
14 considering or that may actually create delay in  
15 launching the program on schedule, and that there  
16 are, you know, those technology code appendices.  
17 Again the billing system pieces are our biggest  
18 concern at this point and just to ensure that this  
19 can be deployed and yeah so -- and of course this  
20 proceeding seeing how if the structure overall, the  
21 formula, and, you know, the incremental load is  
22 amenable to the Commission in meeting the  
23 requirements.

24 MS. POPPITI: Where does the  
25 negotiations with the contractor stand?

1 MS. BRAESE: So we have gone through  
2 several iterations on the agreement and are nearing  
3 the finish line. We had hoped to have it wrapped  
4 before the end of December and then staff resources,  
5 time, vacations, holidays, all those things throw a  
6 wrench in the works, but certainly we anticipate no  
7 later than I would say mid or end of January for that  
8 to be completely wrapped.

9 MS. POPPITI: Then are there any outside  
10 funding sources for this program as there are for  
11 AMI?

12 MS. BRAESE: So we had envisioned  
13 utilizing some of the Department's energy storage  
14 access program funding which VPPSA and BED and WEC  
15 all went in with a joint application into kind of  
16 exploring the solutions and all of that, those  
17 exercises as far as a platform or a technology  
18 solution, however, when the orders were coming out  
19 that we would need to be filing by October that  
20 created some sense of urgency to move sooner, and I  
21 think there's still an opportunity to I hope utilize  
22 that funding -- utilize some of that funding for the  
23 ongoing costs of providing this platform and system  
24 because again right now we're talking about EV's/  
25 EVSE, however the platform itself is capable of

1 implementing and integrating the storage in addition  
2 to other types of devices.

3 MS. POPPITI: And as part of the  
4 utilities' tariff filings there will be a  
5 presentation of costs, correct, and that will be  
6 estimated for each utility?

7 MS. BRAESE: Correct, yes. That's the  
8 more -- I think that would be where we get into the  
9 more discrete and specific numbers, but, Steve,  
10 correct me if I'm wrong there.

11 MR. FARMAN: Yeah large components of  
12 the rate should be exactly the same for all the  
13 members. When you think about it transmission and  
14 forward capacity costs, whether it's the R&S rate,  
15 whether it's GMP and VEC's Schedule 21 rate, those  
16 are all set by tariff and they are in the ISO market  
17 so those are the same for everybody. Where there  
18 could be slight variations would be if we've embedded  
19 some O&M costs and program costs in the non-energy  
20 adders in theory those could vary, but since we  
21 expect as far as O&M goes you would only be including  
22 a fairly limited slice of O&M. If you look at, you  
23 know, what causes costs to change, having more EV's  
24 is not going to affect -- at least not until there's  
25 an awful lot more than there are now it's not going

1 to affect a lot of your O&M costs. So you can  
2 eliminate those. So it's possible that slice might  
3 be about the same size for everybody and then like  
4 all the costs would literally be exactly the same.

5 MS. POPPITI: Okay thanks.

6 MR. FARMAN: I think Chair Roisman.

7 CHAIRMAN ROISMAN: Yes and we raised  
8 this question about funding. This is a very creative  
9 innovative approach that you're taking and because  
10 it's for relatively small utilities say if we were in  
11 California and you're talking about utilities of a  
12 massive scale and I'm wondering whether -- I mean  
13 Vermont has been a testing ground for lots of really  
14 good ideas that the nation has seen and then learned  
15 from us. Have you -- instead of going through the  
16 Department have you tried going directly to DOE and  
17 asking them if they can provide you with financial  
18 support particularly for implementing the basic  
19 system, the thing that you're working on, this  
20 contract which is your big capital cost is there and  
21 I would think that they might be very interested.  
22 They talk in terms of billions and we talk in terms  
23 of thousands. So we might look like just, you know,  
24 a small change to them. Have you looked at that as a  
25 way to get some financial support for this? Of

1 course you would be reporting back to them on the  
2 results and they would find them useful.

3 MS. BRAESE: Yes. I mean VPPSA in the  
4 year and a half since I've been with the organization  
5 I think we've secured 7 to 10 million dollars in  
6 various funding sources for -- in grants for projects  
7 throughout Vermont in varying levels. We have  
8 experienced and had applied for a very large DOE  
9 grant in the grant program and did not receive that,  
10 but that was a very large program and we also -- our  
11 application that was not selected at the time and I  
12 think our experience in negotiating and receiving the  
13 funds for another federal grant sometimes the timing  
14 is simply not conducive to work. That being said  
15 there are other entities. VPPSA is part of the  
16 American Public Power Association and they have a  
17 deed program and they give out funding to support  
18 innovative projects or exploration and kind of  
19 seeking out or approving projects could be viable.  
20 So that is something that we've considered, but have  
21 not applied yet. They have very specific funding  
22 dates and guidelines, but that's an ongoing program,  
23 and I think where we have seen some of the cost  
24 drivers for this it's really standing up the system  
25 and the ongoing maintenance is not on an incremental

1 basis. So it's not that we would need more and more  
2 funding for every device that comes on. I think as  
3 iteration or we add on different types of devices or  
4 where we are exploring storage or you know heat pumps  
5 or any number of potential devices that could be  
6 enrolled or engaged with this program I think there's  
7 more opportunity there. We found that negotiating  
8 out the money tends -- not only getting it but  
9 negotiating it out can take some time, and knowing  
10 what our timeline was here it's not something that we  
11 had actively explored for this in particular, but I  
12 agree with you. I think wherever there's money  
13 willing to be shared to support these sorts of  
14 projects we are certainly willing and able and have  
15 tried to seek quite a bit of extra funding to keep  
16 those costs low for members and customers, but it is  
17 a great suggestion. It's been in the back of my head  
18 for a while so appreciate that.

19 That is the end of our prescribed  
20 presentation. I believe we have certainly some notes  
21 of demographics and additional items to cover and,  
22 Steve, if you want I can pull up that more detailed  
23 -- I didn't have it in here, but I can pull up that  
24 more detailed slide if you want to pull it out after.

25 MS. POPPITI: Should we take a break,

1 maybe 10 minutes, and come back? We might have more  
2 questions that lead to more discussion so I just want  
3 to give our court reporter, JoAnn, a break and other  
4 folks a break too. Does that sound okay? Okay so  
5 we'll come back at 10 after 11.

6 (Recess.)

7 MS. POPPITI: Okay it's 10 after 11. I  
8 have a couple of questions about communicating to  
9 customers and I guess, you know, I want to look at  
10 the tariff rider, some of the language in there,  
11 because I'm thinking about how, you know, the  
12 language in the actual tariff is -- it's pretty  
13 technical in places and so I'm wondering how VPPSA  
14 plans to market the tariff offering to customers.

15 MS. BRAESE: Yes so I think you raise a  
16 very good point and question and there's from our  
17 perspective two elements here. I mean there's the  
18 cost, rate structure, and then there's the  
19 programmatic piece that we envision centralizing and  
20 providing a streamlined opportunity for customers to  
21 either express interest or you know confirm that they  
22 are a data customer just much like we do for the  
23 incentive programs for tier three, and so again a lot  
24 of pieces or elements of this are yet to be  
25 finalized, but we envision one centralized place for

1 members or customers can express interest; and then,  
2 you know, the structure, the tariff itself is more on  
3 that back end, you know, the regulatory piece of it,  
4 and we envision there are a few ways we can do it. I  
5 know we've been very successful as far as the power  
6 shift program having something as simple as a  
7 checkbox on the rebate form for an electric vehicle  
8 saying are you interested in a charger, and so if we  
9 were to move forward with this, it would be are you  
10 interested in enrolling in this specific program,  
11 right, because then a utility could be validating  
12 that customer's information at the same time and then  
13 we can get that process moving fairly quickly to  
14 actually enroll them more technically.

15 MS. POPPITI: I know that the hope of  
16 this proceeding is to facilitate the approval and  
17 review of the tariffs that are actually filed by the  
18 utilities. So one thing that jumps out at me is to  
19 make sure that where in the tariff you say that the  
20 information will be automatically communicated to  
21 customers to be specific there even if it's a  
22 placeholder of where to find the information. I  
23 think that would be helpful just to have that -- once  
24 the tariff is actually filed to have that nailed  
25 down, and then I have a question about the cost

1 component related to -- it's divided up as base  
2 energy, which I assume that would be what would be  
3 dynamic, and then the transmission and peak capacity,  
4 the program delivery costs, and then the historic and  
5 embedded cost contribution, and I'm wondering what's  
6 meant by historic and embedded cost contribution or  
7 if it is truly just embedded costs?

8 MS. BRAESE: Steve is finding his unmute  
9 button I hope.

10 MR. FARMAN: Gets me every time. The  
11 reference to embedded we see the energy, the R&S, and  
12 the capacity is incremental. It's identified in the  
13 market tariffs and then there's just no market price  
14 for O&M. Components of A&G. So this is a  
15 calculation I haven't done in detail yet, but adding  
16 EV's to the system is not going to make a huge change  
17 initially in what your O&M costs are, what your  
18 distribution O&M is. It's not going to change your  
19 distribution, maintenance, investment drastically  
20 right away. Same is true for A&G. A lot of the  
21 components of the A&G just aren't going to be  
22 affected by adding A&G or -- sorry by adding EV's.  
23 So the idea there is to go through probably like at a  
24 FERC account level and look at all the components of  
25 your embedded O&M. There's no other place to look

1 really but to look at the components of your embedded  
2 O&M, the A&G accounts. You know, for instance, I  
3 don't think accounts 924, 926, which is pensions and  
4 benefits, that's not going to change. So we're not  
5 going to assign costs in the EV rate for that.  
6 That's the exercise. Somewhere there's a schedule  
7 where I think I put a cent and a half for each of  
8 those in. That might even be close, but that's a  
9 placeholder. It may be better than a guess, but it's  
10 a placeholder for now. That's the kind of cost we're  
11 talking about there. I know there was -- there was  
12 an order somewhere, there's been so many, that said  
13 we should consider a reasonable contribution to fixed  
14 costs, and that's kind of what we're aiming for with  
15 that.

16 MS. POPPITI: So that would be the  
17 historic and embedded cost contribution is basically  
18 the fixed costs just to make sure we're on the same  
19 page?

20 MR. FARMAN: Yes.

21 MS. POPPITI: Okay I think that covers  
22 that area that I have. I know Chair Roisman and  
23 Commissioner Allen have questions too I see.

24 CHAIRMAN ROISMAN: Riley had his hand up  
25 first so why doesn't he go next.

1                   COMMISSIONER ALLEN: Thanks. I'll try  
2                   to be quick. I just have a couple comments not so  
3                   much questions. You can respond to them if you think  
4                   that's the appropriate thing, but one is it seems to  
5                   me that the billing systems issues seem to be  
6                   challenging. I think they are challenging normally,  
7                   but especially when you're dealing with 10 different  
8                   systems that have five different billing structures.  
9                   It does kind of call to mind the question of whether  
10                  there shouldn't be, you know, a common billing  
11                  platform. I know that's not something you would be  
12                  able to do in nine months, but it is -- does seem to  
13                  me there's nothing kind of intrinsically monopoly  
14                  utility specific about billing systems, and a common  
15                  platform might help to kind of ease the transition as  
16                  you think about these things longer term and creating  
17                  a more seamless framework as we kind of scale up. So  
18                  that's one comment.

19                  Another comment I have is what you  
20                  presented to me is I mean very thoughtful, very, you  
21                  know, well kind of researched and I really appreciate  
22                  all the thought that Mr. Farman and Ms. Braese have  
23                  put into this and VPPSA, but I do worry that  
24                  participation levels given some of the warning signs  
25                  may be low because it's a complex framework from a

1 end use consumer standpoint, and I think other  
2 systems like utilities like Green Mountain Power and  
3 others have been able to get really healthy  
4 participation levels up there, and I would urge you  
5 to kind of think about it from that perspective and  
6 you probably have, but it's the participation levels  
7 not just the responsiveness of consumers to the price  
8 signals, but also their election to participate will  
9 -- might fall far short of what is hoped for.

10 Then I did have a question for Steve  
11 based upon that last comment from Ms. Braese, maybe  
12 it's for Ms. Braese, but is the -- I'm trying to  
13 understand the philosophy of what you're trying to do  
14 relative to the embedded cost or what is referred to  
15 as historically embedded cost. Is the intent to  
16 essentially reflect as you know a differential rate  
17 in the one hundred percent of the avoidable costs  
18 that are in play? I mean if there is a different  
19 rate that can -- cost component -- line cost  
20 component that can be avoided is that essentially  
21 what you're trying to do or is the philosophy that  
22 there should be some sort of contribution element  
23 that goes back to the utility as well? That wasn't  
24 very well articulated, but hopefully you understand  
25 what I'm getting at.

1 MR. FARMAN: Yeah what we're really  
2 trying to do there is simply capture any incremental  
3 O&M and A&G that we can lay at the feet of having a  
4 large number of chargers added to the system. I'm  
5 not sure -- I didn't say that very well apparently,  
6 but I'm not sure there's a lot, but the answer is  
7 probably not zero and we've got a little bit more  
8 digging to do to identify that clearly before we try  
9 to finalize things. There was something else I was  
10 going to say.

11 MS. BRAESE: I'll just add contribution  
12 to historic or embedded cost is included in the acts  
13 requirements or it's in the language of the actual  
14 act implementing the EV/EVSE rate, and if I can take  
15 the opportunity while I'm unmuted and my dog is not  
16 barking just to address your comment on the billing  
17 system, at VPPSA's strategic retreat last year this  
18 was a major topic of conversation. In fact we have a  
19 working group with representatives from all of our  
20 municipal utilities who are exploring the prospect of  
21 a common billing system, and to your point about  
22 there not being a very huge difference I think it's  
23 dependent on if it's using the billing system solely  
24 for electric or if they are using the same common  
25 billing system for other municipal departments in

1 which case some of those requirements and the  
2 complexities for an electric billing program is going  
3 to be a little bit or can be quite different than  
4 what water or property taxes would be.

5 So just wanted to raise that, but that  
6 is something that our working group is actively  
7 exploring and I think they have actually identified  
8 at least two potential partners that could be vital  
9 to a system.

10 CHAIRMAN ROISMAN: Very helpful.

11 MR. FARMAN: There's a size factor in  
12 that evaluation too. Some of the nicer better  
13 systems are expensive enough that some of the smaller  
14 members are going to hesitate to bear that cost  
15 whereas a bigger, a Morrisville or Lyndonville say,  
16 wouldn't think twice. So I mean I could actually see  
17 we could wind up with two common billing systems not  
18 one, but certainly not five, six, seven. Whatever it  
19 is.

20 MS. BRAESE: I think the challenge is  
21 what we've seen with this program the licensing fees  
22 can be quite different depending upon the provider.  
23 So it can be a large flat licensing fee or a  
24 licensing ladder for every meter and that could  
25 change the cost benefit.

1 MR. FARMAN: So I remembered what I  
2 wanted to tack on to my response to Riley about the  
3 embedded cost. The whole reason for referring to  
4 embedded or historic cost there really was there's no  
5 other data source that I'm aware of that you can look  
6 at to formulate any kind of a rational expectation  
7 that EV's do or don't cause incremental costs in  
8 these particular categories. I wasn't -- I wasn't  
9 saying you should recover because since the  
10 incremental approach is leaving your current embedded  
11 cost, right, it's pretty much intact, completely  
12 intact, we don't need to recover embedded costs in  
13 the EV rate. Just looking to that as a source or  
14 proxy to say here's a little bit that probably should  
15 be included. I haven't done that work in detail yet.  
16 I don't know if that makes you feel any better about  
17 that or not but --

18 CHAIRMAN ALLEN: Thanks. Appreciate  
19 that.

20 CHAIRMAN ROISMAN: Okay. Well following  
21 on what Riley has already said and as you know from  
22 my earlier questions I'm most interested in  
23 participation. If you could get every ratepayer to  
24 want to figure out what's the very best time both  
25 economically and in terms of the way the system works

1 to use any significant energy, it would be ideal  
2 whether it's their EV or their dryer or their heat  
3 pump or whatever. So I would like to find out from  
4 you, and if you don't have it I would like to  
5 actively encourage you to have a really aggressive  
6 public education program with real people in the  
7 field, not postings on web sites, not mailers that  
8 include your bill and another little foldout that  
9 people use to light fires with, but like, you know,  
10 lots of people from the utilities going to their  
11 local libraries and having interactive education  
12 programs about how they can take advantage of this  
13 system and using language -- I mean you could use R&S  
14 until you're blue in the face and not a single one of  
15 your ratepayers will have the foggiest idea what  
16 you're talking about, and, you know, day ahead  
17 markets they don't even understand. So what does  
18 that mean day ahead market. I'm in the market. I'm  
19 buying now. What do you mean day ahead. You've got  
20 -- you've got to put it in the language that people  
21 can understand and you have to be willing to spend  
22 human time I think to educate people as to how the  
23 system can work and the interactive so they can ask  
24 you questions and you can have examples up on the  
25 screen that they could look at while you're talking

1 to them and they can say but what do I do if x, you  
2 know, my husband has to go to the hospital and I got  
3 to make sure the car is charged. I can't leave it  
4 uncharged for five hours and then he needs to go to  
5 the hospital three hours after I've failed to charge.  
6 You know you got to be ready to deal with all of that  
7 with people and get them to buy into the system, and  
8 I assume part of what you will be doing is you will  
9 be reporting to us as well as to yourselves what kind  
10 of participation are you getting. You have a sense  
11 of how many EV's you've got, and Steve has pointed  
12 out many times the number today is small compared to  
13 what it's going to be a year from now or three years  
14 from now, but knowing how many people you have who  
15 have EV's and then how many of them are jumping into  
16 this system will help you see is it working, are we  
17 getting participation.

18 So I hope that part of your plan,  
19 including your expenses, is this on the ground hand  
20 holding education program and, Ms. Braese, you talked  
21 about devices and I think that's an important  
22 component for people to understand. I could put my  
23 heat pump on in this same program or you know I could  
24 add in my battery because those things will be  
25 starting to roll out also maybe not as quickly as the

1 EV's, but it will be coming. So if you have any  
2 thoughts now on what you have already got planned, I  
3 would love to hear it. If not, I hope we'll hear  
4 about it in the future.

5 MS. BRAESE: I mean I think with any  
6 large program rollout there's inevitably a public  
7 affairs and outreach and engagement effort that goes  
8 with that and I think it's -- it is a challenge for  
9 us to answer your question of how many EV's are in  
10 the system because we don't have the direct access to  
11 DMV registration data. I know the municipalities can  
12 get it themselves and I believe some other statewide  
13 entities have access to it, but we have not seen that  
14 data directly so it's hard to speak with absolute  
15 certainty on what's out there, and a lot of members  
16 that are customers that I have engaged with directly  
17 for the power shift program have opted to just go  
18 with their drip charger, their level one slow  
19 charger, that works and serves their purposes fine  
20 and that's -- that suits them better than having to  
21 do all of the upgrades and all of the other things  
22 that would be required for a level two, and I think  
23 that's also an element that we have to be cognizant  
24 of, and not to bring it to the forefront, but there  
25 is a difference in the charging infrastructure in

1 most of our member service territories because they  
2 do not follow the corridors, the highway corridors,  
3 and so it's growing. I will say that you know we're  
4 seeing it, we're seeing more and more engagement and  
5 interest and even for fleet electrification which is  
6 one of the measures that we're trying to add on for  
7 tier three as well, and that's a touch point where  
8 VPPSA can support the members compliance obligations  
9 but also help engage the customers, but also respect  
10 that customer and utility relationship is there, the  
11 members real relationship with their customers, and  
12 we are simply a support mechanism to help them all  
13 succeed and to provide the services that they need  
14 and want.

15 CHAIRMAN ROISMAN: And will this program  
16 be -- and it doesn't appear that it is, but will it  
17 be available at a public charging station? In other  
18 words, a public charging station will be able to tell  
19 a customer when they show up right now the rate is x.  
20 If you charge in an hour, it's going to be x minus  
21 two or x plus two or is this only for the chargers  
22 that are owned by the people who can use it, the  
23 fleet or the commercial establishment or the private  
24 residence?

25 MS. BRAESE: That's my understanding but

1       our goal is to include all, but I don't know if it  
2       would be the same structure, you know, because  
3       there's some nuance between someone who is running a  
4       public charger and who is paying that bill, right,  
5       and how you're getting -- how the charger is actually  
6       working, but our intention is to be able to offer  
7       this across the board. There might be some nuances  
8       that have to be put in place to adequately work  
9       through that relationship.

10               MR. FARMAN: It seems like the  
11       incremental cost approach would hold up in that  
12       environment and it seems like if we can transmit the  
13       price signals on a day ahead basis to residential and  
14       smaller commercial customers, whatever, we should be  
15       able to transmit those signals to the people running  
16       the public chargers, then it would be up to them to  
17       translate that however they choose to their  
18       customers. We're not going to set the rate on a  
19       public charger obviously, but yeah I think we haven't  
20       explored that one in detail yet, but I think at least  
21       conceptually it holds up.

22               CHAIRMAN ROISMAN: So they are more like  
23       aggregators? Those public charger owners are more  
24       like an aggregator?

25               MR. FARMAN: Right. That's a pretty

1 good analogy. I can almost guess the size of those.  
2 You know where there's hundreds of kilowatts we would  
3 most likely have to hang a heavier meter. I don't  
4 know if we should use their submetering, you know,  
5 the way you do for a level two charger. We might  
6 have to put in an actual meter. I don't know I'm not  
7 an engineer. So other than that I think the basics  
8 of the program would apply.

9 CHAIRMAN ROISMAN: Because you're  
10 hearing this EV charging business I'm going to take  
11 advantage of this opportunity to proselytize for  
12 something. Okay. As I mentioned I have an electric  
13 vehicle and one of the greatest frustrations for me  
14 when I travel is that there are no good signs to tell  
15 me exactly where the chargers are located and whether  
16 they are level 2 or level 3 chargers. If you look --  
17 if you drive on the road you'll see like on the  
18 interstates it tells you there's a gas station. It  
19 doesn't also have a symbol that says there's a  
20 charger and it doesn't tell you whether it's a level  
21 2 or a level 3 charger which of course makes a lot of  
22 difference. When they tell you there's a charger in  
23 the parking lot they don't have a sign that tells you  
24 it's on the second level in the back corner or they  
25 tell you it's in the southwest corner. I don't know

1 about you, but I never know what is the southwest  
2 corner. I can say yeah it's the charger next to the  
3 entrance to Macy's. I can figure that one out. So  
4 I'm just going to proselytize for you when you're  
5 getting chargers out for public chargers to actively  
6 encourage them to advertise, and I was recently in  
7 Burlington, I don't often go there, but they do seem  
8 to have a pretty good system for letting people know  
9 where chargers are both in what structures and then  
10 when you hit the structure where in the structure you  
11 can find it. So you might just ask them what did you  
12 do and it's just the signage question. It's not move  
13 the charger some place. Just make sure that  
14 everybody knows it's there. Everybody knows where  
15 the gas pumps are.

16 MR. FARMAN: So this isn't something  
17 that AOT is focused on?

18 CHAIRMAN ROISMAN: Well I don't know.  
19 All I can tell you is you drive on the roads in  
20 Vermont you can't tell where the chargers are. The  
21 apps that are there to tell you where chargers are  
22 located are not particularly well done, and of course  
23 the number of chargers is increasing all the time,  
24 but they are not necessarily updated. The one that I  
25 use I tried to go to my hometown Oklahoma City by car

1 a year ago in an electric car. When I got as far as  
2 Cleveland I ran out of chargers. I could not find  
3 chargers that would allow me to charge like overnight  
4 in a hotel because it didn't tell me there were any  
5 hotels or motels that had chargers, and once I got  
6 west of Indianapolis where my daughter lives I  
7 couldn't even find any chargers so I had to cancel my  
8 trip, but that's a little bigger than VPPSA, but at  
9 least on a micro scale I wanted to make that pitch.  
10 Thank you.

11 MS. POPPITI: So in terms of marketing  
12 will VPPSA leverage Efficiency Vermont to help with  
13 some of that education and outreach?

14 MS. BRAESE: I think as we roll out that  
15 is yet to be determined since they are not  
16 particularly engaged in the customer's rate, right,  
17 what their rates are. I think we leverage the RPCs  
18 and Efficiency Vermont and you know the various  
19 outreach newsletters or conferences or things like  
20 that and so we do leverage the network overall, try  
21 to announce and do things that way, and we meet  
22 regularly with Efficiency Vermont; weekly, more than  
23 once a week, and on various initiatives. So we do  
24 try to keep each other apprised of what's going on.  
25 So the rollout I don't think would be under wraps,

1 right. So we would leverage that as part of the  
2 marketing communications, but that's not necessarily  
3 how Chair Roisman is describing it boots on the  
4 ground. I think that is an additive component  
5 though.

6 MS. POPPITI: So one of the things we  
7 talked about is participation numbers. So I would  
8 like the parties to think about how we could  
9 incorporate into an approval or into that some sort  
10 of reporting mechanism. So if the parties could talk  
11 about -- amongst themselves about what that might  
12 look like for participation rates, maybe also for  
13 whether the tariff rate components should be updated  
14 on a regular basis, anything in that nature, it would  
15 be helpful to hear from the parties to see what might  
16 be appropriate to expect and what would be within  
17 VPPSA's -- what would be achievable in terms of  
18 reporting and such. So I'll just let you think about  
19 that.

20 MS. BRAESE: Can I just one point of  
21 clarification to make sure I'm understanding? Do you  
22 mean just reporting out what actual participation is  
23 or are you -- are you envisioning more like setting  
24 metrics or targets that we are to meet because I  
25 think that's a lot harder to follow through on.

1 MS. POPPITI: No. Just reporting out  
2 the metrics and then if there were questions at that  
3 point -- or reporting out the actual participation,  
4 and then if there are questions at that point it  
5 would -- it would be something that you know could be  
6 raised, but more just setting up something so there's  
7 like a regular check in so that the Commission  
8 doesn't have to act, you know, outside of that realm.  
9 I think it would be helpful to have some reporting  
10 requirements there. I just -- rather than putting  
11 something out there on my end I would like to hear  
12 from the parties on that.

13 MS. BRAESE: It's helpful and I think  
14 from our perspective it would be helpful to see them  
15 on a statewide basis too for some of the historic  
16 programs so that there's some benchmark for what has  
17 worked. That's helpful. I appreciate that.

18 MS. POPPITI: Okay. Are there any other  
19 questions? I know that we asked for some followup on  
20 participation estimates maybe as related to the power  
21 shift program, some lessons learned might be helpful  
22 in the form of testimony, some basics there, and,  
23 let's see, maybe some outline and also in terms of  
24 marketing plans. I know that some stuff is yet to be  
25 worked out, but just some framework there would be

1 helpful as we're looking at rolling this out to all  
2 the VPPSA utilities. Let's do what we can now to  
3 just have a bigger picture, and I think that would  
4 fit within the timeline, the schedule, that we have  
5 now. There's discovery until March 13th. So I think  
6 there would be some time frame to put in some  
7 supplemental testimony there, you know, maybe before  
8 the second round of discovery is served on February  
9 7th, maybe by the end of the month for the  
10 supplemental testimony. I just wanted to hear from  
11 Ms. Brennan on that.

12 MS. BRENNAN: Could you repeat your  
13 question? I'm sorry I'm having internet problems  
14 here.

15 MS. POPPITI: Sure. No problem. So we  
16 were talking about doing some supplemental testimony  
17 from VPPSA and the second round of discovery for the  
18 Department is due on VPPSA on February 7th. I was  
19 suggesting that the supplemental testimony be filed  
20 around the time that VPPSA's responses to the  
21 Department's first round of discovery are due which  
22 is January 31st, a little over two weeks from now.  
23 Does that work for the Department?

24 MS. BRENNAN: That should. I will,  
25 while he's here, ask Philip to ensure -- Philip is

1 also working on that case and make sure that timeline  
2 works for Philip as well.

3 MR. PICOTTE: It does. Thank you.

4 MS. POPPITI: Okay. Anything else that  
5 we should discuss today? Yes.

6 MR. PICOTTE: Is it okay if I ask a  
7 couple questions?

8 MS. POPPITI: Sure.

9 MR. PICOTTE: These are both for Ms.  
10 Braese. I guess my first question just speaking of  
11 process do you expect to have an estimate of the  
12 actual numbers of prices even on an example basis  
13 available in the next couple months?

14 MS. BRAESE: I mean I think it would be  
15 a broad estimate. Until we've actually executed the  
16 agreement with our third party there's some element  
17 of programmatic costs that are unknown, and even then  
18 the first scope of work is identifying potential  
19 risks that could be a significant cost driver so  
20 that's another unknown. I think for the  
21 illustrations that Steve provided today in his  
22 presentation I mean we can certainly share that, but  
23 with the caveat of course those are broad estimates  
24 and have not been finalized by any stretch of the  
25 imagination, but I think that would be fair if you

1 wanted that to be included in some supplemental  
2 testimony.

3 MR. PICOTTE: Understood.

4 MS. POPPITI: Just to be clear when the  
5 actual tariffs are filed by the utilities those  
6 numbers would be nailed down at that time, correct?

7 MS. BRAESE: Yes.

8 MS. POPPITI: And the time frame for  
9 that would be presumably around April if all is  
10 moving along as expected and that's a if. I  
11 understand.

12 MS. BRAESE: Yes. I mean the formulaic  
13 portions I think are fairly clear, but again because  
14 it's a formula and could be changing there are  
15 specifics that would be dependent on the market.  
16 That's kind of the whole structure of that, but the  
17 programmatic fees yes I would anticipate by the time  
18 of the tariff filings that would be finalized or  
19 broadly estimated because if there are extra steps  
20 that have to be taken or specific individual  
21 integrations that have to occur for some reason, that  
22 may drive the costs a little differently.

23 MS. POPPITI: So the program delivery  
24 costs and the historic and embedded costs would be --  
25 we would see as actual numbers otherwise it's

1 formulaic; is that right? Am I understanding that  
2 right?

3 MR. FARMAN: Yup.

4 MS. POPPITI: Okay. Sorry, Mr. Picotte.

5 MR. PICOTTE: Thank you very much, Ms.  
6 Braese and Mr. Farman. One final question and this  
7 has to do with the opt-in you mentioned. VPPSA  
8 offers five hundred or a thousand dollar incentive  
9 when customers purchase a new EV, and have you  
10 considered not just having an opt-in but by default,  
11 by default linking receiving an EV incentive per  
12 vehicle to participation? Ms. Braese, you mentioned  
13 some customers they have a plug-in hybrid they have a  
14 level one charger they are happy for that, but those  
15 who -- that is an ideal time to sort of reach out to  
16 customers and have them enroll in this rate?

17 MS. BRAESE: It's a great point and one  
18 that as usual with this sort of thing there's a  
19 couple different ways to answer it, and I think we've  
20 tried to engage with the dealerships and especially  
21 the OEMs we've been talking about as potential EV  
22 telematics as the avenue to engage in this tariff  
23 about how changing it can be for customers to  
24 purchase an EV and then not necessarily have a  
25 charger or need a different type of charger then what

1 type of charger do you get, and so trying to think of  
2 it more holistically and perhaps the partnership  
3 avenue is with the dealership or with the OEM so we  
4 can ensure the device they are getting will  
5 communicate, right, because that's one of the main  
6 eligibility requirements is that it has to be able to  
7 communicate with the platform, and if it does, then  
8 that's a lot easier to do, right, to go ahead and  
9 have them almost automatically enroll, but there's  
10 still an authorization that has to occur to set the  
11 individual device up, but it is certainly the most  
12 obvious pool or pipeline I should say for potential  
13 customers.

14 MR. FARMAN: Can I ask a question here?  
15 Philip, were you envisioning the rebate being  
16 conditioned upon enrollment as part of that question?  
17 Is that what you were wondering about?

18 MR. PICOTTE: I have thought about that,  
19 yes, or at the very least a default, some sort of opt  
20 in. If the connection or the origin of that is for  
21 Green Mountain Power they offer a measure that's a  
22 free charger, very similar to the power shift pilot  
23 that VPPSA offers, but originally didn't have to  
24 participate in the EV rate and GMP did change that so  
25 now to get a free charger from GMP you have to

1 participate in their rate 72 or 74. Seems like a  
2 fair tradeoff. The difference is that's a charger  
3 and that's not the vehicle incentive so I'm just  
4 trying to float that idea.

5 MR. FARMAN: I just wasn't sure what you  
6 were thinking.

7 MS. BRAESE: I think there's probably  
8 some pros and cons to exploring that and certainly  
9 worth further discussion. I think there are  
10 fundamental differences between the way we envision  
11 this program and you know the device diagnostic and  
12 customer choice and not having that direct control,  
13 right. I mean that's part of -- that's part of I  
14 think why -- why the free chargers are given out  
15 because there's a direct control and element to it  
16 where they can toggle down this flexible load or  
17 dispatchable load sort of thing more easily and  
18 that's not -- fundamentally not something our members  
19 are interested in controlling every device in  
20 someone's home, right. It can get complex when that  
21 becomes the case, but certainly worth discussing  
22 further and trying to explore and see how that opt  
23 in/opt out could be mitigated or concerns around the  
24 opt in/opt out.

25 MR. PICOTTE: Thank you.

1 MS. POPPITI: Okay. Any other questions  
2 from folks or process related issues? Okay well  
3 thank you so much for the presentation. It was very  
4 helpful to get some of the plain language information  
5 that I found was a little bit difficult to understand  
6 in the prefiled testimony, but totally understandable  
7 that it was difficult to understand because it's a  
8 pretty complex system, but also very innovative and  
9 we really appreciate your presentation today. Thank  
10 you, Ms. Braese.

11 MS. BRAESE: Thank you.

12 MS. POPPITI: Okay we are adjourned.

13 Thank you.

14 (Adjourned at 11:50 a.m.)

15

16

17

18

19

20

21

22

23

24

25

C E R T I F I C A T E

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

I, JoAnn Q. Carson, do hereby certify that I recorded by stenographic means the workshop re: Case Number 23-3604-PET via Go To Meeting on January 11, 2024, 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 82 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 14th day of January, 2024.

\_\_\_\_\_  
JoAnn Q. Carson

Court Reporter