

COMMONWEALTH OF VIRGINIA  
STATE CORPORATION COMMISSION  
CASE NO. PUR-2020-00251

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PETITION OF APPALACHIAN POWER COMPANY

For approval to continue a rate adjustment clause,  
the EE-RAC, and for approval of new energy  
efficiency programs pursuant to Sections 56-585.1  
A 5 c and 56-596.2 of the Code of Virginia

Held before:

The Honorable Michael D. Thomas,  
Senior Hearing Examiner

ORIGINAL

Wednesday, May 19, 2021

10:00 a.m. to 12:42 p.m.

Conducted Remotely

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Reported by: Ruth A. Levy, RPR

1 APPEARANCES:

2 Noelle J. Coates, Esq.

3 Timothy E. Biller, Esq.

4 Counsel for Appalachian Power Company

6 John E. Farmer, Jr., Esq.

7 Counsel for the Office of the Attorney General,

8 Division of Consumer Counsel

10 Raymond L. Doggett, Jr., Esq.

11 C. Austin Skeens, Esq.

12 Staff Counsel of the State Corporation

13 Commission

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P R O C E E D I N G S

BAILIFF: Today's docket consists of  
Case No. PUR-2020-00251, Petition of  
Appalachian Power Company for approval to  
continue rate adjustment clause, the EE-RAC,  
and for approval of new energy efficiency  
programs pursuant to Sections 56-585.1 A 5 c  
and 56-596.2 of the Code of Virginia. The  
Honorable Michael D. Thomas, Senior Hearing  
Examiner, presiding.

HEARING EXAMINER: Good morning.  
Ms. Coates, on behalf of Appalachian Power  
Company, are you prepared to precede?

MS. COATES: Yes, Your Honor.

HEARING EXAMINER: Mr. Farmer, on  
behalf of the Office of the Attorney Genera,  
Division of Consumer Counsel, are you  
prepared to proceed?

MR. FARMER: Yes, I am, Your Honor.  
Thank you.

HEARING EXAMINER: Mr. Doggett, on  
behalf of the Staff of the State Corporation  
Commission, are you prepared to proceed?

MR. DOGGETT: We are, Your Honor.

HEARING EXAMINER: Thank you very

1 much.

2 Ms. Coates, do you have the proof of  
3 publication and service filed on February  
4 10th of 2021?

5 MS. COATES: I do, Your Honor. Can  
6 we mark it and move it into the record,  
7 please?

8 HEARING EXAMINER: All right. That  
9 will be marked Exhibit No. 1 and accepted  
10 into the record.

11 (Exhibit 1 is marked and admitted.)

12 MS. COATES: Thank you.

13 HEARING EXAMINER: Ms. Coates, also,  
14 do you have the petition and request for  
15 waiver, schedule 46 A, confidential schedule  
16 46 B, and schedules 46 C, 46 D, and 46 N that  
17 were filed on November the 30th of 2020?

18 MS. COATES: I do, Your Honor.  
19 Would you please mark it as Exhibit 2, I  
20 think, and move it into the record.

21 HEARING EXAMINER: Right. Since it  
22 does have confidential information included  
23 in that confidential schedule 46 B, the  
24 public version will be marked Exhibit No. 2  
25 and the confidential version will be marked

1 Exhibit No. 2 C.

2 (Exhibits 2 and 2 C are marked and admitted.)

3 MS. COATES: Thank you.

4 HEARING EXAMINER: Ms. Coates, do  
5 you have an opening statement on behalf of  
6 your client?

7 MS. COATES: I do. Would you like  
8 to mark the testimony that's been waived or  
9 wait until after.

10 HEARING EXAMINER: We'll wait.  
11 We'll wait on that until the appropriate  
12 time.

13 MS. COATES: Okay. Thank you, Your  
14 Honor. Well, good morning. My name is  
15 Noelle Coates. I am here with Timothy Biller  
16 on behalf of Appalachian Power Company.

17 Our petition was requested for the  
18 Commission's approval of five new energy  
19 efficiency programs, approval to continue two  
20 that were approved back in 2018, and for Volt  
21 VAR Optimization, or VVO, pilot program, and  
22 also to recover the costs associated with  
23 those programs through a rate adjustment  
24 clause, or the RAC, the EE-RAC.

25 I'm happy to be here. There's only



1 a few areas of dispute, so I'm very happy  
2 that everyone's come to the table in  
3 agreement that these programs do advance a  
4 public interest.

5 For the most part, we agree with all  
6 of Staff's recommendations. We agree with  
7 their new revenue requirement that reflected  
8 the new ROE approved in the base case last  
9 year. With regards to the environmental  
10 justice issues that have been coming up in  
11 every hearing and every proceeding since that  
12 legislation was passed, the Company's willing  
13 to work with anyone that you direct us to. I  
14 think there's an interagency working group  
15 that's addressing environmental justice  
16 areas, and we're willing to work with them in  
17 our studies to see if we can incorporate  
18 their concerns into our programs going  
19 forward.

20 I'll just note, in general, that  
21 energy efficiency does help lower income  
22 people because it reduces usage and reduces  
23 bills, so the programs are designed with that  
24 in mind already.

25 One area of dispute with the Staff

1 and the Company involves EM&V. And I would  
2 note that we would work with Staff up front  
3 to develop -- to address their concerns and  
4 develop program processes that get them the  
5 information they need. But we just need to  
6 balance the costs of EM&V with the actual  
7 programs so that the costs of the EM&V don't  
8 subsume the cost of the programs  
9 themselves.

10 And finally, I would just note I  
11 will discuss the VVO pilot program, which is  
12 the other area that is really in contention  
13 between Staff and the Company, specifically  
14 where and how to recover it. We propose it  
15 as an energy efficiency program because it  
16 will allow customers to use less energy,  
17 which is the very statutory definition of  
18 energy efficiency.

19 In our proposal, the pilot program  
20 also meets the statutory definition of an EE  
21 pilot program in that it's of limited scope  
22 and duration, and it will help us determine  
23 if the results are repeatable. And I'll also  
24 note that it is supported by DMME. It's not  
25 efficient to require APCo to come back with

1 this program as a grid transformation program  
2 in another proceeding when the information's  
3 already before the Commission now.

4 In summary, the EE portfolio that we  
5 proposed will provide immediate benefits to  
6 participating customers and eventual benefits  
7 to all customers through reduced fuel and  
8 reduced need for generation. And we ask that  
9 the Commission find that it is in the public  
10 interest and advances the goals of the  
11 Commonwealth and approves the petition, the  
12 rate adjustment clause, and the proposed  
13 portfolio. Thank you, Your Honor.

14 HEARING EXAMINER: Thank you. Mr.  
15 Farmer?

16 MR. FARMER: Yes. Thank you, Your  
17 Honor. For the record, John Farmer,  
18 representing the Office of the Attorney  
19 General's Division of Consumer Counsel.

20 Consumer Counsel did not sponsor a  
21 witness in this proceeding but has reviewed  
22 the application and testimony sponsored by  
23 the Company and Staff as well as the May 13th  
24 comments filed by the Department of Mines,  
25 Minerals and Energy, or DMME.

1           Consumer Counsel first acknowledges  
2           that there appears to be no dispute with  
3           respect to the revenue requirement as the  
4           Company has agreed in its rebuttal filing to  
5           accept Staff's downward adjustment to its  
6           originally filed revenue requirement.

7           Consumer Counsel does not take issue  
8           with the revenue requirement as agreed upon.  
9           The petition stated that approval of the  
10          originally proposed revenue requirement would  
11          result in a 39-cent increase in monthly bills  
12          based on 1,000 kilowatt hours of usage.  
13          Consumer Counsel would expect approval of the  
14          lower revenue requirement may result in a  
15          somewhat smaller increase.

16          While Consumer Counsel does not  
17          contest the revenue requirement, Staff  
18          Witness Blevins has raised some  
19          program-specific concerns that we'd like to  
20          explore further through cross-examination;  
21          particularly, the Company's inclusion of pool  
22          pump measures in the proposed residential  
23          efficient products program.

24          Finally, with respect to evaluation  
25          measurement and verification, or EM&V,

1 Consumer Counsel agrees with sentiments  
2 expressed in the comments of DMME and in  
3 Staff's testimony that the passage of the  
4 2020 Virginia Clean Economy Act, or VCEA,  
5 highlights the importance of rigorous EM&V  
6 protocols, since it provides for financial  
7 incentives for the Commonwealth's two major  
8 electric utilities if they meet certain  
9 energy efficiency targets. It's critical  
10 that customers only incur the additional  
11 costs associated with these incentives if the  
12 Company's stated achievements are backed by  
13 thorough and accurate EM&V analyses.

14 Consumer Counsel does not take any  
15 position on the EM&V protocols presented in  
16 this proceeding, but we would note that  
17 Consumer Counsel is participating in Case No.  
18 PUR-2020-00156, the Commission's pending  
19 proceeding to consider EM&V proposals put  
20 forth by Virginia Electric and Power Company.  
21 This is a case in which APCo has also  
22 intervened and which will be heard next  
23 week.

24 Consumer Counsel is hopeful that the  
25 Commission's determinations in that

1 proceeding might provide some clarity for  
2 EM&V protocols moving forward, both for  
3 Dominion and APCo.

4 With that, Your Honor, Consumer  
5 Counsel looks forward to developing the  
6 record today, and we appreciate your time and  
7 attention this morning.

8 HEARING EXAMINER: Thank you.

9 Mr. Doggett?

10 MR. SKEENS: Good morning, Your  
11 Honor. Austin Skeens, along with Raymond  
12 Doggett, on behalf of Commission Staff.

13 As directed by the Commission's  
14 order for notice and hearing in this matter,  
15 Staff investigated the Company's application,  
16 and on March 31st, 2021, filed the direct  
17 testimony of two witnesses: Madhu S.

18 Mangalam from the Commission's Division of  
19 Utility Accounting and Finance and Ruben S.  
20 Blevins from the Commission's Division of  
21 Public Utility Regulation.

22 Staff Witness Mangalam recommends,  
23 among other things, a revenue requirement of  
24 \$15.64 million, which is \$.95 million less  
25 than the Company proposed in its application.

1 Based on the Company's comments this morning  
2 and its rebuttal testimony, Staff understands  
3 that the revenue requirement in this case is  
4 no longer in dispute.

5 Staff Witness Blevins examined the  
6 Company's seven proposed energy efficiency  
7 programs and found that those programs  
8 satisfy the public interest criteria set  
9 forth in Code Section 56-576. Mr. Blevins,  
10 therefore, recommends approval of these  
11 programs as adjusted in his pre-filed  
12 testimony for the proposed five-year  
13 implementation period.

14 Staff Witness Blevins also reviewed  
15 the Company's proposed VVO pilot program.  
16 Staff does not oppose approval of the VVO  
17 pilot program but believes that the costs  
18 associated with this pilot program would more  
19 appropriately be recovered by an electric  
20 distribution grid transformation project  
21 under Code Section 56-585.1 A 6.

22 Staff's opinion is based on the  
23 possibility that certain large customers  
24 could potentially become exempt from paying  
25 the EE-RAC, while there's no way to exclude

1 such customers from receiving any benefits  
2 associated with being on a VVO circuit.

3           However, should the Commission  
4 approve the VVO pilot as an energy efficiency  
5 pilot program, Staff Witness Blevins makes  
6 three recommendations: First, that all  
7 affected customers be notified that the  
8 circuit supplying their electric service has  
9 been selected for the VVO pilot; second, that  
10 the Company leave three of the six circuits  
11 selected for the VVO pilot program in an on  
12 state for an extended period of time; and  
13 third, that the Company include customer  
14 survey sampling in its EM&V plan.

15           Notwithstanding Staff's position  
16 that it may be more appropriate to classify  
17 the VVO pilot program as a GridMod project.  
18 Mr. Blevins will testify today that the  
19 Commission could approve the VVO pilot  
20 program as an energy efficiency pilot program  
21 and that one of the purposes of the pilot  
22 should be to gather information that would  
23 inform how this program should be classified  
24 in the future upon any potential broader  
25 rollout.



1           It's therefore Staff's position that  
2           the question in this proceeding of how the  
3           program is most appropriately classified  
4           could be deferred to a future proceeding in  
5           which the Company seeks full program approval  
6           after completion of the pilot.

7           Likewise, the question of whether  
8           and the extent to which the potential for  
9           exempt customers to be present on  
10          distribution circuits with VVO affects  
11          whether VVO should be considered an energy  
12          efficiency program or a GridMod project could  
13          also be deferred until after completion of  
14          the pilot. Thank you.

15          HEARING EXAMINER: Thank you.

16          Ms. Coates, please call your first  
17          witness.

18          MS. COATES: Would you like me to  
19          move the waived witnesses into testimony?

20          HEARING EXAMINER: All right. Well,  
21          I have them in order on my cheat sheet.

22          MS. COATES: Okay.

23          HEARING EXAMINER: So we'll start  
24          with the proposed order of witnesses in the  
25          order of presentation.

1 MS. COATES: Okay. I will stick to  
2 the order of presentation then. Then the  
3 Company calls Mr. Nichols to the stand.

4 (At this time, FRED D. NICHOLS, II, takes the  
5 stand and is sworn by the bailiff.)

6 DIRECT EXAMINATION OF FRED D. NICHOLS, II  
7 BY MS. COATES:

8 Q Good morning. Did you cause to be  
9 filed -- sorry. Can you please state your name,  
10 position with the Company, and address for the  
11 record.

12 A Sure. My name is Fred D. Nichols, II.  
13 My title is manager of energy efficiency and  
14 alternative energy. And my business address is 40  
15 Franklin Road SW, Roanoke, Virginia 24011.

16 Q Thank you. And did you cause, on  
17 November 30th, 2020, direct testimony consisting  
18 of 16 pages of summary, four schedules, one of  
19 which is to be confidential, to be filed?

20 A That's correct.

21 Q Do you have any changes to that  
22 testimony?

23 A No changes.

24 MS. COATES: With that, Your Honor,  
25 I'd ask that we mark Mr. Nichols' testimony

1 and move it into the record, subject to  
2 cross.

3 HEARING EXAMINER: All right. Mr.  
4 Nichols' pre-filed testimony public version  
5 will be marked as Exhibit No. 3. The  
6 confidential version will be marked as  
7 Exhibit No. 3 C. And both are accepted into  
8 the record subject to cross-examination.  
9 (Exhibits 3 and 3 C were marked and admitted.)

10 MS. COATES: Thank you, Your Honor.  
11 And with that, Mr. Nichols is available for  
12 cross-examination.

13 HEARING EXAMINER: All right.  
14 Mr. Farmer?

15 MR. FARMER: I have no questions,  
16 Your Honor.

17 HEARING EXAMINER: All right, sir.  
18 Commission Staff?

19 MR. DOGGETT: Yes, Your Honor.  
20 Thank you. This is Raymond Doggett for the  
21 Commission Staff.

22 CROSS-EXAMINATION OF FRED D. NICHOLS, II  
23 BY MR. DOGGETT:

24 Q Good morning, Mr. Nichols, as I come  
25 through the virtual courtroom portal to you.

1           A       Good morning.

2           Q       I just have a couple questions on your  
3 direct testimony for you this morning. Let me  
4 turn your attention to page 14 of your pre-filed  
5 direct.

6           A       Okay.

7           Q       So down towards lines 14 and 16, you  
8 have a statement that, "All of the proposed EE  
9 programs pass, at a minimum, three of the four  
10 industry standards benefit cost tests." Do you  
11 see that?

12          A       I do.

13          Q       All right. So when you make that  
14 statement, you're referring to the proposed EE  
15 programs in this petition and not necessarily the  
16 proposed VVO pilot?

17          A       That is correct.

18          Q       So a pilot does not have to pass these  
19 industry standard benefit costs to be implemented  
20 at this point; is that right?

21          A       That's my understanding, yes.

22          Q       So is one of the reasons for conducting  
23 the pilot is to gather information to determine  
24 whether it's going to be able to pass these  
25 industry standard benefit cost tests if it's

1 implemented throughout the APCo system?

2 A Yes. So it's a limited scope and cause  
3 to determine if this program will be beneficial as  
4 a full scale program.

5 Q All right. Because to be rolled out  
6 across the system as an energy efficiency program  
7 it would have to pass three of the four industry  
8 standard tests; is that right?

9 A That is correct.

10 Q Now, if this were -- if VVO were rolled  
11 out as an electric grid transformation project,  
12 would the project have to pass any of these cost  
13 benefit tests?

14 A I am not sure; I'm not involved in grid  
15 modernization, but I don't -- I don't think there  
16 would be EM&V unless it was directed by the  
17 Commission to do so as a GridMod project.

18 MR. DOGETT: All right. Thank you,  
19 Mr. Nichols. Your Honor, that's all the  
20 questions I have for Mr. Nichols on direct.

21 HEARING EXAMINER: All right.

22 Ms. Coates, any redirect?

23 MS. COATES: No, Your Honor.

24 HEARING EXAMINER: Just some  
25 questions from the Bench.

1 EXAMINATION OF FRED D. NICHOLS, II

2 BY THE HEARING EXAMINER:

3 Q Mr. Nichols, as I understand it, the  
4 Staff's primary concern with this VVO pilot  
5 program is that large general service customers  
6 may get a free ride, you know, in that, if VVO is  
7 installed on a circuit, a large general service  
8 customer potentially could opt out and receive the  
9 benefits of VVO without having to incur any of the  
10 costs of VVO.

11 I know that there were some exhibits  
12 that may or may not be included into the record,  
13 but as we sit here today, on the circuits that  
14 have been identified by APCo, are there any large  
15 general service customers on those circuits?

16 A There are.

17 Q All right. Now, have any of those large  
18 general service customers opted out --

19 A They have not.

20 Q -- of the energy efficiency programs?

21 A No, none of them have.

22 Q Okay. So as I sit here today, all of  
23 those large general service customers would be  
24 charged their proportionate share of any VVO  
25 that's installed on their circuit?

1           A       That is correct.

2           Q       And it would be up to the Commission at  
3       some later date if a large general service  
4       customer would have to file an application to opt  
5       out, as I understand it; is that correct?

6           A       They do have to file an application and  
7       supporting affidavits and things like that in  
8       order to opt out.

9           Q       Right. And then the Commission would  
10      determine at that time whether that large general  
11      service customer should be permitted to opt out  
12      and, for lack of better understanding, the  
13      Commission would consider the fact that they are  
14      participating in a VVO pilot as part of their  
15      determination on whether to allow them to opt out;  
16      would that be correct of my understanding of the  
17      processing?

18          A       That is correct.

19          Q       As a general matter, this Hearing  
20      Examiner does not like subsidies and this Hearing  
21      Examiner does not like freeloaders. So with that  
22      in mind, I just -- and when you come back on  
23      rebuttal, convince me that these large general  
24      service customers are not going to be freeloaders  
25      in the VVO pilot program --

1 A Okay.

2 Q -- to the extent you can.

3 The last and sort of the second part of  
4 this VVO pilot, where the dispute is between Staff  
5 and the Company is sort of the notice  
6 requirements, and Staff is requiring, you know,  
7 notice to go to every customer. Could that notice  
8 be included in the monthly bill?

9 A If there is room on the monthly bill.  
10 There are certain -- it's my understanding there's  
11 different bill messages that go out. It could be  
12 done that way. Or it could be done --

13 Q Right. I call them bill stuffers.

14 A Right.

15 Q If I open my electric bill, there's  
16 usually some feel-good notice in there from  
17 Rappahannock Electric Co-op that, you know,  
18 provides me what's the latest and greatest that's  
19 happening at the co-op. It's usually a one-page  
20 piece of paper, you know, slick, glossy  
21 photographs, you know, intended to make me feel so  
22 good about the fact that I'm receiving my electric  
23 service from Rappahannock Electric Co-op. Is that  
24 sort of a bill stuffer that APCo could include in  
25 its bill?



1           A       We certainly could.

2           Q       And are the costs for including such a  
3 bill stuffer exorbitant?

4           A       I don't know the answer to that. I  
5 don't think so.

6           Q       You can come back on rebuttal and just  
7 give me a flavor for that. You know, in my mind,  
8 I think there's -- I'm not convinced that every  
9 customer -- because the way this VVO operates, you  
10 know, it's basically narrowing the band of  
11 delivered electricity to consumers. So if I'm a  
12 consumer, I'm not going to notice that VVO was  
13 installed on my circuit.

14          A       That is correct.

15               HEARING EXAMINER: Because the  
16 electricity that's delivered to my house, my  
17 business, my large general service customer  
18 is still going to meet the parameters for  
19 operation -- or should meet the parameters  
20 for the operation of all the equipment in my  
21 house, my business, or my very large  
22 business.

23               So from a customer's perspective, I  
24 won't know it's doing anything for me. But it is  
25 potentially saving APCo from either having to

1 produce or buy additional electricity to serve the  
2 customers on that VVO circuit.

3 So in terms of notice, I'm not  
4 convinced, as I sit here right now, that it needs  
5 to go to every single customer. I think a bill  
6 stuffer would be appropriate in terms of that  
7 notice requirement.

8 And the last is customer -- the last  
9 piece of this is a customer service survey for the  
10 customers that are on the VVO circuits. And this  
11 may go to Staff Witness Blevins or Mr. Diebel. I  
12 don't know what type of questions you would ask in  
13 that type of survey. "You know, in the last year,  
14 while we've been doing this VVO pilot project on  
15 your circuit, you know, how many times did you  
16 lose power?" I don't know. "Or did you have  
17 power blips?"

18 You know, I'm served by Rappahannock,  
19 and there are a lot of times where the power blips  
20 at my house, and it's more due to weather than,  
21 you know, delivery or anything that's occurring on  
22 the circuit or other circuit interruptions.

23 So this may be for Mr. Diebel -- and he  
24 can address this in his rebuttal testimony -- is  
25 that I'm not convinced that there's a requirement

1 for customer service surveys at the end of this  
2 pilot project. I seem to agree with his  
3 recommendations, and if he would focus on those  
4 recommendations when he gets up on his rebuttal  
5 testimony. I just wanted to alert the parties of  
6 the concerns -- or the areas of interest that I am  
7 interested in hearing additional testimony on.

8 So, Mr. Nichols, thank you very much for  
9 your direct testimony. Look forward to hearing  
10 from you on your redirect. Thank you, sir.

11 THE WITNESS: Thank you, Your Honor.

12 (Witness excused.)

13 HEARING EXAMINER: Ms. Coates, Mr.  
14 Bacon?

15 MS. COATES: I note that, on your  
16 question about bill stuffers, I just texted a  
17 lifeline. I don't think Mr. Nichols will be  
18 able to answer that quickly, but I texted a  
19 question to APCo regulatory. And they don't  
20 know exactly, but it's not very costly. So  
21 it's something that might be able to be done  
22 rather cost efficiently.

23 HEARING EXAMINER: Ms. Coates, along  
24 with my two other foibles that I have, in  
25 that I don't like subsidies and I don't like

1 free riders, these Commission cases are  
2 costly, and I appreciate that. And those  
3 costs are ultimately passed on to consumers.  
4 So whatever I can do to improve efficiency,  
5 get the same data, or the right amount of  
6 data, worthwhile data, you know, I'm willing  
7 to pursue that.

8 But where we can save money, save  
9 consumers money -- Mr. Farmer -- I'm going to  
10 do whatever I can do to make that happen.

11 MS. COATES: We appreciate that.

12 HEARING EXAMINER: Ms. Coates, Mr.  
13 Bacon's testimony.

14 MS. COATES: Mr. Bacon, yes, Your  
15 Honor. Mr. Bacon's testimony consists of six  
16 pages and two schedules. I ask that that be  
17 marked as an exhibit and moved into the  
18 record. And all the parties have waived  
19 cross on Mr. Bacon.

20 HEARING EXAMINER: All right. Mr.  
21 Bacon's pre-filed direct testimony will be  
22 marked Exhibit No. 4 and accepted into the  
23 record.

24 (Exhibit 4 is marked and admitted.)

25 MS. COATES: Thank you, Your Honor.

1 And now the Company calls Mr. Brown to the  
2 stand.

3 (At this time, KEVIN BROWN takes the stand  
4 and is sworn by the bailiff.)

5 DIRECT EXAMINATION OF KEVIN BROWN

6 BY MS. COATES:

7 Q Good morning. Would you state your  
8 name, position, and address for the record.

9 A Hi. I'm Kevin Brown. I'm an energy  
10 efficiency and consumer program coordinator. My  
11 address is 500 Lee Street East, Suite 800,  
12 Charleston, West Virginia 25301.

13 Q Thank you. And did you cause to be  
14 filed on November 30th, 2020 twelve pages of  
15 direct testimony and one schedule and a summary  
16 page?

17 A Yes.

18 Q Do you have any corrections or changes  
19 to that testimony?

20 A No, I do not.

21 MS. COATES: With that, Your Honor,  
22 I ask that Mr. Brown's testimony be marked  
23 and moved into the record, subject to cross.

24 HEARING EXAMINER: All right. Mr.  
25 Brown's pre-filed direct testimony will be

1 marked Exhibit No. 5 and accepted into the  
2 record subject to cross-examination.

3 (Exhibit 5 is marked and admitted.)

4 MS. COATES: Thank you, Your Honor.

5 And with that, Mr. Brown is available for  
6 cross-examination.

7 HEARING EXAMINER: All right.

8 Mr. Farmer?

9 MR. FARMER: No questions, Your  
10 Honor.

11 MR. DOGGETT: Your Honor, Raymond  
12 Doggett for Commission Staff.

13 HEARING EXAMINER: All right, sir.

14 CROSS-EXAMINATION OF KEVIN BROWN

15 BY MR. DOGGETT:

16 Q Good morning, Mr. Brown.

17 A Good morning.

18 Q Have I appeared to you through the  
19 hearing room portal?

20 A Yes. Yes, you did.

21 Q All right. So I'm the attorney for the  
22 Commission Staff, and I just have a couple  
23 questions for you this morning on your direct  
24 testimony. Let me get you to turn to page 10, if  
25 you would.

1           A       Okay.

2           Q       All right. So I see in there you have a  
3 statement that, "The VVO pilot program provides  
4 the Company with an opportunity to verify the  
5 technology asset cost effectiveness and determine  
6 if such a program should be part of APCo's ongoing  
7 overall EE DR portfolio." Do you see that  
8 statement?

9           A       Yes, I do.

10          Q       All right. Well, what is it that needs  
11 to be learned about VVO to determine whether it  
12 should be part of APCo's plans going forward?

13          A       Well, part of an energy efficiency  
14 project, it has to pass three of the cost benefit  
15 tests. So with doing this as a pilot program, we  
16 can prove that this -- these circuits are  
17 repeatable and are able to pass three of the four  
18 tests, since we don't have -- no Virginia-specific  
19 data available to us.

20          Q       Great. Okay. Let's see. A little  
21 later on page 10 you have a statement that,  
22 "Testing of VVO has shown that equipment used by  
23 consumers can operate more efficiently when the  
24 voltages are closer to the design equipment."  
25 When you say can operate, does that mean it will

1 always operate more efficiently?

2 A So if you look at a lot of your voltages  
3 within a house, minus your pure resistance  
4 voltages such as like your oven resisters, your  
5 older incandescent light bulbs, most of your  
6 appliances operate most efficiently at  
7 approximately 115 volts. So not all of your  
8 appliances would operate at that efficiency,  
9 especially if it's more a hundred percent  
10 resistance; it would operate just like a normal  
11 type appliance.

12 Q Okay. So you mentioned ovens as maybe  
13 one of the exceptions. Is that something that,  
14 like, an electric oven might take longer to heat  
15 up under a VVO circuit?

16 A There would be nothing noticeable within  
17 an oven that a customer would notice. Because if  
18 you look at your ovens in the way that they're  
19 designed and your resistance elements within the  
20 oven, most of them are within a range of ohmage,  
21 and also within a range of wattage out there.

22 So they're designed to operate within a  
23 range of voltages, so it would not be noticeable  
24 to any customer that there was any change within  
25 that appliance.



1           Q       Okay. So you also mentioned light bulbs  
2 a second ago. Is there a chance that a homeowner  
3 on one of these VVO circuits would notice their  
4 light bulbs burning dimmer?

5           A       No, because when you look at the light  
6 bulbs and the way light bulbs are designed today,  
7 especially if they're going with an LED-type light  
8 bulb that's replacing a 60-watt incandescent with  
9 an LED-equivalent 9-watt light bulb, your total  
10 wattage on that, you're not going to notice any  
11 difference with your lumens coming out of that  
12 light.

13          Q       So you wouldn't expect someone to put in  
14 a bigger -- a brighter light bulb after being put  
15 on the VVO circuit; is that what you're saying?

16          A       I would not expect a customer to put in  
17 a brighter light bulb after being on a VVO  
18 circuit, no.

19          Q       Now, let's see. Around pages 10 and 11  
20 you have another statement that, "The VVO  
21 technology can provide annual savings estimated to  
22 be up to 3 percent." Do you see that number?

23          A       Yes.

24          Q       When you say "up to 3 percent," that  
25 means some people might save less; is that right?

1           A       That's correct. And that figure came  
2       from a pilot that we did in West Virginia based on  
3       a total of four circuits that we did.

4                    So when you look at the circuit itself,  
5       you would have some customers that would have  
6       minimal savings. But you would have other  
7       customers that would have greater than 3 percent  
8       savings, depending on what their initial voltage  
9       was on that circuit. So that's an average of the  
10      customers for that circuit.

11          Q       So since it's average, might there be  
12      some customers that don't save anything at all?

13          A       That would be a potential that some  
14      customers would not save anything at all if  
15      they're already close to that design voltage.

16          Q       All right. What are the chances some  
17      customers might see an increase in their monthly  
18      bill?

19          A       Very minimal. And the reason being is  
20      most circuits are designed to start out at a high  
21      voltage, and as they get to the end of the  
22      circuit, they go to the low voltage. So we would  
23      be operating in a more narrow span closer to the  
24      lower voltage of that circuit. So your customers,  
25      overall, should see a savings.

1 Q All right. And that estimated savings,  
2 does that account for any possible change in  
3 behavior of customers because of the VVO circuit?

4 A No. And we would not expect any change  
5 in conditions from customers out there.

6 Q Thanks. Last question, turning to page  
7 11, you have a statement that, "The Company  
8 anticipates the pilot will demonstrate that the  
9 results are predictable and repeatable." What  
10 sort of evidence will the Commission get that will  
11 demonstrate this?

12 A For each circuit, we would be running an  
13 EM&V on that circuit with different EM&V  
14 practices, and we would be able to show that the  
15 test -- that the VVO would pass three out of the  
16 four tests on a repeated basis.

17 Q Three out of four. And was that the  
18 same cost benefit tests I was talking to Mr.  
19 Nichols about earlier?

20 A Yes. But this would be after the fact;  
21 this would be actual results.

22 Q I see. And you're familiar with these  
23 tests?

24 A Yes.

25 Q Are you familiar with the participant

1 cost test?

2 A Yes.

3 Q And you know how it's calculated?

4 A I have an understanding on how it's  
5 calculated, but I would not be the expert on that.

6 Q All right. Well, then Mr. Diebel is the  
7 expert on that?

8 A That's correct.

9 MR. DOGETT: All right. I'll ask  
10 him.

11 Thank you, Your Honor. No further  
12 questions of this witness.

13 HEARING EXAMINER: All right.

14 Ms. Coates, any redirect?

15 MS. COATES: No, Your Honor.

16 HEARING EXAMINER: All right. Thank  
17 you, sir, for your testimony.

18 THE WITNESS: Thank you.

19 (Witness excused.)

20 MS. COATES: Your Honor, the Company  
21 has next the testimony of Mr. Shane Williams,  
22 which consists of three pages, a summary, and  
23 two schedules. And all parties have waived  
24 cross on Mr. Williams, so I ask that it be  
25 marked as an exhibit and moved into the

1 record.

2 HEARING EXAMINER: All right. Mr.  
3 Williams' pre-filed direct testimony will be  
4 marked Exhibit No. 6 and accepted into the  
5 record subject to cross-examination.

6 (Exhibit 6 is marked and accepted.)

7 MS. COATES: Thank you, Your Honor.  
8 Now I pass the baton to Mr. Biller.

9 MR. BILLER: Thank you, Your Honor.  
10 The Company calls Mr. David Diebel to the  
11 stand.

12 (At this time, DAVID S. DIEBEL takes the  
13 stand and is sworn by the bailiff.)

14 DIRECT EXAMINATION OF DAVID S. DIEBEL  
15 BY MR. BILLER:

16 Q Would you please state your name and  
17 business address for the record.

18 A David Diebel. My business address is  
19 3239 Ramos Circle, Sacramento, California 95827.

20 Q And by whom are you employed?

21 A ADM Associates.

22 Q And on November 30th, 2020, did you  
23 cause to be filed the pre-filed direct testimony  
24 consisting of 22 pages of question-and-answer  
25 testimony, a one-page summary, and seven

1 attachments?

2 A Yes, I did.

3 Q Do you have any changes or corrections  
4 to that testimony?

5 A I do not.

6 MR. BILLER: Your Honor, with that,  
7 the Company would ask that Mr. Diebel's  
8 direct testimony be marked and admitted  
9 subject to cross.

10 HEARING EXAMINER: All right.  
11 Mr. Diebel's pre-filed direct testimony will  
12 be marked Exhibit No. 7 and accepted into the  
13 record subject to cross-examination.

14 (Exhibit 7 is marked and admitted.)

15 MR. BILLER: Thank you, Your Honor.  
16 And Mr. Diebel's available for cross.

17 HEARING EXAMINER: Mr. Farmer?

18 MR. FARMER: No questions for this  
19 witness.

20 MR. DOGGETT: Raymond Doggett again,  
21 Your Honor.

22 HEARING EXAMINER: Whoever has the  
23 vacuum cleaner running...

24 MR. DOGGETT: I hear it, but it's  
25 not inside here. I'll mute off and mute back

1 on to see if that clears it up.

2 THE WITNESS: I hope that's not on  
3 my end.

4 HEARING EXAMINER: The sound is  
5 going down; they must have moved down the  
6 hall.

7 CROSS-EXAMINATION OF DAVID S. DIEBEL  
8 BY MR. DOGGETT:

9 Q All right. Morning, Mr. Diebel. This  
10 is Raymond Doggett from Commission Staff.

11 A Good morning.

12 Q How are you today?

13 A Well. Thank you.

14 Q I just have a couple questions about  
15 your pre-filed direct testimony. Let me draw your  
16 attention to, I guess, pages 15 through 17. I  
17 don't know that I have a specific quote for you to  
18 review, but it's the portion of your testimony  
19 where you're discussing the four standard tests of  
20 evaluating cost benefits of DSM programs. You did  
21 that for this case, didn't you?

22 A I did.

23 Q And on pages 21 and 22, you discuss your  
24 results of the four tests when applying to the  
25 seven DSM programs included in the petition. But

1 you didn't apply that test to the Volt VAR pilot  
2 program; is that right?

3 A That is correct.

4 Q And you were present in the virtual  
5 courtroom earlier when I asked Mr. Nichols; you  
6 didn't need to at this point; is that right?

7 A That's my understanding.

8 Q All right. But before a -- if VVO were  
9 to be converted from a pilot into a full-blown  
10 energy efficiency program, it would have to pass  
11 three of the four standard cost benefit tests,  
12 wouldn't it?

13 A That is my understanding.

14 Q All right. Under the Company's proposal  
15 for the pilot, do you know if affected customers  
16 on the circuits will be informed if they are  
17 participants?

18 A I understand that that's a subject  
19 matter of discussion in the proceeding today. I  
20 don't know the answer to that question.

21 Q All right. Would you accept, subject to  
22 check, that it's proposed that --

23 MR. BILLER: Your Honor, maybe if  
24 Mr. Doggett could direct us to where in his  
25 direct testimony we're talking about, that



1 might help the discussion.

2 MR. DOGETT: Actually, I don't need  
3 to know if he knows the answer to that  
4 question to ask my next one, Your Honor, so  
5 I'll move on.

6 HEARING EXAMINER: All right, sir.

7 Q You're familiar with how to calculate  
8 the participant cost test; is that correct?

9 A I am.

10 Q And in the pilot, if it's rolled out,  
11 there would be no cost to the participants on the  
12 VVO circuit; is that correct?

13 A It's my understanding there would be no  
14 direct cost, correct.

15 Q So in that case, with the participant  
16 cost test, the denominator would be zero; is that  
17 correct?

18 A Yes.

19 Q So the VVO wouldn't pass a participant  
20 cost test, if applied?

21 A That's not my understanding. How I've  
22 actually seen that applied in different  
23 jurisdictions is considering that to be passing  
24 the test; for instance, home energy reports and  
25 other behavioral programs may have no direct cost

1 to participants and yet those programs are  
2 typically considered to have passed the  
3 participant cost test.

4 Q All right. But in your pre-filed direct  
5 testimony, you established the formula as the  
6 denominator being the participant's cost?

7 A Yes.

8 Q And that cost is zero?

9 A Correct.

10 Q And so as a mathematical function, you  
11 won't pass that test.

12 A Well, table 3 in my testimony on page 22  
13 presents a table of the test results for the  
14 various programs proposed for the portfolio. And  
15 in the column for participant cost test, there are  
16 two programs, Home Energy Reports and Bring Your  
17 Own Thermostat, for which the same thing is true;  
18 there are zero participant costs.

19 And I've understood that various parties  
20 have interpreted that to mean that those programs  
21 have passed the participant cost test and hence  
22 passed three out of the four of the tests.

23 MR. DOGGETT: Thank you, Mr. Diebel.

24 That's all the questions I have for you.

25 Your Honor, that's all the questions.

1 HEARING EXAMINER: Any redirect, Mr.  
2 Biller?

3 MR. BILLER: No redirect, Your  
4 Honor.

5 HEARING EXAMINER: All right, sir.  
6 We thank you very much for your testimony,  
7 Mr. Diebel. We look forward to hearing you  
8 on redirect.

9 (Witness excused.)

10 HEARING EXAMINER: Ms. Coates, does  
11 that complete the Company's direct case?

12 MS. COATES: It does, Your Honor.  
13 Thank you.

14 HEARING EXAMINER: All right. Let  
15 me just make a statement for the record.  
16 There were no public witnesses that signed up  
17 to participate in the public witness hearing,  
18 so yesterday's public witness hearing was  
19 canceled on that account. And I just need to  
20 make that statement for the record.

21 And of course, parties have already  
22 alluded to it: Commission did receive  
23 written comments from the Virginia Department  
24 of Mines, Minerals & Energy, and those  
25 comments will be included in my report.

1 So with that, Mr. Doggett, or Mr. --

2 MR. DOGGETT: Yes, Your Honor.

3 HEARING EXAMINER: -- Mr. Skeens,  
4 Commission's case?

5 MR. DOGGETT: For the Commission's  
6 case, Your Honor, we'd like to call our first  
7 witness, Ruben S. Blevins.

8 (At this time, RUBEN S. BLEVINS takes the  
9 stand and is sworn by the bailiff.)

10 DIRECT EXAMINATION OF RUBEN S. BLEVINS

11 BY MR. DOGGETT:

12 Q Could you please state your name and  
13 position with the Commission.

14 A My name is Ruben S. Blevins. I am a  
15 utilities analyst with the Commission's Division  
16 of Public Utility Regulation.

17 Q Did you prepare pre-filed testimony for  
18 use in this proceeding?

19 A Yes.

20 Q Was that pre-filed testimony in the form  
21 of a one-page summary, 67 pages of questions and  
22 answers, 12 attachments, collectively entitled the  
23 pre-filed testimony of Ruben S. Blevins and filed  
24 on March 31st, 2021?

25 A Yes.

1 Q Did you also prepare and cause to be  
2 filed on May 11, 2021 corrected replacement pages,  
3 documenting corrections to four pages in your  
4 pre-filed testimony?

5 A Yes.

6 Q Do you wish to adopt those corrections  
7 to your pre-filed testimony?

8 A I do.

9 Q Could you briefly describe the  
10 corrections filed on May 11th.

11 A Yes. The corrected pages filed on May  
12 11th, 2021 amend my testimony to reflect that the  
13 Company has proposed to select six circuits for  
14 the VVO pilot. This changes Staff's  
15 recommendation regarding the plan evaluation  
16 measurement and verification, also known as EM&V,  
17 for the proposed pilot.

18 Where Staff previously recommended that  
19 the Company leave two of the four circuits  
20 selected for the pilot in a continual "on" state,  
21 Staff's corrected recommendation proposes that the  
22 Company leave three of the six circuits selected  
23 for the pilot in a continued "on" state.

24 Q Mr. Blevins, do you have any additional  
25 corrections to your pre-filed testimony?

1 A No.

2 Q If I were to ask you the same questions  
3 here today, would your answers be substantially  
4 the same?

5 A Yes.

6 Q Do you wish to sponsor this as your  
7 testimony in this proceeding?

8 A Yes.

9 MR. DOGGETT: Your Honor, may we  
10 have Mr. Blevins' testimony, as corrected,  
11 marked and entered into the record?

12 HEARING EXAMINER: All right. Mr.  
13 Blevins' pre-filed direct testimony as  
14 corrected will be marked Exhibit No. 8 and  
15 accepted into the record subject to  
16 cross-examination.

17 (Exhibit 8 is marked and admitted.)

18 MR. DOGGETT: Thank you, Your  
19 Honor.

20 Q Mr. Blevins, have you reviewed the  
21 Company's rebuttal testimony in this proceeding?

22 A Yes. I have reviewed the Company's  
23 rebuttal testimony. And for the most part, I  
24 stand by the findings and recommendations  
25 contained in my testimony. Staff finds that

1 certain alternatives presented by Company Witness  
2 Diebel with respect to the EM&V recommendations  
3 made by Staff could provide for more Robust EM&V  
4 initially planned by the Company. However, I  
5 maintain that Staff's recommended EM&V approaches  
6 may achieve more robust estimates of energy  
7 savings.

8 In addition, there are a few points  
9 raised in the Company's rebuttal that I would like  
10 to address to provide more clarity to the record  
11 on Staff's recommendations; specifically, matters  
12 concerning the proposed VVO pilot and the planned  
13 EM&V for the proposed pilot.

14 Q Mr. Blevins, does the Company's rebuttal  
15 indicate that there are areas of agreement between  
16 the Company and Staff with respect to the proposed  
17 VVO pilot?

18 A Yes. On page 2 of his rebuttal  
19 testimony, Company Witness Nichols states that the  
20 Company agrees that the proposed VVO pilot could  
21 meet the definition of an electric distribution  
22 grid modernization program. And moving forward,  
23 I'll refer to this as GridMod.

24 Q Has the Company identified any drawbacks  
25 to approval of the VVO pilot as a GridMod project?

1           A       The Company lists certain drawbacks,  
2       such as the need for additional filings that would  
3       delay implementation of the pilot by at least nine  
4       months. The Company also draws attention to the  
5       uncertainty regarding whether the energy savings  
6       achieved through a GridMod pilot would count  
7       towards the energy efficiency savings targets  
8       established for the Company by the Virginia Clean  
9       Economy Act.

10          Q       Do you have any comments with respect to  
11       the Company's concern that reclassifying the pilot  
12       as GridMod project would delay implementation by  
13       at least nine months?

14          A       Staff acknowledges that approval of the  
15       VVO pilot as a GridMod project may require  
16       additional filings and therefore may delay  
17       implementation of the pilot. Although Staff  
18       believes that the pilot could conceptually qualify  
19       as either an energy efficiency program or a  
20       GridMod project, the presence of large customers  
21       that are potentially exempt from paying for or  
22       participating in energy efficiency programs  
23       present issues in practice that weigh against  
24       classifying Volt-VAR as an energy efficiency  
25       program.



1           Q       You said that classifying the pilot as a  
2       GridMod project may require additional filings.  
3       Do you believe the Commission is precluded from  
4       approving the pilot in this case?

5           A       No, not necessarily. The purpose of the  
6       pilot is to gather information to answer questions  
7       prior to a broader rollout of a proposal. Staff  
8       believes that the Commission could approve the  
9       pilot as an energy efficiency project in this  
10      case, but one of the key questions that the pilot  
11      should seek to answer is whether Volt-VAR should  
12      be considered as an energy efficiency program or  
13      as a GridMod project on a going-forward basis.

14               MR. DOGETT: Your Honor, at this  
15      point, I'd like to turn the witness's  
16      attention to the hearing exhibits that we  
17      identified for use in this proceeding which  
18      have been marked in accordance with your  
19      prior ruling as Staff RB-1 and Staff RB-2.

20               Staff RB-1 is the Company's witness  
21      to Staff interrogatories, the set 9-75 to 77;  
22      while Staff RB-2 is a copy of a confidential  
23      attachment that was provided as part of those  
24      responses.

25               HEARING EXAMINER: I have those in

1 front of me.

2 MR. DOGGETT: Could we have them  
3 marked and entered into the record?

4 HEARING EXAMINER: All right. Staff  
5 RB-1 will be marked Exhibit No. 9 and  
6 accepted into the record subject to  
7 cross-examination.

8 (Exhibit 9 is marked and admitted.)

9 HEARING EXAMINER: Staff RB-2 will  
10 be marked Exhibit No. 10. And because that  
11 is confidential, it will be Exhibit 10 C, C  
12 for confidential.

13 (Exhibit 10 C is marked and admitted.)

14 MR. DOGGETT: Thank you, Your  
15 Honor.

16 Q Mr. Blevins, without revealing any of  
17 the confidential information in Exhibit 10 C,  
18 formerly Staff RB-2, could you explain generally  
19 what is revealed in these interrogatory responses?

20 A Yes. The Company's response to Staff  
21 interrogatory No. 9-75 displays the number of  
22 customers with a demand equal to or greater than 1  
23 megawatt, receiving the service on a circuit  
24 selected for the VVO pilot.

25 As shown in the Company's response to

1 Staff interrogatory No. 9-76, as of May 3rd, 2021,  
2 the proposed six Volt-VAR circuits -- for those  
3 proposed six Volt-VAR circuits, the Company has  
4 not received any notices of non-participation from  
5 customers on these circuits seeking an exemption  
6 from EE-RAC. As reflected in this confidential  
7 Exhibit 10 C, there are, however, large customers  
8 that potentially qualify for the exemption on  
9 certain circuits in the proposed pilot.

10 Should the Commission decide to approve  
11 the pilot and agrees with Staff that one of the  
12 purposes of the pilot should be to gather  
13 information on this question of how VVO should be  
14 going forward, the presence of large customers  
15 that could be exempt could have a direct impact  
16 and a type of EM&V should be performed on the  
17 pilot.

18 Q Mr. Blevins, in rebuttal, Company  
19 Witness Nichols suggests that it's not a valid  
20 concern about implementing VVO as an energy  
21 efficiency program, that it would potentially  
22 benefit customers who might be exempt from paying  
23 the EE-RAC. Does Staff agree?

24 A No. On page 5 of his rebuttal  
25 testimony, Company Witness Nichols explains that

1 customers who are exempt from an EE-RAC are  
2 customers that have demonstrated that they have  
3 made a proportionate investment in energy  
4 efficiency. Staff notes, however, that the types  
5 of energy efficiency investments undertaken by  
6 customers who may be exempt from an EE-RAC are  
7 demand-side management energy efficiency programs.  
8 In other words, such customers would have made a  
9 proportionate investment to customer-owned  
10 facilities.

11 The VVO pilot proposal under the EE  
12 statute is novel in that it entails supply-side  
13 management and capital investment in company-owned  
14 facilities. And according to the Company's terms  
15 and conditions, customers may not adjust or make  
16 changes to or, in other words, invest in  
17 company-owned facilities.

18 Thus, unlike any other EE program  
19 proposed before the Commission, exempt customers  
20 do not make proportionate or comparable  
21 investments in energy efficiency. Further, if the  
22 Commission approved broader rollout of EEO across  
23 the APCo system, this could be the first instance  
24 where exempt customers would potentially receive  
25 the benefits from an energy efficiency program

1 where not only do they avoid paying any  
2 participant costs but also do not pay for any  
3 program costs.

4 Q Mr. Blevins, in rebuttal, the Company  
5 states that, even if the VVO pilot were to be  
6 covered under a GridMod RAC, customers on other  
7 circuits would still be paying for that investment  
8 without receiving direct benefit. What are  
9 Staff's comments regarding this statement?

10 A Staff agrees that all rate payers would  
11 share the burden of cost associated with the pilot  
12 and that the pilot would directly benefit only the  
13 customers served by the selected circuits. Staff  
14 draws attention to the fact, however, that  
15 selected circuits from the VVO pilot serve all  
16 classes of customers, residential, commercial, and  
17 industrial.

18 Q Mr. Blevins, is it possible for the  
19 Company to exclude industrial customers with a  
20 demand greater than one megawatt from receiving  
21 the benefits from VVO technology if such a  
22 customer is served on a circuit in the VVO pilot?

23 A No, it is not. All customers,  
24 irrespective of size served by distribution  
25 circuit, will receive benefits from VVO

1 technology, should such a customer be served on a  
2 circuit with VVO installed.

3 Therefore, in Staff's opinion, as a  
4 practical matter, aside from income-based EE  
5 programs, customers that receive benefits should  
6 share in the cost. And so VVO pilot costs should  
7 be recovered from all customers and all customer  
8 classes and all customers within such classes.  
9 Therefore, in Staff's view, it may be more  
10 appropriate to treat VVO as a GridMod project and  
11 collect the cost of such via the GridMod RAC where  
12 no customers can be treated as exempt from  
13 paying.

14 Q Mr. Blevins, do you have any comments on  
15 the Company's concern that any energy efficiency  
16 savings from a GridMod project would not count  
17 towards energy efficiency saving targets under the  
18 VCEA?

19 A Yes. It has been clear to Staff that  
20 they're allowed to count or not. That is a legal  
21 question of first impression for the Commission to  
22 answer.

23 However, Staff does not believe that the  
24 determination of whether or not the energy  
25 efficiency savings counts towards the EE targets

1 should determine classification of the pilot as  
2 either an EE program or a GridMod project.

3 Q All right. Moving to the EM&V aspect of  
4 the proposed VVO pilot, in rebuttal, Company  
5 Witness Nichols asserts that it's not necessary to  
6 notify all customers on the pilot circuits in  
7 advance of implementation of the program. Does  
8 Staff agree?

9 A No. Staff believes transparency is  
10 important. Staff believes customers should be  
11 notified that they're on a circuit being used as  
12 part of a pilot program. Staff also believes that  
13 it is important to collect customer surveys at the  
14 conclusion of the pilot to gather valuable EM&V  
15 data on customer perceptions and any changes in  
16 customer behavior that may have occurred and that  
17 may have impacted energy savings achieved.

18 Q In rebuttal, Company Witness Nichols  
19 states that customer equipment will operate more  
20 efficiently to produce energy savings and that  
21 will be transparent to customers. Does Staff  
22 agree the energy savings will be transparent to  
23 customers?

24 A Without notifying customers of their  
25 indirect participation in the VVO pilot, it is

1       unclear to Staff how customers would attribute  
2       energy savings to the VVO pilot.

3           Q       Company Witness Diebel, in his rebuttal  
4       testimony, proposes, as an alternative to Staff's  
5       recommended customer survey sampling, a comparison  
6       study of meter-level variation and voltage  
7       magnitude between a VVO circuit and a non-VVO  
8       circuit prior to and after VVO enablement. What  
9       does Staff think of this alternative?

10          A       Staff finds Diebel's proposed  
11       alternative to be viable for observing variations  
12       in voltage magnitudes, which may provide insight  
13       on variations in service quality.

14                However, the proposed alternative does  
15       not provide for observations of change in customer  
16       behavior. Customer surveys are intended to serve  
17       a significant function of gauging changes in  
18       customer behavior resulting from the VVO pilot;  
19       therefore, Staff continues to recommend the  
20       customer survey approach.

21          Q       All right. Let me turn your attention  
22       to APCo's rebuttal on Staff's recommendation that  
23       the Company leave three of the six circuits  
24       selected for VVO in an "on" position for an  
25       extended period of time. Company Witness Diebel



1 suggests that's "it's possible to perform  
2 supplementary analysis to compare energy usage on  
3 a VVO circuit and a non-VVO circuit, even with  
4 employment of the on/off schedule as proposed in  
5 the pilot." Do you agree?

6 A No. If Volt-VAR is deployed more  
7 broadly throughout the Company's system, it will  
8 be left on all the time and will not cycle on and  
9 off as proposed in the pilot. Staff believes the  
10 pilot should model the actual way Volt-VAR will be  
11 deployed as a permanent program after the pilot is  
12 completed. In particular, observed changes in  
13 customer behavior and usage may be different if it  
14 is left on versus the on/off cycle approach.

15 Further, by leaving some circuits on for  
16 an extended period of time, this will allow the  
17 Company and Staff to perform the customer billing  
18 analysis of actual meter sales, comparing whether  
19 adjusted sales for the 12-month period before  
20 Volt-VAR was implemented to a 12-month period with  
21 Volt-VAR.

22 Q Why is it important to perform EM&V on  
23 actual metered sales data?

24 A Staff believes this data will assist the  
25 Commission in determining how much of the energy

1 efficiency savings are occurring at the customer  
2 meter versus how much is occurring upstream of the  
3 customer's meter. Staff believes this analysis  
4 will assist the Commission in determining whether  
5 Volt-VAR should be considered an energy efficiency  
6 program or a GridMod program going forward.

7 Q All right. Mr. Blevins, does that  
8 complete your surrebuttal testimony?

9 A Yes, it does.

10 MR. DOGETT: Your Honor, the  
11 witness is available for cross-examination.

12 HEARING EXAMINER: All right. Mr.  
13 Farmer?

14 MR. FARMER: Yes, Your Honor. Just  
15 a few questions.

16 CROSS-EXAMINATION OF RUBEN S. BLEVINS

17 BY MR. FARMER:

18 Q Good morning, Mr. Blevins. My name is  
19 John Farmer. I'm representing the Office of the  
20 Attorney General.

21 A Good morning.

22 Q I'll pick up, since you were just  
23 discussing the VVO pilot. So on page 46 of your  
24 pre-filed testimony -- I'll let you get that.

25 A Okay. I'm here.

1 Q Okay. And that's where you raise your  
2 concern with APCo classifying the VVO pilot  
3 program as an energy efficiency pilot rather than  
4 a grid transformation project, correct?

5 A Correct.

6 Q And mainly your concern is that large  
7 general service customers who may be exempt from  
8 paying for energy efficiency programs under the  
9 RAC might receive the energy efficiency of the  
10 pilot. Am I understanding that correctly?

11 A That is a concern, yes.

12 Q So on surrebuttal a moment ago, you were  
13 discussing Mr. Nichols' rebuttal testimony where,  
14 on page 5, he says that this isn't a concern  
15 because EE-RAC exempt LGS customers have already,  
16 in effect, paid for energy efficiency programs.  
17 Is that your understanding of Mr. Nichols'  
18 testimony?

19 A Yes.

20 Q Okay. And you testified on surrebuttal  
21 that Mr. Nichols' rebuttal doesn't allay your  
22 concern. Did I understand that correctly?

23 A Right.

24 Q Okay. And have you been in this virtual  
25 courtroom for the entirety of the hearing this

1 morning?

2 A Yes.

3 Q Have you heard anything else today that  
4 allays your concern regarding potentially exempt  
5 customers receiving benefits under the VVO pilot?

6 A Well, under the pilot, at this moment,  
7 there are not any customers that have applied for  
8 exemption from the EE-RAC.

9 Q Okay.

10 A It does mitigate certain concerns.

11 HEARING EXAMINER: May I ask a  
12 follow-up if you're not going to ask it, Mr.  
13 Farmer?

14 If they apply, a basis for the  
15 Commission's decision not to allow them an  
16 exemption, would part of that be that they  
17 are participating in a VVO pilot and then the  
18 Commission could deny their exemption for  
19 that reason?

20 THE WITNESS: My understanding from  
21 the rulemaking is that Commission Staff will  
22 review the applications, but the application  
23 process and the approval process is more of a  
24 process between the Company and the  
25 applicant.

1 HEARING EXAMINER: But it would be  
2 within the Commission's discretion to deny  
3 the application because they are  
4 participating in the VVO pilot?

5 THE WITNESS: I'm sorry; I don't  
6 know whether or not that's in the  
7 Commission's discretion at this time, if  
8 their participation in the pilot would  
9 disqualify customers applying for an  
10 exemption.

11 HEARING EXAMINER: Okay. Maybe  
12 that's a question to answer in post-hearing  
13 briefs. But you know, it is purely  
14 theoretical at this point whether any of  
15 these large general service customers will  
16 receive an exemption from the Commission.  
17 And that's troubling for a number of reasons.

18 But, you know, as I -- I have to  
19 decide the case on the evidence that I have  
20 in front of me today, not speculative  
21 evidence of what may or may not happen in the  
22 future. So I just point that out to the  
23 attorneys and the parties in this case and  
24 the witnesses in this case.

25 My apologies, Mr. Farmer; I will

1 allow you to proceed.

2 MR. FARMER: No problem. Thank you,  
3 Your Honor.

4 Q So Mr. Blevins, I'm going to shift gears  
5 a little bit. And if you would turn to page 29 of  
6 your pre-filed testimony.

7 A Okay. I'm there.

8 Q And this is under your discussion of the  
9 residential efficient products program. And in  
10 particular, on page 29, you began a discussion of  
11 APCo's inclusion of energy star pool pump measures  
12 in the program.

13 Mr. Blevins, could you describe what a  
14 pool pump measure is, if you're able to?

15 A Yeah. I'm not extremely familiar with  
16 exactly what the pool pump measure does, but it's  
17 my understanding that it's a necessary appliance  
18 for a pool.

19 Q Understood. So moving to the top of  
20 page 30 of your testimony, you say -- and I'll  
21 read what you say -- quote, "It may not be  
22 appropriate to extend the transfer of such  
23 benefits to luxury goods such as private pools.  
24 This would result in a transfer of benefits from  
25 lower income customers to a relatively small

1 subset of affluent customers; as such, it may be  
2 at odds with environmental justice  
3 considerations." Did I read that correctly?

4 A That is correct.

5 Q And do you stand by that testimony as  
6 you sit here today?

7 A I do.

8 Q Okay. And just curious: Do you happen  
9 to know how many dollars out of the proposed  
10 efficient products program budget are associated  
11 with pool pump measures specifically?

12 A I believe that figure could be  
13 calculated based on the cost benefit model, but I  
14 don't have that exact figure available to me right  
15 now.

16 MR. FARMER: Okay. Your Honor,  
17 that's all the questions I have. Thank you,  
18 Mr. Blevins.

19 HEARING EXAMINER: All right. Mr.  
20 Blevins, I think you sold me on the pool  
21 pump. But I appreciate that. All right.  
22 Mr. Blevins, thank you very much for your  
23 testimony.

24 MR. BILLER: Your Honor?

25 HEARING EXAMINER: I'm sorry.

1 Cross-examination?

2 MR. BILLER: Thank you, Your  
3 Honor.

4 CROSS-EXAMINATION OF RUBEN S. BLEVINS  
5 BY MR. BILLER:

6 Q Good morning, Mr. Blevins. I'm Timothy  
7 Biller on behalf of Appalachian Power Company  
8 today. I want to just touch on a few issues with  
9 you. I'm going to start on some of your testimony  
10 on EM&V.

11 So is it fair to summarize your  
12 testimony on EM&V as that Staff believes accurate  
13 EM&V is essential going forward in the energy  
14 efficiency programs generally?

15 A I think it may be better characterized  
16 as more robust and more accurate EM&V than what is  
17 provided for in the current Commission standards  
18 for EM&V, maybe essential due to the Virginia  
19 Clean Economy Act.

20 Q Okay. And in your testimony, you used  
21 the phrase "rigorous and accurate EM&V" and  
22 highlight the importance of this in verifying  
23 energy savings; is that right?

24 A What page is that on?

25 Q On page 4. You used the term a few



1 places, but if you turn to page 4, at the top,  
2 before the quote, line 3, you're just highlighting  
3 there that, "Staff believes rigorous and accurate  
4 EM&V of energy efficiency programs is an important  
5 consideration," correct?

6 A Correct.

7 Q And can you explain what you mean by the  
8 word "rigorous" in that context?

9 A Right. Well, I would defer to the  
10 Dominion dashboard case, Case No. PUR-2020-00156.  
11 I think that the best definition of rigorous, from  
12 Staff's perspective, will be litigated in that  
13 case.

14 Q Okay. But you've provided testimony in  
15 this case on -- extensive testimony on EM&V for  
16 APCo's programs, correct?

17 A Yes.

18 Q All right. So do you have an  
19 understanding of what you intended by the word  
20 "rigorous" in that context?

21 A Part of that would include billing  
22 analyses and would include less reliance upon  
23 deemed values.

24 Q Okay. And on page 11 of your testimony  
25 you state that it's Staff's opinion that there is

1 a relationship between rigor and accuracy; is that  
2 right?

3 A Yes.

4 Q What is Staff's opinion on this  
5 relationship? What is that based on? Is it  
6 specific studies of energy efficiency programs or  
7 academic studies? What's the basis for that  
8 opinion?

9 A I think it's just a general assumption  
10 that the more you observe any sort of measure, the  
11 more accurate the evaluation of the impact will  
12 be.

13 Q Okay. So it's more Staff's assumption.  
14 Okay. Thank you.

15 And in Staff's opinion, is there a  
16 relationship between rigor and cost?

17 A There would be a relationship, yes.

18 Q And is there a relationship between cost  
19 and accuracy?

20 A I don't know that that's definitively  
21 accurate. Typically, yes, that is the case.

22 Q But generally, for more rigorous  
23 studies, would Staff think that the costs would  
24 necessarily increase?

25 A I think that may be something that the

1 Company would have to advise on.

2 Q Okay. Well, in formulating your  
3 recommendations for EM&V, has the Staff given any  
4 consideration to the cost associated with the  
5 specific recommendations you make?

6 A Not with these recommendations.

7 Q Okay. So you haven't looked at what the  
8 cost would be on this. So backing up, is it still  
9 fair to say that you take issue with -- or raise  
10 concerns with some of the Company's EM&V plans  
11 that are proposed in this proceeding?

12 A Yes.

13 Q And if I can turn your attention to page  
14 26 of your testimony.

15 A Okay.

16 Q You highlight a concern that the, quote,  
17 "Deemed assumptions are not sampled and verified  
18 through the proposed EM&V plans." And you're  
19 talking about the portfolio as a whole, correct?

20 A Yes.

21 Q And you illustrate this concern with the  
22 deemed assumptions by discussing the commercial  
23 freezer measure?

24 A Right. That was an example.

25 Q Okay. And so on page 26 and 27, you

1 discuss that the technical resource manual that  
2 the Company used to put this together, that it  
3 relies upon a formula to calculate the baseline  
4 consumption of a commercial freezer?

5 A Correct.

6 Q And then on page 27, you say, quote, "At  
7 no point does the Company perform statistical  
8 analysis to verify the accuracy at which the  
9 formula" -- and I'll skip repeating the formula --  
10 "but the formula represents the daily usage of  
11 baseline commercial freezers in APCo's service  
12 territory."

13 A Right.

14 Q Do you know how the TRM derived the  
15 formula for baseline consumption of commercial  
16 freezers that's used in that?

17 A Well, which TRM does this come from?  
18 This may be -- I believe this is the Mid-Atlantic  
19 TRM. So yeah, I mean, there's a process for  
20 reviewing the assumptions and material.

21 Q Okay. And is it your understanding  
22 that, generally, assumptions like this for  
23 baseline usage in a TRM for something like a  
24 commercial freezer would be done based on an  
25 actual study of actual commercial freezers and

1 their energy usage?

2 A That would be true. However, that may  
3 be more broadly applicable to the Mid-Atlantic  
4 region but not specific to Virginia.

5 Q Okay. And so I take it your concern is  
6 that the Company doesn't plan to verify that  
7 commercial freezers in its service territory have  
8 consumptions similar to commercial freezers  
9 generally in the Mid-Atlantic region?

10 A Well, this was just an example, but  
11 generally, yes, that is a concern.

12 Q Okay. And just curiosity, you have used  
13 this as an illustrative example. Does Staff have  
14 a particular cause to be concerned that commercial  
15 freezers in APCo's service territory function  
16 differently or consume a different amount of  
17 energy than consumer freezers in the Mid-Atlantic  
18 generally?

19 A I would point to the Commission's  
20 direction that utility-specific and  
21 Virginia-specific data is preferred. And the  
22 extent to which that preference is applicable here  
23 may be reviewed in the Dominion dashboard case.

24 Q Okay. But we're talking about APCo's  
25 programs here.

1           A       Right. Yeah. So it's really just a  
2 preference for utility- and Virginia-specific  
3 data.

4                   HEARING EXAMINER: Mr. Biller, may I  
5 ask a question?

6                   MR. BILLER: Certainly, Your Honor.

7                   HEARING EXAMINER: And I hope you'll  
8 tell me at some point. This Mid-Atlantic  
9 TRM, what states are covered by the  
10 Mid-Atlantic TRM?

11                  MR. BILLER: I'd have to defer to --  
12 unless Mr. Blevins knows, I'd have to defer  
13 myself to Mr. Diebel.

14                  HEARING EXAMINER: All right.  
15 That's fine. You can defer. But you know,  
16 if there is a data-gathering organization  
17 that produces technical resource manuals for  
18 Virginia, Maryland, Pennsylvania, West  
19 Virginia, North Carolina, which is, you know,  
20 my understanding of what is typically called  
21 the Mid-Atlantic region, they gather this  
22 data and they produce a publication, and it  
23 says commercial freezers use X, I think the  
24 Commission can rely on that data-gathering  
25 source as long as it's reasonable; that we

1 don't have to somehow look behind that to  
2 say, "Well, how did they get to X?"

3 I mean, if it's something that's  
4 widely used, commercially available, I'm sure  
5 there's some other buzz words that are out  
6 there, that the Commission can rely on that  
7 and use that in its cases without having to  
8 incur additional expense and looking behind  
9 the numbers that they're publishing and that  
10 are widely available.

11 So leave it to Mr. Diebel to explain  
12 to me what's covered in the Mid-Atlantic  
13 region.

14 MR. BILLER: Certainly, Your Honor.

15 HEARING EXAMINER: My apologies for  
16 interrupting you.

17 MR. BILLER: Not a problem.

18 Q I'm going to move on to another issue,  
19 still on EM&V. In a few places in your testimony  
20 you suggest that the target sample size for the  
21 evaluation were developed by the Company's EM&V  
22 experts; 68 responses, in many instances, is too  
23 low. And then instead, a better target sample  
24 size is 100 responses; is that correct?

25 A That is correct.

1           Q       If you could turn to page 55 of your  
2 testimony.

3           A       Okay.

4           Q       Now, here you're just noting in around  
5 line 8 and 9 that APCo's evaluation experts  
6 targeted 68 participants based on the statistical  
7 confidence interval and statistical provision that  
8 that sample size would produce; is that correct?

9           A       That is correct.

10          Q       And so generally, just overall, for the  
11 evaluation, is it your understanding that that's  
12 generally the statistical targets that the  
13 Company's EM&V experts have set for evaluating  
14 these programs?

15          A       That's correct.

16          Q       And so with the sample size of a hundred  
17 participants, what's the confidence interval and  
18 the statistical precision that Staff is targeting  
19 with that 100 participant sample rather than the  
20 68 participants?

21          A       I haven't calculated such statistical  
22 precision and confidence interval. That  
23 recommendation is more so to recommend that the  
24 Company doesn't limit themselves to a sample size;  
25 that they should attempt to achieve as large of a



1 sample size as possible.

2 Q Okay. So there's nothing magical about  
3 the number 100; Staff's point is just the more  
4 respondents, the better?

5 A Correct.

6 Q Okay. So I guess just, more generally,  
7 we agree that Staff's overall position is that  
8 there's a need to have EM&V as accurate as  
9 possible for evaluating energy efficiency,  
10 correct? I think we discussed that earlier?

11 A Correct.

12 Q So to that goal, would Staff agree to  
13 take an active role in the stakeholder process to  
14 develop EM&V plans for these programs going  
15 forward?

16 A Well, my understanding is that the  
17 Virginia Code has designated that Staff take an  
18 active role in the stakeholder process.

19 Q And do you know, sitting here, has Staff  
20 raised concerns like you've raised here in those  
21 stakeholder processes and tried to work with a  
22 company and the other stakeholders to figure out  
23 the best and most accurate methods to incorporate  
24 in those EM&V plans before we get into this  
25 proceeding?

1           A       I haven't participated in the  
2 stakeholder process, so I can't speak to that.

3           HEARING EXAMINER: I think he  
4 asked -- the question was whether Staff has,  
5 and your answer was you haven't. So let's go  
6 back a step. Has Staff participated in a  
7 stakeholder process?

8           THE WITNESS: I have not  
9 participated in that process, so I don't have  
10 any understanding or any perspective on  
11 Staff's input in that process.

12           HEARING EXAMINER: But the question  
13 was whether Staff has participated in that  
14 process. Do you know whether Staff has or  
15 has not participated in the EM&V stakeholder  
16 process?

17           THE WITNESS: Right. I do not know.

18           HEARING EXAMINER: My apologies, Mr.  
19 Biller.

20           MR. BILLER: Not a problem, Your  
21 Honor.

22           Q       I'm going to move on to the VVO program  
23 and ask you a few questions there. So if you  
24 could turn back -- we were there earlier -- to  
25 page 46 of your testimony.

1           A       All right.

2           Q       And as you discussed with Mr. Farmer,  
3       here is where you note that Staff considers the  
4       VVO program to be a supply-side program, supply  
5       side management program; is that correct?

6           A       Correct.

7           Q       And so in this, you're highlighting --  
8       and you disagree by this -- with the Company's  
9       characterization of this as a demand-side  
10      management program, correct?

11          A       I'm sorry; could you repeat the  
12      question?

13          Q       Certainly. So generally, by calling it  
14      out as a supply side management program, Staff's  
15      disagreeing with the Company's characterization in  
16      a few places as the program as a demand-side  
17      management program, correct?

18          A       Yes. Correct.

19          Q       I don't want to put you on a lot of  
20      detail, but could you just give a brief overview  
21      of how VVO works in the energy efficiency context  
22      or at least in producing energy savings?

23          A       Well, the VVO technology allows the  
24      Company to supply service at a lower voltage;  
25      theoretically, this could achieve energy savings

1 for the customers; however, the management is  
2 occurring on the supply side.

3 Q So the management of the voltage is  
4 occurring on the supply side, correct?

5 A Right.

6 Q Do you have an understanding of where  
7 the actual energy savings are produced?

8 A Well, that is something that could be  
9 observed through the pilot, but my understanding  
10 is that there could be energy savings achieved  
11 through, for example, less line losses, and there  
12 may be energy efficiency achieved for the  
13 customers as well; that, to the extent to which  
14 the energy efficiency savings are occurring on the  
15 company side of the meter versus on the customer  
16 side of the meter, that would have to be measured  
17 through the pilot, and that's something that Staff  
18 would like to observe in this pilot.

19 Q Well, if I could, let me just direct you  
20 to the customer side of the meter. And energy  
21 savings on the customer side of the meter, you  
22 heard Mr. Brown -- did you hear Mr. Brown for the  
23 Company testifying about -- from questions from  
24 your Counsel, for various questions on different  
25 types of appliances and the energy savings that

1 could be achieved through different types of  
2 appliances; do you recall that?

3 A Yes.

4 Q And so your understanding is generally  
5 that there is some -- there is the potential that  
6 the VVO program would produce energy savings  
7 through how the customer's appliances utilize  
8 electricity?

9 A Right.

10 Q And that produces energy savings?

11 A Correct.

12 Q And so if it's the appliances producing  
13 energy savings, that's on the customer side of the  
14 meter, correct?

15 A Correct.

16 Q Okay. Let me move on to my next  
17 question. So on the large customer exemptions,  
18 we've talked about it a fair amount, but  
19 generally, Staff's concern is that there's  
20 potential that large customers that could be  
21 exempted from the EE-RAC could receive some energy  
22 efficiency benefits from the VVO program in the  
23 future?

24 A Correct.

25 Q And so, in essence, Staff would consider

1 those customers, to the extent that happened, as  
2 free riders under the program?

3 A Yes.

4 Q And so just as you mentioned in your  
5 surrebuttal, for the actual pilot program we're  
6 looking at here and you sponsored in what have  
7 been marked as Exhibits 9 and 10, which were some  
8 discovery responses from the Company, that the  
9 actual pilot circuits we're talking about, there's  
10 no exempt large customers at this point, correct?

11 A At this point, correct.

12 Q Okay. So at least for these pilot  
13 circuits, we don't have the concern at this time  
14 that there would be any large customer free  
15 riders?

16 A There is potential for customers that  
17 qualify for the exemption that they could apply  
18 for exemption over the course of a pilot. So  
19 there is that possibility and that concern  
20 stemming from that possibility. But at least as  
21 of now, given the fact that there aren't any  
22 customers that have applied for exemption, that  
23 concern is not relevant as of now.

24 Q Okay. And now to qualify for the  
25 exemption, is it your understanding that large

1 customers have to show that they've made  
2 investments in their own energy efficiency  
3 measures and that they can show verifiable  
4 savings?

5 A Yes.

6 Q Now, for large industrial customers,  
7 would your understanding be that one of the major  
8 categories they could invest in would be more  
9 efficient industrial equipment, equipment that  
10 they may use in manufacturing processes or in  
11 their business?

12 A I mean, I imagine that would be true,  
13 but I'm not extremely familiar with what measures  
14 they may implement or that would qualify them for  
15 exemption.

16 Q And at least in theory, if they did  
17 install more efficient appliances, is it potential  
18 that these customers, on their own, could achieve  
19 similar savings through utilization of energy that  
20 they might, without making those investments, they  
21 would get from the VVO program? In other words,  
22 they can install equipment that controls the  
23 electricity, how their equipment utilizes  
24 electricity to produce similar savings as VVO  
25 would produce, correct?

1           A       I mean, they can install measures that  
2 would achieve energy savings, that is correct.

3           MR. BILLER:   Okay.   No more  
4 questions, Your Honor.   Thank you, Mr.  
5 Blevins.

6           HEARING EXAMINER:   Any redirect?

7           MR. DOGGETT:   Yes, Your Honor; a  
8 couple points, if I may.

9           REDIRECT EXAMINATION OF RUBEN S. BLEVINS  
10 BY MR. DOGGETT:

11          Q       And let's see if I can pick them up in  
12 the right particular order here.   Mr. Blevins, you  
13 had a discussion with Counsel and the Hearing  
14 Examiner about the stakeholder process.   Do you  
15 recall that?

16          A       Yes.

17          Q       All right.   So does the Staff take  
18 direction from the Commission about EM&V from its  
19 orders?

20          A       Yes.

21          Q       So the Staff's not really in a position  
22 to bind the Commission in any stakeholder process,  
23 is it?

24          A       No.

25          Q       Do you know if this stakeholder process



1 is about the energy efficiency programs or  
2 specifically about EM&V?

3 A My understanding is that the stakeholder  
4 process is more so geared towards the design of  
5 EM&V programs -- or of energy efficiency programs.

6 Q Are you aware if the Commission's issued  
7 any orders that it expects regarding EM&V as to  
8 rigor or accuracy?

9 A Yes. Yeah, it's my understanding that  
10 the Commission is interested in more rigorous  
11 EM&V.

12 Q All right. Let me turn your  
13 attention --

14 HEARING EXAMINER: Let me be precise  
15 here: They're interested in it or have they  
16 demanded it? Or to be more precise, they're  
17 interested in it or have they ordered it?

18 THE WITNESS: They have not ordered  
19 it.

20 HEARING EXAMINER: Okay. Mr.  
21 Doggett, please continue.

22 Q Following up, I guess redirect on that  
23 question, Mr. Blevins, are you familiar with the  
24 Commission's order in the last EE-RAC involving  
25 Appalachian Power Company?

1 A Yes.

2 Q And wasn't there a statement in it as to  
3 the -- and if you don't know, you don't know; we  
4 can address this on briefing -- but are you aware  
5 of the Commission's statements towards EM&V for  
6 these EE-RACs going forward?

7 A Not off the top of my head. I am  
8 familiar.

9 MR. DOGGETT: That's fine. And Your  
10 Honor, obviously, the Commission's orders  
11 speak for themselves. And we'd be happy to  
12 include that in any briefing you would  
13 direct.

14 HEARING EXAMINER: Yes. Yes,  
15 please.

16 Q And turning to the other issue to  
17 discuss this morning, the possibility for large  
18 customers to file for exemption. Mr. Blevins, are  
19 you aware that the Commission had a rulemaking to  
20 govern how these large customers would seek  
21 exemptions from participating in energy efficiency  
22 programs?

23 A Yes. Yeah, I'm aware that there's a  
24 rulemaking.

25 Q Do you know if those rules were adopted

1 earlier this year?

2 A They were.

3 Q You don't know the case number or the  
4 rules number, do you?

5 A Not off the top of my head, no.

6 Q As far as your understanding of the way  
7 these rules operate, do the entity seeking  
8 exemption file those notices with the Company or  
9 with the Commission?

10 A They file them with the Company. I  
11 believe they go before a Staff at some point for  
12 Staff's review.

13 Q But a formal proceeding is not filed as  
14 far as you know; is that correct?

15 A No. No.

16 Q Are you aware of any large companies  
17 that have filed for notices of exemption in the  
18 Appalachian Power service territory since the  
19 April 1 start date?

20 A I'm not familiar with any specific  
21 companies.

22 MR. DOGGETT: All right, Your Honor.

23 I have no further questions on redirect for  
24 Mr. Blevins.

25 HEARING EXAMINER: All right. Mr.

1 Blevins, thank you very much for your  
2 testimony.

3 (Witness excused.)

4 MR. DOGGETT: Your Honor, our next  
5 witness is one that has been waived. It is  
6 the pre-filed testimony of Staff Witness  
7 Madhu Mangalam. She has pre-filed testimony  
8 consisting of -- I've lost it here.

9 HEARING EXAMINER: I got it. 24  
10 pages of questions and answers, schedules 1  
11 through 5, and appendices A through C. And  
12 there is confidential testimony in her direct  
13 file.

14 MR. DOGGETT: Yes, Your Honor. And  
15 one summary page.

16 HEARING EXAMINER: Right, and one  
17 summary page. The public version will be  
18 marked Exhibit No. 11. The confidential  
19 version will be marked Exhibit No. 11 C. And  
20 both are accepted into the record subject to  
21 cross -- no cross-examination because the  
22 parties have waived it.  
23 (Exhibits 11 and 11 C are marked and admitted.)

24 MR. DOGGETT: Thank you, Your Honor.  
25 That concludes Staff's case.

1 HEARING EXAMINER: All right. Why  
2 don't we take a short recess, five or ten  
3 minutes. Your preference, Ms. Coates.

4 MS. COATES: Ten minutes would be  
5 fine. Thank you.

6 HEARING EXAMINER: That's perfect.  
7 Ten minutes it is then. We'll resume at  
8 quarter till the hour.

9 MS. COATES: Thank you, Your Honor.

10 HEARING EXAMINER: Thank you.

11 (Recess from 11:33 a.m. to 11:44 a.m.)

12 BAILIFF: The Commission resumes  
13 this session.

14 HEARING EXAMINER: Thank you, sir.  
15 While we were away, I pulled the Commission's  
16 order in the previous case, the language that  
17 Mr. Doggett was looking at. And I'll quote  
18 it directly, "For future filings, we direct  
19 APCo to file in every future rate adjustment  
20 clause proceeding, under Code Section  
21 56-585.1 A 5, evidence of the actual energy  
22 savings achieved as a result of each specific  
23 program for which cost recovery is sought,  
24 along with revised cost benefit tests that  
25 incorporate actual Virginia energy savings

1 and cost data."

2 So with a little commentary from the  
3 Bench, you know, I would think that the  
4 Mid-Atlantic Technical Resource Manual is a  
5 manual that provides expected cost savings  
6 based on an average as opposed to actual cost  
7 savings; actual being what is observed in the  
8 field or what is observed in APCo's service  
9 territory.

10 So words have meaning, and the  
11 inclusion of the word "actual" at least, to  
12 me, means observed, which you would have to  
13 look at billing data and usage data to  
14 determine. For example, if I had a small  
15 business lighting program and that small  
16 business lighting was installed today, that  
17 in order to determine whether that small  
18 business lighting installation was affected,  
19 you would look at billing data for the  
20 previous 12-month period. So through --

21 MR. SKEENS: Excuse me, Your Honor?  
22 I apologize for interrupting you. Staff is  
23 having some trouble getting back into the  
24 room.

25 HEARING EXAMINER: Okay.

1 MR. SKEENS: If we could just pause  
2 for a moment, please.

3 HEARING EXAMINER: Will do.

4 Mr. Blevins, are you there?

5 MR. BLEVINS: I am, yes.

6 MR. SKEENS: I believe it's Mr.  
7 Doggett, specifically, Your Honor.

8 HEARING EXAMINER: You don't mess  
9 with the internet gods. You always leave  
10 your system on. Things were going so well.

11 MR. SKEENS: Right.

12 HEARING EXAMINER: You just walk out  
13 of the office, leave them with a blank  
14 screen.

15 Excuse me for a moment. I'll go  
16 check with my paralegal, Ms. Starkey, who's  
17 monitoring today's hearing.

18 (Recess from 11:48 a.m. to 11:51 a.m.)

19 MR. DOGGETT: All right. What did I  
20 miss?

21 HEARING EXAMINER: Mr. Doggett, for  
22 your benefit, I had pulled the Commission's  
23 order in the last APCo EE-RAC case, and I  
24 read into the record the requirement that, in  
25 effect, in every future EE-RAC case the

1 Company has to provide evidence of actual  
2 energy savings achieved as a result of each  
3 specific program for which cost recovery is  
4 sought, along with a revised cost benefit  
5 test that incorporate actual Virginia energy  
6 savings and cost data.

7 And I noted there's a difference.  
8 If you look at -- the Mid-Atlantic TRM is a  
9 document that would provide you with expected  
10 cost savings based on some historical average  
11 of, you know, equipment usage in the  
12 Mid-Atlantic region for commercial freezers.  
13 And I say expected. And there's a difference  
14 between expected and actual.

15 In my mind, actual means what is  
16 observed in APCo's service territory. So by  
17 using that term actual, you would then have  
18 to look at either billing data or consumption  
19 data to determine whether any savings have  
20 accrued. And I use the small business  
21 install program; if I have new LED lighting  
22 installed in my restaurant, that, you know,  
23 to determine whether there were any actual  
24 energy savings that accrued because of that,  
25 that you would have to look at the



1 previous -- a previous 12-month period and a  
2 future 12-month period, compare those two  
3 periods to see whether my energy usage has  
4 gone down because of the installation of LED  
5 lighting in my restaurant.

6 So you know, I always say words have  
7 meaning. And there's, you know, a difference  
8 between theoretical, expected, and actual.  
9 There are no senses in common between those  
10 words.

11 So I just wanted to note that before  
12 proceeding with the Company's rebuttal case.  
13 And I will allow the parties to brief that as  
14 well.

15 MR. DOGETT: Thank you, Your Honor.

16 MS. COATES: Thank you, Your Honor.

17 HEARING EXAMINER: No. Thank you.

18 All right. Ms. Coates?

19 MS. COATES: The Company is ready to  
20 present its rebuttal testimony and re-calls  
21 Mr. Nichols to the stand.

22 HEARING EXAMINER: Mr. Nichols, I'll  
23 advise you you're still under oath.

24 THE WITNESS: Yes, Your Honor.

25 DIRECT EXAMINATION OF

1 FRED D. NICHOLS, II ON REBUTTAL

2 BY MS. COATES:

3 Q Mr. Nichols, have you been listening to  
4 the testimony in this hearing today?

5 A I have.

6 Q Okay. I do have a few questions for  
7 you. First one, you heard the Hearing Examiner's  
8 concerns about notifying customers who would be  
9 part of the VVO pilot program. Do you have any  
10 thoughts about ways that we could cost efficiently  
11 notify customers?

12 A Well, it was mentioned at today's  
13 hearing that possibly bill inserts; that is one  
14 option. We haven't got a price on that yet. But  
15 another maybe more cost-effective option is a  
16 direct mail post card. I don't know if we can  
17 segment out bill inserts by circuit, but we  
18 certainly can do postcard mailings. And I think  
19 it would be very cost effective.

20 Q Thank you. Now, we had this  
21 back-and-forth between Staff about the exemption  
22 process. Could you explain, just give us a  
23 general overview of the exemption process for our  
24 larger customers?

25 A Okay. Yep. The opt-out rules recently

1 changed. So a customer has to submit to both us  
2 and the Commission Staff certain information. And  
3 there's quite a bit of information they have to  
4 provide. And it's really -- many of these things  
5 is the customer's sole responsibility to ensure;  
6 for example, that the savings are measured and  
7 verified.

8 So the Company will receive these. And  
9 we had nine accounts this past period -- nine  
10 customers with 15 accounts; I apologize. And so  
11 our role was to ensure that the customer provided  
12 everything that's in the rules, each piece that's  
13 required in the rules. And if they did, then we  
14 would accept the application. Or if they did not,  
15 we would reject it, and we would ask them -- we  
16 would show them where their deficiencies were.

17 Q Now, is it up to -- does the Commission  
18 have discretion to do what it wants to with these  
19 applications?

20 A Yes. As I recall in the rules, a large  
21 general service customer can be exempt from the  
22 EE-RAC if they can certify to the Commission or  
23 verify to the Commission that they have  
24 implemented energy efficiency programs at their  
25 own expense that have measured and verified

1 savings.

2 Q And you mentioned that we have nine  
3 customers that have opted out. Do you know if  
4 they're -- if they take service at the  
5 distribution or the transmission level?

6 A They were all transmission or primary.

7 Q Okay. Thank you. Now, moving on to  
8 another topic. Is there any evidence in the  
9 record that only rich people have pools in our  
10 service territory?

11 A No.

12 Q Thank you. Now, going back to the VVO  
13 program a little bit, where are the savings?  
14 Where are the savings realized with the -- where  
15 would they be realized?

16 A So Staff has characterized this as a  
17 supply-side management program, but the vast  
18 majority of the savings -- and that's what we saw  
19 in West Virginia -- and when I say vast, I mean  
20 almost all, and Mr. David Diebel might be able  
21 to -- hate to put him on the spot, but he may have  
22 some better information. But the vast majority of  
23 the savings is on the customer side of the meter.

24 Q Thank you. And one last question in  
25 general. When these customers seek exemption, are

1 there still benefits to the whole system from  
2 large customers and selling their own energy  
3 efficiency measures?

4 A There are. Because these customers have  
5 acted on their own to install energy efficiency  
6 measures at their cost, and so yes, all customers  
7 would benefit from that.

8 Q Thank you. And that's all my  
9 questions -- I forgot to ask you about your  
10 testimony, your actual rebuttal. Did you cause to  
11 be filed on April 23rd, 2021 seven pages of  
12 rebuttal testimony plus a summary page?

13 A Yes, I did.

14 Q Do you have any corrections or changes  
15 to that testimony?

16 A No corrections.

17 MS. COATES: Okay. Thank you. And  
18 with all that, I ask that your testimony be  
19 marked and moved into the record subject to  
20 cross.

21 HEARING EXAMINER: All right. Mr.  
22 Nichols' rebuttal testimony will be marked  
23 Exhibit No. 12 and accepted into the record  
24 subject to cross-examination.

25 (Exhibit 12 is marked and admitted.)

1 MS. COATES: Thank you. And with  
2 that, Mr. Nichols is available for  
3 cross-examination.

4 HEARING EXAMINER: Okay. Mr.  
5 Farmer?

6 MR. FARMER: Consumer Counsel has no  
7 questions, Your Honor. Thank you.

8 HEARING EXAMINER: All right.  
9 Commission Staff?

10 MR. DOGETT: Thank you, Your  
11 Honor.

12 CROSS-EXAMINATION OF  
13 FRED D. NICHOLS, II ON REBUTTAL  
14 BY MR. DOGETT:

15 Q Mr. Nichols, just a couple questions for  
16 you. Let's see; what's the right order to do  
17 this? We were just talking about exemption, the  
18 exemption process in the large customers. You  
19 review the notices you get from the customers  
20 according to the rules recently adopted by the  
21 Commission; is that right?

22 A Yes. We verify that the customer has  
23 provided the information.

24 Q And once you verify that, you start  
25 treating that customer as exempt and no longer

1 bill the EE-RAC to that customer?

2 A That would start July 1st.

3 Q You don't wait for a Commission order to  
4 start doing that?

5 A I don't know that there's anything in  
6 the rules about that.

7 Q So this --

8 HEARING EXAMINER: Mr. Doggett and  
9 Mr. Nichols, do the rules say that, if they  
10 provide all the information, they shall be  
11 exempt or do the rules say if you provide all  
12 the necessary information, you may be exempt?

13 THE WITNESS: I'm pretty sure it  
14 says they shall be exempt.

15 HEARING EXAMINER: Okay.

16 MR. DOGGETT: I would have to check,  
17 Your Honor. That's certainly one of the  
18 things that we can make clear on brief. I  
19 was just trying to make sure I understood  
20 what Mr. Nichols is telling us about his  
21 understanding of the process.

22 HEARING EXAMINER: Thank you.

23 THE WITNESS: That is my  
24 understanding. I'd have to say subject to  
25 check, but I'm pretty sure that's right.

1 MR. DOGGETT: Absolutely. We do  
2 that here often.

3 Q Let's see. So it's probably not covered  
4 in the rule, but I'm interested in what your  
5 reaction would be if the Commission issued an  
6 order in this case saying APCo, you shall not  
7 accept an exemption filed by any entity on a VVO's  
8 pilot circuit.

9 A You know, I think that would be in the  
10 Commission's discretion.

11 Q All right. Let's go back to your  
12 pre-filed rebuttal testimony then; just a couple  
13 questions here for you.

14 A Okay.

15 Q We've covered some of this, so it's  
16 going to get even shorter. One of your concerns,  
17 it sounded like, about treating VVO as a GridMod  
18 project is that you wouldn't get to count any  
19 energy savings towards the energy target under the  
20 Virginia Clean Economy Act; is that right?

21 A Yeah, I believe I stated that it was  
22 unclear whether or not we could do that, if it was  
23 a GridMod.

24 Q And you're talking about Code Section  
25 56-596.2, those targets on the Clean Economy Act?



1           A       I don't know the code number off the top  
2       of my head; sorry.

3           Q       That's quite all right. Would you  
4       accept, subject to check, that that code section  
5       ties those targets to reductions to average annual  
6       energy jurisdictional retail sales?

7           A       Correct.

8           Q       All right. Will the VVO pilot, as  
9       proposed, measure retail sales?

10          A       Yes. Absolutely.

11          Q       You're going to take meter sales at the  
12       customer level?

13          A       That's probably a question for  
14       Mr. Diebel, but it's my understanding we would  
15       take the measurements before and after at the  
16       station level.

17          Q       So if you're --

18          A       Or the circuit level.

19          Q       And if you're taking it at the circuit  
20       level, you're not going to get customer meter  
21       sales data, are you?

22          A       I'd have to leave that one to  
23       Mr. Diebel.

24          Q       Does VVO, as a technology, affect line  
25       loss?

1           A       Based on what we did in West Virginia,  
2       very, very little was line loss.

3           Q       So that was your experience in West  
4       Virginia about their system. But as a technology,  
5       that is one of the things that can result in  
6       energy efficiency, isn't it?

7           A       It could.

8           Q       The idea that you're producing less  
9       energy to provide the same amount of wattage.

10          A       No. The wattage would go down; that's  
11       where your savings is. But you're providing the  
12       voltage at a narrow bandwidth, and thus, get  
13       energy savings.

14          Q       All right. So providing the voltage at  
15       a narrower band, would you be able to cut down on  
16       line losses across the circuit?

17          A       If you do, it would be marginal.

18                   MR. DOGGETT: Thank you, Mr.

19       Nichols.

20                   Your Honor, no further questions.

21                   HEARING EXAMINER: All right. Mr.

22       Nichols, thank you very much for your  
23       rebuttal testimony.

24                   (Witness excused.)

25                   HEARING EXAMINER: Ms. Coates?

1 MS. COATES: I pass the baton back  
2 to Mr. Biller.

3 MR. BILLER: Thank you. The Company  
4 re-calls Mr. Diebel to the stand.

5 HEARING EXAMINER: Mr. Diebel, I'll  
6 remind you that you're still under oath.

7 THE WITNESS: Understood.

8 DIRECT EXAMINATION OF DAVID S. DIEBEL ON REBUTTAL  
9 BY MR. BILLER:

10 Q Please, just once again, state your name  
11 for the record.

12 A David Diebel.

13 Q And on April 23rd, 2021, did you cause  
14 to be filed rebuttal testimony consisting of eight  
15 pages of question-and-answer testimony and a  
16 one-page summary?

17 A I did.

18 Q And do you have any changes or  
19 corrections to that testimony?

20 A I do not.

21 MR. BILLER: Your Honor, with that,  
22 the Company would ask that Mr. Diebel's  
23 rebuttal testimony be marked and admitted  
24 subject to cross-examination.

25 HEARING EXAMINER: All right. It

1 will be marked Exhibit No. 13 and accepted  
2 into the record subject to cross-examination.

3 (Exhibit 13 is marked and admitted.)

4 Q Now, Mr. Diebel, have you been listening  
5 to the hearing this morning?

6 A Yes.

7 Q Did you hear earlier this morning when  
8 the Hearing Examiner was asking some questions  
9 about the VVO program and customer surveys?

10 A I did.

11 Q In your opinion, are there benefits to  
12 surveying customers in a program like the VVO  
13 program?

14 A So based on my review of information and  
15 understanding, I don't see incremental value to  
16 the evaluation of administering such a survey.  
17 Additionally, I think that to obtain the desired  
18 information regarding any incremental impact on  
19 perceived level of service or power quality  
20 associated with deployment of VVO, it would be  
21 necessary to not just survey customers associated  
22 with the VVO enabled circuits; it would also be  
23 necessary to survey customers that are associated  
24 with non-VVO enabled circuits so that the  
25 incremental difference between the two groups can

1 be assessed in terms of statistical precision of  
2 the associated estimate.

3 Q And in your opinion, that would be a  
4 fairly extensive survey process to do that?

5 A I think that a rather large sample size  
6 may be required to accomplish the objectives. And  
7 moreover, my sense is, based on my experience and  
8 review of the literature, that there is a low  
9 likelihood that there would be significant  
10 findings associated with that survey effort.

11 Q Okay. Now for evaluating the VVO  
12 program generally, is it -- are there ways to  
13 utilize customer meter data, such as if there's  
14 AMI data available?

15 A Yes.

16 Q And can you just briefly explain how  
17 that might work?

18 A Sure. So one way that VVO can be  
19 evaluated is by referencing the power and voltage  
20 data that is collected by equipment that is  
21 deployed along with the deployment and enablement  
22 of the VVO technology. An alternative is to use  
23 data that could be considered downstream from that  
24 equipment associated with the AMI customer meters  
25 for which there is also power and voltage data

1 available.

2           Based on the method outlined in the  
3 preliminary EM&V plan, we perform a statistical  
4 analysis using power and voltage data as inputs so  
5 that we can determine the relationship between the  
6 two and the incremental impact on power of changes  
7 and voltage. And we can accomplish that either  
8 with the data upstream, provided via the VVO  
9 technology, or downstream, provided via the AMI  
10 equipment.

11           Q       Thank you.

12           HEARING EXAMINER: Sorry to jump in.  
13 So if I could take this as your  
14 recommendation would be to do that, what  
15 you've just spoken about, as opposed to  
16 surveying customers, that the data that would  
17 be collected would be easier to obtain and  
18 then be more beneficial or more useful?

19           THE WITNESS: I tend to think that  
20 the data would be more beneficial and useful.  
21 One of the conceptual problems -- and I say  
22 conceptual problems because I don't have any  
23 observed data indicating that this has  
24 occurred -- is that voltage unbalance may  
25 occur, which is related to an increase in the

1 difference between phases of three-phase  
2 power, and that data can be assessed  
3 referencing this type of data.

4 HEARING EXAMINER: All right. Mr.  
5 Biller?

6 Q And so just to tie up that point -- and  
7 these are all methods that the Company could  
8 evaluate under this pilot program approach to  
9 determine how to best evaluate this, correct?

10 A Correct. And in fact, I would recommend  
11 concurrently performing both of those statistical  
12 analyses using both sets of data to identify and  
13 assess the differences between them so that an  
14 actionable recommendation can be made on that  
15 basis.

16 Q Okay. Thank you. Now, I had some  
17 discussion earlier with Staff Witness Blevins  
18 regarding EM&V for the commercial freezer measure.  
19 Do you recall that testimony?

20 A I do.

21 Q And the Hearing Examiner had a question  
22 about the Mid-Atlantic TRM. Could you just  
23 explain briefly what regions -- what states the  
24 TRM covers.

25 A My understanding is that the sponsors of

1 the Mid-Atlantic TRM are based in Maryland,  
2 Delaware, and District of Columbia. And I'll just  
3 note that this is, like TRMs across the country,  
4 managed by a technical advisory group or a  
5 stakeholder group that convenes for the purpose of  
6 reviewing the material in the TRMs.

7 Q And in using those -- well, let me back  
8 up. What other TRMs does APCo use to evaluate the  
9 programs? Is it only the Mid-Atlantic TRM or do  
10 you look to other TRMs as well?

11 A It is not only the Mid-Atlantic TRM, not  
12 least because not all TRMs are inclusive of the  
13 same list of measures. Certain measures may have  
14 been added to a specific TRM and not been  
15 propagated to other TRMs. This was a general  
16 point related to TRMs, that they essentially serve  
17 as a compendium of stand-alone work papers  
18 regarding different technologies.

19 And so in assessing which TRM to  
20 reference, we consider how recently the data has  
21 been updated, at times, the validity of the study  
22 associated with that measure work paper, and so  
23 on.

24 Q And when you're utilizing those TRMs, do  
25 you, at times, update certain input values when



1 it's appropriate to account for things such as  
2 climate change in the APCo service territory  
3 before you'd actually use it?

4 A Right. And before I answer that, I  
5 realize that I didn't respond to your last  
6 question. Other TRMs that we have referenced  
7 while evaluating APCo programs include the  
8 Illinois TRM and Pennsylvania TRM.

9 Q Thank you.

10 A So the TRMs, for certain measures, may  
11 present information that essentially is an  
12 engineering algorithm. And the engineering  
13 algorithm is associated with various inputs.

14 The inputs may be stipulated in the TRM  
15 based on some other study that was performed, say  
16 for instance, of commercial freezers. Or it may  
17 be left as a placeholder value to be populated  
18 based on the actual value verified by some party.

19 I make that distinction because the TRM  
20 is not simply a matter of providing a single  
21 deemed value that is applicable for a particular  
22 measure; it provides a method that may be  
23 referenced and informed by available data relating  
24 to the applicable climate zone and related to the  
25 specific measured characteristics, including

1 efficiency levels and capacity levels and so on.

2 Q Thank you. And now backing up generally  
3 for EM&V, can you discuss whether using billing  
4 data in all cases will provide actual evidence of  
5 energy savings?

6 A So I think it's commonly understood in  
7 the EM&V community that there are recognized  
8 guidelines related to the application of this  
9 method of analysis for the purpose of estimating  
10 energy savings. One of those is a recognized  
11 metric that the energy savings being measured  
12 should be equal to 10 percent or more of the  
13 baseline electrical load associated with the  
14 meter.

15 And that's related to what could be  
16 characterized as a signal to noise issue. So  
17 through the statistical analysis, which is a  
18 regression analysis, we are trying to identify the  
19 signal, the energy savings associated with an  
20 event in time that occurred, the installation of  
21 the measure. It is required that the signal  
22 associated with that event be of sufficient  
23 magnitude such that it's not getting swamped or  
24 covered over by other changes in energy use that  
25 may be occurring at a particular premise.

1           So for measures or projects for which  
2           energy savings is less than that 10 percent  
3           threshold, it would be inadvisable to perform that  
4           type of analysis for the purpose of estimating  
5           savings.

6           Q       So for instance, where it's a lower  
7           energy usage measure, that change in consumption  
8           might be overshadowed by the customer putting an  
9           addition on their house or installing an electric  
10          car charger or something like that; is that  
11          generally correct?

12          A       Yes. And there are written protocols  
13          that, you know, stipulate some of these  
14          considerations. And the determination of needing  
15          to perform a measure-specific approach versus  
16          using what could be characterized as a whole  
17          building approach to analyzing savings.

18          Q       And in your experience, you would think  
19          that, particularly for these smaller measures,  
20          would it be burdensome and costly to try to  
21          conduct surveys or whatnot to actually determine  
22          if customers have installed these additional  
23          measures that would sort of cloud out the actual  
24          energy savings from the actual measure?

25          A       And I'm sorry; just so I understand,

1 you're referring to this in which program context?

2 Q For a program that has a measure with  
3 less than the 10 percent consumption for the  
4 household, it would be costly and time consuming  
5 to try to determine on an individual,  
6 customer-by-customer basis if they have installed  
7 some other improvement to their house that's  
8 consuming more electricity than they're saving?

9 A Yes, I understand. And so we encounter  
10 this issue in trying to perform this type of  
11 energy use analysis, say, for a commercial  
12 industrial customer. We often need to inform the  
13 statistical model with additional information,  
14 like if there was a change in production or a  
15 change in schedules, say, they performed an annual  
16 inventory; you know, other things that could be  
17 quantitatively modeled within the statistical  
18 model. It would be expensive and logistically  
19 difficult to perform those types of enhancements  
20 for residential billing analysis.

21 Q Thank you. And just one final question:  
22 Do you know how much of the estimated energy  
23 savings in 2022 is attributable to pool pumps?

24 A 1.9 percent for the efficient products  
25 program.

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1 Q Okay. And that's just for that program?

2 Okay.

3 A Yes.

4 MR. BILLER: Thank you. No more  
5 questions on surrebuttal. He's available for  
6 cross.

7 HEARING EXAMINER: All right. Mr.  
8 Farmer?

9 MR. FARMER: No questions, Your  
10 Honor.

11 MR. DOGGETT: Raymond Doggett here,  
12 Your Honor.

13 CROSS-EXAMINATION OF DAVID S. DIEBEL ON REBUTTAL  
14 BY MR. DOGGETT:

15 Q Afternoon, Mr. Diebel. Just a couple  
16 final questions here for you, based upon what  
17 we've heard here in the virtual courtroom today.  
18 Were you listening when Mr. Nichols suggested I  
19 speak to you about questions regarding whether the  
20 current proposed pilot will measure retail sales?

21 A Yes.

22 Q What do you think?

23 A I think that if AMI data were being  
24 referenced, that we would be measuring retail  
25 sales.

1           Q       So you're going to get -- we'll be able  
2       to tell which customer experienced up to that 3  
3       percent in energy savings?

4           A       It is possible to perform  
5       customer-specific analysis of savings associated  
6       with this technology. And I would suggest that we  
7       perform that as one of the methods of analysis for  
8       this pilot.

9           Q       How does that 3 percent of savings match  
10      up with that 10 percent threshold you were just  
11      discussing with Mr. Biller?

12          A       I think it's a different statistical  
13      model. I think in one model we are attempting to  
14      model the relationship between voltage and power  
15      and there are not other factors that are  
16      significantly affecting the voltage power  
17      relationship; whereas, with the question  
18      of applying a statistical model to a customer's  
19      energy use to, say, estimate savings associated  
20      with a freezer, you have many other variables that  
21      are affecting energy use.

22                   So, essentially, going back to the  
23      concept of signal to noise ratio I mentioned in a  
24      previous response, the signal to noise ratio for  
25      the analysis of AMI data for the VVO pilot would

1 be significantly greater than the signal to noise  
2 ratio associated with attempting to estimate  
3 savings for the commercial freezer or a pool  
4 pump.

5 Q Were you involved in APCo's West  
6 Virginia pilot discussed earlier?

7 A I did not perform that analysis.

8 Q So you couldn't tell me how it was  
9 determined that the savings were on the customer  
10 side of the meter?

11 A I think that there are recognized  
12 estimates of line loss factors that can be applied  
13 to develop such estimates of savings that may be  
14 associated with places upstream, you know, from  
15 the customer meter.

16 Q So line losses, that would be supply  
17 side, wouldn't it? That would be on the utility  
18 side of the meter?

19 A That's correct.

20 Q So how would we determine that the  
21 savings were on the customer side of the meter  
22 then?

23 A Well, that's what I'm saying; if there  
24 were any applicable line loss factors that needed  
25 to be accounted for, those could adjust the

1 savings estimate associated with, you know,  
2 further upstream at the substation level.

3 Q I see. So you're saying back out the  
4 line loss --

5 A Correct.

6 Q -- savings from whatever your AMI  
7 analysis produces?

8 A Not the AMI analysis. This would be the  
9 analysis derived from analysis of the data  
10 provided by components of the VVO technology;  
11 there would be no such need to make an adjustment  
12 to savings values developed with AMI data.

13 MR. DOGETT: All right. Thank you.  
14 No further questions.

15 HEARING EXAMINER: Mr. Biller, any  
16 redirect?

17 MR. BILLER: No redirect, Your  
18 Honor.

19 HEARING EXAMINER: All right.  
20 Mr. Diebel, thank you very much for your  
21 testimony.

22 (Witness excused.)

23 HEARING EXAMINER: Does that  
24 conclude APCo's case.

25 MS. COATES: Yes, it does, Your



1 Honor.

2 HEARING EXAMINER: All right. Let's  
3 go off the record for a moment.

4 (Recess from 12:24 p.m. to 12:38 p.m.)

5 HEARING EXAMINER: After having had  
6 a discussion off the record concerning future  
7 filings in this proceeding, I am going to  
8 request that the parties file a joint issues  
9 statement on or before May the 27th outlining  
10 for me and the Commission the areas in which  
11 the parties agree and the issues where the  
12 parties disagree.

13 The parties are directed to focus  
14 their post-hearing briefs, which I'm  
15 requiring in this proceeding, to focus on the  
16 areas where there is a disagreement among the  
17 parties and to fully brief that. And also,  
18 if there are recommendations in those areas  
19 where there are disagreement, if there are  
20 alternative recommendations the parties would  
21 wish the Commission to consider, to include  
22 those alternative recommendations in their  
23 post-hearing brief.

24 Post-hearing briefs will be due 21  
25 days after the date that the transcript is

1 filed in this proceeding. I have requested  
2 an expedited transcript. I have asked the  
3 bailiff to inform me when the transcript is  
4 filed with the document control center. When  
5 he so informs me, I will have a member of my  
6 Staff inform all Counsel of record that the  
7 transcript is available.

8 The parties know the procedure after  
9 the post-hearing briefs are filed: I'll work  
10 on my report. I'll file my report.  
11 Typically, since this is a contested case,  
12 parties will have 21 days after the date I  
13 file my report to file comments, unless they  
14 wish some shorter period. If they do wish  
15 some shorter period for comments, they have  
16 to confer and provide that period to me as  
17 soon as practicable. Otherwise, they'll get  
18 21 days to file comments.

19 And the parties know that my report  
20 is advisory to the Commission; the Commission  
21 may accept, reject, or modify any of the  
22 findings or recommendations in my report.  
23 That's why I encourage, in all of my cases,  
24 for the parties to file comments to my  
25 report. I don't take those comments

1 personally.

2 As I like to interject humor in my  
3 cases, I don't read your comments. After I  
4 file my report, I lose jurisdiction of the  
5 case, and I feel it is an exercise in  
6 futility for me to spend the time reading  
7 your comments. I will read them if the  
8 Commission does remand the case to me.

9 So with that, is there anything  
10 further to come before the Commission,  
11 Ms. Coates?

12 MS. COATES: No, Your Honor.

13 HEARING EXAMINER: Mr. Farmer?

14 MR. FARMER: Nothing from Consumer  
15 Counsel.

16 HEARING EXAMINER: All right. Mr.  
17 Doggett?

18 MR. DOGGETT: Nothing further, Your  
19 Honor.

20 HEARING EXAMINER: All right. There  
21 being nothing further to come before the  
22 Commission, I'll close the record in this  
23 proceeding. I'll take the matter under  
24 advisement. And I will work expeditiously to  
25 get a report out to the Commission in this

1 matter.

2 Thank you all very much. And  
3 hopefully, in July, we'll be back to  
4 in-person hearings, provided everyone has  
5 been vaccinated. So see you then.

6 (Hearing concluded at 12:42 p.m.)

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CERTIFICATE OF REPORTER

I, Ruth A. Levy, RPR, do hereby certify that the proceedings were heard before me in the State Corporation Commission remote hearing herein; further that the foregoing is a true and accurate record of the testimony and other incidents of the remote hearing herein; and that I am neither counsel for, related to, nor employed by any of the parties to this case and have no interest, financial or otherwise, in its outcome.

Given under my hand, this 20th day of May, 2021.



Ruth A. Levy, RPR

Notary Public, Commonwealth of Virginia  
My Commission Expires August 31, 2022  
Notary Registration No. 224511