

**In the Matter Of:**

In Re: RMP - Sustainable Transportation and Energy Plan Act

**HEARING PROCEEDINGS, DOCKET NO. 16-035-36**

*November 30, 2016*

*Job Number: 342069*

1 BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

2

3 In the Matter of the Application ) Docket No. 16-035-36  
4 of Rocky Mountain Power to )  
5 Implement Programs Authorized )  
6 By the Sustainable Transportation )  
7 and Energy Act )

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HEARING PROCEEDINGS

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9 TAKEN AT: Utah Public Service Commission  
10 Hearing Room 451  
11 160 East 300 South  
12 Salt Lake City, Utah  
13 DATE: November 30, 2016  
14 TIME: 9:00 a.m.  
15 REPORTER: Mary R. Honigman, R.P.R.

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Job Number: 342069

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PROCEEDINGS

CHAIRMAN LEVAR: Good morning. We're here for Public Service Commission Docket 16-035-36 in the Matter of the Application of Rocky Mountain Power to implement programs authorized by the Sustainable Transportation and Energy Plan Act. This is the hearing on Phase One of this docket and as noticed in the schedule. Why don't we start with appearances. For the Utility?

MR. SOLANDER: Thank you, Chairman LeVar. Daniel Solander, representing Rocky Mountain Power. I have with me at counsel table Steve McDougal, who will be one of the Company's witnesses today.

MR. JETTER: Good morning. I'm Justin Jetter, and I'm here representing the Utah Division of Public Utilities today. With me at counsel table is Division witness Bob Davis, and the Division also intends to call David Thomson as an additional witness today.

MR. OLSEN: Rex Olsen on behalf of the Office of Consumer Services. And at the table with me is Bela Vastag, and we will also be calling Danny Martinez and Cheryl Murray as well.

CHAIRMAN LEVAR: Okay. Thank you.

1 Ms. Hayes?

2 MS. HAYES: Good morning. Sophie  
3 Hayes on behalf of Utah Clean Energy, and we will be  
4 calling Ms. Sarah Wright as our witness.

5 CHAIRMAN LEVAR: Thank you.

6 MS. GARDNER: Good morning. Jennifer  
7 Gardner representing Western Resource Advocates, and  
8 we will be calling Kenneth Wilson as our witness.

9 CHAIRMAN LEVAR: Thank you. That  
10 appears to be all the appearances we have this  
11 morning. Does anyone have any preliminary matters  
12 before we move on with the Utilities presentation?  
13 Mr. Solander?

14 MR. SOLANDER: I just have a  
15 question. We filed with the application several  
16 exhibits that aren't necessarily part of the Phase  
17 One proceeding, so I don't know if it's cleaner to  
18 enter the application and all of the exhibits into  
19 the record or if you would like me to, as we go  
20 through, move the exhibits that correspond to the  
21 individual witnesses' testimony today.

22 CHAIRMAN LEVAR: That might be the  
23 cleanest way to go because look around the room and  
24 see if any other party wants to weigh in on the  
25 issue. I'm not seeing that anybody has any

1 preference, but since we have some testimony that is  
2 not relevant to today's hearing, it might be cleaner  
3 just to introduce them as the witnesses present  
4 them. Any other preliminary matters? Okay.

5 Mr. Solander.

6 MR. SOLANDER: Rocky Mountain Power  
7 would like to call Ian Andrews as its first witness  
8 in support of the Clean Coal Research Projects.

9 IAN ANDREWS,  
10 having been first duly sworn to tell the truth, was  
11 examined and testified as follows:

12 EXAMINATION

13 BY MR. SOLANDER:

14 Q. Good morning, Mr. Andrews.

15 A. Good morning.

16 Q. Could you please state and spell your name  
17 for the record.

18 A. My name is Ian Andrews. I-a-n  
19 A-n-d-r-e-w-s.

20 Q. And by whom are you employed?

21 A. Rocky Mountain Power. I'm the director of  
22 resource development.

23 Q. And as the director of resource  
24 development, did you prepare and file in this  
25 proceeding direct testimony and Exhibit B to the

1 **Company's application which it titled The Clean Coal**  
2 **Program?**

3 A. I did.

4 MR. SOLANDER: At this time, I'd move  
5 that the prefiled testimony of Mr. Andrews and  
6 Exhibit B to the Company's application be moved into  
7 the record.

8 CHAIRMAN LEVAR: I'll ask anyone who  
9 has an objection to that motion to indicate to me.  
10 I'm not seeing any, so that motion is granted.

11 MR. SOLANDER: And I'd also move the  
12 entry of the application into the record as well.

13 CHAIRMAN LEVAR: I'll ask if anyone  
14 has any opposition to that, and I'm not seeing any  
15 so that motion will be granted also.

16 BY MR. SOLANDER:

17 **Q. After you filed the testimony in this**  
18 **proceeding, did you have to opportunity to**  
19 **participate in technical conferences with the**  
20 **parties?**

21 A. We did. We had a technical conference on  
22 October 18 on the two topics we'll discuss today.

23 **Q. And at the end of that technical**  
24 **conference, did you believe that there were any**  
25 **outstanding questions from the parties that have yet**



1 **to be answered?**

2 A. I believe we answered all the questions  
3 that were asked.

4 **Q. And have you prepared a summary of your**  
5 **testimony that you would like to share with the**  
6 **Commission?**

7 A. I have.

8 **Q. Please, proceed.**

9 A. I apologize for reading this, but I don't  
10 want to miss any points. So pursuant to our STEP  
11 legislation, the Company is requesting approval to  
12 apply \$5 million in STEP funding over a five-year  
13 period to investigate, analyze and research clean  
14 coal technology.

15 As defined in the legislation, clean coal  
16 technology means a technology that may be  
17 researched, developed, or used for reducing  
18 emissions or the rate of emissions from a thermal  
19 electric generating plant that uses coal as a fuel  
20 source. To meet that objective, the Company  
21 proposes to allocate these funds across a number of  
22 projects that focus on the capture, reduction, and  
23 sequestration of carbon dioxide and the reduction of  
24 nitrogen oxides, also known as NOx.

25 Funding will go toward these specific

1 projects that will be performed or assisted by Utah  
2 universities, Utah technology firms that process  
3 woody waste and CO2 capture technologies that may  
4 result in lower capture costs in comparison to  
5 traditional methods.

6           The selected projects are intended to meet  
7 multiple objectives. And these are the four  
8 objectives: To demonstrate projects that result in  
9 measurable emission reductions; to invest in  
10 promising technologies and applications that may  
11 advance technologies when fully developed and  
12 applied at utility scale that will allow for coal  
13 for our generating resources to operate with reduced  
14 carbon dioxide emissions; provide funding and  
15 opportunities for industry targeted areas of  
16 research that can be performed by Utah's  
17 universities; and to promote Utah's clean energy  
18 technologies.

19           We have seven projects that are proposed  
20 under the Clean Coal Research Program. The two that  
21 I'll discuss today -- which were the Phase One  
22 projects that we submitted on our October 18  
23 meeting -- are the application of a neural network  
24 control system at Huntington Unit 2 for the  
25 reduction of NOx and the implementation of a utility

1 scale demonstration of an alternative for decreasing  
2 NOx emissions without the use of Selective Catalytic  
3 Reduction System, also known as an SCR. Both of  
4 these projects were presented at our technical  
5 conference on October 18th.

6           The first project I'd like to discuss  
7 briefly is approximately a \$1 million project that  
8 would be applied over the five-year period, and that  
9 is for an advanced neural network control system at  
10 Huntington Unit 2. For this project, it is proposed  
11 to install a neural network optimization control  
12 system on that unit with the objective of targeting  
13 NOx reductions followed by a reduction in other  
14 emissions associated with combustion. Subsequent to  
15 this effort will be an additional objective to  
16 balance those reductions with unit efficiency  
17 improvements. Along with combustion optimization,  
18 there are other plant processes that may benefit  
19 from a neural network optimization system. For this  
20 project, the University of Utah will partner with  
21 Rocky Mountain Power and the software provider to  
22 install, demonstrate, and fundamentally research  
23 artificial intelligence technology to improve  
24 emissions from this unit. If successful, this would  
25 be applicable to similar boilers at the Hunter and

1 Huntington plants.

2           The second project that we're proposing is  
3 approximately a \$1.4 million project for utility  
4 scale demonstration of alternative NOx emission  
5 control technologies. This particular clean coal  
6 research project is proposed to perform one or more  
7 slipstream or full-scale demonstration tests of one  
8 or more NOx emission control technologies at the  
9 Huntington plant. The objective of this test  
10 program will be to determine if there are one or  
11 more emerging NOx control technologies, either on a  
12 standalone or combined basis, that could achieve NOx  
13 emission rates similar to those expected with an SCR  
14 system and at lower cost. The STEP Clean Coal  
15 research monies would be used to fund all or a  
16 portion of these NOx emission demonstrations.

17           In order to identify which technologies  
18 will be tested, a request for proposal process will  
19 be conducted in calendar year 2017. Criteria that  
20 will be used for the technologies will include: An  
21 assessment of whether the technology can be  
22 installed at full-scale; previous operational  
23 experience; permitting impacts; economics; an  
24 assessment of the long-term reliability of the  
25 technology; and the ability of the underlying

1 technology company to provide commercially viable  
2 performance warranties or guarantees. Prior to the  
3 distribution of the RFP, a request for information  
4 would be issued to determine levels of interest,  
5 identify technology consolidation or partnering  
6 companies, and prepare a short list of potential  
7 technology providers for the RFP.

8 So that summarizes the two projects we  
9 have in mind.

10 **Q. Does that conclude your testimony?**

11 A. It does.

12 **Q. Thank you. Mr. Andrews is available for**  
13 **questions from the Commission or the other parties.**

14 CHAIRMAN LEVAR: Thank you.

15 Mr. Jetter?

16 MR. JETTER: No questions for the  
17 Division. Thank you.

18 CHAIRMAN LEVAR: Mr. Olsen?

19 MR. OLSEN: No questions from the  
20 Office.

21 CHAIRMAN LEVAR: Ms. Hayes?

22 MS. HAYES: No questions. Thank you.

23 CHAIRMAN LEVAR: Thank you.

24 Ms. Gardner?

25 MS. GARDNER: No questions.

1 CHAIRMAN LEVAR: Commissioner White,  
2 do you have any questions?

3 COMMISSIONER WHITE: I don't now, but  
4 are we going to have an opportunity for potential --  
5 I mean, I guess part of the question with respect to  
6 some of the clean coal technology OMAG costs, I just  
7 want to make sure that we have the right or the  
8 ability if necessary to come back to --

9 CHAIRMAN LEVAR: Is there any  
10 objection to keeping the witnesses in the room  
11 throughout the hearing if there's any need for  
12 further questions?

13 MR. SOLANDER: Absolutely not. Thank  
14 you.

15 CHAIRMAN LEVAR: Okay. So do you  
16 have any questions at this point?

17 COMMISSIONER WHITE: No, I don't.  
18 Thanks.

19 CHAIRMAN LEVAR: Commissioner Clark?

20 COMMISSIONER CLARK: No questions.

21 CHAIRMAN LEVAR: I don't either.  
22 Thank you, Mr. Andrews. And if we have questions  
23 later, we'll ask you to return. Mr. Solander?

24 MR. SOLANDER: Thank you. Rocky  
25 Mountain Power would call Mr. Douglas Marx in

1 support of the Utah Battery and Solar Project.

2 DOUGLAS MARX,

3 having been first duly sworn to tell the truth, was

4 examined and testified as follows:

5 EXAMINATION

6 BY MR. SOLANDER:

7 Q. Good morning.

8 A. How are you doing?

9 Q. Well, thank you. Could you please state  
10 your name and spell it for the record.

11 A. Douglas Marx. D-o-u-g-l-a-s and M-a-r-x.

12 Q. And by whom are you employed and in what  
13 capacity?

14 A. I'm employed by Rocky Mountain Power. I'm  
15 the director of engineering standards and technical  
16 services.

17 Q. And as the director of engineering  
18 standards and technical services, did you prepare a  
19 testimony and a confidential Exhibit D that were  
20 filed in this docket?

21 A. I did.

22 Q. Do you have any corrections or additions  
23 to your testimony or the exhibit at this time?

24 A. I do not.

25 MR. SOLANDER: I'd like to move the

1 admission of Mr. Marx's testimony and confidential  
2 Exhibit D, which was labeled as Solar and Energy  
3 Storage Program.

4 CHAIRMAN LEVAR: I'll ask any party  
5 that objects to that to indicate to me. I'm not  
6 seeing any so that motion is granted.

7 BY MR. SOLANDER:

8 Q. Thank you. And, Mr. Marx, did you have  
9 the opportunity to prepare a summary of your  
10 testimony that you'd like to share with the  
11 Commission today?

12 A. I did, yes.

13 Q. Please proceed.

14 A. Pursuant to the STEP legislation, the  
15 Company is requesting authorization to use \$5.5  
16 million of the STEP funding to install a stationary  
17 battery system, to be installed on the 12.5 kilovolt  
18 distribution circuits connected to a Company-owned  
19 substation in Utah. In addition, the company  
20 proposes to utilize an additional \$1.95 million from  
21 Blue Sky community funds to install a large-scale,  
22 company-owned solar project in conjunction with the  
23 battery installation. The battery storage and solar  
24 technology is expected to defer or eliminate the  
25 need for traditional capital investments and will



1 reduce the loading on the distribution power  
2 transformer, improve voltage conditions, and  
3 mitigate costs associated with connection on the 69  
4 kilovolt bus at the substation.

5           The program will provide a number of  
6 benefits to the Company's customers, particularly  
7 those in the immediate area of the project. The  
8 benefits include: (1) Reducing load on the  
9 distribution power transformer at the substation,  
10 ensuring the voltage in the area does not drop below  
11 ANSI standards; (2) providing high-speed reactive  
12 power support to ensure load rejection in the area  
13 does not impact voltage levels; (3) deferring the  
14 need for traditional capital investment in the form  
15 of poles and wires; (4) enabling the Company to  
16 obtain firsthand operational experience with control  
17 algorithms and efficiency levels associated with  
18 energy storage and in combination with solar;  
19 (5) enabling the Company to become familiar with and  
20 utilize innovative technologies to provide customers  
21 with solutions to power quality issues; and last,  
22 providing an opportunity for the Company to meet  
23 requests from its Blue Sky customers for physical  
24 "steel in the ground" renewable facilities in the  
25 form of solar generation. The Company anticipates

1 that it will implement similar projects in the  
2 future, and its experience with battery storage and  
3 solar will continue to provide dividends by giving  
4 the Company experience with and the opportunity to  
5 implement future projects more efficiently.

6 There are no limitations or risks to the  
7 applicability or technological feasibility of the  
8 battery/solar solution for this project. This is a  
9 solution that continues to mature and has been  
10 proven in many installations across the country.  
11 Due to the lack of operational data available at the  
12 time of the project proposal, the only uncertainty  
13 with this solution is the total number of operations  
14 that will be required of the battery on an annual  
15 basis.

16 Since the initial study, Rocky Mountain  
17 Power has completed the installation of appropriate  
18 metering at the substation, and continuous data will  
19 soon be available. While only limited data is  
20 available for 2016, full data will become available  
21 during 2017 and beyond, prior to the installation of  
22 the battery. The new metering will provide all of  
23 the required data for proper determination of the  
24 battery operational metrics.

25 The Company consistently implements

1 reliability and power quality enhancements on its  
2 transmission and distribution systems to mitigate  
3 operational and performance problems. Recognizing  
4 that energy storage and renewable energy will be  
5 major contributors to grid modernization, the  
6 Company has identified a logical location to pilot a  
7 range of technologies -- battery storage and solar,  
8 metering, et cetera. This project enables us to  
9 correct a voltage issue for our customers in the  
10 area using an innovative technology in lieu of  
11 traditional infrastructure and concurrently provides  
12 a platform to objectively study and enhance the  
13 operational performance of a technology that will  
14 begin to permeate the system as more renewable and  
15 distributed generation systems are connected to the  
16 grid now and in the future.

17 **Q. Thank you. Can you explain what the**  
18 **primary goal of voltage correction measures are?**

19 A. The primary application is to ensure that  
20 the voltage levels delivered to our end-use  
21 customers fall within the ANSI standards and control  
22 standards. It's the end-use customer where our  
23 focus is. The voltage will change on the system,  
24 but we are trying to ensure that the end-use  
25 customer gets a good quality voltage.

1           **Q.     And what would happen if the Company made**  
2           **engineering decisions on how to achieve that and**  
3           **other engineering and system balancing decisions**  
4           **based on how the costs would be allocated?**

5           A.     When we design systems, we do it to  
6           optimize the performance of the system.  If we did  
7           it based on economic allocations, it would lead us  
8           to a less -- a suboptimal -- condition in our design  
9           of our systems.  For example, let's take a voltage  
10          problem and do it in the state of Idaho.  In the  
11          state of Idaho, our allocation on transmission  
12          levels is around 6 percent.  So if I have a voltage  
13          problem, I can choose to do a capacitor correction  
14          or regulation at either the distribution level or  
15          the transmission level.  So if I do it at the  
16          distribution level, paying a 600K bar cap bank on a  
17          pole is relatively inexpensive.  I take it, I bring  
18          that up to the distribution level -- a larger  
19          capacitor -- do it on the 12 KUB bus -- it's not  
20          much more expensive than doing a pole -- but once I  
21          move that to the transmission side of the bus still  
22          within the same perimeter of the fence line, I've  
23          just increased my cost by about three times in that  
24          installation.

25                    So what you look at is, if I did it based

1 on allocations and used a 6 percent allocation, in  
2 Idaho I'd probably spend money on the high side bus,  
3 because I've got 15 times more money to spend than I  
4 do on the low side bus. But what that does is it  
5 impacts my capital budgets. We've got a limited  
6 capital area and it, thus, is going to push the  
7 rates up for all the customers across all of our  
8 service territories in all states we serve. So when  
9 we design, we look for conditions that economically  
10 drive good engineering decisions, not looking at how  
11 the allocation drives those engineering decisions.

12 MR. SOLANDER: Thank you. That  
13 concludes my questions for Mr. Marx. He's available  
14 for questions from the Commission and the parties.

15 CHAIRMAN LEVAR: Thank you. Mr.  
16 Jetter?

17 MR. JETTER: No questions.

18 CHAIRMAN LEVAR: Thank you. Mr.  
19 Olsen?

20 EXAMINATION

21 BY MR. OLSEN:

22 Q. I guess I'd like to just follow up on what  
23 I understood the last statement you made. You said  
24 that there are economic considerations that would  
25 drive these -- any of these decisions, which makes

1 sense, but that those economic decisions are not in  
2 some way tied to the interjurisdictional allocation.

3 Is that --

4 A. That's correct.

5 MR. OLSEN: That's all. Thank you.

6 CHAIRMAN LEVAR: Thank you.

7 Ms. Hayes?

8 MS. HAYES: No questions, thanks.

9 CHAIRMAN LEVAR: Thank you. Ms.

10 Gardner?

11 MS. GARDNER: No questions. Thank  
12 you.

13 CHAIRMAN LEVAR: Commissioner Clark,  
14 do you have anything at this point?

15 COMMISSIONER CLARK: No questions.

16 CHAIRMAN LEVAR: Commissioner White?

17 COMMISSIONER WHITE: The discussion  
18 about, you know, allocation, one particular question  
19 I had is what is a precise issue driving the need  
20 for this voltage support? And let me tell you what  
21 kind of prompted this question. It was actually  
22 from Mr. McDougal's rebuttal testimony where he  
23 talks about the missed opportunity to investigate  
24 the impact of distributed energy resources on Utah  
25 customers. Help me understand what is actually

1 driving the need for this voltage support on this  
2 circuit.

3 THE WITNESS: There's three primary  
4 factors that drive voltage problems. It's the  
5 impedance of the system -- and that's multiplied by  
6 the length of the line -- and the primary thing is  
7 the current flow on the conductors. So what you  
8 have is a load condition -- got to be careful; I  
9 don't want to name the substation. So at the  
10 substation, I have a voltage condition that I need  
11 to correct because of the load out on the  
12 distribution network. So two ways I can correct  
13 that voltage; one is to change my conductors,  
14 increase them in size to lower the impedance. The  
15 other one is to reduce the load. So when you look  
16 at the peak levels, they only happen for short  
17 periods of time during the year, even though we  
18 build our system to handle those, because we don't  
19 know when that is going to occur. With this  
20 technology, we can take in a very flexible, dynamic  
21 design to just answer the question of when those  
22 peaks occur.

23 When you increase your conductors,  
24 you do this based on some forecasts of expected load  
25 growth. So you hear the question, well, let's look

1 at the economics of increasing that line because  
2 that line will last for fifty years. Well, you know  
3 what? The wire in there will probably last for a  
4 hundred years, but it depends on the load growth of  
5 when I might have to re-conductor that. So when  
6 this area, if we get some unexpected load growth, I  
7 may be back re-conductoring that sooner than I would  
8 have if I use a scalable, short-term technology that  
9 I can rapidly implement without significant changes.

10 So the big driver here is the load at  
11 the distribution level for short periods of time  
12 during the year is creating voltage problems back  
13 into the system of the distribution level, power  
14 transformer, even on the transmission; it's a ripple  
15 effect. So do I increase my conductors or do I  
16 reduce my load? So we're seeing here that there's a  
17 technology we can do at a lower initial cost to hit  
18 that for short periods of time in the year. It's  
19 scalable, and we can do that more incrementally over  
20 time as load grows or doesn't appear, depending on  
21 how good our crystal balls are at the time we make  
22 the installation. Does that help?

23 COMMISSIONER WHITE: That helps.

24 Thank you.

25 COMMISSIONER CLARK: Can I ask a



1 follow-up question or two? Recognizing that you  
2 don't have a crystal ball, but that you have some  
3 history with the requirements of the particular  
4 distribution system -- or part of your distribution  
5 system -- how often do you expect to call on the  
6 power that's stored, and for how long would it be  
7 called on when you need it? Just your general sense  
8 of what your expectations might be.

9 THE WITNESS: In this area, there's  
10 two times during the year where we see it: In the  
11 dead of winter when we have a lot of heating load  
12 and in the middle of summer when we have a lot of  
13 cooling load. And it's going to be for typically  
14 anywhere from an hour to four hours per day, for  
15 generally 30 to 45 days in each period, depending on  
16 local climate conditions at the time we need it.

17 So with this project, also, what  
18 we're looking at is by building the solar next to  
19 the battery, we can actually control this to say,  
20 okay, what happens in these different "what if"  
21 scenarios? What happens if I get to a point where  
22 I've got more generation in a small area than I do  
23 have actual load? Am I able to take that, store it  
24 and release it at another time? So we can do a lot  
25 of "what if" scenarios with this technology by

1 having control of the two. So as time goes on and  
2 the load grows, it will change. It could become  
3 more or less until such time that we do have  
4 significant growth that may require other  
5 technologies to solve those issues.

6 COMMISSIONER CLARK: And given the  
7 solar profile of this area, you expect that in the  
8 winter the system would operate sufficiently or, in  
9 other words, there would be enough regeneration of  
10 the batteries to satisfy the needs of --

11 THE WITNESS: In the winter  
12 condition, it actually works out really good. The  
13 concern of the initial -- we did a fairly small  
14 solar installation, so we may have to augment some  
15 of that battery charging at night with other  
16 resources. But, like I said, we did this -- we  
17 basically put metering up for a very short period of  
18 time to give us the granular data so we can make  
19 some assumptions to see would this technology work  
20 or not. So as the new metering goes in and we start  
21 to see that coming in, we can refine that a little  
22 bit tighter. But I think we're going to be okay  
23 with just what we've got for the solar and the  
24 install battery that it can take care of that  
25 charging for that. So that local generation will

1 get released right back into the immediate area.

2 There is not enough solar generation there to  
3 permeate back into my system at all. It will get  
4 consumed there by the local load in one way or the  
5 other. We're just going to try to shift the peak  
6 from the middle of the day generation to the evening  
7 when the load does occur.

8 COMMISSIONER CLARK: Thank you. That  
9 concludes my questions.

10 CHAIRMAN LEVAR: Anything else for  
11 this witness?

12 MR. JETTER: No, thank you.

13 CHAIRMAN LEVAR: Mr. Solander?

14 MR. SOLANDER: Thank you. Rocky  
15 Mountain Power would like to call James Campbell as  
16 its third witness.

17 JAMES CAMPBELL,  
18 having been first duly sworn to tell the truth, was  
19 examined and testified as follows:

20 EXAMINATION

21 BY MR. SOLANDER:

22 Q. Good morning, Mr. Campbell.

23 A. Good morning.

24 Q. Could you please state and spell your name  
25 for the record?

1 A. James Campbell, J-a-m-e-s C-a-m-p-b-e-l-l.

2 Q. And what is your current position with  
3 Rocky Mountain Power?

4 A. I'm the legislative policy adviser.

5 Q. And as part of your duties as a  
6 legislative policy adviser, did you prepare  
7 testimony and Exhibit E to the application, which is  
8 entitled Gadsby Emissions Curtailment Program?

9 A. I did.

10 Q. Do you have any additions or corrections  
11 to that testimony that you would like to make at  
12 this time?

13 A. I do not.

14 Q. And did you prepare a summary of your  
15 testimony that you'd like to share with the  
16 Commission?

17 A. I did.

18 Q. Please proceed.

19 A. Thank you. Pursuant to Senate Bill 115,  
20 the Company is requesting approval for up to  
21 \$500,000 in STEP funding over a five-year period to  
22 cover the economic loss of curtailing the operation  
23 of Gadsby Power Plant, units 1 through 3, during  
24 periods of winter air quality events as defined by  
25 the Utah Division of Air Quality.

1           The Gadsby Power Plant is located in the  
2 Salt Lake PM2.5 Non-attainment area. The power  
3 plant will be curtailed after a minimum of 48-hour  
4 notification from the Division Of Air Quality of an  
5 impending air quality event. An air quality event  
6 is defined as when the Salt Lake non-attainment  
7 areas' ambient air conditions are predicted by DEQ  
8 to be 25 micrograms per cubic meter for PM2.5.

9           Gadsby units 1 through 3 typically do not  
10 operate in the winter. However, in the last five  
11 years, units 1 through 3 have been dispatched in the  
12 winter, including during periods of extremely high  
13 ambient pollution. Since the units are only  
14 dispatched when they are economic to operate, there  
15 is economic impact to not operate. The Company  
16 proposes using a market proxy to determine the  
17 replacement of power costs for not operating. The  
18 Company proposes using the Four Corners market hub  
19 as the proxy, or if the Commission chooses, market  
20 pricing at either the Palo Verde or Mid-C market.  
21 If the method of calculating the replacement power  
22 is not approved as part of the Gadsby Curtailment  
23 Program, then the potential unrecoverable costs  
24 would be an unacceptable risk for the Company and  
25 would likely not proceed with implementing the

1 program.

2 The Company proposes budgeting a total of  
3 \$500,000 for the Gadsby Curtailment Program, and  
4 once the budget is exhausted, the program will end.  
5 If Gadsby is not scheduled to operate during an air  
6 quality event, then no action is taken and there is  
7 no economic loss and no replacement costs will be  
8 requested. Since Gadsby does not always dispatch in  
9 the winter and air quality events last roughly three  
10 weeks a year, it is believed that \$500,000 is a  
11 sufficient budget to cover the cost of the Gadsby  
12 Curtailment Program.

13 **Q. Does that conclude your summary?**

14 A. It does.

15 MR. SOLANDER: I move the admission  
16 of Mr. Campbell's direct testimony and Exhibit E to  
17 the application at this time.

18 CHAIRMAN LEVAR: Thank you. I'll ask  
19 anyone who objects to that to indicate to me. I'm  
20 not seeing any, so that motion is granted.

21 MR. SOLANDER: Thank you. Mr.  
22 Campbell is available for questions to the parties  
23 and the Commission.

24 CHAIRMAN LEVAR: Thank you.  
25 Mr. Jetter?

1 MR. JETTER: No questions.

2 CHAIRMAN LEVAR: Thank you. Mr.  
3 Olsen?

4 MR. OLSEN: No questions from the  
5 Office. Thank you.

6 CHAIRMAN LEVAR: Ms. Hayes?

7 MS. HAYES: No questions.

8 CHAIRMAN LEVAR: Ms. Gardner?

9 MS. GARDNER: No questions.

10 CHAIRMAN LEVAR: Commissioner White?

11 COMMISSIONER WHITE: Is there any  
12 reason or preference between the three; the Four  
13 Corners, the Palo Verde, or the Mid-C? What was, I  
14 guess, the rationale for choosing one or the other?

15 THE WITNESS: Mr. McDougal addressed  
16 this issue in his rebuttal testimony. Is it okay if  
17 I refer to him in that?

18 COMMISSIONER WHITE: That's fine.  
19 That's all I have.

20 CHAIRMAN LEVAR: Commissioner Clark?

21 COMMISSIONER CLARK: No questions.

22 CHAIRMAN LEVAR: I don't have any.  
23 Thank you, Mr. Campbell.

24 MR. SOLANDER: Rocky Mountain Power  
25 would like to call Mr. Steven McDougal as its final

1 witness today.

2 STEVEN MCDOUGAL,  
3 having been first duly sworn to tell the truth, was  
4 examined and testified as follows:

5 EXAMINATION

6 BY MR. SOLANDER:

7 Q. Good morning, Mr. McDougal.

8 A. Good morning.

9 Q. Would you please state and spell your name  
10 for the record?

11 A. Yes. My name is Steven McDougal,  
12 S-t-e-v-e-n M-c-d-o-u-g-a-l.

13 Q. And what is your current position with  
14 Rocky Mountain Power?

15 A. I'm currently employed as the director of  
16 revenue requirement.

17 Q. And as the director of revenue  
18 requirement, did you prepare and cause to be filed  
19 in this docket supplemental and rebuttal testimony,  
20 as well as Attachment 1 to the Company's  
21 application, which is the proposed tariff sheets?

22 A. Yes.

23 Q. And does your rebuttal testimony contain  
24 seven exhibits; is that correct?

25 A. I believe so. Let me look real quick.



1 Yes.

2 **Q. Do you have any additions or corrections**  
3 **to your testimony or the exhibits attached thereto**  
4 **at this time?**

5 A. No, I do not.

6 MR. SOLANDER: Thank you. I'd move  
7 the admission of Attachment 1 to the Company's  
8 application, RMP supplement testimony filed by Steve  
9 McDougal, and RMP rebuttal testimony of Steven  
10 McDougal and the exhibits thereto at this time.

11 CHAIRMAN LEVAR: Thank you. I'll ask  
12 any party who objects to indicate. I'm not seeing  
13 any, so that motion is granted.

14 BY MR. SOLANDER:

15 **Q. Thank you. Have you prepared a summary of**  
16 **both your supplemental and rebuttal testimony that**  
17 **you'd like to share today?**

18 A. Yes, I have. Before we get started, I was  
19 thinking I had one exhibit on my direct testimony  
20 also. I attached the Utah STEP Pilot Program  
21 instructions, which I believe was an exhibit. Just  
22 when you moved for admission --

23 MR. SOLANDER: Thank you for that  
24 clarification. I'd also move the admission that I  
25 did not have it tabbed as a separate exhibit.

1 CHAIRMAN LEVAR: Any objection from  
2 anyone? I'm not seeing any. That motion is  
3 granted.

4 MR. SOLANDER: Thank you.

5 A. As mentioned, I filed both supplemental  
6 and rebuttal testimony in this proceeding. I'll  
7 provide a brief summary of both filings.

8 In my supplemental testimony, I basically  
9 cover three items. First, I cover the proposed  
10 changes in accounting for the Utah Demand Site  
11 Management, or DSM programs. Basically, effective  
12 January 1st, 2017, PacifiCorp will begin to defer  
13 the monthly DSM expenditures. Each monthly deferral  
14 will carry a ten-year amortization period. The  
15 difference between the DSM expenditures and the  
16 amortization expenses related to the deferred DSM  
17 expenditures will create a regulatory asset. That's  
18 very similar, almost identical, to how we do all  
19 other capital assets.

20 The second item I discuss is the  
21 accounting related to the new plant accelerated  
22 depreciation fund, which is, that the difference  
23 between the customer collections from the surcharge  
24 attributable to DSM programs and the monthly  
25 amortization expense from the monthly deferred DSM

1 expenditures will create a plant accelerated  
2 depreciation fund for a regulatory liability that  
3 may be used to depreciate thermal generation plants  
4 as described in my testimony.

5 Consistent with the legislation, the  
6 Commission needs to determine that the accelerated  
7 depreciation is in the public interest. Therefore,  
8 the Company will make a filing with the Commission  
9 requesting the use of the funds and response to  
10 environmental regulation or for another purpose the  
11 Company believes is in the public interest. The  
12 final authorization to use the funds will come from  
13 the Commission.

14 Third, I discuss the Company's proposed  
15 STEP accounting and reporting, which I then  
16 clarified in my rebuttal testimony. In my rebuttal  
17 testimony, I discussed various issues raised by the  
18 DPU, the Office, and the Utah Clean Energy. My  
19 testimony includes a background on the Company  
20 decision to propose the Solar and Energy Storage  
21 Program as part of STEP. As mentioned by  
22 Mr. Douglas Marx, the Company projects that by 2019  
23 the distribution load in the designated area will  
24 reach a point that will cause nominal voltage on the  
25 transmission lines serving the area of this project

1 to drop below the required industry standards. In  
2 evaluating solutions to this problem, the Company  
3 considered both transmission and distribution fixes.  
4 The Company analyzes all of these investment option  
5 decisions based on total Company results.

6 Some parties proposed and mentioned  
7 looking at the Utah allocated portions. But by  
8 looking at the Utah allocated costs as discussed by  
9 the parties, only a portion of the transmission  
10 costs would be included in the analysis, creating an  
11 incorrect investment comparison that could lead to  
12 suboptimal decisions for the Company and its  
13 customers. The Company agrees that the benefits of  
14 the Solar and Energy Storage Program should be  
15 passed to Utah customers through the EBA. This will  
16 be done similar to the treatment of the Black Cap  
17 Solar Program in Oregon, such that Utah will be  
18 credited for the market value of the solar  
19 production as described in my testimony. No other  
20 adjustments, other than those described above, are  
21 needed to give Utah the benefit of the Solar and  
22 Energy Storage Program.

23 The second item I discussed was Blue Sky  
24 funding. The Company believes the use of Blue Sky  
25 funding should be approved and is consistent with

1 the purpose of the Blue Sky Program. The energy  
2 generated by the solar installation should benefit  
3 all Utah customers and not just select community  
4 organizations. The administrative costs to create a  
5 grant program that applies credits to customer bills  
6 would require additional funding, including the  
7 creation of a new rate schedule, billing system  
8 modifications, and ongoing program management, none  
9 of which were contemplated or requested in the  
10 Company's application.

11 Third, I discuss the Gadsby Emissions  
12 Curtailment Program. I describe the Company's  
13 proposed accounting and measurement of the costs  
14 associated with the Gadsby Emissions Curtailment  
15 Program. The Company's proposal provides a  
16 reasonable, quantifiable, and transparent approach  
17 to determining the replacement power costs for the  
18 Gadsby Emission Curtailment Program. This is also  
19 consistent with the approach used for Utah's benefit  
20 related to the Solar and Energy Storage Program.

21 Fourth, I provided tariff sheet  
22 modifications. And the last item, I provided  
23 additional details on the Company's proposed STEP  
24 accounting and reporting plan.

25 BY MR. SOLANDER:

1           **Q.    And did you have a final request and**  
2           **recommendation?**

3           A.    Yes.  As supported by the Company's  
4           application in this docket, the testimony of the  
5           Company witnesses accompanying the application and  
6           in my testimony, the Company recommends that the  
7           Commission find as follows:  (1)  The Company has  
8           properly evaluated the Solar Energy and Storage  
9           Program;  (2)  the Company proposed accounting  
10          treatment will properly allocate to Utah customers  
11          the benefits of the Solar Energy and Storage Program  
12          through the EBA;  (3)  it is appropriate to allow Blue  
13          Sky funding for the solar portion of the Solar  
14          Energy and Storage Program;  (4)  it is not  
15          appropriate or feasible to establish a grant program  
16          to benefit community service organizations based on  
17          the kilowatt hours generated by the solar portion of  
18          the Solar and Energy Storage Program;  (5)  the  
19          replacement power costs resulting from operation of  
20          the Gadsby Emissions Curtailment Program should be  
21          calculated using the Four Corners trading market;  
22          (6)  the various tariff sheets filed with my  
23          supplemental testimony reflecting the modifications  
24          and needed corrections addressed by the parties are  
25          approved;  and (7)  the Company-proposed reporting

1 plan provides all appropriate STEP reporting  
2 information.

3 The Company further respectfully  
4 recommends the Commission approve all issues under  
5 consideration in Phase 1 of this docket as outlined  
6 in my rebuttal testimony and the application and  
7 testimony of other Company witnesses in this docket.

8 **Q. Does that conclude your summary?**

9 A. Yes, it does.

10 **Q. Mr. McDougal, does the Company support the**  
11 **alternative proposal put forth by Ms. Wright on**  
12 **behalf of UCE for creating a creditor grant program**  
13 **with the energy generated by the Solar and Battery**  
14 **Storage Program?**

15 A. No, we do not.

16 **Q. And why not?**

17 A. One, there isn't excess energy, as  
18 mentioned by Mr. Marx. The energy will all be used  
19 there locally. Two, as I mentioned in my summary  
20 and my testimony, the solar program is going to  
21 benefit all Utah customers, not just select  
22 customers, and, therefore, we believe that the  
23 benefit should flow to all Utah customers through  
24 the EBA by giving them that market benefit.

25 **Q. And my final question, if the Commission**

1 ordered that the cost of the Solar and Battery  
2 Storage Program were to be system allocated, would  
3 the Company be more or less likely in the future to  
4 pursue distributed generation projects?

5 A. Less likely, because what we would be  
6 saying is that those kind of decisions should be  
7 based upon allocations. And if you look at  
8 allocations, the distributed generation are a  
9 situs-type program, and they're benefiting systems  
10 that should be directly allocated to that state.

11 MR. SOLANDER: Thank you. That  
12 concludes my questions for Mr. McDougal. He is  
13 available for cross-examination or questions from  
14 the Commission.

15 CHAIRMAN LEVAR: Thank you.  
16 Mr. Jetter?

17 EXAMINATION

18 BY MR. JETTER:

19 Q. I've just got a few questions. Good  
20 morning, Mr. McDougal.

21 A. Good morning.

22 Q. Just looking at page three of your  
23 rebuttal testimony, you described the Solar  
24 Generation Program. Looking at line 64.

25 A. Okay.



1 Q. You had described it as a program to  
2 "solve the voltage issue on the transmission system  
3 caused by distribution load in the area." Is that  
4 accurate?

5 A. That is correct.

6 Q. And is it fair to say that transmission  
7 voltage problems requiring re-conductoring or  
8 upgrades are practically always caused by increased  
9 demand on the distribution system?

10 A. Yes. I think that was described by Mr.  
11 Marx earlier.

12 Q. Okay. And you have said that the  
13 investment decision should be made without regard to  
14 the allocation model; you should be choosing the  
15 lowest cost alternative; is that correct?

16 A. That is correct.

17 Q. And would it then be fair to expect the  
18 similar protections for Utah customers to the extent  
19 that transmission upgrades in other states might be  
20 offset by local projects similar to this?

21 A. I'm not sure I completely understand the  
22 question, so I'll try to answer. If I don't get it  
23 right, correct me. But I think that all of your  
24 decisions can be done both ways, and it's just like,  
25 you know, a DSM program can help to eliminate

1 transmission issues and so can other items. We  
2 treat those all similar where they are  
3 situs-allocated.

4 **Q. And I guess my question is, as a**  
5 **representative looking out to some extent for the**  
6 **interests of Utah customers, it would be fair then**  
7 **for Utah customers to expect the Company to make**  
8 **similar decisions in other states without regard to**  
9 **allocation?**

10 A. Correct. And that is what the Company  
11 does. As I mentioned in my testimony, we look at  
12 the decisions based upon a total Company view. We  
13 don't say that, in Mr. Marx's example, a  
14 transmission upgrade in Idaho where they only get  
15 allocated 6 percent, but if they could move  
16 43 percent to Utah, you don't want to make that  
17 decision based upon how Idaho has allocated the cost  
18 and make Utah try to bear additional costs when they  
19 make a suboptimal decision.

20 Likewise, we expect that in all states, to  
21 look at what's the best for the system. It's the  
22 only way that a combined system is going to be  
23 optimized.

24 **Q. I think it would also be fair, probably,**  
25 **in this specific instance to indicate that or to**

1 reach the conclusion that this particular project is  
2 going to cost Utah customers more than it would were  
3 it system-allocated. That's accurate, isn't is?

4 A. Yes, that is.

5 MR. JETTER: Okay. That's all of my  
6 questions. Thank you.

7 CHAIRMAN LEVAR: Thank you.

8 Mr. Olsen?

9 EXAMINATION

10 BY MR. OLSEN:

11 Q. Thank you. Good morning, Mr. McDougal.

12 A. Good morning.

13 Q. So based on what I understand is the  
14 testimony that you have provided -- both you and  
15 Mr. Marx -- these kinds of decisions regarding  
16 distribution solutions or -- well, I guess what you  
17 guys are characterizing as transmission solutions --  
18 are not new to the system. Thousands of miles of  
19 both distribution and transmission lines, so these  
20 come up more than once, I guess.

21 A. Yes.

22 Q. So do you know or are you aware of whether  
23 or not you have a breakdown by regulatory  
24 jurisdiction about how frequently -- if it's a  
25 transmission, a circumstance here -- where it's a

1 transmission-related issue where you say it is  
2 driven by distribution when the Company has elected  
3 to make a transmission decision as opposed to a  
4 distribution application as you've done here. Do  
5 you have any sense of how frequently those two types  
6 of decisions are made?

7 A. No, I don't. That would be -- you know,  
8 the engineering group would look at what is the most  
9 optimal decision, and I don't have any information  
10 on that universe of decisions.

11 Q. You have described some of the processes  
12 that you went through here. Can you just help me  
13 understand with a little bit more specificity the  
14 factors that go into deciding whether or not you  
15 make a distribution decision versus a transmission  
16 decision?

17 A. I'll give it at a high level, because the  
18 detailed decisions are not made by me; they're made  
19 by the engineering group and the others who really  
20 know the system and know what the options are. But  
21 what I do know is they will look at the range of  
22 options that are available and choose the one that  
23 fixes the problem and does so in the most economical  
24 way possible.

25 Q. And just to -- thank you. Just to get --

1 I want to make sure I understood something in your  
2 summary testimony that you just provided -- you were  
3 saying that consideration of the system allocation  
4 could lead to suboptimal decisions. Is that what  
5 your concern was?

6 A. Yes.

7 Q. But that's not necessarily the case, that  
8 it would lead to a suboptimal decision?

9 A. As a full system, if everybody were to  
10 look at allocations, it would, in my opinion.  
11 Because of the examples of -- especially in the  
12 smaller states. If you can choose a decision  
13 that -- Idaho is one of our smaller states close to  
14 us -- if you can choose a decision that you only get  
15 allocated 6 percent as opposed to a hundred percent,  
16 Idaho would naturally choose the 6 percent. And it  
17 could lead to suboptimal decisions --

18 Q. It could.

19 A. -- if those opportunities arise, which, as  
20 described by Mr. Marx, there are those decisions.

21 MR. OLSEN: Thank you. I have no  
22 further questions.

23 CHAIRMAN LEVAR: Ms. Hayes?

24 MS. HAYES: No. Thank you.

25 CHAIRMAN LEVAR: Ms. Gardner?

1 MS. GARDNER: No. Thank you.

2 CHAIRMAN LEVAR: Any redirect?

3 EXAMINATION

4 BY MR. SOLANDER:

5 Q. Just one, quickly. In that last example  
6 as described by Mr. Olsen, what would happen to  
7 overall system costs if each state made the decision  
8 to sub-optimally assign or sub-optimally solve  
9 problems by creating transmission instead of  
10 distribution level investments?

11 A. It would raise the overall costs, because  
12 if the project was in Utah, Utah would only bear  
13 43 percent, and 57 percent could get shifted to  
14 other states. But if it's an overall more expensive  
15 option for the system, the same thing would happen  
16 in Oregon and Wyoming. They would make these  
17 decisions that might cost more, and Utah would have  
18 to bear 43 percent of those decisions from the  
19 states of Idaho and Oregon and Wyoming.

20 MR. SOLANDER: Thank you.

21 CHAIRMAN LEVAR: Thank you. Was  
22 there any re-cross, Mr. Jetter?

23 EXAMINATION

24 BY MR. JETTER:

25 Q. Just briefly. Just in relation to that

1 question, in this case, can you describe why it  
2 would be unfair to also expect Utah to -- if Utah is  
3 paying a 100 percent of the costs of this, would it  
4 be unreasonable for Utah to expect to retain  
5 100 percent of the benefits if it's also situs  
6 assigned?

7 A. That is correct. As it's described in my  
8 testimony and my summary, we are proposing to do  
9 that through looking at the market value and putting  
10 it into the EBA where we say here is the value of  
11 this energy that's being produced and give that  
12 value to Utah.

13 Q. And so is it fair to summarize that as  
14 meaning that the value that you're looking at is  
15 only the output of the solar facility and battery at  
16 market rates and not adding any additional value for  
17 Utah customers for deferring the expense of upgrade  
18 to a facility?

19 A. Correct.

20 MR. JETTER: Okay. Thank you.

21 CHAIRMAN LEVAR: Any other re-cross,  
22 Mr. Olsen?

23 MR. OLSEN: No. Thank you.

24 CHAIRMAN LEVAR: Ms. Hayes?

25 MS. HAYES: No. Thank you.

1 CHAIRMAN LEVAR: No other re-cross?

2 Ms. Gardner?

3 MS. GARDNER: No.

4 CHAIRMAN LEVAR: Commissioner White,  
5 any questions for Mr. McDougal?

6 COMMISSIONER WHITE: Just a couple.  
7 To this issue, in terms of allocation, putting aside  
8 the initial question from an engineering perspective  
9 of how to address a problem based upon least cost,  
10 et cetera, is there bearing or relationship between  
11 a state-driven policy or statute that drives a  
12 project? And does that have any -- is that part of  
13 the equation all in terms of how a project is ever  
14 allocated?

15 THE WITNESS: It's only an issue  
16 with -- related to the 2017 protocol, it does talk  
17 about state-specific initiatives should be situs  
18 allocated to those states starting the initiatives.  
19 And that was done within the 2017 protocol largely  
20 because of environmental or other restrictions or  
21 other programs that -- you know, as a general rule,  
22 things and decisions within a state result in those  
23 costs being borne by that state, not moved to  
24 others.

25 COMMISSIONER WHITE: The follow-up



1 question, just the one I had for Mr. Marx earlier,  
2 which is is there anything, you know, specific as to  
3 the choice to use the Four Corners pricing hub for  
4 purposes of the replacement power or -- it sounds  
5 like from the testimony that the Company, the  
6 difference between the three -- was there some  
7 reason or rationale driving the decision to choose  
8 Four Corners?

9 THE WITNESS: In talking with our  
10 system dispatch and the people who run the system,  
11 they said that the market hub that most closely  
12 resembles market prices in the state of Utah is Four  
13 Corners. It's the closest proxy; it's the one  
14 that's really used a lot for the balancing on this  
15 side of the system.

16 COMMISSIONER WHITE: I have no  
17 further questions. Thank you.

18 CHAIRMAN LEVAR: Commissioner Clark?

19 COMMISSIONER CLARK: Thanks. It  
20 seems to me that one of issues in front of us is  
21 that we have a relatively new technical approach to  
22 an old problem, the problem being the load in the  
23 given distribution area creating the need for  
24 transmission augmentation. So one question I have  
25 is, I guess, is that -- I mean, tell me if you

1 disagree with that characterization but -- assuming  
2 it's roughly accurate, have you used this approach  
3 at other locations in the PacifiCorp system?

4 THE WITNESS: I'm not aware of any  
5 time we have used this approach. This is more of a  
6 new approach that's available, that by starting it  
7 we're going to gain more information, we're going to  
8 gain experience on how this can benefit and, you  
9 know, if everything works out as what we hope, this  
10 is something that could spread. But it's something  
11 that we need to make that initial decision to move  
12 forward. And let's, you know, try to prove out what  
13 can be accomplished through this kind of a program.

14 COMMISSIONER CLARK: And because of  
15 the allocation consequences of this planning  
16 decision versus an election to augment the  
17 transmission system in some way, I hear in the  
18 questions that you have been asked the desire for  
19 some kind of confirmation that the same decision  
20 rules will apply in other jurisdictions when you've  
21 faced this same kind of issue. What are your  
22 feelings about that? Can you confirm for us that  
23 you will continue to be consistent in how you look  
24 at deploying this technological approach, assuming  
25 that it proves beneficial in this instance?

1 THE WITNESS: Yes. You know, as  
2 described by Mr. Marx and others, we're going to  
3 look at all of our decisions based upon what's most  
4 economic and what's best for the area. And if this  
5 works in other areas of the Company, we would  
6 definitely propose it, if it works out and it's the  
7 most economical.

8 COMMISSIONER CLARK: In your rebuttal  
9 testimony, at line 81, you use the phrase  
10 "suboptimal system operating results and increased  
11 overall costs." So my question is, is there an  
12 operational element to this, too, that -- in other  
13 words, what I think you would view as an improper  
14 consideration of the cost allocation consequences in  
15 the decision-making process, would that drive  
16 suboptimal -- not just increase costs or suboptimal  
17 financial results -- but suboptimal operating  
18 results? And I just want to understand what you  
19 mean by that phrase.

20 THE WITNESS: By operating results,  
21 I'm talking about our operating and maintenance  
22 expenses, or our expenses as far as how we operate  
23 the system.

24 COMMISSIONER CLARK: There wouldn't  
25 be a reliability risk or some other kind of risk

1 that would be also --

2 THE WITNESS: Not that I'm aware of.

3 COMMISSIONER CLARK: -- part of this  
4 equation?

5 THE WITNESS: No.

6 COMMISSIONER CLARK: Those are all my  
7 questions. Thank you.

8 CHAIRMAN LEVAR: I don't have any  
9 further ones, so thank you, Mr. McDougal.  
10 Mr. Solander?

11 MR. SOLANDER: That's concludes Rocky  
12 Mountain Power's direct case. Thank you.

13 CHAIRMAN LEVAR: Thank you.  
14 Mr. Jetter?

15 MR. JETTER: Can I request maybe a  
16 15-minute recess?

17 CHAIRMAN LEVAR: Sure. We'll  
18 reconvene at ten after. Thank you.

19 (A brief recess was taken.)

20 CHAIRMAN LEVAR: Okay. We're back on  
21 the record. And I'll just comment to Rocky Mountain  
22 Power, in terms of follow-up questions from the  
23 Commissioners, we would like to ask Mr. McDougal to  
24 remain around for the rest of the hearing, but I'm  
25 not sure there's a need for the other Company

1 witnesses. If there's any interest in releasing  
2 those witnesses rather than keeping them for the  
3 whole hearing, we'll let that be your discretion.  
4 And we'll go to Mr. Jetter.

5 MR. JETTER: The Division -- I'm  
6 sorry, are we ready? The Division would like to  
7 call and have sworn in Mr. Bob Davis.

8 ROBERT A. DAVIS,  
9 having been first duly sworn to tell the truth, was  
10 examined and testified as follows:

11 EXAMINATION

12 BY MR. JETTER:

13 Q. Good morning, Mr. Davis.

14 A. Good morning.

15 Q. Would you please state your name and  
16 occupation for the record?

17 A. I'm a utility analyst for the Division of  
18 Public Utilities.

19 Q. Thank you. In the course of your  
20 employment with the Division, and with respect to  
21 matters that you have testified to so far in this  
22 docket, did you create and cause to be filed with  
23 the Commission DPU witness Robert A. Davis direct  
24 testimony filed on November 9th, 2016, along with  
25 rebuttal testimony filed on November 23rd, 2016?

1 A. Yes.

2 Q. Do you have any edits or corrections you'd  
3 like to make to this?

4 A. I do not.

5 Q. And if you were asked the same questions  
6 that are contained in those prefiled testimonies  
7 today, would your answers be the same?

8 A. They would.

9 MR. JETTER: I move at this time to  
10 enter into the record direct and rebuttal testimony  
11 from DPU witness Robert A. Davis.

12 CHAIRMAN LEVAR: If any parties  
13 object to that, please indicate to me. I'm not  
14 seeing any, so the motion is granted.

15 BY MR. JETTER:

16 Q. Thank you. And, Mr. Davis, have you  
17 prepared a brief statement today?

18 A. I have.

19 Q. Please go ahead.

20 A. Good morning. The Division reviewed the  
21 Company's application for implementation of the STEP  
22 programs and categories of programs as contained in  
23 the Commission's Phase One order in this docket.  
24 The Company has presented information about the  
25 programs to stakeholders throughout several

1 technical conferences and data requests.

2 After consideration of the proposed  
3 programs, including Phase One of the STEP program,  
4 the Division recommends that the Company be granted  
5 approval of the following: (1) Establishing a line  
6 item charge on customer bills for the funding of the  
7 STEP program. This category also includes  
8 establishing a regulatory liability account to  
9 depreciate thermal generation plant; revising tariff  
10 Schedules 193 and 195; revising the Utah Solar  
11 Incentive Program (USIP) Schedule 107, which will  
12 close the USIP program to new customers at the end  
13 of December 2016; and approving implementation of  
14 the Company's Electric Vehicle infrastructure  
15 incentive program; (2) approval of the Solar and  
16 Storage Program; (3) approval of the Gadsby Emission  
17 Curtailment Program; (4) approval of the Clean Coal  
18 Technology Program for NOx reduction using Neural  
19 Networks and Advanced Catalytic Reduction (SCR)  
20 applications.

21 The Division recommends that the Company  
22 be required to report its progress and actual  
23 expenditures on these programs throughout the pilot  
24 at least annually through reports and/or technical  
25 conferences so the Division and other stakeholders

1 have the opportunity to review the STEP initiatives.

2           The Division recommends the approval of  
3 this phase of the proceeding be subject to the  
4 accounting treatment and reporting requirements as  
5 outlined by the Company through discussions during  
6 the technical conferences, other meetings with the  
7 Company, testimony and exhibits. Mr. David Thomson  
8 will address the Division's review of the Phase One  
9 accounting treatment of the STEP program and revised  
10 tariff sheets that are being recommended for  
11 implementation. Schedule 107 has been revised to  
12 end the Utah Solar Incentive Program December 31st,  
13 2016. Tariff Sheet No. 107 has been revised to  
14 remove the 2017 Program Incentive Level and  
15 Available Capacity.

16           The Company is proposing to correct a  
17 transmission voltage issue in Central Utah with a  
18 stationary battery storage system along with a solar  
19 facility funded entirely by Utah customers through  
20 the STEP program. The battery and solar project  
21 will provide valuable training to Company personnel  
22 which will provide benefits to all customers as  
23 distributed energy resources increase on the system.  
24 The Division believes that Company personnel need to  
25 gain as much understanding of distributed energy



1 resources as possible. The Division's concern lies  
2 in the benefits spread to all the Company's  
3 customers as a result of avoiding the transmission  
4 system upgrades that would otherwise be allocated  
5 systemwide through the multi-state protocol. By  
6 using the STEP funds for this project, the Solar and  
7 Storage Program is funded by Utah customers alone.  
8 The Division recommends that at a minimum, the  
9 direct cost savings of the project be retained by  
10 Utah customers. The Division proposes that the  
11 benefits flow through the EBA at the market value of  
12 the output to the grid. The Division is also  
13 supportive of Utah Clean Energy's request that if  
14 funding, in part or full, is used from Blue Sky  
15 customers for the solar array, then the Blue Sky  
16 Program should receive those same proportions of the  
17 net benefits from the system, provided the  
18 administrative costs do not outweigh the benefits.  
19 Using the EBA as a mechanism for Utah customers to  
20 retain the benefits would be easier to administer.  
21 Additionally, under the Division's proposal, Blue  
22 Sky customers would get a benefit through the EBA  
23 adjustment plus knowing Blue Sky funds were used for  
24 a renewable project.

25 The Division is supportive of the Office

1 of Consumer Services' treatment of Operation,  
2 Maintenance, Administrative and Other (OMAG)  
3 expenses relating to the STEP program. The Division  
4 does not believe unknown or known OMAG expenses  
5 should be borne by customers to support the pilot  
6 program outside of those covered by the STEP  
7 funding. The Division supports the Office's  
8 recommendation that OMAG expenses should be  
9 identified during the STEP pilot program and  
10 included in STEP funding. If STEP OMAG expenses are  
11 not included in STEP funding, then they should be  
12 removed from rates in the next general rate case.

13 In conclusion, the Division recommends  
14 that the Commission approve the programs under  
15 consideration in Phase One of this proceeding,  
16 subject to the proposed reporting requirements,  
17 accounting treatment, tariff sheet revisions, and  
18 other concerns with the Solar and Storage program  
19 and OMAG expense treatment.

20 **Q. Thank you. I'd like to clarify a few**  
21 **things. As witnesses from the Company testified**  
22 **earlier today -- and I'd like to clarify the**  
23 **position of the Division with respect to the**  
24 **recommendation for approval of this project -- is**  
25 **it -- was the Division's recommendation to capture**

1 benefits through the EBA -- let me rephrase that  
2 question.

3 Does the Division object to the decision  
4 of the Company in this case to build this facility  
5 on the demand side of the system if it's the lowest  
6 cost alternative?

7 A. No.

8 Q. And can you describe, kind of briefly, why  
9 the Division recommended the EBA treatment?

10 A. The Division believes that if Utah  
11 customers are going to bear the 100 percent of the  
12 cost of this, then they should receive the benefits  
13 from it.

14 Q. Okay. And do you think that the EBA  
15 treatment that captures the market value of the  
16 kilowatt hours delivered from this project into the  
17 system captures the full benefit that is being  
18 provided by this project?

19 A. Probably not. But based on the  
20 information that we have currently, it's probably  
21 the best way to do it.

22 Q. Okay. And in light of that, is it still  
23 the Division's recommendation that the Commission  
24 approve this project with the modifications that you  
25 have recommended in your brief opening statement?

1 A. Yes.

2 MR. JETTER: Thank you. I have no  
3 further questions. And Mr. Davis is available for  
4 questions from other parties or the Commission.

5 CHAIRMAN LEVAR: Thank you.  
6 Mr. Olsen?

7 MR. OLSEN: Thank you. No.

8 CHAIRMAN LEVAR: Ms. Hayes, any  
9 questions for Mr. Davis?

10 MS. HAYES: No. Thank you.

11 CHAIRMAN LEVAR: Thank you.

12 Ms. Gardner?

13 MS. GARDNER: No. Thank you.

14 CHAIRMAN LEVAR: Thank you.

15 Mr. Solander?

16 MR. SOLANDER: One moment.

17 EXAMINATION

18 BY MR. SOLANDER:

19 Q. Just one question, Mr. Davis. With your  
20 recommendation regarding the STEP OMAG coming from  
21 the STEP funding, is it your recommendation at the  
22 end of the pilot program period that the OMAG would  
23 then be in base rates after the five years?

24 A. No. I think my position is that any OMAG  
25 expenses that are outside of the STEP programs that

1 are either known or unknown at this time would not  
2 be included in base rates.

3 **Q. So you're saying they would not be**  
4 **collected by the Company after the five-year pilot**  
5 **program period?**

6 A. No. I don't think if the expenses, if  
7 they're outside of the projects, I don't believe  
8 they should be collected. It's an additional burden  
9 to the customers.

10 **Q. I guess what I'm asking is, is the ongoing**  
11 **OMAG cost -- for instance, of the Solar and Battery**  
12 **Storage program -- will continue after the five-year**  
13 **period?**

14 A. I understand your question better now.  
15 Thanks. Those would probably, in my opinion, would  
16 probably be okay to collect those.

17 MR. SOLANDER: Thank you. No further  
18 questions.

19 CHAIRMAN LEVAR: Any redirect?

20 MR. JETTER: No redirect at this  
21 time. Thanks.

22 CHAIRMAN LEVAR: Commissioner Clark?

23 COMMISSIONER CLARK: No questions.

24 CHAIRMAN LEVAR: Commissioner White?

25 COMMISSIONER WHITE: One question.

1 This question may be more properly addressed by  
2 Mr. Vastag or Martinez, but with respect to the OMAG  
3 costs, if I recall, the Office addressed this  
4 specifically with respect to the Clean Coal  
5 Technology program. Is it the Division's position  
6 that those are applicable to all STEP OMAG --

7 THE WITNESS: Yes, that would be our  
8 position.

9 COMMISSIONER WHITE: Thanks. That's  
10 all I've got.

11 CHAIRMAN LEVAR: A couple of  
12 clarifying questions. First, does the proposed  
13 reporting program presented in Mr. McDougal's  
14 rebuttal satisfy your concerns with respect to  
15 reporting?

16 THE WITNESS: I believe so. I mean,  
17 it's kind of dynamic, so we'll see how that goes.  
18 But I think it does address -- and our other  
19 witness, Mr. David Thomson, will address that a  
20 little bit as well.

21 CHAIRMAN LEVAR: I'd like to follow  
22 up or to ask your thoughts on a question that  
23 Commissioner White asked Mr. McDougal earlier. If  
24 you look at the Solar and Battery Storage Project,  
25 how would you describe the similarities or

1 differences between that project and something, for  
2 example, that were built in another state solely to  
3 satisfy that state's RPS or solely to satisfy a  
4 legislative directive in another state?

5 THE WITNESS: Like, for example, the  
6 Black Cap Solar where it was built specifically to  
7 address the portfolio standard versus this, which is  
8 tackling a transmission problem?

9 CHAIRMAN LEVAR: Yes, for allocation  
10 purposes.

11 THE WITNESS: They're different. The  
12 weird thing about the solar and storage is it is at  
13 the distribution level, but it is correcting a  
14 transmission problem.

15 CHAIRMAN LEVAR: Okay. Thank you. I  
16 think that's all I have.

17 COMMISSIONER CLARK: Can I ask one  
18 more? And I think you have probably said it  
19 somewhere, Mr. Davis, but just to refresh me, the  
20 use of the Four Corners price as a reference in  
21 relation to the Gadsby replacement power, what is  
22 your view of that? Would you refresh me as to  
23 whether or not the Division's position is that's  
24 appropriate?

25 THE WITNESS: I think we're okay with

1 that. It's based on lower costs, so we made the  
2 assumption that the Company would use the lowest  
3 cost, whether that's Four Corners or one of the  
4 others.

5 COMMISSIONER CLARK: Thanks. That's  
6 all my questions.

7 CHAIRMAN LEVAR: Thank you, Mr.  
8 Davis. Mr. Jetter?

9 MR. JETTER: Thank you. The Division  
10 would like to call and have sworn in Mr. David  
11 Thomson.

12 DAVID THOMSON,  
13 having been first duly sworn to tell the truth, was  
14 examined and testified as follows:

15 EXAMINATION

16 BY MR. JETTER:

17 Q. Good morning, Mr. Thomson. Would you  
18 please state your name and occupation for the  
19 record?

20 A. My name is David Thomson. T-h-o-m-s-o-n.  
21 That's without a "P." And I work for the Division  
22 of Public Utilities as a technical consultant.

23 Q. Thank you. In the course of your  
24 employment, have you had the opportunity to review  
25 the filings made by the Company in this docket that



1 are relevant to the testimony that you have  
2 prefiled?

3 A. I have.

4 Q. And did you create and cause to be filed  
5 with the Commission DPU witness David Thomson  
6 Direct, dated November 9th, 2016 along with DPU  
7 Exhibit 2.1 which is also titled Exhibit A?

8 A. Yes.

9 Q. Do you have any corrections or changes  
10 that you would like to make to that?

11 A. No.

12 Q. And if you're asked the same questions  
13 that were asked and answered in your prefiled direct  
14 testimony today, would you have the same answers?

15 A. Yes.

16 MR. JETTER: Thank you. I'd like to  
17 move at this time to enter the direct testimony and  
18 Exhibit A or DPU Exhibit 2.1 Direct for Mr. Thomson  
19 into the record.

20 CHAIRMAN LEVAR: Thank you. If any  
21 party objects to that motion, please indicate to me.  
22 I'm not seeing any, so that motion is granted.

23 BY MR. JETTER:

24 Q. Thank you. Mr. Thomson, do you have a  
25 brief opening statement you'd like to give?

1           A.    I do. Thank you. Good morning,  
2   Commissioners, and thank you for the opportunity to  
3   summarize the Divisions review of the Company's  
4   proposed STEP accounting and certain proposed STEP  
5   tariff sheets and schedules.

6                    In its direct testimony, the Division  
7   accepted the Company's proposed reporting plan. In  
8   its rebuttal testimony, Mr. Steven R. McDougal  
9   provided an update on the Company's STEP reporting  
10  plan, including the recommended additional reporting  
11  requirements supported by the Company. The Division  
12  will accept the reporting plans as outlined in  
13  Mr. McDougal's direct testimony and rebuttal  
14  testimony.

15                   The Division supports the Company's  
16  proposal to cancel Schedule 195 and call it Schedule  
17  196. The Division also supports the proposed  
18  changes made by the Company to Electric Service  
19  Schedules Sheet B.1 and Schedule 80. In his  
20  rebuttal testimony, Mr. McDougal accepted the  
21  Division's recommendations that the carrying charge  
22  be updated annually. He also accepted the  
23  Division's recommendation that Schedule 195, which  
24  is now 196, include the term pilot program and that  
25  it make no other program period of five years. The

1 Division knows that these changes were made to the  
2 new proposed Schedule 196.

3 The Company also, during rebuttal, made a  
4 change to the cost adjustment percentages on  
5 proposed Schedule 196. They were updated to reflect  
6 the price change on November 1, 2016 per Schedule 94  
7 Energy Balancing Account pilot program. It appears  
8 to the Division that the revised sheets as discussed  
9 above support the Company's application implementing  
10 programs authorized by the STEP.

11 Finally, the overall accounting process  
12 proposed by the Company in its implementation of  
13 S.B. 115 has been reviewed by the Division. After  
14 review at this time, nothing came to the Division's  
15 attention that would indicate the overall accounting  
16 process as proposed by the Company as improper or  
17 inadequate. And that concludes my summary.

18 MR. JETTER: Thank you. I have no  
19 further questions for Mr. Thomson. And he's  
20 available for questions.

21 CHAIRMAN LEVAR: Thank you.

22 Mr. Olsen?

23 MR. OLSEN: Nothing at this time.

24 Thank you.

25 CHAIRMAN LEVAR: Ms. Hayes?

1 MS. HAYES: No. Thank you.

2 CHAIRMAN LEVAR: Ms. Gardner?

3 MS. GARDNER: No questions.

4 CHAIRMAN LEVAR: Mr. Solandar?

5 MR. SOLANDER: No questions.

6 CHAIRMAN LEVAR: Commissioner White,  
7 any questions?

8 COMMISSIONER WHITE: No questions.

9 CHAIRMAN LEVAR: Mr. Clark?

10 COMMISSIONER CLARK: No questions.

11 CHAIRMAN LEVAR: Thank you,  
12 Mr. Thomson.

13 MR. JETTER: Those were the only two  
14 witness from the Division. So I guess that  
15 concludes our testimony today.

16 CHAIRMAN LEVAR: Thank you.  
17 Mr. Olsen?

18 MR. OLSEN: Thank you. The Office  
19 would like to call Cheryl Murray, please.

20 CHERYL MURRAY,  
21 having been first duly sworn to tell the truth, was  
22 examined and testified as follows:

23 EXAMINATION

24 BY MR. OLSEN:

25 Q. Could you state your name and business

1 **address and by whom you're employed?**

2 A. My name is Cheryl Murray. My business  
3 address is 160 East 300 South, Salt Lake City, Utah.  
4 I'm a utility analyst with the Office of Consumer  
5 Services.

6 **Q. Did you file any prefiled testimony in**  
7 **this docket?**

8 A. Yes. On November 9, 2016, I submitted ten  
9 pages of direct testimony.

10 **Q. Are there any changes that you would**  
11 **propose to that testimony at this time?**

12 A. No.

13 MR. OLSEN: I would ask then at this  
14 time that her direct testimony filed on November 9th  
15 be admitted.

16 CHAIRMAN LEVAR: If there is any  
17 objection to that motion, please indicate to me.  
18 I'm not seeing any, so the motion is granted.

19 BY MR. OLSEN:

20 **Q. Thank you. And what was the purpose of**  
21 **that testimony that you filed?**

22 A. My testimony introduced two other Office  
23 witnesses, Bela Vastag and Danny Martinez, and  
24 identified the specific areas of Company's filing to  
25 be addressed by each of them. I also addressed some

1 of the Company's proposed changes to three tariffs;  
2 Schedule 107, Utah Solar Incentive Program; Schedule  
3 195, Solar Incentive Program Cost Adjustment; and  
4 Schedule 193, Demand Side Management Cost  
5 Adjustment.

6 **Q. And have you prepared a summary of your**  
7 **testimony?**

8 A. Yes.

9 **Q. Could you please provide that summary?**

10 A. In my direct testimony, I identified  
11 necessary corrections or clarifications on tariff  
12 sheets 107.4, 107.1, and 195.2. The Office also  
13 noted that the Company's proposed changes to  
14 Schedule 195 are so extensive, even including the  
15 tariff title, that it amounts to a completely new  
16 tariff. For this reason, as well as ease of  
17 reference, over time the Office recommended that the  
18 Company should be required to cancel Schedule 195  
19 and create a new tariff with a new schedule number  
20 for the STEP surcharge tariff. In the rebuttal  
21 testimony of Company witness Steven R. McDougal,  
22 filed November 23, 2016, the Company agreed to all  
23 of the recommendations made by the Office related to  
24 Schedule 107 and Schedule 195, including creating a  
25 new tariff, Schedule 196 for the STEP surcharge.

1           In addition to the recommendations related  
2   to the tariffs discussed above, the Office also  
3   noted that with the Company's plan to capitalize the  
4   annual DSM cost as a DSM regulatory asset and  
5   amortize them over a ten-year period, a sizable  
6   regulatory asset will likely build up over that  
7   period. While we did not recommend any  
8   modifications to the DSM accounting provisions  
9   proposed by the Company at this time, we stated that  
10  the Office may address this issue in a future  
11  proceeding.

12           In his summary, Mr. McDougal asked that  
13  the Commission specifically approve the reporting  
14  plan presented by the Company. Office witnesses  
15  Mr. Martinez and Mr. Vastag will address reporting  
16  in their summaries. But the Office requests that in  
17  its order on Phase One of this docket that the  
18  Commission specify that they are not approving  
19  reporting related to issues to be heard in Phase  
20  Two.

21           That concludes my summary.

22           MR. OLSEN: Thank you. Ms. Murray is  
23  available for questions from the parties or the  
24  Commission.

25           CHAIRMAN LEVAR: Thank you.

1 Mr. Jetter, do you have any questions?

2 MR. JETTER: No questions.

3 CHAIRMAN LEVAR: Ms. Hayes?

4 MS. HAYES: No questions. Thank you.

5 CHAIRMAN LEVAR: Ms. Gardner?

6 MS. GARDNER: No questions. Thank

7 you.

8 CHAIRMAN LEVAR: Mr. Solander?

9 MR. SOLANDER: No questions.

10 COMMISSIONER CLARK: No questions.

11 Thank you.

12 CHAIRMAN LEVAR: Commissioner White?

13 COMMISSIONER WHITE: No questions.

14 Thank you.

15 CHAIRMAN LEVAR: Thank you,

16 Ms. Murray. Mr. Olsen?

17 MR. OLSEN: Thank you. The Office

18 would now like to call Mr. Danny Martinez and ask

19 that he be sworn.

20 DANNY MARTINEZ,

21 having been first duly sworn to tell the truth, was

22 examined and testified as follows:

23 EXAMINATION

24 BY MR. OLSEN:

25 Q. Mr. Martinez, could you please state your



1 name for the record, where you work, and what your  
2 position is?

3 A. Yes. My name is Danny Martinez. I am a  
4 utility analyst for the Office of Consumer Services.  
5 My business address is 160 East 300 South, Salt Lake  
6 City, Utah 84111.

7 Q. And as part of your duties as a utility  
8 analyst, did you have occasion to review the STEP  
9 filing under consideration here today?

10 A. Yes.

11 Q. And as part of that, did you file or cause  
12 to be filed direct testimony on November 9th, 2016?

13 A. Yes.

14 Q. And did you file or cause to be filed  
15 rebuttal testimony on November 23rd, 2016?

16 A. Yes.

17 Q. Are there any changes that you'd like to  
18 make to that testimony at this time?

19 A. No.

20 MR. OLSEN: I would ask that the  
21 testimony -- that the direct rebuttal testimony --  
22 be admitted at this time.

23 CHAIRMAN LEVAR: If any party has an  
24 objection, please indicate to me. I'm not seeing  
25 any, so that motion is granted.

1 BY MR. OLSEN:

2 Q. Thank you. Mr. Martinez, have you  
3 provided a summary for the Commission at this time?

4 A. Yes, I have.

5 Q. Could you please proceed?

6 A. Yes. Good morning, Commissioners. My  
7 testimony addresses the Phase One Clean Coal  
8 projects, related to NOx emissions reduction and the  
9 Gadsby Curtailment program. Since the Commission's  
10 scheduling order allows for live surrebuttal  
11 testimony, I will include a brief response to the  
12 Company's rebuttal testimony in this summary.

13 With respect to the Phase One Clean Coal  
14 projects, the Office raised concerns regarding  
15 reporting requirements and OMAG expenses. In  
16 rebuttal testimony, the Company proposed more  
17 specific reporting for all of the STEP programs.  
18 The company's proposal adequately addresses the  
19 Office's concerns regarding reporting requirements  
20 and addresses the Office's reporting  
21 recommendations.

22 Regarding OMAG expenses, the Office agrees  
23 with the Division that those costs need to be  
24 identified and quantified and included in the  
25 Company's STEP budget. The Office contends that the

1 Company should reserve STEP funds from funds  
2 authorized by the Legislature to be used for OMAG  
3 expenses rather than seek recovery outside of the  
4 STEP line item charge for the years during which  
5 STEP is in place.

6 With respect to the Gadsby Curtailment  
7 Program, my testimony indicated that Company did not  
8 sufficiently explain how the value of curtailment  
9 replacement power cost is calculated and why the  
10 Four Corners hub would be appropriate to use as a  
11 market proxy. I further recommended that the  
12 Commission approve the Gadsby Curtailment Program  
13 without specifically authorizing the method of  
14 calculation for replacement power costs. Instead,  
15 the Office recommended that the Commission require  
16 additional supporting information in the annual EBA  
17 filing if the Company seeks STEP funds for Gadsby  
18 Curtailment in that year.

19 In rebuttal testimony, Mr. McDougal  
20 opposed this recommendation. He indicated that  
21 determining actual replacement costs would be  
22 burdensome and potentially controversial, and  
23 recommended that the Commission approve the use of  
24 the formula that he presented and the Four Corners  
25 hub as the appropriate market proxy to use in

1 replacement cost calculation. However, Mr. McDougal  
2 also offered to include in future reporting  
3 requirements a justification in a future EBA filing  
4 if the Company proposes to use a different hub in  
5 the future. He agreed to use a different market hub  
6 as proxy if ordered by the Commission.

7 My testimony did not oppose the  
8 replacement power cost estimate or the use of a  
9 market proxy; rather, I was concerned that the  
10 filing was confusing and did not sufficiently  
11 explain the process. The detailed explanations were  
12 all obtained through the discovery process. To be  
13 clear, the Office agrees with Mr. McDougal that the  
14 formula provided in response to OCS 3.4 and his  
15 rebuttal testimony is a reasonable estimation for  
16 curtailment replacement power costs.

17 However, the Office contends that  
18 insufficient evidence has been presented in this  
19 proceeding to determine the appropriate hub to be  
20 used as a market proxy. Further, it is clear that  
21 the Company would like to be able to justify a  
22 change in what hub is used if appropriate in future  
23 years. For these reasons, the Office continues to  
24 recommend that the Commission require the Company to  
25 justify what market should be used as a market proxy

1 price if it requests STEP funds to reimburse the  
2 Gadsby curtailment costs in a future EBA proceeding.  
3 To clarify our position, the Office supports the  
4 Commission approving the Gadsby Curtailment Program  
5 and the general method of calculation of replacement  
6 power costs but requests that the issue of the  
7 appropriate hub be addressed in each relevant future  
8 EBA proceeding.

9 The Office still recommends the Commission  
10 require an additional filing requirement for the  
11 Company in its annual EBA filing if it seeks STEP  
12 funds for Gadsby curtailment in that year.

13 That's the conclusion of my summary.

14 MR. OLSEN: Thank you. Mr. Martinez  
15 is available for questions from the parties or the  
16 Commission.

17 CHAIRMAN LEVAR: Thank you. Mr.  
18 Jetter?

19 MR. JETTER: No questions.

20 CHAIRMAN LEVAR: Ms. Hayes?

21 MS. HAYES: No questions.

22 CHAIRMAN LEVAR: Ms. Gardner?

23 MS. GARDNER: No questions. Thank  
24 you.

25 CHAIRMAN LEVAR: Thank you.

1 Mr. Solander?

2 MR. SOLANDER: No questions.

3 CHAIRMAN LEVAR: Commissioner White?

4 COMMISSIONER WHITE: So my  
5 understanding -- and that was helpful, the  
6 clarification on the curtailment power costs -- is  
7 the Office is not necessarily opposed to using one  
8 of those three -- Mid-C, Four Corners, or Palo  
9 Verde -- it's just that they want to reserve the  
10 right to address justification. It's not that they  
11 want to actually use the actual costs; they're okay  
12 with the proxy. They want to be able to address one  
13 of those three proxies at the time.

14 THE WITNESS: That's correct. Yes.

15 CHAIRMAN LEVAR: Commissioner Clark?

16 COMMISSIONER CLARK: I want to  
17 express appreciation also for the clarification  
18 because I had a few questions that I can eliminate  
19 now. But I am still interested to know or  
20 understand better the extent to which the Office  
21 specifically objects to Four Corners as the  
22 identified market proxy hub.

23 THE WITNESS: We didn't -- my intent  
24 was not to object specifically to the Four Corners.  
25 We just didn't understand why that specific hub was

1 chosen over other hubs that could have been. And so  
2 that was the intent of trying to figure out which  
3 one would be the appropriate hub. We didn't see  
4 that in the application by the Company, and so we  
5 asked discovery on that, and that's where we got our  
6 response. In one of the responses, they said it was  
7 just basically a geographical proximity.

8 COMMISSIONER CLARK: Thanks very  
9 much.

10 CHAIRMAN LEVAR: Just one follow-up  
11 to that. In your opinion, does that provide  
12 sufficient certainty to the utility to make  
13 curtailment decisions if there's not certainty on  
14 which of the three hubs might be the proxy in the  
15 next EBA case?

16 THE WITNESS: I think the choice of  
17 the hub, given the formula the Company put forth as  
18 described in Mr. McDougal's testimony as well as my  
19 own, there needs to be a market proxy in place for  
20 the calculations to work. Again, we're not  
21 concerned which one it is as long as it's one that  
22 is prudent for determining those costs. I think in  
23 my testimony I indicated we would presume that would  
24 be the least cost purchase of power that would be  
25 used in that calculation.

1 CHAIRMAN LEVAR: Thank you. That's  
2 all I have. Thank you, Mr. Martinez. Mr. Olsen?

3 MR. OLSEN: Thank you. The Office  
4 would like to call Mr. Bela Vastag.

5 BELA VASTAG,  
6 having been first duly sworn to tell the truth, was  
7 examined and testified as follows:

8 EXAMINATION

9 BY MR. OLSEN:

10 Q. Mr. Vastag, could you please state your  
11 name for the record, your place of employment, and  
12 what you do, what your position is?

13 A. Yes. My name is Bela Vastag. I'll spell  
14 that for the court reporter. B-e-l-a, last name  
15 V-a-s-t-a-g. I'm a utility analyst for the Utah  
16 Office of Consumer Services, and my business address  
17 is here in this building, 160 East 300 South.

18 Q. And as part of your work as a utility  
19 analyst for the Office of Consumer Services, did you  
20 have occasion to review the filing under  
21 consideration -- the STEP filing under consideration  
22 here today?

23 A. Yes.

24 Q. And did you file or cause to be filed  
25 direct testimony on November 9th, 2016 and rebuttal



1 **testimony on November 23, 2016 in response to that**  
2 **filing?**

3 A. Yes.

4 **Q. Are there any corrections or revisions**  
5 **you'd like to make at this time?**

6 A. I have no changes to my testimony.

7 MR. OLSEN: The Office would move  
8 that those filings be admitted into evidence at this  
9 time.

10 CHAIRMAN LEVAR: Thank you. If  
11 anyone objects to that motion, please indicate to  
12 me. And the motion is granted.

13 BY MR. OLSEN:

14 **Q. Mr. Vastag, have you prepared a summary of**  
15 **your testimony?**

16 A. Yes, I have.

17 **Q. Would you please provide the summary now?**

18 A. Yes. My testimony in this proceeding has  
19 addressed the Company's proposed Solar and Energy  
20 Storage technology project, which I usually refer to  
21 as the solar/battery project. This project falls  
22 under the Innovative Utility Programs section of the  
23 Sustainable Transportation and Energy Plan or STEP  
24 Act. So in other words, the solar/battery project  
25 is a research and development or an R&D project.

1           Research and development projects are not  
2 always successful, and this is a risk that one  
3 assumes when pursuing an R&D project. However, the  
4 risk is worth taking if this solar battery R&D  
5 project gives the Company some knowledge that will  
6 enable it to provide service to its customers in the  
7 future in a more effective and less costly manner.

8           Utah ratepayers are funding the entire  
9 solar/battery project. Therefore, given the  
10 inherent risks of an R&D project, the Office  
11 believes that the solar/battery project would only  
12 be in the interest of Utah ratepayers if the R&D  
13 knowledge could be used for the benefit of rate  
14 payers in the future. Unfortunately, the Office  
15 sees a barrier to this technology being used in the  
16 future. This barrier is caused by -- the barrier is  
17 caused by how the costs of such a project would be  
18 allocated. Because the Company's solar/battery  
19 project is on the distribution side of the system,  
20 all of the costs would be assigned to Utah even  
21 though the project is solving a problem on a  
22 transmission line. The costs associated with  
23 transmission assets are allocated among all the  
24 states that Rocky Mountain Power's parent company,  
25 PacifiCorp, serves. As described in my written

1 testimony, the Utah-allocated costs of a  
2 transmission solution to the transmission line  
3 problem are significantly lower than the  
4 Utah-allocated costs of the solar/battery project.  
5 The solar/battery project that is at issue today  
6 would be funded according to the STEP Act, but in  
7 the future, an implementation of this technology  
8 would have its costs allocated through a different  
9 process, usually a general rate case including a  
10 Multi-State Protocol or MSP-type process.  
11 Therefore, the Office sees cost allocation as a  
12 barrier to the future use of this R&D knowledge  
13 because a state jurisdiction may not approve another  
14 solar/battery project where all the costs are  
15 state-assigned when an alternative transmission  
16 based solution would be cheaper because its costs  
17 were allocated among all PacifiCorp states.

18           Therefore, the Office does not recommend  
19 that the Commission authorize this project unless  
20 the Company can propose a solution to this cost  
21 allocation problem or this barrier. This cost  
22 allocation method that they would propose or the  
23 solution to the cost problem would need to be  
24 incorporated in any future implementation of the  
25 solar/battery technology. If the proposed

1 solar/battery project is authorized by the  
2 Commission, the Office supports the concept from the  
3 Utah Division of Public Utilities that the value or  
4 benefit of the energy from the solar facility be  
5 credited back to Utah through the EBA. Also, if the  
6 project is authorized, the Office does not oppose  
7 Utah Clean Energy's proposal for a Blue Sky grant  
8 program based on the output of a Blue Sky funded  
9 solar facility, that is, as long as the energy from  
10 the solar facility is valued at the Company's  
11 avoided costs and also the costs of running the  
12 grant program are charged to the Blue Sky program.

13 That concludes my summary statement.

14 MR. OLSEN: Mr. Vastag, as you know,  
15 the order allowed for the possibility of live  
16 surrebuttal. Would you like to provide any of that  
17 at this time?

18 THE WITNESS: Yes. Today I'd like to  
19 respond to Rocky Mountain Power witness Steven R.  
20 McDougal. Mr. McDougal's rebuttal testimony was  
21 filed on November 23rd.

22 BY MR. OLSEN:

23 Q. Thank you. Would you please proceed then  
24 with the surrebuttal?

25 A. Yes. In his rebuttal testimony, Mr.

1 McDougal states that the Company does not agree with  
2 the Office's approach in evaluating project costs on  
3 a state allocated basis. He says that the Company  
4 analyzes all transmission and distribution  
5 investment options on a total Company basis. This  
6 implies that the Company is regularly making  
7 transmission versus distribution investment  
8 decisions, like the one it proposes to make for this  
9 solar/battery project, without consideration of the  
10 cost allocation impacts on the various  
11 jurisdictions. This raises a red flag for the  
12 Office and indicates that in the future, state  
13 jurisdictions need to devote more resources in  
14 future rate cases to evaluating the Company's  
15 investments and situs assigned distribution assets.  
16 Furthermore, going forward, the Company should be  
17 required to provide a comprehensive explanation of  
18 how decisions are made for both transmission and  
19 distribution investments including how it evaluates  
20 the tradeoffs between a transmission versus a  
21 distribution solution. This explanation should also  
22 explore how these investment decisions distort or do  
23 not distort the Multi-State Protocol or MSP  
24 allocation process.

25 In another area, if the solar/battery

1 project is to be authorized, Mr. McDougal also  
2 states in his rebuttal testimony that the energy  
3 benefits that Utah would receive from the project  
4 should be calculated using the same methodology as  
5 for the Black Cap solar project in Oregon. However,  
6 the Company does not provide sufficient detail in  
7 this docket for parties to understand how the Black  
8 Cap benefits are calculated and credited back to  
9 Oregon. If the Commission authorizes this project  
10 and approves such a benefit crediting program, the  
11 Commission should require the Company to submit a  
12 compliance filing. In this filing, it should show  
13 how the Oregon crediting system is done for the  
14 Black Cap project and allow parties to submit  
15 comments on the Company's filing to ensure that the  
16 accounting is done in a way that properly credits  
17 Utah ratepayers.

18 Finally, Mr. McDougal implies in his  
19 rebuttal testimony that a demand-side management or  
20 DSM program could be implemented in an area to solve  
21 a transmission line loading problem and notes that  
22 DSM program costs are situs assigned. However, this  
23 is not a fair analogy to the proposed solar/battery  
24 project because DSM programs reduce load in the  
25 state that they are implemented in, which in turn

1 reduces the state's share of system costs that are  
2 allocated based on load.

3 That concludes my surrebuttal testimony.

4 MR. OLSEN: Thank you. Mr. Vastag is  
5 available for questions from the parties or the  
6 Commission.

7 CHAIRMAN LEVAR: Thank you.  
8 Mr. Jetter, any questions for Mr. Vastag?

9 MR. JETTER: No questions. Thank  
10 you.

11 CHAIRMAN LEVAR: Thank you. Ms.  
12 Hayes?

13 MS. HAYES: No questions.

14 CHAIRMAN LEVAR: Thank you. Ms.  
15 Gardner?

16 MS. GARDNER: No questions. Thank  
17 you.

18 CHAIRMAN LEVAR: Mr. Solander?

19 EXAMINATION

20 BY MR. SOLANDER:

21 Q. Yes. Thank you. Good morning, Mr.  
22 Vastag.

23 A. Good morning.

24 Q. You would agree, wouldn't you, with  
25 Mr. Marx's assertion that if the Company is incented

1 either way, one way or another, to make system or  
2 situs investments, that it could lead to suboptimal  
3 planning decisions?

4 A. There is that possibility, yes.

5 Q. Now, let's -- you were here when Mr. Marx  
6 was testifying earlier?

7 A. Yes.

8 Q. So you heard his hypothetical about the  
9 same exact Solar and Energy Storage project in Idaho  
10 instead of in Utah?

11 A. Yes.

12 Q. Now, if that project was built on the  
13 distribution side in Idaho, would the Office accept  
14 if 43 percent of the cost of that project was  
15 assigned to Utah and recommended the Company be  
16 allowed recovery of 43 percent of the total cost of  
17 that project in its next rate case?

18 A. Well, that hypothetical is really  
19 impossible to answer without a lot more detail.

20 Q. No, that's the exact same project we're  
21 presenting today.

22 A. Well, if there was a process in place as  
23 we propose, you know, for future projects, then of  
24 course we would agree, because we would have been  
25 involved in the process to determine how that would



1 work.

2 Q. So you're saying that you would support,  
3 in the future, if transmission level and if  
4 distribution investments to solve a transmission  
5 problem were made in Idaho, you would support 43  
6 percent of the cost being assigned to Utah?

7 A. Yes. A good example would be there are  
8 several expensive transmission projects being  
9 proposed in Idaho and Wyoming -- and Utah Gateway  
10 comes to mind -- and if there was a less expensive  
11 distribution solution, then we would see, you know,  
12 merit in postponing or not investing in billions of  
13 dollars of transmission, yes.

14 MR. SOLANDER: One moment, please.  
15 No further questions. Thank you.

16 CHAIRMAN LEVAR: Any redirect?

17 MR. OLSEN: Yes, if I may.

18 REDIRECT EXAMINATION

19 BY MR. OLSEN:

20 Q. Mr. Vastag, in your response to  
21 Mr. Solander's question, you spoke about the  
22 process. Is that a proposed process that the Office  
23 is suggesting? A comprehensive review of all facts  
24 and circumstances regarding any of those kinds of  
25 decisions that would go on in the future with an

1 opportunity to review and evaluate the specific  
2 facts and circumstances of those decisions that are  
3 made in this jurisdiction?

4 A. Yes. I would say that would be the  
5 beginning of the process so we could understand what  
6 the factors are. And, then, of course, out of that  
7 should come some method or way to handle these  
8 distribution versus transmission decisions where  
9 state allocation is a problem and where a state such  
10 as Idaho may not approve a solar/battery project  
11 when it's going to shoulder a hundred percent of the  
12 costs when its allocated costs would be 6 percent.

13 Q. And to your knowledge, a robust process as  
14 you're describing now is not in existence at this  
15 time?

16 A. No, it's not. This is new a new area of  
17 analysis.

18 MR. OLSEN: Thank you. I have  
19 nothing further.

20 CHAIRMAN LEVAR: Thank you. Any  
21 recross, Mr. Solander?

22 MR. SOLANDER: No. Thank you.

23 CHAIRMAN LEVAR: Commissioner Clark?

24 COMMISSIONER CLARK: No questions.

25 Thank you.

1 CHAIRMAN LEVAR: Commissioner White?

2 COMMISSIONER WHITE: I want to  
3 circle back on this concept of, I guess, the  
4 compensation for the generation from the solar  
5 panels. Maybe I'm confusing this, but are you  
6 talking about the gross generation from those panels  
7 or is that netted out for what's utilized for  
8 station power and batteries?

9 THE WITNESS: Honestly, we haven't  
10 delved into the details. We agree on a high level,  
11 you know, at a high level on the concept that Utah  
12 Clean Energy proposes. We were just concerned that  
13 the value of the grant program may be overvalued if  
14 it was based on a retail-type rate.

15 COMMISSIONER WHITE: And the avoided  
16 costs, I mean, is that something you would consider  
17 just as a, you know, like the Schedule 37 feed in or  
18 a Schedule 38 or a separate proceeding to determine  
19 whatever the avoided cost of that specific --

20 THE WITNESS: I suggested in my  
21 testimony since this facility would be of the size  
22 that falls under Schedule 37, that we could just use  
23 the Schedule 37 as -- simply as the price.

24 COMMISSIONER WHITE: And earlier you  
25 were discussing the concept -- I think I heard you

1 correctly about, you know, this an R&D project, and  
2 tell me if I'm mischaracterizing this -- is the  
3 concept you were -- is the concept that because  
4 there's going to be lessons learned and potential  
5 intellectual property that flow from this project to  
6 that, if Utah were to pay for that, they should  
7 somehow be able to capture, or is that going to be,  
8 you know, a benefit to all states, and so there  
9 should be some kind of inverse relationship between  
10 those two?

11 THE WITNESS: No, the concept was R&D  
12 projects are unknown whether or not they will work,  
13 so if we are going to invest Utah funds, we should  
14 at least have the opportunity to use them -- you  
15 know, the knowledge of the technology that we've  
16 gained from such a project -- to benefit the entire  
17 system, to benefit -- if Utah, again, or other  
18 jurisdictions, and we're just concerned that if this  
19 cost allocation question comes up in other states,  
20 they may not approve of such a project and we've  
21 lost, you know, the benefit of that knowledge in  
22 that case.

23 COMMISSIONER WHITE: One final  
24 question. I asked this -- and Chairman LeVar asked  
25 it in a different way earlier -- but I'm wondering

1 if you have a position on whether there's a  
2 distinction between this type of project that flows  
3 out of a legislative directive and something like,  
4 for example, an RPS related project from another  
5 state. Is there a distinction or is that not a  
6 factor in how projects are being allocated within a  
7 system?

8 THE WITNESS: We really didn't  
9 consider it from that perspective. In my opinion, I  
10 think an RPS project would be a different type of  
11 RPS related project because it would be a mandated  
12 policy related project. To meet a specific goal  
13 and, in this case, the choice of an innovative  
14 technology project, there are potentially many  
15 candidates for this project; not just this project.

16 COMMISSIONER WHITE: That's all I've  
17 got.

18 CHAIRMAN LEVAR: I don't have  
19 anything, so thank you Mr. Vastag. Mr. Olsen, do  
20 you have any else?

21 MR. OLSEN: Nothing further at this  
22 time. Thank you.

23 CHAIRMAN LEVAR: Thank you. I wonder  
24 if you could indulge one question I have, follow up  
25 for Rocky Mountain Power before we move to Ms.

1 Wright's testimony. While I see that Mr. Campbell  
2 is still in the room, I don't know if this question  
3 is best for him or Mr. McDougal, but I would just  
4 like to ask Rocky Mountain Power if -- based on  
5 Mr. Martinez's clarifications, I think we heard in  
6 his testimony what your position is on the Gadsby  
7 curtailment with respect to certainty if there were  
8 certainty of the use of a proxy, but not certainty  
9 until a following EBA docket of -- which of the  
10 three proxies were going to be used.

11 MR. SOLANDER: I think  
12 Mr. McDougal -- I don't know if you want to re-call  
13 him --

14 CHAIRMAN LEVAR: He can just answer  
15 from the stand.

16 MR. MCDUGAL: I think we would be  
17 okay determining the proxy, but what I don't think  
18 we would be okay with is making it an issue that we  
19 have to re-litigate every EBA. One of the things we  
20 would like is certainty to know that we're using a  
21 certain proxy and that not every time it's the  
22 lowest of the three and we're not picking and  
23 choosing. We would prefer to have the certainty of  
24 a known proxy, and we would prefer for it to be  
25 determined in this proceeding. If it's not, as long

1 as it is going to be one proxy and not change every  
2 time, we would be okay with it.

3 CHAIRMAN LEVAR: Thank you. That  
4 answers my question. Any other follow-ups while  
5 we're doing this?

6 COMMISSIONER CLARK: I appreciate,  
7 Chairman LeVar, that you've raised this, because I  
8 wanted to pursue the same general subject area.  
9 Could you explain why or what challenges would exist  
10 for the Company if the process was simply that when  
11 there's a curtailment that you then look to the  
12 lowest of, say, the three hubs that have been  
13 mentioned -- Mid-C, Four Corners, and Palo Verde --  
14 and use the lowest of those at that time? Are there  
15 technical challenges there that I don't -- I'd like  
16 to understand if --

17 THE WITNESS: No, there are not  
18 technical challenges to that. Because we know the  
19 prices of all three, but in reality from a planning  
20 perspective and from an actual perspective, what  
21 we're saying is let's use a market price hub as the  
22 proxy. If we assume that we're getting the  
23 replacement power from Mid-C or from Four Corners, I  
24 think we ought to be consistent because the system  
25 is going to operate the same. It's going to pull

1 replacement from that same hub all the time. It's  
2 not going to say, you know, let's always use the  
3 lowest; there's transmission constraints, there's  
4 other issues. And that's why we believe Four  
5 Corners is the best because of its proximity to the  
6 load that we're using, its proximity to Gadsby. And  
7 that's why I think we ought to use one hub. We  
8 shouldn't change back and forth because in reality,  
9 we're not changing the way we serve the load.

10 COMMISSIONER CLARK: That helps me  
11 understand. So it's not just a matter of -- I mean,  
12 your decision as to where you go for the replacement  
13 power isn't going to be driven solely by the prices  
14 at the hub. There's a number of factors that you'll  
15 be considering. Is that what you're saying?

16 THE WITNESS: That's correct, because  
17 we're continually trading at multiple hubs, not  
18 just, you know, at one hub. And we do it because of  
19 constraints of where we can find the power.

20 COMMISSIONER CLARK: Thank you. That  
21 concludes my questions.

22 COMMISSIONER WHITE: One final  
23 follow-up on that concept. Is there a reason that  
24 the Company couldn't utilize a blended proxy rate?  
25 In other words, if there's really no specific -- it



1 sounds like in the testimony, there was a choice  
2 between Palo Verde, Mid-C, and Four Corners. And if  
3 you're looking for consistency, would that be more  
4 complicated or less complicated than just picking  
5 one of those three?

6 THE WITNESS: I had not thought of  
7 that option, but there would not be a lot of  
8 additional complexity. We would just have to throw  
9 the three prices into a spreadsheet and take a third  
10 of each of whatever the proposed methodology is.  
11 Like I said, we would like to have it determined  
12 ahead of time so that we don't have that fight in  
13 every EBA, saying, well, let's use this proxy this  
14 year and another proxy the next year. I don't see  
15 there would be a lot of additional work putting all  
16 three and taking an average.

17 COMMISSIONER WHITE: That's all the  
18 questions I have.

19 CHAIRMAN LEVAR: Thank you,  
20 Mr. McDougal. Ms. Hayes?

21 MS. HAYES: Thank you. Utah Clean  
22 Energy will call Sarah Wright to the stand, and she  
23 needs to be sworn.

24 SARAH WRIGHT,  
25 having been first duly sworn to tell the truth, was

1 examined and testified as follows:

2 EXAMINATION

3 BY MS. HAYES:

4 Q. Good morning.

5 A. Good morning.

6 Q. Will you please state your name, position,  
7 and business address for the record?

8 A. Certainly. My name is Sarah Wright. I'm  
9 the executive director and founder of Utah Clean  
10 Energy, which is located at 1014 2nd Avenue, Salt  
11 Lake City, Utah 84103.

12 Q. Is your mike on?

13 A. I think so.

14 Q. Did you file direct testimony in this  
15 docket on November 9th, 2016 marked as Utah Clean  
16 Energy Exhibit 1.0?

17 A. Yes.

18 Q. To the best of your knowledge, is  
19 everything in your testimony true and correct?

20 A. Yes.

21 MS. HAYES: At this point, I would  
22 like to move the admission of this testimony.

23 CHAIRMAN LEVAR: Thank you. Please  
24 indicate to me if there's any objection to that  
25 motion. And the motion is granted.

1 BY MS. HAYES:

2 Q. Thank you. Will you please provide a  
3 summary of your direct testimony?

4 A. Yes. Utah Clean Energy is generally  
5 supportive of Rocky Mountain Power's pilot project  
6 to utilize solar and storage to avoid distribution  
7 and transmission upgrades. We believe that in  
8 addition to the deferral benefits, the project will  
9 help the Company and others to understand the  
10 potential of these technologies. We support this  
11 study to further utilize "non-wires" alternatives  
12 and options in transmission and distribution system  
13 planning and maintenance.

14 So while Utah Clean Energy is supportive  
15 of the project, we offer some recommendations for  
16 the Commission's consideration with regard to the  
17 solar component of the project. First, because  
18 solar PV is an extremely cost effective resource,  
19 there is likely no need to utilize Blue Sky funds to  
20 pay for this project. I have been involved in  
21 shaping and the early promotion of the Blue Sky  
22 Program since 2001. And to date, the benefits from  
23 the program have flowed to Blue Sky customers or  
24 grant recipients that were deemed worthy of the Blue  
25 Sky grant project. The Company's proposal to have

1 the benefits flow to all ratepayers is a significant  
2 deviation from the Blue Sky Program. However,  
3 should the Commission authorize the use of Blue Sky  
4 funds, I recommend that a grant program similar to  
5 the workings of the Solar Subscriber Program be  
6 developed, the main differences being (1) that the  
7 program is funded by Blue Sky funding; (2) that  
8 customers receive a bill credit based upon solar  
9 energy rate as determined in the Solar Subscriber  
10 Program, and (3) that the benefits flow to  
11 recipients deemed worthy by the Blue Sky grant  
12 program, such as food banks, homeless shelters, et  
13 cetera.

14 Specifically, I propose that the value of  
15 the energy credit established in the Solar  
16 Subscriber be utilized as an offset on grant  
17 recipients' bills. And I understand this portion of  
18 my proposal was not very clear, so I'll trying to  
19 clarify that now before providing live surrebuttal.

20 In my proposal, I gave the example of a  
21 200-kilowatt hour monthly block that could be  
22 awarded to community service organizations. And  
23 rather than offsetting 200-kilowatt hours of usage  
24 directly, a set value for those 200-kilowatt hours,  
25 as established in the Solar Subscriber docket, would

1 be used to offset the energy portion of a customer's  
2 bills. So in the Subscriber Solar docket, an energy  
3 value was used as a component of the Solar  
4 Generation Block Charge. Also included in that  
5 charge was marketing and administrative costs.  
6 Given that my proposal is a grant program, it is not  
7 appropriate to include a credit for those marketing  
8 and administrative charges in the bill credit. So  
9 my proposal is to compensate grant recipients with  
10 an energy value associated with the kilowatt hours  
11 generated by the granted capacity of the solar PV  
12 facility -- I know this is probably confusing -- as  
13 an offset to the energy portion of the grantee's  
14 rate as determined by the Solar Subscriber Program.

15 And, finally, in my direct testimony, I  
16 made a statement about the importance of using this  
17 pilot project as an opportunity to learn about  
18 allocating costs associated with distributed or  
19 non-wires transmission alternatives across  
20 jurisdictional lines. And that's been a common  
21 theme today.

22 **Q. Does that conclude your summary of your**  
23 **direct testimony?**

24 A. Yes.

25 **Q. Did parties file rebuttals to your direct**

1 **testimony?**

2 A. Yes. The Division -- yes. The Division  
3 and the Office did not oppose my proposal for a Blue  
4 Sky grant program and provided additional questions  
5 and recommendations. The Company does not support  
6 my recommendations.

7 **Q. Will you review the Division's response to**  
8 **your proposal?**

9 A. Yes. The Division's primary response with  
10 regard to the solar facility is that the market  
11 value of the energy output flow to Utah ratepayers  
12 via the EBA. This recommendation would ensure that  
13 benefits flow to Utah ratepayers. The Division  
14 highlighted some additional details that, if  
15 addressed in my proposal, could permit both the  
16 Division's and Utah Clean Energy's recommendations  
17 to be implemented.

18 First, the Division proposes allocating  
19 Blue Sky grants based on capacity rather than  
20 energy, then using the actual energy output to  
21 allocate bill offsets proportionately to grant  
22 recipients. In a way, customers cannot be credited  
23 for more energy than is actually produced by the  
24 facility. This is similar to how the Solar  
25 Subscriber is structured for customers with interval

1 meters now where customers receive one kilowatt  
2 blocks, and their bills are offset by the actual  
3 energy generated by the solar facility.

4           Second, the Division proposes that grants  
5 have a limited duration. The Division notes that  
6 grant recipients under Utah Clean Energy's proposal  
7 are not leveraging their own funds, unlike other  
8 Blue Sky grant recipients, nor are they responsible  
9 for ongoing operations, maintenance, or capital  
10 expenses. The Division proposes the length of the  
11 pilot period as the duration of the grant period.

12           Finally, the Division makes some  
13 additional comparisons between the Subscriber Solar  
14 and Utah Clean Energy's Blue Sky grant program.

15           **Q. Would you please respond as to Division's**  
16 **recommendations?**

17           A. Well, firstly, I sincerely appreciate the  
18 Division's thoughtful recommendations on my  
19 proposal. I'm not opposed to allocating grants  
20 based upon capacity and offsetting bills based on  
21 actual generation. It is an appropriate way to  
22 protect ratepayers from the potential negative  
23 impact of granting more energy PV system produces.  
24 However, I am concerned that it would increase the  
25 administrative burden of the program, and I think

1 there's a simple way to decrease administrative  
2 burden while simultaneously avoiding oversubscribing  
3 the PV system.

4 The grant program could withhold capacity  
5 from the system -- say 10 percent of the PV system  
6 capacity -- thereby providing a cushion to protect  
7 ratepayers in --

8 MR. SOLANDER: Your Honor, I'm going  
9 to object. This isn't rebutting. This is direct  
10 testimony that wasn't filed as direct testimony.  
11 This isn't rebutting any assertion made by the  
12 Division. It's just additional detail that could  
13 have been included in Ms. Wright's direct testimony.

14 CHAIRMAN LEVAR: Well, let's see if  
15 Ms. Hayes wants to respond to the objection.

16 MS. HAYES: Well, it's a fair  
17 objection. It is a sincere response to -- I mean, a  
18 sincere attempt to respond to the Division's  
19 rebuttal testimony. And I will leave it to the  
20 Commission to decide.

21 CHAIRMAN LEVAR: Let me ask  
22 Mr. Jetter to weigh in on this.

23 MR. JETTER: I don't think that the  
24 Division has a ton of passion on the nuance of this  
25 and, I guess, this is something that I think would



1 show up in the surrebuttal potentially, so I don't  
2 think I have any objection to Ms. Wright providing  
3 her proposal to the extent that it's, I guess,  
4 limited to a response to our critique or  
5 suggestions. I know that's kind of a long-winded  
6 answer, but I suppose my real answer is we don't  
7 object to the question.

8 CHAIRMAN LEVAR: Mr. Olsen or Ms.  
9 Gardner, do either of you have any input or any  
10 interest in this objection?

11 MS. GARDNER: No, we have nothing to  
12 add.

13 CHAIRMAN LEVAR: Mr. Olsen?

14 MR. OLSEN: I believe that it seems  
15 to be a logical consequence of surrebuttal to  
16 provide alternatives, so we would not object to the  
17 continuation of that.

18 CHAIRMAN LEVAR: I think the  
19 objection is well noted. This does tend to seem  
20 like the type of thing that generally would be  
21 allowed in a written surrebuttal, the kind of thing  
22 we typically see, so we'll allow a little more  
23 leeway on this issue. Ms. Wright?

24 A. Thank you. So with this cushion, if the  
25 PV system -- but if the PV system generates energy

1 in excess of the granted energy, then the market  
2 value could flow through the EBA to all ratepayers,  
3 and this would ensure that benefits stay in Utah.

4 And regarding the Division's  
5 recommendations to set a time limit on the grant,  
6 I'm also not opposed to this recommendation.  
7 However, given that the project will not come online  
8 until 2018, I recommend setting a duration longer  
9 than the STEP pilot period, perhaps five to ten  
10 years from the online date of the project, with a  
11 review of the grant program scheduled as part of the  
12 Blue Sky Program and in determination of whether the  
13 program should be continued, continued with  
14 modifications, or discontinued.

15 BY MS. HAYES:

16 **Q. Will you please describe the Office's**  
17 **response to your proposal?**

18 A. Yes. The Office sees merit in the concept  
19 of using the output of the Blue Sky funded project  
20 for the benefit of the Blue Sky Program instead of  
21 for the benefit of all ratepayers. However, the  
22 Office is concerned with the complexity of the  
23 program and the potential administrative costs, as  
24 well as whether the compensation level is too high.  
25 As I indicated before, my initial proposal was not

1 clear, and the Office and Division responded as  
2 though I was proposing a kilowatt hour for kilowatt  
3 hour credit as compensation. The Office proposed  
4 compensation at Schedule 37 avoided cost rates. The  
5 Office also proposed that administrative costs be  
6 charged to the Blue Sky Program.

7 **Q. What is your response to the Office's**  
8 **recommendations?**

9 A. I support charging the administrative  
10 costs to the Blue Sky Program. And perhaps the  
11 simplest and least costly way to administer this  
12 program would be an annual bill credit awarded at  
13 the beginning of the year based upon the projected  
14 energy output associated with the awarded capacity  
15 grant. A credit based on the determined value of  
16 the energy could be applied to the grant recipient's  
17 bill and thus carried forward every month for which  
18 the value remains. This greatly decreases the  
19 administrative burden. And it may take up to  
20 multiple months to use this credit.

21 And with regard to the matter of  
22 compensation, there are currently three options  
23 before the Commission: Utah Clean Energy's proposal  
24 to use the energy value that was recently  
25 established in the Solar Subscriber docket; DPU's

1 proposal to use the market value of the solar  
2 output; or OCS's proposal to value using Schedule 37  
3 avoided costs.

4           Given that the project does not come  
5 online until 2018, if the Commission finds merit in  
6 Utah Clean Energy's recommendation to create a Blue  
7 Sky grant program for the energy output of the solar  
8 facility, I believe there is time to evaluate these  
9 options.

10           **Q. Will you describe the Company's response**  
11 **UCE's proposal?**

12           A. Yes. Steve McDougal, in his rebuttal  
13 testimony, raises two primary concerns. First, Mr.  
14 McDougal argues that the energy generated by the  
15 solar facility is not excess generation that can be  
16 counted on for use in a grant program because it is  
17 needed to reduce loading on the distribution  
18 circuit. Second, Mr. McDougal argues that the grant  
19 program will create an administrative burden.

20           **Q. What is your response?**

21           A. With regard to the administrative burden,  
22 I believe it is appropriate to charge the Blue Sky  
23 Program with the cost of administering this grant  
24 program. The Blue Sky Program already has the  
25 infrastructure for managing the grant program, and

1 the Subscriber Solar Program already has the billing  
2 infrastructure.

3 And regarding Mr. McDougal's other  
4 assertion that the PV system is not excess  
5 generation, I accept and applaud that the energy  
6 from the solar PV system will be used in conjunction  
7 with battery storage to provide system benefits to  
8 avoid transmission and distribution upgrades in the  
9 project area. However, the fact that the energy  
10 from the PV system will work in conjunction with  
11 batteries to reduce line loading is not mutually  
12 exclusive to providing energy benefits to Utah  
13 ratepayers through the Blue Sky Program. I'm not  
14 sure if I articulated that well -- is not mutually  
15 exclusive to the energy having value for use in the  
16 Blue Sky grant Program.

17 If you consider a Subscriber Solar  
18 project, if it's built on an area of the system that  
19 provides benefits and reduces line loading, that  
20 isn't mutually exclusive to providing those energy  
21 benefits to the Subscriber Solar program.

22 So they're very much two different issues,  
23 and my proposal is that the energy benefits funneled  
24 by Blue Sky customers be conveyed to deserving  
25 grantees, such as food banks, homeless shelters,

1 et cetera, to a grant program operated from the Blue  
2 Sky Program. And that they're not -- because  
3 they're providing line benefits and system benefits  
4 doesn't mean that the energy benefits can't go to  
5 the Blue Sky grant program.

6 **Q. What is your recommendation to the**  
7 **Commission based on your review of the party's**  
8 **positions?**

9 A. I recommend that if Blue Sky funds are  
10 used for this project, that the Commission approve  
11 the creation of a Blue Sky grant program for the  
12 energy output associated with the solar facility.  
13 The grant should be awarded the same way other Blue  
14 Sky grants are awarded but with grant recipients  
15 receiving bill credits based on the value of the  
16 energy produced from their granted capacity  
17 allocation.

18 Utah Clean Energy recommends that the  
19 energy value be based upon the energy value and the  
20 Commission-approved Solar Subscriber Program.  
21 Grants can be time limited but should not last less  
22 than five years from the online date of the solar  
23 facility, with a review prior to the expiration date  
24 of the grant within the Blue Sky docket to determine  
25 whether the current grant program should continue in

1 its current form, be modified, or end.

2 Grants could be awarded based on capacity  
3 allocations, but bill credits should be allocated  
4 based on either actual generation or estimated  
5 generation. If there is concern that using  
6 estimated generation may result in granting more  
7 energy than is produced by the system, the program  
8 could limit its grant allocation to a portion of  
9 system capacity, reserving a cushion to protect  
10 ratepayers in the event that the system does not  
11 produce as projected.

12 Administrative costs should be charged to  
13 the Blue Sky Program, and I recommend that the  
14 Commission set up a technical conference or a Blue  
15 Sky work group meeting to receive comments on this  
16 program, elements and design, and compensation prior  
17 to the online date of the solar facility.

18 **Q. Do you have any other recommendations for**  
19 **the Commission?**

20 A. Yes. I recommend that the Commission host  
21 a technical conference on distribution-sited,  
22 non-wires transmission alternatives and cost  
23 allocation issues. Given that one of the main  
24 objectives of this pilot program -- that one of the  
25 main objectives of this pilot program is

1 educational, it would be a missed opportunity not to  
2 try to learn how to replicate projects without  
3 stumbling over this critical cost allocation issue.

4 **Q. Does that conclude your summary,**  
5 **surrebuttal testimony and conclusions?**

6 A. Yes. Thank you very much.

7 MS. HAYES: Ms. Wright is now  
8 available for questions.

9 CHAIRMAN LEVAR: Thank you.  
10 Ms. Gardner, do you have any questions for  
11 Ms. Wright?

12 MS. GARDNER: No. Thank you.

13 CHAIRMAN LEVAR: Mr. Olsen, do you?

14 MR. OLSEN: No questions. Thank you.

15 CHAIRMAN LEVAR: Thank you.

16 Mr. Jetter?

17 MR. JETTER: I have no questions.

18 Thank you.

19 CHAIRMAN LEVAR: Mr. Solander?

20 EXAMINATION

21 BY MR. SOLANDER:

22 **Q. Yes, thank you. Would you agree that your**  
23 **proposed grant program is essentially setting up an**  
24 **offsite or virtual net metering program?**

25 A. I would disagree. It's very similar to



1 your Solar Subscriber Program.

2 **Q. But the energy generated in one area by**  
3 **this project would then be used to offset usage by**  
4 **other parties.**

5 A. Just as it is in your Solar Subscriber  
6 Program.

7 **Q. Who would determine who receives the**  
8 **benefits of your grant program?**

9 A. The Blue Sky Program has a current grant  
10 program, and I'm not sure how you decide on the  
11 grant recipients, but a number of applications are  
12 received every year. And the Company, I assume,  
13 unless you have a committee that works with you,  
14 determines the grant recipients.

15 **Q. Do you have any idea who you would want to**  
16 **be eligible for this program?**

17 A. It could be very similar to the grant  
18 recipients that you now give. Community  
19 organizations, schools apply, churches apply, a  
20 number of different -- and as a company, you could  
21 set up a steering committee to decide. You know, I  
22 think that food banks and, you know, homeless  
23 shelters would be an excellent idea.

24 **Q. So more administrative costs?**

25 A. No. Just it's just a matter of

1 applying -- just as they do now, they apply for  
2 grants and the Company reviews those proposals, and  
3 they make a decision on who should receive those  
4 grants.

5 **Q. Isn't this awfully similar to a**  
6 **repackaging of the USEP program?**

7 A. No. Do understand the grant program that  
8 you currently have for the Blue Sky grant program?

9 **Q. Yes. I participate in it.**

10 A. No, the Blue Sky grant program.

11 **Q. Yes. I participate in the evaluation**  
12 **phase, so yes.**

13 A. I don't see it as a repackaging. I see  
14 that it is a grant program, but the companies are  
15 not putting the solar on site. You are granting the  
16 energy just as you would through the Subscriber  
17 Solar.

18 **Q. How is it then a public benefit to the**  
19 **Solar Energy Storage program if the benefits are**  
20 **repackaged to benefit a select group of customers?**

21 A. The benefits of this -- the main benefits  
22 of this -- this is a small solar project; it's 650  
23 kilowatts. The main benefits are in the  
24 transmission deferral.

25 **Q. Are you aware of whether the Commission**

1 has ever previously ordered the Company to implement  
2 a program that it didn't propose and didn't support  
3 and for which the costs are totally speculative?

4 A. I'm not aware. I've been involved with  
5 the Blue Sky Program for a long time, and you have  
6 done grant programs for a long time.

7 MR. SOLANDER: Thank you.

8 CHAIRMAN LEVAR: Is that all you  
9 have, Mr. Solander?

10 MR. SOLANDER: It is. Thank you.

11 CHAIRMAN LEVAR: Any redirect?

12 MS. HAYES: No. Thank you.

13 CHAIRMAN LEVAR: Commissioner White,  
14 anything for Ms. Wright?

15 COMMISSIONER WHITE: You may have  
16 described this but I may have missed it.

17 THE WITNESS: It's confusing. I'm  
18 sorry.

19 COMMISSIONER WHITE: It was helpful.  
20 With respect to the output, were you saying you're  
21 talking, like, gross generation or talking, like, a  
22 net excess based upon what's the generation left  
23 after the use of the batteries or what's the --

24 THE WITNESS: There are two different  
25 issues. I would say gross, you would probably do

1 something for line losses, to remove line losses,  
2 but it would be the gross generation because this  
3 project is providing dual benefits. Energy is a  
4 secondary benefit, whereas the primary benefit, as  
5 Mr. Marx explained, is to reduce the peak loading on  
6 the grid. And so it's providing that benefit, but  
7 then there's also an added energy benefit. So it's  
8 just a matter of because you sited that project in a  
9 location, it provides benefits. Just like if you  
10 built a Solar Subscriber project in a location that  
11 provided grid benefits, those kilowatt hours would  
12 still be available for the Solar Subscriber Program.

13 COMMISSIONER WHITE: One other  
14 question -- and I understand you probably don't have  
15 the calculations readily available, but, I mean,  
16 what are we talking about in terms of -- and I know  
17 there's three different concepts. There's the  
18 Schedule 37 and some other compensation. Is there  
19 any kind of rough estimate of what the total  
20 value -- based upon your gross generation -- of what  
21 that would be in terms of dollars?

22 THE WITNESS: I could probably  
23 quickly do it. I looked at the total in my direct  
24 testimony; I calculated the total output, I believe.  
25 Sophie, if you're looking at it and you can point me

1 to the right page --

2 MS. HAYES: My screen just went to  
3 sleep.

4 THE WITNESS: Okay. So the PV watts  
5 calculator online -- I just did that simple, online  
6 calculation -- that showed the entire system would  
7 generate about 1,118,000-kilowatt hours a year. And  
8 divide that annual output by 12, and let's see, let  
9 me -- sorry, I have to follow through my math  
10 again -- it would be approximately 466-200 kilowatt  
11 hour blocks. And I didn't really -- so we would  
12 multiply that times whatever value that the  
13 Commission determines -- the value and the  
14 Subscriber Solar program I think are part of a  
15 confidential docket, so I probably shouldn't say  
16 that right now -- avoided costs, Schedule 37, I'm  
17 not sure where that lands right now, but you would  
18 multiply 466 -- if someone has a calculator they can  
19 do this -- times 200 times the different values. So  
20 it's not a huge value, but it could provide really  
21 meaningful benefits to organizations in Utah. And  
22 it would also align -- I think when people -- I  
23 mean, right now the Blue Sky Program is way  
24 overpriced, and when we filed our last comments, we  
25 said if the benefits still flow to the community,

1 we're okay with it being overpriced. But if the  
2 benefits are not going to flow to the community, I  
3 think we need to reduce the Blue Sky price to maybe  
4 \$.50 per kilowatt or block. But, sorry I don't have  
5 the math; I don't have a calculator.

6 COMMISSIONER WHITE: I guess the  
7 final question is, putting aside, I guess, the  
8 philosophical benefits versus who should be  
9 entitled, is there anything in your opinion that is  
10 contrary to the Blue Sky Program as written by law,  
11 rule, et cetera, tariff, that would prohibit the use  
12 of the funds for this project?

13 A. For the project? So there's nothing by  
14 law -- and I was involved in the changes that  
15 allowed them to do demonstration projects or do  
16 projects, but it was -- and I guess I failed in not  
17 saying that those benefits should flow to Blue Sky  
18 customers or grant programs, because the law  
19 definitely allows it. It's just a big deviation  
20 from what Blue Sky customers have supported in the  
21 past.

22 COMMISSIONER WHITE: Thank you. I  
23 have no further questions.

24 CHAIRMAN LEVAR: Commissioner Clark?

25 COMMISSIONER CLARK: No questions.

1 Thank you.

2 CHAIRMAN LEVAR: Thank you. I don't  
3 have anything else either, so Ms. Hayes?

4 MS. HAYES: No further questions.

5 CHAIRMAN LEVAR: Thank you,  
6 Ms. Wright.

7 THE WITNESS: Thank you.

8 CHAIRMAN LEVAR: Ms. Gardner?

9 MS. GARDNER: Before I call my  
10 witness, would anybody object to me moving so that  
11 my witness's back isn't to me during direct?

12 CHAIRMAN LEVAR: No. I think we've  
13 got two chairs right here.

14 KENNETH WILSON,  
15 having been first duly sworn to tell the truth, was  
16 examined and testified as follows:

17 EXAMINATION

18 BY MS. GARDNER:

19 **Q. Good morning. Will you please state your**  
20 **name, position, and business address for the record.**

21 A. My name is Kenneth Wilson. I'm  
22 representing Western Resource Advocates. I'm an  
23 engineering fellow, and my office address is 2260  
24 Baseline Road, Boulder, Colorado.

25 **Q. Thank you. And Mr. Wilson, did you file**

1 **direct testimony as well as your CV in this docket**  
2 **on November 9, 2016 marked as WRA Exhibit 1.0 and**  
3 **1.1 respectively?**

4 A. Yes, I did.

5 Q. **And to the best of your knowledge, is**  
6 **everything in your testimony and CV still true**  
7 **correct?**

8 A. Yes, it is.

9 MS. GARDNER: I'd like to move the  
10 admission of Mr. Wilson's testimony and CV into  
11 evidence at this time.

12 CHAIRMAN LEVAR: Thank you. If any  
13 party objects to the motion, please indicate to me.  
14 And I'm not seeing any, so the motion is granted.

15 BY MS. GARDNER:

16 Q. **Mr. Wilson, at this time, will you please**  
17 **summarize your direct testimony for the Commission?**

18 A. Yes. Thank you. Commissioners, I'd like  
19 to focus on some technical issues in this case. I  
20 find the proposal by Rocky Mountain Power to be very  
21 solid technically. This is a typical non-wire  
22 solution to a voltage problem, and I have been  
23 testifying in Nevada, Colorado, Arizona on similar  
24 proposals by utilities there. We find these to be  
25 very reasonable first steps for utilities to start



1 testing battery storage technology. While that  
2 technology is still a little expensive today, we  
3 believe that within a few years it will be more  
4 economical than typical wired solutions. And you've  
5 heard some testimony about non-wire solutions, but I  
6 will just add to my testimony on that non-wire  
7 solutions are being looked at in states all across  
8 the country. This is not a new solution. These  
9 technologies have been in use for five or six years.

10 Each utility really needs to get some  
11 experience with this technology to see how it works,  
12 how do they manage, how do they operate a battery  
13 storage system by itself with solar, with other  
14 distributed generation, because each utility system  
15 is different. And I think maybe one  
16 misperception -- non-wire solutions can solve  
17 problems that are strictly in the distribution grid;  
18 they don't have to be related to transmission. You  
19 can avoid putting in a new transformer at a  
20 substation, you can avoid re-conductoring feeders,  
21 which are totally in the distribution side. So I  
22 don't find it rings true to say that this would  
23 always involve an allocation issue because it would  
24 always be on the transmission side. There are many  
25 examples across the country where these non-wires,

1 battery storage and solar solutions are being used  
2 at the substation and feeder level and have nothing  
3 to do with transmission. So I wanted to clear that  
4 up a bit.

5 We find this a very good use for STEP  
6 funds. We think that this type of pilot project was  
7 contemplated and that the R&D purpose for this is  
8 quite sound. As I mentioned, the Company needs to  
9 get experience. It's like you have a new type of  
10 car; you need to drive it, you need to drive it on  
11 your roads in your neighborhood to see how it works,  
12 how does it work for you, and that's very important.  
13 And as I said, this will be an important choice that  
14 the Utility and the Commission needs to have in its  
15 portfolio of solutions for distribution problems,  
16 for transmission problems, for mixes of those  
17 problems. And I would hate to see an allocation  
18 issue stop a good project like this.

19 I have been involved in R&D for 40 years  
20 in a variety of technologies and have evaluated  
21 hundreds of projects, and I would say this is a very  
22 good example of what we should be promoting as  
23 choices for utilities.

24 One other thing that I mention in my  
25 testimony that I think needs to be added to the

1 conversation are the additional benefits that a  
2 battery storage system can bring to the customers in  
3 Utah. While the Company is proposing this project  
4 strictly to solve a voltage problem, as you heard in  
5 testimony earlier today, the battery will only be  
6 used a couple of months a year for that purpose.  
7 That leaves a large part of the year available to  
8 use this battery storage system to solve other  
9 problems and essentially to make money for the  
10 customers of Utah. Two examples of that are energy  
11 shifting. In a month like April when there's no  
12 voltage problem, they could use the battery to store  
13 up excess energy at night and then discharge it in  
14 the daytime when they would have had to add  
15 additional generation into the mix. So that's a  
16 definite economic advantage.

17 And the second advantage or example is  
18 frequency regulation. The Company has to provide a  
19 steady frequency of 60 Hertz 24-hours a day, seven  
20 days a week to the second -- to the millisecond,  
21 really. And a battery system has been shown to be  
22 very good at helping to balance the frequency on the  
23 system. And what I'm saying is that once the  
24 Company learns how to use this system to solve the  
25 voltage problem, they can start using the same

1 battery to get economic benefits for the customers,  
2 and that will be very important for this project;  
3 but more so in the future, when batteries are much  
4 cheaper and will be in the running to replace  
5 (inaudible), to replace burning fuel wastefully,  
6 just to do this frequency balancing. You can store  
7 the excess energy and ramp the battery up and down  
8 and balance the frequency. So there are a lot of  
9 benefits to this project that I see, and it is  
10 typical of other projects that I'm supporting in  
11 other states. Thank you very much.

12 **Q. Thank you. Does that conclude your**  
13 **summary of your direct testimony?**

14 A. It does.

15 **Q. And did any parties file rebuttal to your**  
16 **direct testimony?**

17 A. They did not.

18 **Q. Do you have any other recommendation that**  
19 **you'd like to share with the Commission today?**

20 A. I think all of my recommendations are in  
21 my direct testimony.

22 **Q. And finally, does that conclude your**  
23 **summary and conclusions?**

24 A. Yes, it does.

25 MS. GARDNER: Mr. Wilson is now

1 available for questions from the parties as well as  
2 from the Commission.

3 CHAIRMAN LEVAR: Thank you.

4 Ms. Hayes, any questions?

5 MS. HAYES: No questions. Thank you.

6 CHAIRMAN LEVAR: Thank you. Mr.

7 Jetter?

8 MR. JETTER: I have no questions.

9 CHAIRMAN LEVAR: Mr. Olsen?

10 MR. OLSEN: No questions. Thank you.

11 CHAIRMAN LEVAR: Mr. Solander?

12 MR. SOLANDER: No questions. Thank

13 you.

14 CHAIRMAN LEVAR: Commissioner White?

15 COMMISSIONER WHITE: No questions.

16 CHAIRMAN LEVAR: Thank you.

17 Commissioner Clark?

18 COMMISSIONER CLARK: I have a

19 question or two. If you're conversant enough with

20 battery technology to take these on, I'd be grateful

21 for your thoughts. The additional uses of the

22 battery capacity that you described, avoiding having

23 to transmit certain amounts of energy to that area

24 because it's been produced and stored and is

25 available in the month and days when it's not doing

1 its primary -- fulfilling its primary purpose -- is  
2 that going to affect the longevity of the battery's  
3 life in any material way as far as you know? In  
4 other words, if this battery were used ten months a  
5 year instead of two, have we reduced the life of the  
6 battery by 5 or not at all or 50 percent or --

7 THE WITNESS: That's an excellent  
8 question, because this is an issue that utilities  
9 and commissions and the battery providers are  
10 looking at across the country, and electric vehicles  
11 is a good example of this. It turns out that if you  
12 use battery storage, for instance, frequency  
13 regulation, what you're going to do is set it kind  
14 of in the half-filled, and sometimes you have to  
15 store energy because there's too much on the system,  
16 sometimes you discharge. If you keep a battery  
17 around the 50 percent charged level, it lasts a lot  
18 longer than if you deeply discharge and then fully  
19 charge. And I don't think that your question on  
20 cycles would concern me. I'd almost say that it's  
21 better to use it than to let it sit, because, you  
22 know, you'll be letting it sit there fully charged  
23 in case you have a problem. I'd really rather see  
24 it used in a sensible way, and I would not worry  
25 about the cycle issue. I have not see where that

1 has significantly reduced the life.

2 COMMISSIONER CLARK: Thank you.

3 CHAIRMAN LEVAR: I don't have any  
4 further questions, so thank you, Mr. Wilson.  
5 Anything else, Ms. Gardner?

6 MS. GARDNER: No. Thank you.

7 CHAIRMAN LEVAR: Any final matters  
8 from any party?

9 MR. SOLANDER: Rocky Mountain Power  
10 would request that we call Douglas Marx as a  
11 rebuttal witness. I have three questions for him  
12 just to clarify some issues that have been raised  
13 during this session today.

14 CHAIRMAN LEVAR: We are at a point  
15 where I probably ought to give our court reporter a  
16 short break, so maybe a five-minute break and then  
17 come back and do that.

18 MR. SOLANDER: That would be great.  
19 Thank you.

20 (A brief recess was taken.)

21 CHAIRMAN LEVAR: Mr. Solander?

22 MR. SOLANDER: Thank you. We'd like  
23 to call Douglas Marx as our rebuttal witness.

24 CHAIRMAN LEVAR: Okay. And you're  
25 still under oath, Mr. Marx.

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EXAMINATION

BY MR. SOLANDER:

Q. Mr. Marx, were you here during Mr. Vastag's testimony regarding the Company's process for evaluating whether to make transmission or distribution level decisions?

A. Yes, I was.

Q. And can you describe for the Commission's benefit the process that the Company uses to evaluate where to invest and what type of investments to make?

A. Yes. I'll give kind of a high level overview, and I'll also answer a question that also came up with Commissioner Clark earlier, too.

When we look at system issues, we look at it kind of holistic, and we look for the least cost economic decision to upgrade that. So we will look at distribution, transmission investments from an economic standpoint.

Two years ago, in 2014, we recognized that these nontraditional investments would be coming into their own in the near future, so inside our decision matrix for all of our planning, that's actually one of the first line items our engineers who are doing the planning are required to look at



1 is will a nontraditional solution solve this. So  
2 they look at battery storage, they look at issues  
3 like -- we have looked at electromechanical battery  
4 systems, which are basically giant gyroscopes that  
5 we can use for frequency regulation, so that's part  
6 of the decision matrix now in all states to look at.  
7 Because as the costs started to come down -- and as  
8 Mr. Wilson mentioned, they are coming down very fast  
9 in the battery world -- as the energy densities get  
10 greater, the costs are collapsing fast. So when you  
11 look at the decision thing, unless there's a  
12 physical component to require a conductor to be  
13 changed out, i.e., it's completely overloaded, you  
14 may not do that if you can do something else to  
15 relieve that.

16 So as we looked at this whole process, we  
17 have looked at this in several concepts. We've  
18 looked at these in different states, different  
19 areas, but this is the first project that came real  
20 close to being a very economic decision. And it's  
21 actually the first time it came down to be the  
22 lowest first cost for a solution on a system. So  
23 again, we're talking here in this aspect about a  
24 radial transmission line that does no other purpose  
25 except to serve my distribution substation.

1           So when you start to say how do I solve  
2 this problem, we looked at many things. And one of  
3 the alternatives in the testimony was basically  
4 increasing another substation in the area. So we  
5 can put another substation in, we can expand the  
6 transmission line, we can increase the regulation on  
7 the distribution. So I think when we start to look  
8 at a fully optimized system, we look at it  
9 holistically and not just say I've got a little  
10 problem. Do I solve with it the transmission  
11 because I know my allocation levels are lower, or do  
12 I do it on distribution because it's a lower cost.

13           I think you've got to do it on a full  
14 economic analysis over the life cycle of the  
15 projects, too. And as I mentioned, the life cycles  
16 are tough because you're looking at some future  
17 projections. And I know my estimates are pretty  
18 much wrong as soon as the ink dries on the paper, so  
19 that's kind of the problem you're looking at when  
20 you're trying to do this kind of planning stuff.

21           What we believe is with these newer  
22 technologies, the battery technologies,  
23 electromechanical batteries, whether we use  
24 synchrophasors on transmission lines, all of these  
25 come into play when you're starting to do your

1 analysis. And how quickly can you put them in and  
2 at what cost can you put them in, and is there a  
3 need to do it. Does that answer that?

4 MR. SOLANDER: I believe it does.

5 Mr. Marx is available for additional questions from  
6 the Commission or the parties.

7 CHAIRMAN LEVAR: Thank you. Mr.  
8 Jetter?

9 MR. JETTER: I don't have any  
10 additional questions.

11 CHAIRMAN LEVAR: Mr. Olsen?

12 MR. OLSEN: No additional questions.  
13 Thank you.

14 CHAIRMAN LEVAR: Ms. Hayes?

15 MS. HAYES: No questions. Thank you.

16 CHAIRMAN LEVAR: Ms. Gardner?

17 MS. GARDNER: Also no questions.

18 CHAIRMAN LEVAR: Commissioner White?

19 COMMISSIONER WHITE: No questions.

20 Thanks.

21 CHAIRMAN LEVAR: Commissioner Clark?

22 COMMISSIONER CLARK: No questions.

23 Thank you.

24 CHAIRMAN LEVAR: I don't have  
25 anything further either. Thank you. Anything

1 further from any party before we adjourn? I'm not  
2 seeing any indication, so we're adjourned. Thank  
3 you all.

4 (The hearing concluded at 11:55 a.m.)

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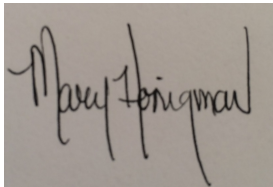
REPORTER'S CERTIFICATE

STATE OF UTAH        )  
COUNTY OF SUMMIT )

I, Mary R. Honigman, a Registered Professional Reporter, hereby certify:

THAT the foregoing proceedings were taken before me at the time and place set forth in the caption hereof; that the witness was placed under oath to tell the truth, the whole truth, and nothing but the truth; that the proceedings were taken down by me in shorthand and thereafter my notes were transcribed through computer-aided transcription; and the foregoing transcript constitutes a full, true, and accurate record of such testimony adduced and oral proceedings had, and of the whole thereof.

I have subscribed my name on this 12th day of December, 2016.



\_\_\_\_\_  
Mary R. Honigman  
Registered Professional Reporter

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