## BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations

Docket No. 13-035-184

HEARING PROCEEDINGS, (VOLUME II)

TAKEN AT:

Public Service Commission

Hearing Room 403 160 East 300 South Salt Lake City, Utah

DATE:

Tuesday, July 29, 2014

TIME:

9:02 a.m.

REPORTED BY:

Scott M. Knight, RPR



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1	Hearing Proceedings (Volume II)
2	July 29, 2014
3	PROCEEDINGS
4	THE HEARING OFFICER: On the record.
5	Good morning, ladies and gentlemen. This is
6	continuation of the hearing in Docket No. 13-035-184, commonly
7	known as the Rocky Mountain Power general rate case. And we
8	left off yesterday with, I believe, having concluded the Office's
9	presentation. And we're now ready to hear from the Division.
10	Are there any preliminary matters before Mr. Jetter presents the
11	Division's case?
12	And let me remind all that the public witness hearing
13	will be in this room tonight at 5:00 p.m.
14	I don't believe we have anybody participating on the
15	telephone today, is that correct, as of today, or as of this
16	moment?
17	MS. BINTZ: No.
18	THE HEARING OFFICER: Thank you.
19	Mr. Jetter.
20	MR. JETTER: Thank you. The Division would like
21	to call our first witness, Dr. Artie Powell.
22	THE HEARING OFFICER: Please raise your right
23	hand. Do you solemnly swear that the testimony you're about to
24	give shall be the truth, the whole truth, and nothing but the truth?
25	THE WITNESS: Yes.

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1	THE HEARING OFFICER: Thank you. Please be			
2	seated.			
3	ARTIE POWELL, being first duly sworn, was			
4	examined and testified as follows:			
5	EXAMINATION			
6	BY-MR.JETTER:			
7	Q. Dr. Powell, would you please state your name and			
8	occupation for the record?			
9	A. My name is Artie Powell, A-r-t-i-e. I'm the energy			
10	section manager within the Division of Public Utilities.			
11	Q. Thank you. And have you prepared and filed, on			
12	behalf of the Division, direct rebuttal and surrebuttal testimony in			
13	this docket?			
14	A. Yes.			
15	Q. And if you were asked the same questions contained			
16	within the prefiled direct rebuttal and surrebuttal testimony,			
17	would your answers remain the same?			
18	A. Yes, it would.			
19	MR. JETTER: Thank you. With that, the Division			
20	would like to move to enter the rebuttal and surrebuttal that I			
21	believe the direct testimony has already been received by the			
22	Commission. So at this time, we'd like to move to admit the			
23	other prefiled testimony and the attending exhibits.			
24	THE HEARING OFFICER: Any objections?			
25	They're received.			



MR. JETTER: Thank you.

BY MR. JETTER.

- Q. Have you prepared a brief statement?
- A. Yes, very brief. Good morning. It's a lot cooler today than it was yesterday, so that's nice.

THE HEARING OFFICER: We hope that will be consistent throughout the day.

THE WITNESS: Well, it's probably going to heat up in a minute.

The Division is generally supportive and has expressed its support for the Company's net metering charge and argues that it is consistent with several general rate making principles, including cost causation.

We recommend that the Commission adopt a net metering charge in this particular docket, although we differ from the Company in the amount of that particular charge. The Company revised its recommendation up to 4-- 4.65 as part of its case from the original 4.25. The Division still supports implementing the net metering charge at the \$4.25 per month.

In the Division's view, the net metering charge is about cost recovery of existing distribution costs. And the Division believes that there's sufficient evidence on the record for the Commission to implement that charge. While the Division believes that there is this adequate evidence on the record, we do not oppose if the Commission decides to further study cost



1	benefits under SB 208 in a separate docket as some of the			
2	intervening parties have recommended.			
3	Such a study will help the Commission on several			
4	questions about a net metering program that we outlined in our			
5	testimony. Whether or not a net metering program is in the			
6	public interest, how that net metering program should be			
7	structured, and at what rate the net metering customer should be			
8	compensated.			
9	And I think I'll leave my summary statement at that.			
10	Thank you.			
11	THE HEARING OFFICER: Thank you.			
12	MR. JETTER: Dr. Powell is available for cross-			
13	examination.			
14	THE HEARING OFFICER: Thank you.			
15	Mr. Moscon.			
16	MR. MOSCON: No questions.			
17	MR. COLEMAN: The Office has no questions for Dr.			
18	Powell.			
19	THE HEARING OFFICER: Mr. Rossetti.			
20	MR. ROSSETTI: Thank you. I expected it to come			
21	quick that time.			
22	EXAMINATION			
23	BY-MR.ROSSETTI:			
24	Q. Just a couple of very brief questions, if you don't			
25	mind And good morning to you			

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1	A. Good morning.		
2	Q. I hope it stays cool myself, especially when I'm		
3	there later today.		
4	Would you please definewell, looking at your		
5	prefiled rebuttal testimony of June 26th, on line 20, could you		
6	please define "zone of reasonableness"?		
7	A. I think I'm going to defer that question to the		
8	Division's consultant because I'm simply quoting what he		
9	concluded in his testimony there. So I'll let him		
10	Q. Okay.		
11	Adefine what that means.		
12	Q. I'll ask him. Thank you.		
13	A. You bet.		
14	Q. Then the second question is helping me understand		
15	cost causation. And this is notthis is from your summary just		
16	now. It'spleaselet me reflect that back to you and see if I've		
17	got it correct. Because a net metering customer creates excess		
18	they get a credit. Later in the day, they redeem that credit by		
19	pulling energy out of the grid, but they don't pay the fixed costs		
20	associated with that because it was a credit. And that is what		
21	we're referring to as the cost causation and the fundamental		
22	underlying principle behind cost shifting? Maybe I should have		
23	broken that down into smaller, butso it's the redeeming of the		
24	credit later, which does not actually cover the fixed costs. Is		
25	that a correct understanding?		

1	A.	In terms of the definition of cost causation, no,
2	that's	not the way I would have defined it. Cost causation
3	genera	ally is the principle that if you can identify those who are
4	causin	ng the cost to be incurred, then you recover those costs
5	from th	nose customers.
6	Q.	Okay.
7	A.	So it's a fairlyin my mind, it's a fairly simple
8	conce	pt.
9	Q.	Okay. I'mI'm just trying to get my head around it
10	A.	Right.
11	Q.	because, you know, I'm not very well versed in
12	anythi	ng like this. So the net metering customer, if they were
13	not to	redeem that credit, then they would not be shifting any
14	cost?	
15	A.	They don't redeem the credit
16		So a net metering customerlet me see if I
17	unders	stand what you're asking.
18	Q.	Okay.
19	A.	A net metering customer produces excess energy.
20	They	they produce more than they consume.
21	Q.	Uh-huh (Affirmative).
22	A.	And then they're not allowed to use that credit at
23	some	time in the future? And therefore, they don't cover those
24	costs?	
25	Ω	Let's say that they choose not to redeem that credit

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That--

Α.

Okay.

Q. At that point, they have not caused any cost to be incurred, because they have not used the grid. Is that a correct assumption?

A. No, I would disagree with that. They--they use the grid when they pulled the electricity off the grid. Their--their--and therefore, they reduce their consumption and since we're collecting those fixed costs through those volumetric grades and their volumes are less for the month, they don't pay those costs.

Q. Okay.

A. So it really has nothing to do--at least in the scenario that you presented--with the--with them not redeeming or redeeming that particular credit.

Now, I do disagree with the premise of your scenario because if a customer produces excess electricity at one part of the day, they don't redeem that credit later that day. That's not the way the net metering tariff works. The net metering tariff works on a billing cycle. So at the end of the month--and I know billing cycles don't coincide directly with month--but at the end of the month, there's a netting of--of what was consumed--that's where the excess energy comes from that's carried over to some future billing period that then is credited against the customer's account. So you don't--so you don't produce it, say, at 1:00 during the day and then use that

1	credit la	ater that afternoon at 5:00 or 7:00
2	Q.	Uh-huh (Affirmative).
3	A.	or at midnight. That's not the way the net
4	meterir	ng program or the net metering tariff was designed. That
5	would r	require much more complicated metering to do it that way.
6	Q.	Okay. I think that makes a lot of sense.
7	A.	Okay.
8	Q.	It accumulates over the month and the customer
9	then re	deems that credit at the end of the month or carries it
10	over?	
11	A.	Carries over. And thank you, because you just said
12	it more	articulately than I was trying to, so yes.
13	Q.	Okay. But I'm trying to understand the concept of
14	cost ca	usation.
15	A.	Right.
16	Q.	And that comes as a result of the customer using
17	kilowat	t-hours for which they exercise that credit at the end of
18	the mo	nth. So sometimelet's assume that during the month,
19	they ar	e not carrying anything over so that credit offsets kilowatt-
20	hours o	consumed during the month. Would you agree with that, if
21	they do	not carry over a credit?
22	A.	Right. You'reyou'reagain, allI think what you're
23	saying	isis that net metering customer's system produces
24	during	the month, but it just produces less than what they
25	actually	y consume. So yeah, it'sit's being used as an offset to



1	their current deal. That's correct.
2	Q. Great. It's good to get a good understanding of this.
3	And, because they actually drew electricity from the
4	grid for those kilowatt-hours for which they're exchanging credits
5	later in the month, that is the underlying principle for cost
6	causation?
7	A. Again, the idea if they're drawing power off of the
8	systemin other words, if they're using the distribution grid, then
9	they're causing costs.
10	Q. Okay. Thank you.
11	A. Yes.
12	Q. I appreciate you taking the time to help me
13	understand.
14	No more questions.
15	THE HEARING OFFICER: Thank you. Thank you,
16	Mr. Rossetti.
17	Mr. Culley.
18	MR. CULLEY: Yes. Thank you, Commissioner.
19	EXAMINATION
20	BY-MR.CULLEY:
21	Q. Good morning, Dr. Powell. We haven't had the
22	chance to meet before. My name is Thad Culley. I'm counsel for
23	The Alliance for Solar Choice. But before we get into my
24	questions, which I'll keep brief, I want to kind of walk through a
25	couple of statements in your testimony that will be the focus of



1	our conversation.
2	So startingwe're going to jump around here kind of
3	fast. With your direct testimony on page .14, starting with line
4	277, you state that the Division made no attempt in this period to
5	quantify the costs or benefits
6	A. Hang on. Hang on.
7	Q. I'm sorry. I'm sorry.
8	A. Line 277, did you say?
9	Q. That is correct, sir.
10	A. Okay. Now, my pagination is a little bit different.
11	I'm on page .13, but that may be a difference in
12	Q. Redacted?
13	A. Okay. Okay. Yeah.
14	Q. Okay. So, "The Division has made no attempt in
15	this period to quantify the costs or benefits of the net metering
16	program." Okay. Then onjumping to page .3 of your rebuttal
17	testimony, looking at pageat line 35, you statepardon me"SB
18	208 requires some cost/benefit analysis. While the Company did
19	not provide a comprehensive evaluation of benefits in its direct
20	case, others have and will continue to analyze the benefits."
21	And did I read that correctly?
22	A. Where was that again?
23	Q. Again, I apologize for getting ahead of you. This
24	was line 37 of rebuttal.



A. And read that again. What are you reading?

25

1	Q. So I'm sorryline 35 to	
2	A. Okay.	
3	Qline 37.	
4	A. Okay. "SB 208 requires some cost/benefit	
5	analysis"?	
6	Q. Correct.	
7	A. Okay. Correct.	
8	Q. And then continuing on to line 37, you observe, "As	
9	Mr. Faryniarz"if I pronounce that correctlylet me know	
10	"indicates in his testimony parties have not successfully shown	
11	that net metering benefits are not reflected in [our] current	
12	rates"?	
13	A. Right.	
14	Q. Then finally, going to your surrebuttal, on page .10	
15	and starting with line 197so I'll give you a second.	
16	All right. And so there you state, "However, no	
17	party to this docket has presented persuasive evidence that net	
18	metering customers are undercompensated or, if so, what the	
19	appropriate compensation is."	
20	A. Correct.	
21	Q. And, Dr. Powell, is it your understanding that a	
22	utility filing a rate case application generally must carry the	
23	burden of proof before the Commission?	
24	A. Yes.	
25	Q. And when you participate in a case, do you	

1	generally try to understand the parameters of the case, including	
2	the legal parameters?	
3	A. Generally, no, not the legal parameters.	
4	Q. Though when the legal parameters may affect the	
5	outcome of the case, it might be a part of the strategy that you	
6	work out with the attorneys; is that correct?	
7	A. We might discuss that.	
8	Q. Okay. And would you agree that SB 208 was an	
9	issue in this case that involved legal parameters?	
10	A. I think so.	
11	Q. And did you comment on SB 208 and your	
12	understanding of its importanceI'm sorry. Let me restate that.	
13	Did you comment on SB 208 in your testimony and your	
14	understanding of its importance to the Commission's decision in	
15	this case?	
16	A. Important in which way? Specifically which one of	
17	those statements, do you think?	
18	Q. I'd say did you comment in your testimony on	
19	whether it's important procedurally and substantively to how the	
20	Commission resolves this case?	
21	A. I think what I commented on is that SB 208 directs	
22	the Commission that they have to undertake some cost/benefit	
23	analysis. I think what our testimony is, or my testimony is that I	
24	articulated in my summary is that there's sufficient evidence on	
25	the record to adopt a net metering charge.	



1	Q. Let's see. And are you familiar with the standard	
2	the Commission uses for determining what the burden of proof	
3	is?	
4	A. From a legal point of view?	
5	Q. Just from your understanding in terms of how you	
6	prepare a case, how you work on preparing a case.	
7	A. Inin a general way, yeah.	
8	Q. Okay. I'd like to introduce a cross exhibit at this	
9	time.	
10	Okay. Just to be clear, Dr. Powell, I'm not going to	
11	ask you to read this whole thing into the record. The first	
12	document in this cross exhibitactually, before I do that, Mrif I	
13	could ask to have this identified. This will be our fourth cross	
14	exhibit.	
15	THE HEARING OFFICER: Right. It's identified as	
16	TASC Cross Exhibit 4, for identification.	
17	MR. CULLEY: Thank you.	
18	BY MR. CULLEY:	
19	Q. So the first part of this cross exhibit	
20	areit's titled, "Response of the Division of Public Utilities to the	
21	Rocky Mountain Power August 28, 2008, Filing Responding to	
22	Motion""Motions to Dismiss or to Restart the 240-Day Statutory	
23	Time Period." And that appears in Docket No. 08-035-38.	
24	Do you recall participating in this case?	
25	A. Vaguely.	

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Q. Okay. And so if we could just turn to page .7 of these comments, which is also page .7 of the cross exhibit, I would just ask that you note whether I'm saying this correctly, that the comments here say that the burden of proof is well established. The burden--includes providing all necessary information to the Commission and allow--allowing it to set just and reasonable rates and in there, there's a case cited, the Utah Department of Business Regulation Division of Public Utilities vs. Public Service Commission.

So do you see that?

- A. I see that reference, yes.
- Q. And now if we could turn to the next tab I have.
- A. Was there another question about that or--I mean, I see the reference. I don't--I'm not seeing what you articulated before you referred to it. Is there a question--another question there?
- Q. Not related specifically to that. What I wanted to turn to now was now the Commission's order--
  - A. Okay.
- Q. --following the submission of these comments. And that is the next tab, which can be found on page .26 of the cross exhibit, which is on the upper right-hand side of the page. And do you see--
  - A. Go ahead.
  - Q. Okay. Thank you. And do you see at the bottom of



1	the page, it's the indented paragraph there?	
2	A. Just below where it says, "Court has stated"?	
3	Q. Yes.	
4	A. Okay.	
5	Q. And would you mind readinglet's see how many	
6	how manyI think the firstfirst three sentences of that.	
7	A. Okay. "In the regulation of public utilities by	
8	governmental authority, a fundamental principle is, the burden	
9	rests heavily upon a utility to prove it is entitled to rate relief and	
10	not upon the Commission, the Commission staff, or any	
11	interested party or protestant to prove the contrary. A utility has	
12	the burden of proof to demonstrate its proposed increase in rates	
13	and charges is just and reasonable."	
14	Q. Thank you, Dr. Powell.	
15	A. Okay.	
16	Q. And if you flip to the next page, you see that this	
17	Division order cites the same case that the Division cited in its	
18	response, and that is the Utah Department of Business. And just	
19	for	
20	A. Yes.	
21	Qsake ofokay. Thank you. Just to be	
22	comprehensive here, I included another attachment, which is that	
23	Supreme Court case. And it's another tab. I would just have you	
24	look at that tab and see if that lookit's the last paragraph of	
25	that page to make sure that looks like that's the standard you're	

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familiar with as well.

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MR. JETTER: Commissioners, I'm going to object to this line of questioning. I think it goes pretty far beyond the direct of Dr. Powell. And I think it's leading down the road to call for a legal conclusion, which is also, I think, an inappropriate direction to go with this line of questioning. I'm not sure what the relevance of having Dr. Powell read from Commission's orders I'm sure the Commission's aware of is going to provide.

THE HEARING OFFICER: Mr. Culley?

MR. CULLEY: And this really is the end of this--use of this exhibit and I'm not really asking for an interpretation of this document, just want to ascertain if what is contained here is consistent with Dr. Powell's understanding of the burden that must be carried by the utilities.

MR. JETTER: I'm not sure that Dr. Powell's understanding of the burden that must be carried by the parties in the legal sense is something that he can really testify to.

THE HEARING OFFICER: I think the guestion would be did he rely on these materials or--or--in the preparation of his--of his testimony in this case.

MR. CULLEY: Uh-huh (Affirmative).

THE HEARING OFFICER: And if you would like to ask that question, I think you may.

MR. CULLEY: Sure. Thank you, Commissioner.

BY MR. CULLEY:

1	Q. And, Dr. Powell, is it fair to say in making comments
2	about whatever the burden of proof is, that you relied on your
3	understanding of well-established Commission precedent on
4	whether a utility carries the burden of proof?
5	A. That's not what I was commenting on in my
6	testimony, no.
7	Q. Okay. Well, then let me turn to page .10 of your
8	surrebuttal. And this is a quote we went over already, but I think
9	we can restate it here. It's line 179.
10	A. 179?
11	Q. I'm sorry. I didn'tI inverted that. 197.
12	A. 197? Okay.
13	Q. Okay. So there you say that no party to this docket
14	has presented persuasive evidence that net metering customers
15	are undercompensated. So I'll leave that quote there. And is
16	this in reference to the statement of some witnesses in this case
17	that SB 208 might allow for additional compensation as it allows
18	for charges and creditscharges or credits?
19	A. It could, yes.
20	Q. Okay. But it is your position that the Company
21	carries the burden of proof to justify the net facility charge as
22	just and reasonable; is that correct?
23	A. Yes.
24	Q. Okay. One last thing. If we could turn to page .4,

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line 38 of your surrebuttal--

1	A. Line 38, did you say?	
2	Q. Yes. Line 38 through 40. If you could just read	
3	this is a part ofyou quoted SB 208's pertinent language. If you	
4	could just read that quote.	
5	A. It says, "(2) determine a just and reasonable	
6	charge, credit, or ratemaking structure, including new or existing	
7	tariffs, in light of the costs and benefits. (Emphasis added)."	
8	MR. CULLEY: Thank you, Dr. Powell. I have no	
9	further questions. Thank you.	
10	THE HEARING OFFICER: Ms. RobertsMs.	
11	Roberts.	
12	EXAMINATION	
13	BY-MS.ROBERTS:	
14	Q. Good morning, Dr. Powell.	
15	A. Good morning.	
16	Q. Some of my questions are similar to those of Mr.	
17	Culley, but there are some differences, so I want to try to	
18	perhaps approach some issues from a slightly different different	
19	way.	
20	Looking at page .4 of your rebuttal testimony, you	
21	say that SB 208 requires some cost/benefit analysis, correct?	
22	A. No.	
23	Q. On lineI'm sorry. On line 35 of your rebuttal	
24	testimony?	
25	A. On page .3?	

1	Q.	Page .4, line 35.
2	A.	For some reason, we have different paginations.
3	Q.	Oh, I'm sorry.
4	A.	So that's why I was questioning. On line 35, it
5	states,	"SB 208 requires some cost/benefit analysis."
6	Q.	Thank you. Thatthat is what I had asked.
7	A.	I'm hoping that I've got the right copy
8	Q.	That's what my
9	A.	in my testimony.
10	Q.	We're in the same place and reading the same
11	quote,	so I think we're
12		THE WITNESS: Commissioner Clark, could I ask:
13	Is it on	page .3?
14		THE HEARING OFFICER: We have that on page .3
15	of 4	
16		THE WITNESS: Okay.
17		THE HEARING OFFICER:line 35, in the middle of
18	the pa	ge.
19		MS. ROBERTS: Great. I have an odd paper in
20	mine.	That must be the difference. My apologies.
21	BY N	MS. ROBERTS:
22	Q.	And you agree that SB 208 governs the
23	Comm	ission's consideration of Rocky Mountain Power's request
24	for the	net metering charge, correct?
25	A.	Not necessarily.

Q. Could you explain that, please?

A. Again, in testimony, what I tried to explain anyway was, is that the net metering charge is about cost recovery of existing facility costs. The SB--the--what I envision as a cost/benefit analysis of--under SB 208 will address questions about how to design a net metering program and at what level of compensation you would compensate net metering customers for.

So the costs and benefits under SB 208 are talking about the costs that are imposed or potentially imposed on the system from net metering customers. The costs that I'm talking about in terms of the recovery under the net metering charge are distribution costs that already exist.

- Q. SB 208 states that the Commission shall determine whether the costs exceed the benefits for net metering or the reverse. And then it says that based on that determination, the Commission shall establish just and reasonable rates, including a charge, credit, etc. Is that a correct paraphrase of the legislation question?
  - A. Correct.
- Q. And to you, that does not suggest that before a charge is imposed on net metering, that that evaluation of cost and benefits should be completed?
- A. I think it's up to the Commission to determine whether or not the evidence that's on the record satisfies the cost/benefit analysis under 208 in terms of whether or not they

can establish a net metering charge.

We believe that the cost--the testimony that's presented has established that a net metering charge is just and reasonable.

- Q. Referring back to page .3 of your rebuttal testimony where we were just reading, you state that the Company did not provide a comprehensive evaluation of benefits in its direct case, correct?
  - A. Correct.
- Q. And as you were stating to Mr. Culley, the company does bear the burden of proof with respect to fees that it requests as part of its general rate case, correct?
  - A. Correct.
- Q. Okay. Is it the responsibility of intervenors or other parties in the case to provide evidence that's required as part of the Company's direct case?

MR. JETTER: I'm just going to object to the extent that calls for a legal conclusion. Beyond that, I think he can go ahead and answer.

MS. ROBERTS: Commissioner, Dr. Powell testified extensively in his prefiled testimony regarding intervenors' failure to convince him regarding the benefits and--and discussing the Company's failure to provide a comprehensive evaluation of benefits. And I certainly believe that his--his testimony makes the kinds of conclusions that Mr. Jetter is characterizing as legal,



and so I believe that it's fair to ask him questions on this line.

THE HEARING OFFICER: Dr. Powell, do you have an opinion that's responsive to the question Ms. Roberts asked?

THE WITNESS: I have an opinion. Whether it's responsive or not, I won't . . .

Let me explain it this way: When a Company files a rate case, yes, they have the burden of proof to demonstrate that what they're asking for is just and reasonable. My understanding of the legal parameters around a rate case is--is that if the Commission does not act within the 240 days, those rates automatically go into effect. And therefore, when we intervene in a case and offer testimony, the--contrary to what the Company is asking for, then we're trying to prove that what the Company is asking for is not reasonable.

And I'm applying that same standard to the intervenors in this particular case. The Company has filed, in my mind, what is sufficient evidence to support the net metering charge. And I don't see any evidence from the other parties in this case that would change my position on that.

BY MS. ROBERTS:

Q. Is there a presumption of reasonableness of the Company's case?

MR. JETTER: Same objection from the Division.

MS. ROBERTS: Same response to the objection.

THE WITNESS: Can I--can I jump in here?



1	THE HEARING OFFICER: I'm going to sustain the
2	objection
3	THE WITNESS: Oh, shoot.
4	THE HEARING OFFICER:and allow you, Ms.
5	Roberts, to rephrase the question in relation to Dr. Powell's
6	testimony and hisand the views that led him toto file the
7	testimony in the form that it is.
8	MS. ROBERTS: Thank you.
9	BY MS. ROBERTS:
10	Q. Now, the page numbers that I made in my notes
11	appear not to be correct, so I might not be able to point you to
12	this statement quite as precisely. But you stated somewhere that
13	you're not persuaded by the intervenors thatmaybe Mr. Culley
14	pointed this to you earlierthat the current ratemaking structure
15	does not adequately compensate rate-paying customers?
16	THE HEARING OFFICER: Ms. Roberts, I think the
17	line numbers work. They seem to be consistent. So if you
18	provide a line number, I think that will help us all.
19	THE WITNESS: Okay. They want a line number. I
20	was going to say I think that's a fair paraphrasing of what it said.
21	BY MS. ROBERTS:
22	Q. Okay. Thank you. I'm going to move on toto a
23	different topic. Turning now to your surrebuttal testimony, Dr.
24	Powell
25	A. Okay.

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1	Qand line 22, you state, "If, as the Division holds,			
2	an identifiable subclass of customers, such as the net metering			
3	customers, are allowed to shift a portion of their share of the			
4	costs to other customers, the resulting rate design will violate			
5	the principle of cost causation and, therefore, will not be just and			
6	reasonable." That's the Division's position, correct?			
7	A. Correct.			
8	Q. Is it your view that allowing any identifiable subclass			
9	of customers to shift a portion of their share of costs to other			
10	customers would violate the principle of cost causation?			
11	A. Yes.			
12	Q. So all customers that consume less than 500			
13	kilowatt-hours a month are an identifiable subclass, are they not?			
14	A. Yes.			
15	Q. So does it follow from the statement that you just			
16	made that you agree that all customers that consume less than			
17	500 kilowatt-hours a month should be required to pay an extra			
18	fee in order to make the overall scheme just and reasonable?			
19	A. No.			
20	Q. Could you please explain that answer, because it			
21	seems a bit counterintuitive based on previous responses.			
22	A. In my direct testimony, I articulated, I think, five or			
23	six principles that the Division looks at when they go about trying			
24	to designit's the wrong document. Hold on.			
25	Q. The Bonbright principles?			



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Correct. And those principles are often ctory to one another. So just because you're violating usation when you set rate design, you may be fulfilling inciples that, in that instance, you think are more nt.

- Okay. So referring back to your surrebuttal ny, then, on lines 24--beginning on line 24--
  - Okay.
- --you state, ". . . the resulting rate design will the principle of cost causation and, therefore, will not be reasonable." Would you like to make any correction to imony?
  - No.
- So it's possible for a rate design do violate the e of cost causation and still be just and reasonable?
  - Yes.
  - Okay. Thank you.
- This statement is in reference to what I'm identifying ou have a class of customers--subclass in the residential at are readily identifiable. In other words, by identifiable, nean is that you can easily separate them out from the he class. And based on that, the idea would be that in sign and allocation of cost, one of the first things you do ne question, "Can we identify at least easily the customers that are causing these costs and in a fairly simple way

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allocate those costs directly to the customers?" And so that's the principle that I'm saying is being satisfied here.

The net metering customers can be identified. They can be separated. We can identify the costs that are associated with those customers, and therefore, those costs should be directly assigned. To allow those customers to shift those costs or a portion of those costs to another customer or class of customers violates the principle of cost causation and that outcome in this case--or in this instance, would be--would not be just and reasonable.

- So, Dr. Powell, when you say an identifiable subclass, do you mean a group of people that have distinguished themselves voluntarily rather than simply a group of people that can be identified by the utility?
- Α. I'm not sure I would make that distinction between voluntary and just being identified, but all I'm saying here is net metering customers, by the fact that they're on the net metering tariff, are readily identifiable by the Company.
- Q. Okay. Thank you. On my final topic, on page .4 of your rebuttal testimony--and probably I'm wrong on the page numbering--
  - Probably. Α.
  - Q. --it is line--
  - Α. Rebuttal testimony?
  - Q. Yes, back to the rebuttal.

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1	A. Okay.		
2	Q. This is on line 39. You state, "The cost/benefit		
3	analysis required by SB 208 should be conducted with an eye		
4	toward three important issues. First, whether a net metering		
5	program is in the public interest." What does "the public		
6	interest" mean to you?		
7	A. There are several things that go into the public		
8	interest. In general, theI would say that the public interest is		
9	the general welfare of the customers as a whole. We could get		
10	intoexcuse mewe could get into subparts of what that means		
11	if we need to.		
12	Q. Okay. Soso the general welfare of those		
13	customers might mean something other than simply their		
14	relationship with the utility company?		
15	A. Their relationship, yes.		
16	Q. So their health might be a matter of public interest?		
17	A. Could be.		
18	MS. ROBERTS: Okay. Thank you. No further		
19	questions.		
20	THE HEARING OFFICER: Ms. Hayes. Ms. Hayes.		
21	MS. HAYES: Thank you. Good morning,		
22	Commissioners.		
23	EXAMINATION		
24	BY-MS.HAYES:		
25	Q. And good morning, Dr. Powell.		

1	A. Good morning, Ms. Hayes. We're never that formal			
2	other than here.			
3	Q. We have to be here, my understanding.			
4	I just want to follow up a little bit on the previous			
5	questioning. And I don't have a line number, but you were asked			
6	about burden of proof and it was in reference to testimony where			
7	you said you weren't persuaded by the evidence provided by the			
8	intervenors. And I apologize. I didn't note down the line number			
9	that counsel was referencing, but you remember that because it			
10	was thirty seconds ago. Is that correct?			
11	A. That'sthat's about the extent of my memory			
12	Q. Great.			
13	Athirty seconds.			
14	Q. So your attorney has been very clear that you were			
15	not an attorney. Is that correct?			
16	A. Thank goodness, yes.			
17	Q. Yeah. Isn't that nice? You made a better life			
18	choice.			
19	A. I told a joke before. Ask me later. I'll tell you a			
20	joke.			
21	Q. Okay. I will.			
22	So when you say that you're unpersuaded by the			
23	evidence provided by the he intervenors, you're not making a			
24	dispositive or legal conclusion on the issues at hand, are you?			
25	A. No, I'm making that conclusion as an analyst.			



1	Q. All right. And would you agree that there is a			
2	difference between not providing evidence of benefits and a lack			
3	of benefits?			
4	A. Yes.			
5	Q. Sookay. Okay. Great.			
6	Then I've crossed out a lot of questions, so if you'll			
7	permit me to sort of root through theand find the ones I'd like to			
8	ask			
9	THE HEARING OFFICER: Ms. Hayes, do you want			
10	a minute?			
11	We'll be off the record.			
12	MS. HAYES: I found it. Thank you.			
13	BY MS. HAYES:			
14	Q. Can I direct you to lines 204 through 207 of your			
15	surrebuttal testimony?			
16	A. 204, did you say?			
17	Q. Yes. You say, "No cost/benefit study will change			
18	the fact that net metering customers are using the distribution			
19	system at the time of the distribution peak for their own needs			
20	and therefore should pay, consistent with cost causation, an			
21	equitable share of [sic] that service."			
22	A. Correct.			
23	Q. Okay. And I'd like to, just before I question you,			
24	refer you back to a portion of your testimony that Mr. Culley			
25	asked you about where you recognize that SB 208 does require			

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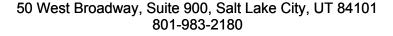
1	some form of cost/benefit analysis. But in this statement here,			
2	you make two statements, as far as I can see it. You make a			
3	policy argument that customers should pay fair share of the costs			
4	of a particular service consistent with cost causation; is that			
5	correct?			
6	A. Correct.			
7	Q. And you also make a factual assertion that			
8	cost/benefit analysis will not change the fact that net metering			
9	customers are using the distribution system at the time of the			
10	distribution peak. Is that correct?			
11	A. That's correct.			
12	Q. What if comprehensive cost/benefit analysis does			
13	illuminate the net metering customers do reduce their distribution			
14	peak load? Should that factor into cost/benefit analysis?			
15	A. Yes, but that's not what this says here. So I			
16	disagree with the premise of your question. All I said was is that			
17	they're using the system at the peak. I didn't make a statement			
18	here			
19	Q. Okay.			
20	Athat they weren't reducing their			
21	Q. Okay.			
22	Apeak.			
23	Q. Butbut a reduction in peak load couldyou did say			
24	that that should factor into cost/benefit analysis; is that correct?			

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A. Yes.

Steward?



1	A. Could you rephrase that for me, please? I think I'm		
2	going to agree with you, but I just wantI want you to rephrase		
3	it.		
4	Q. Okay. So inin the Company's cost-of-service		
5	study, they did not distinguish specifically impacts associated		
6	with net metering customers among all residential customers; is		
7	that correct?		
8	A. I think that's correct.		
9	Q. All right. All right. If you'll excuse me one moment.		
10	All right. In yourlet's see. I'm trying to findI feel like I've		
11	written down the wrong line number. Oh, let's see. Surrebuttal		
12	testimony at line 41. Let's see. Or perhapsyeah, so at 48,		
13	rather, you say, "Given the fact that we have a net metering		
14	program in place with an existing tariff"dot, dot, dotI'm		
15	skipping"the Commission would be forced to immediately		
16	suspend the net metering tariff [if the Commission were to follow		
17	Intervenor's argument to its logical conclusion]." I don't		
18	know why I just jumbled the order of that sentence. I apologize,		
19	but I		
20	A. It's a fair characterization of what it says.		
21	Q. As a utility regulator, are you familiar with what		
22	happens when the Company files changes to a tariff or proposes		
23	changes to its programs and services?		
24	A. Yes.		
25	Q. Does the Commission send you an action request		



1	and you		
2	A. On everything that is filed with the Commission,		
3	yes, we get an action request.		
4	Q. We appreciate that.		
5	A. I don't. I didn't say that on the record.		
6	Q. Strike that.		
7	What happens if the Commission or the Division or		
8	the Office or another interested party wants to investigate a		
9	proposed change more thoroughly?		
10	A. So the question is, if the Company files for some		
11	change and we want to take more time and investigate that, what		
12	happens?		
13	Q. Uh-huh (Affirmative).		
14	A. Okay. When the Companylet'slet's keep it as		
15	simple or a fairlyat least not a rate case. A fairly simple tariff		
16	change. Maybe there's some language change to the tariff that		
17	they're proposing. They would file that with the Commission.		
18	The Commission would issue us an action request. If we wanted		
19	to takeandand my understanding of the law, okay, is that the		
20	Commission has 30 days under those circumstances, once again,		
21	to act. If they don't act within the 30 days, then whatever the		
22	Company's proposing automatically goes into effect.		
23	Q. Right.		
24	A. So if we want more time, we would send a memo		
25	back to the Commission in response to the action request and		



request more time to study that.

The Commission--if they agree with us, then the Commission would suspend the tariff or at least the proposed tariff, so it would not go into effect. And then we would do whatever we're going to do and file a final memo sometime later.

- Q. So the Commission would suspend the proposed changes, not the--not the existing tariff; is that correct?
  - A. That's correct.
  - Q. I think that's all my questions for you.
- A. But I would like to explain what I meant here and the reason I said it.
  - Q. Sure.
- A. The--some of the intervening parties have argued that a very strict interpretation of what I see as SB 208, that this comprehensive cost/benefit analysis has to be performed before the Commission can enact a new tariff. What I was pointing out here in my testimony is, is that's a favorable editing of what the statute says. Statute says--and this is on line 39 of my surrebuttal testimony--it says, "Including new or existing tariffs." And that's what I'm pointing out is if you follow the logic that the intervenors have said, the Commission can't impose this net metering charge without doing that comprehensive net--cost/benefit analysis.

Then, by extension, they have to suspend the existing tariff. We have the tariff in place. When the

1	Commission issues an order on this docketby that I mean the		
2	entire order, revenue requirement and all of the other cost-of-		
3	service or rate-assigned issuesthey will be implementing a net		
4	metering tariff. That net metering tariff will have new charges in		
5	itor new credits, because we are increasing the energy rates at		
6	which those net metering customers are compensated.		
7	So if that's the interpretation that the intervenors		
8	want to give to the statute, then it seems obvious to me that they		
9	would have to suspend that tariff, those new rates.		
10	Q. And although I said I didn't have questions for you,		
11	just		
12	A. And that's notI'm notI'm not legally interpreting		
13	this.		
14	Q. That's my question. Was this		
15	A. I'm just saying, let's accept the logic or the		
16	argument that those intervenors have. So maybe it is a legal		
17	interpretation, but it's no more legal interpretation than what the		
18	other intervenorswitnesses have		
19	Q. All right.		
20	Adone.		
21	Q. So you are not an attorney, soand you're not		
22	making a legal conclusion. And I suppose further that you are		
23	not base your conclusion on, for example, considerationslegal		
24	considerations about burden of proof that you've been		



questioned about earlier as well; is that correct?

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1	A. I'm not basing it on legal interpretations of burden of		
2	proof, no.		
3	Q. Do you concede that there could be other logical		
4	conclusions?		
5	A. Logical conclusions to what?		
6	Q. Well, youtoto this statutory interpretation, if		
7	you'll pardon the legal phrase.		
8	A. I believe that another person could look at this and		
9	try to make an argument that there's another logical conclusion		
10	to reach.		
11	Q. All right. Thanks very much. Unless you have more		
12	to add, I'm finished with you.		
13	A. There were other questions asked yesterday that I		
14	wished people would have asked me.		
15	Q. I'm sorry to disappoint you.		
16	MS. HOGLE: Your Honor, I apologize. Given the		
17	questioning that occurred, can youcan the Commission indulge		
18	me in asking a few cross-questions?		
19	MS. HAYES: I would just like to object to the extent		
20	that the Commission generally doesn't allow friendly cross-		
21	examination and doesn't allow agreeing parties to rehabilitate		
22	each other's witnesses.		
23	MS. HOGLE: And this is not that, your Honor. It		
24	was just a response to the burden of proof issue. And I believe		
25	that you have extended the courtesy to Mr. Rossetti and		



1	yesterday.
2	THE HEARING OFFICER: We have, although Ms.
3	Hayes' point about rehabilitation is appropriate. So whatwhat
4	do you intend to ask, Ms
5	MS. HOGLE: I just have four questions, your Honor,
6	about burden of proof.
7	THE HEARING OFFICER: About Dr. Powell's view
8	ofof the burden in this case? Because I think we've been over
9	that pretty significantly.
10	MS. HOGLE: No, your Honor, just about the phase
11	of the case that we're in and how that relates to thethe TASC
12	cross exhibit that was admitted into evidence earlier, which was
13	asked of Mr. Powell. And so it just relates to that.
14	MR. CULLEY: Pardon me, Commissioner. I don't
15	believe TASC's exhibit has been admitted into evidence at this
16	point, and given Mr. Powell's answer, does not need to be.
17	MR. JETTER: I may have the same objections to
18	these questions as well as I did earlier, depending on what they
19	are.
20	THE HEARING OFFICER: In light of the fact that
21	the exhibit's not going to be offered, I'm going to turn to Mr.
22	Jetter and see if he has redirect for the witness, Ms. Hogle.
23	MS. HOGLE: Thank you.
24	MR. JETTER: And I have no redirect.
25	THE HEARING OFFICER: Commissioner LeVar.



## BY-COMMISSIONER LeVAR:

- Q. In--in this docket, we have costs presented to us that relate to distribution and customer service costs. Rocky Mountain Power has indicated that at a later time, they're engaging in a load study that will evaluate, including other things, transmission and generation costs. So consider--considering that this docket is focusing on distribution and customer service costs, should our comparison of benefits also focus only on benefits that relate directly to distribution and customer service?
- A. No, not necessarily. I think it's up to the Commission to decide, if they want to go forward with another docket, what the scope of that docket would be.

I'm assuming, maybe incorrectly, that there would be some input from parties on what that scope might be and the Division would have several things that it would articulate that should be included also in the scope of that docket. So I think the final decision, again, is up to the Commission.

- Q. In this docket, though--
- A. Okay.
- Q. --do you think that we should compare benefits that relate to transmission and generation to costs in this docket that relate to distribution and customer service?
  - A. No, I don't think it's absolutely necessary to do it



that way. And again, it goes back to, I think, what the Division's position is, is this is about recovery of those distribution costs.

And I would argue that if there are uncaptured benefits--and I tried to state this in my testimony--if there are uncaptured benefits, then those should be applied on the compensation side.

In other words, what are we compensating net metering customers at? We're compensating them at the full retail rate at the moment. If we try to say that there's a group of benefits over here somewhere that are not being captured and we're going to apply those and reduce the net metering charge or do away with it, those distribution costs don't go away. They're still there. And if we--and if we do it that way, then we're distorting the volumetric prices for everybody.

In other words, we're relying on those volumetric prices to send a proper price signal to customers, hopefully, so that they will conserve. That's part of the reason for the tiered rates. But if we just start in some sense arbitrarily increasing those volumetric rates because we're not recovering a group of costs over here that are related to the distribution, that's not going to lead to efficiency. We might get conservation, but it's not an efficient use of resources. We have to set rates at least partially on marginal cost. And it would be only coincidental that that type of a scenario would lead to setting volumetric cost--or prices--excuse me--at the marginal cost of the company.

Does that answer your question?



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Q. I think so.

A. Okay.

- Q. I have a couple of other questions for you before I turn it over. As I look at your testimony, it seems you have not taken a position on the Office of Consumer Service's proposal to tier the fee based on installed capacity. It also seems to me the Office's proposal is based on the starting point of Company's proposed 4.65 versus your 4.25. Do you have any other--anything else you'd like to add on that--on that issue?
- A. First off, yeah, we recommend that the Commission adopt the 4.25. If the Commission is inclined to adopt the Office's alternative calculation and net metering charge, then we will recommend that that be based on the 4.25, and the Division would not oppose that type of a charge.
- Q. My last question is: What--what would you see as the cost causation implications of rather than imposing a fee, reducing the net metering credits to a percentage of retail that would--that would come to the same revenue?
- A. And that's an intriguing idea. And it is one of the things that the--or at least the general review of the net metering tariff the Division would recommend be part of any comprehensive cost/benefit analysis. And I certainly think that that's a--an alternative that's worth considering.

So if I understand the--kind of the premise behind your question, what you're saying is that there are distribution,

transmission, and generation fixed costs and O&M costs that all go into those volumetric rates. If distribution costs are as an arbitrary number, 30 percent of that bucket of costs, then would it be--would a viable alternative be to set the net metering credit value at 30 percent of those--that bucket of costs? And I think that's a legitimate question to ask and explore, yes. Okay?

COMMISSIONER LeVAR: Thank you. I don't have anything else.

## **EXAMINATION**

## **BY-CHAIRMAN ALLEN:**

- Q. Good morning, Dr. Powell.
- A. Good morning.
- Q. Last--yesterday, you may have heard me ask Mr. Gimble a couple of questions about the public comments that we're receiving and the notion that some sort of net metering fee or cost recovery, should we decide to apply that in the case of public comments, is somehow going to be a great detriment to solar enrollments. And it looks like, at least according to Mr. Gimble--and do you agree that there's no information in this particular docket that deals with any elasticity of demand studies or approaches that question?
- A. I agree that there--I haven't seen or remember anybody talking about the elasticity of demand and that concept. But I did read a couple of emails early on in this docket that articulated that particular idea that somehow the net metering



rooftop solar.

The one email that I remember off the top of my head--the numbers are vague, but I remember a customer saying something about 1,500 or maybe \$2,000 over the life of the PV panels. I never could figure out where that customer was coming up with that 1,500 or the \$2,000. There wasn't enough detail in the email to say that, so I did my own calculations based on the Company's original proposed 4.25. So \$4.25 a month for 25 years is approximately \$1,275.

Now, the mistake I think that the person made in the email was they were assuming that they would have to pay that charge up front. And I would agree that if they had to pay that up front, that that might be a detriment to enrolling. But they're actually going to pay that over a number of years, the 25 years, or the life of the solar project. And so if you look at it from that perspective, you really should look at it on a net present value basis.

So again, at 4.25 a month, you're spending approximately \$1,275 over the 25 years. Using the Company's approximate cost of capital, weighted cost of capital, that would be about \$58.62 on a present value basis. And so at--I think there was yesterday--I think you mentioned in your questioning of Mr. Gimble 10,000, 15,000, or \$20,000 system. At a \$10,000 system, that would equate to 0.59 percent. So that \$58 is a very



1	small up-front cost, at least in equivalent value. It's a very small				
2	up-front cost relative to the cost of the system.				
3	At \$20,000, of course, it's about half of that, so				
4	about 30or 0.3 percent. Excuse me. So, no, I don't think that				
5	the net metering charge is going to have any substantial impact				
6	on people's willingness to adopt rooftop solar.				
7	CHAIRMAN ALLEN: Thank you.				
8	THE HEARING OFFICER: I don't have any				
9	questions.				
10	Mr. Jetter, any follow- up?				
11	MR. JETTER: No. Thank you.				
12	THE HEARING OFFICER: Thank you, Dr. Powell.				
13	You're excused.				
14	THE WITNESS: Thank you.				
15	MR. JETTER: The Division would like to call a				
16	second witness, Stan Faryniarz.				
17	THE HEARING OFFICER: Please raise your right				
18	hand. Do you solemnly swear that the testimony you're about to				
19	give shall be the truth, the whole truth, and nothing but the truth?				
20	THE WITNESS: I do.				
21	THE HEARING OFFICER: Thank you. Please be				
22	seated.				
23	STAN FARYNIARZ, being first duly sworn, was				
24	examined and testified as follows:				
25					





1	EXAMINATION		
2	BY-M	IR.JETTER:	
3	Q.	Mr. Faryniarz, would you please state your name	
4	and oc	cupation for the record?	
5	A.	Yes. I'm Stan Faryniarz, managing consultant with	
6	La Capra Associates.		
7	Q.	Hold on. I think your microphone might be turned	
8	off.		
9	A.	Sorry. My name is Stan Faryniarz. I'm managing	
10	consultant with La Capra Associates.		
11	Q.	Thank you. And were you a consultant for the	
12	Division on this rate case?		
13	A.	I was.	
14	Q.	And have you filed direct and rebuttal testimony in	
15	this docket?		
16	A.	I have.	
17	Q.	And if I were to ask you the same questions that are	
18	contained in your both direct and rebuttal testimony today, would		
19	your answers remain the same?		
20	A.	They would.	
21	N	MR. JETTER: With that, I'd like to move to enter	
22	those	I believe the direct has already been taken by the	
23	Commission and enter the rebuttal testimony and the exhibits.		
24	٦	THE HEARING OFFICER: Objections?	
25	٦	They're received.	
	Ī.		



## BY MR. JETTER:

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Q. Have you prepared a brief statement that summarizes your testimony?

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Α. I have.

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Please go ahead. Thank you.

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Q.

Α. I presented direct and rebuttal testimony on behalf of the Division of Public Utilities on May 22nd and June 26th, respectively. In my direct testimony, I address the subject is of the Company's proposed net metering facilities charge and related policy issues. I concluded that at the time of the net metering charge to be reviewed carefully within the context of a benefit cause analysis to the extent practicable in this rate proceeding as directed in recent Utah legislation, Senate Bill 208.

I noted the Company had not provided such a benefit/cost analysis at that time. Together with Division witness Dr. Artie Powell. I noted that the Division has reviewed the net metering charge originally proposed by the Company at 4.25 per month and found that it was within a zone of reasonableness and acceptably balanced cost and benefits until a more comprehensive study could be undertaken.

Without such a charge, net metering customers do not contribute fully toward especially distribution system, as well as potentially other fixed costs. This leads to a cross subsidy for non-net metered to net metered customers, violating the

ratemaking principle of rates reflect cost causation; further, it's inequitable and economically inefficient.

In my rebuttal testimony, I commented on sufficiency of the record in this proceeding concerning the costs and benefits of the Rocky Mountain Power Net Energy Metering program, concluding that RMP failed to provide at that time a full cost/benefit analysis of its net metering program of the type required by SB 208. Likewise, other intervening parties have not provided an adequate cost/benefit analysis.

I reiterated that the Division does not oppose the suggestion by a number of parties that further inquiry occur either under the current docket or in a separate proceeding.

I also addressed in rebuttal certain statements regarding net metering made in the testimony of Messrs. Gilliam and Mulvaney on behalf of Utah Clean Energy and the Sierra Club, respectively; found that the cost/ benefit analyses discussed in Mr. Gilliam and Mr. Mulvaney's direct testimonies did not make a conclusive case that the benefits of net metering clearly outweighed the costs for residential customers.

And I rejected the notion that power exported to the grid from net metering customers does not result in a loss of cost recovery to the Company. As I point out in testimony, Rocky Mountain Power may not be currently recovering the full fixed costs of the distribution system from residential net metering customers.



1	I did not address every potential issue, and reiterate			
2	that silence on a particular issue does not necessarily signal			
3	agreement.			
4	MR. JETTER: Mr. Faryniarz is available for cross-			
5	examination.			
6	THE HEARING OFFICER: Thank you.			
7	Ms. Hogle or Mr. Moscon.			
8	MR. MOSCON: No question.			
9	MR. COLEMAN: The Offices has no questions for			
10	Mr. Faryniarz. Thank you.			
11	THE HEARING OFFICER: Mr. Rossetti.			
12	MR. ROSSETTI: Thank you.			
13	EXAMINATION			
14	BY-MR.ROSSETTI:			
15	Q. Good morning, Mr. Faryniarz.			
16	A. Good morning.			
17	Q. I have to admit the first time I read "zone of			
18	reasonableness," the phrase "cone of silence" came to mind.			
19	Would you mind just defining that term, please?			
20	A. Hopefully I'll do better than Maxwell Smart.			
21	Well, obviously, it's not a highly quantitative phrase.			
22	I was attempting to suggest that there was reasonable amount of			
23	evidence adduced to suggest that net metering customers were			
24	not contributing fully to fixed costs recovery especially of the			
25	distribution system. Company's proposed charge attempted to			



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24 25 correct for that and to result in some contribution towards distribution and retail costs.

On the one hand, the size of that charge at 4.25 per month, it did make some contribution towards those fixed costs from the population of net metering customers. And on the other hand, it was not so--did not appear so potentially burdensome so as to seriously affect the program, its success going forward.

- Okay. So that term hasn't been codified anywhere; Q. it's just kind of an opinion?
  - Α. Yes.
  - Q. Okay. Thanks.

The department, I think, is the right term?

MS. ROBERTS: Division.

BY MR. ROSSETTI:

- Q. Division? Thank you. The Division has suggested four and a quarter versus 4.65. Would you mind telling me what the difference is between the two proposals and why you'd be happy with four and a quarter?
- Α. Well, 40 cents is the answer to your first question, not to be flip.

It's--has to do with the principle of gradualism. The 4.65 was developed after revenue requirements were agreed to in this proceeding. And was--obviously being a higher charge, starts to push the impact of that potentially new charge up on the program and given the Division's reliance on the principle of



1	gradualism, we feel that 4.25 is still an acceptable contribution
2	by net metered customers.
3	Q. Okay. Hadhave you then any estimate as to what
4	the full recovery charge would be if you were to recover the full
5	cost of service not collected?
6	A. Other than review of the Company's analysis on
7	that, I did not perform any particular analysis that suggests that
8	the number should be higher.
9	Q. Okay. Other than the conclusion that we can come
10	to that it does not fully recover the charges at this time if it were
11	to be accepted at four and a quarter?
12	A. Yes.
13	Q. Sorry for phrasing my question badly.
14	You
15	MR. JETTER: Can I jump in really quick and ask:
16	Mr. Faryniarz, can you pull the microphone just a little bit around
17	because I think the court reporter is having a little bit of difficulty
18	at times.
19	THE WITNESS: I apologize.
20	MR. JETTER: Thank you.
21	BY MR. ROSSETTI:
22	Q. You put together some scenarios in your rebuttal
23	onstarting on page .6, which you used to counter-argue with Mr.
24	Gilliam's testimony. You put together three scenarios. Do you
25	recall that?



1	A. Yes.
2	Q. Did you happen to do a scenario that compares a
3	conserving and high-efficiency customer using the same
4	conclusions or assumptionsusing the same assumptions?
5	A. No separate scenario was prepared other than
6	potentially that a conserving customer could be represented in
7	any one of my three scenarios.
8	Q. But they're not taking into account the investment in
9	the conservation or efficiency measures taken by the customer?
10	A. In my scenario analysis, no.
11	Q. Okay. Thank you.
12	I will sacrifice my questions to the next person.
13	Thank you very much for your answers.
14	A. You're welcome.
15	THE HEARING OFFICER: Mr. Plenk. Mr. Plenk.
16	MR. PLENK: Thank you, Commissioner Clark.
17	EXAMINATION
18	BY-MR.PLENK:
19	Q. Good morning, Mr. Faryniarz. My name is Bruce
20	Plenk. I'm one of the attorneys representing The Alliance for
21	Solar Choice. Good morning.
22	A. Good morning, Counselor.
23	Q. Let me ask you a couple of questions to follow up
24	on Dr. Powell's testimony. Were you here a few minutes ago
25	when Dr. Powell was asked and answered questions about the



1	burden of proof in utility cases?
2	A. I was here.
3	Q. And you heard him answer the question that
4	basically the utility company has the burden of going forward and
5	the burden of proof as to any new rates or charges that they
6	propose, correct?
7	A. I'm not sure that Dr. Powell made that statement in
8	particular. There was some discussion and some objection as to
9	whether he could make a statement that rendered a legal
10	opinion, given that he was not a lawyer.
11	Q. Well, let me just ask you directly: Do you agree
12	that, as a general matter, utility ratemakingthe utility company
13	proposing a new tariff or charge has the burden of proof going
14	forward?
15	A. Yes.
16	Q. And that burden of proof cannot be passed on to
17	other parties in the case. Do you agree with that?
18	MR. JETTER: I'm going to object on the same
19	grounds as earlier with Dr. Powell. These are legal questions
20	that are outside the scope of his direct testimony.
21	MR. PLENK: Well, Commissioner Clark, if I
22	understood Mr. Faryniarz's summaryand my notes may not have
23	been accurate, but Imy notes said that he said that he felt that
24	Mr. Gilliam and Mr. Mulvaney did not make the case against
25	Rocky Mountain Power's proposed charge. And I think I'm



entitled to follow up on that statement.

If he believes they have some case to be made, the position that TASC has taken--and I believe it's been quite clear in the other testimony--is that's not an issue that is required by TASC or any of the other intervenors. That's strictly a matter for Rocky Mountain Power to put forth. And they don't--nobody else, whether it be our clients or anyone else, other than the Company, has to make a case. And I think I'm entitled to ask him about that.

MR. JETTER: And I disagree. I think that whether or not the other witnesses were persuasive to the Division is irrelevant to the question of the legal burden of proof that's upon the parties in this case. And the other witnesses' testimony is not Mr. Faryniarz's direct testimony, and so because other witnesses have testified about certain things does not expand the scope of Mr. Faryniarz' direct testimony.

THE HEARING OFFICER: Mr. Plenk, perhaps if you ask the witness about his statement about the case to be made and--and his reason for using that language--

MR. PLENK: Okay.

THE HEARING OFFICER: --you can make your general points.

MR. PLENK: Okay. Thank you, Mr. Clark.

THE HEARING OFFICER: His views of what--what



1	the burden of proof is in the proceeding will not be, you know, a
2	focus of the Commission's
3	MR. PLENK: Sure.
4	THE HEARING OFFICER:order.
5	MR. PLENK: That's fine. Thank you, Commissioner
6	Clark.
7	BY MR. PLENK:
8	Q. Okay. Mr. Faryniarz, let's deal with that. Your
9	testimony was thatand correct me if I'm wrongthat the parties
10	you mentioned didn't convince you of what they were saying?
11	A. On the points I raised in rebuttal, yes.
12	Q. Have you had a chance to study net metering
13	charges in other jurisdictions?
14	A. This is a relatively new frontier. I'm aware of some
15	of the policy that is starting to be made in other jurisdictions, but
16	I am not an expert on other jurisdictions' net energy metering
17	charges.
18	Q. Mr. Gimble testified yesterdayand I know you
19	weren't herethat there was one state, Arizona, which had
20	enacted a net metering charge recently. Are you aware of any
21	other state that has a net metering charge of any sort?
22	A. No, I'm not.
23	Q. Did I understand your testimony correctly to say that
24	you recommended that a new docket be established to fully
25	explore net metering costs and benefits to comply with Senate

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Bill 208?

A.	To the extent that the record in this docket would be
incom	plete and/or given the prerogatives of the Commission, the
Divisio	on did not oppose that concept of a separate docket.

- Q. So it would be fair to say that you--your position is that a fuller cost/benefit analysis of the net metering program would be required to comply with Senate Bill 208?
- A. That is a determination for the Commission to make in terms of the standards relating to costs and benefits, to whether the evidence in this proceeding is sufficient, so I would-I would accept whatever the Commission determined to be the standard and whether the evidence in this proceeding was sufficient to address that standard.
- Q. Well, are there costs or benefits of the Rocky

  Mountain Power net metering program in Utah that you believe

  were not explored in the testimony that's been provided?
  - A. Yes.
- Q. And those are the kind of items that could be more fully explored with a fuller cost/benefit analysis being undertaken in the future, correct?
  - A. Yes.
- Q. And your suggestion was that the format of a new docket might be an appropriate venue to do that, correct?
  - A. Correct.
  - Q. You answered a few questions from Mr. Rossetti a



1	few mi	nutes ago about the chart that you have in yourin your
2	rebutta	al testimony, right?
3	A.	I did.
4	Q.	And do you accept the general principle of cost
5	causa	tion for the allocation of fixed cost?
6	A.	I do.
7	Q.	And wouldn't you agree that avoided variable costs
8	are ge	nerally prior during hours of solar production?
9	A.	Well, it's dependent upon the time of day and
10	depen	dent upon the season, but they could be, yes.
11	Q.	And would you not agree with me important to
12	consid	er coincident peak demand on individual circuits before
13	you co	ould make an informed cost allocation of distributed
14	assets	?
15	A.	Could you restate that, please?
16	Q.	Sure. You would need to look at coincident peak
17	demar	nd on different individual circuits before you could come to
18	a com	plete cost allocation, correct?
19	A.	Yes, that's correct.
20	Q.	And so if it turned out that net metering customers
21	in the	Rocky Mountain Power service territory are generating
22	power	during peak periods, they should be allocated a
23	signific	cantly smaller share of distribution-related costs; is that
24	correc	t?
25	A.	Again, it depends on whether those facilities are



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operational, the extent to which their production output does, in fact, reduce the coincident peak on the distribution circuits, and whether that's happening on all distribution circuits or a majority of them versus here and there.

- Q. And in your review of the testimony the Company provided in this case, is the data available to be able to come to a conclusion on that topic?
- A. The Company, as I understand it, presented evidence on a limited study covering one distribution circuit, so as a practical matter, yes, I'd like to see more evidence than that.
- Q. You mention in your rebuttal testimony that charges to net metering customers are likely--I think the phrase you use was, "erode incentives for potential purchasers of solar." Is that correct?
- A. Could you point me to that testimony? I don't recall that.
  - Q. I believe it's on line 208, but let me--let me find it.209 and 210 of your rebuttal testimony.
- A. I indicated there may well be an eroded incentive. I did not offer an opinion as to the extent of that erosion. And I was putting it in the context of comparing the charge for net metering facilities to that for customer charges generally.
- Q. But is your point that additional charges to solar customers may decrease the number of new solar installations?

1	A. It's unclear whether that would happen or not. And it	
2	would depend on the size of the charges and how they compared	
3	to the investment decision the customer was making and how	
4	much the customer was investing.	
5	Q. Are you familiar with an annual document called	
6	Freeing the Grid, state-by-state analysis of net metering policies	
7	in the different states around the country?	
8	A. I'm familiar that it exists, but notI don't have any	
9	strong study of it toto be able to cite from it or to discuss it.	
10	Q. Well, let me ask this question and see if you can	
11	answer it: In that study, I think with the general familiarity you	
12	mentioned, the states are graded on their net metering policy,	
13	correct?	
14	A. That's my recollection, subject to check.	
15	Q. Sure. Subject to check. And if a stateand again,	
16	subject to checkUtah has an A grade at the moment on their	
17	net metering policy, again, subject to check. Do you agree with	
18	that?	
19	A. Iit's the only other way I can agree with it is to	
20	check it.	
21	Q. Okay.	
22	A. But I'llI'll take your opinion at this point	
23	Q. Okay.	
24	Awhere you were.	
25	Q. Would you agree that as a general proposition, fees	

1	that decrease the value that net metered customers receive
2	might result in a decreased grade on that kind of grading system
3	that they use?
4	A. That's hard to say. I'm too unfamiliar with the
5	grading system and there are a lot of other factors that might
6	affect a grade.
7	Q. Okay. The
8	THE HEARING OFFICER: Is this a good time for a
9	recess
10	MR. PLENK: That's great.
11	THE HEARING OFFICER:Mr. Plenk?
12	MR. PLENK: I've got a couple more. I may be
13	done, but if you want do take some time, Commissioner, it would
14	be great.
15	THE HEARING OFFICER: We're just a couple of
16	minutes past typical, so we'll be in recess until twenty minutes to
17	the hour. Thank you very much.
18	(Recess taken, 10:32-10:43 a.m.)
19	THE HEARING OFFICER: On the record.
20	Mr. Plenk, further questions?
21	MR. PLENK: Thank you, Commissioner Clark.
22	BY MR. PLENK:
23	Q. I just have one more question, and that is: If there
24	were to be a more thorough cost/benefit analysis as you
25	mentioned would be useful, do you believe that that process



1	should be transparent, inclusive of all parties and one that allows
2	for time to include information that may be obtained from further
3	studies that the Company has planned, including the load study
4	they mentioned they're going to do later.
5	A. Yes.
6	MR. PLENK: Thank you. That's all.
7	THE HEARING OFFICER: Ms. Roberts? Thank
8	you.
9	EXAMINATION
10	BY-MS.ROBERTS:
11	Q. Good morning
12	A. Good morning.
13	QMr. Faryniarz. Glad you made it after some
14	difficult travel yesterday.
15	A. It was.
16	Q. Are you familiar with the Company's testimony that
17	it is only seeking to recover a portion of fixed costs from net
18	metering customers at this time?
19	A. Yes.
20	Q. And that position is based on principles of
21	gradualism?
22	A. Yes.
23	Q. Okay. So if this fee is approved by the Commission,
24	the net metering facilities charge, do you think it is likely to
25	increase service time?

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1	A. Well, that'll depend on a host of factors related to
2	whether the distribution system costs in particular increase over
3	time and also potentially the number of net metering customers.
4	Q. Okay. Utility customers are generally familiar with
5	the concept that any fees imposed such as fixed customer
6	charges or rates, those things generally increase over time,
7	correct?
8	A. As a general matter, they will.
9	Q. Okay. Do you think the chance that this fee might
10	increase over time would be relevant to a customer's
11	consideration about the life time costs of the fee in their decision
12	to install solar?
13	A. It could potentially, you know. Note that it is paid
14	over time. It's a relatively small amount, so it's hard to say,
15	when you're facing an investment in the thousands of dollars,
16	whether a fee per month that may increase in cents per month
17	level would have any appreciable impact on their investment
18	decision.
19	Q. Okay. So while we're on this topic, I'd like to turn to
20	pagepage .10 of your rebuttal testimony.
21	A. I'm there. Line numbers?
22	Q. All right. Actually, that iswrong
23	pagelet's start with line 195, page .11.
24	A. Page .11 onthank you.
25	Q. Just let me know when you're there.

1	A. I'm there.
2	Q. Okay. Now, in thisbeginning with this question,
3	you are you're critiquing Sierra Club's witness Dr. Mulvaney's
4	analysis regarding the lifetime investment costs for a net
5	metering facility, correct?
6	A. Yes.
7	Q. Okay. Dr. Mulvaney was describing how higher
8	fixed charges would affect the pay back period for installing solar
9	on your rooftop, correct?
10	A. As I understood his testimony, yes.
11	Q. Okay. As a general matter, if a utility company
12	recovers more of its fixed costs through fixed charges, it will
13	recover less of that cost of its revenue requirement through the
14	rates, correct?
15	A. Well, a fixed-cost charge is a rate. You mean
16	volumetric rates?
17	Q. Thank you, yes, volumetric rates.
18	A. Well, by definition, given a certain revenue
19	requirement, if the fixed-cost charges increase, then the
20	volumetric rates would have to increase commensurately in order
21	to keep that revenue neutral.
22	Q. And would you agree that if volumetric rates are
23	lower, then the investment pay back period for installing a
24	rooftop system becomes longer?

No, I don't--I'm not sure I agree with that, no.

25

A.

1	Q. If you're going to make a tencustomer is going to	
2	make a \$10,000 investment and it's doing so in part because it	
3	believes it will reduce the amount of volumetric rate that it's	
4	paying to the utility, might the customer evaluate the time period	
5	over which that investment would be paid off?	
6	A. Well, I think the customer would make that	
7	evaluation regardless of the rate structure.	
8	Q. Right. But the rate structure would be relevant to	
9	that customer's analysis?	
10	A. Potentially, yes.	
11	Q. So will you agree with me for the sake of argument	
12	that if rates are lower, the period of time over which it would take	
13	to pay back an investment might be longer?	
14	A. If the entirety of the rates the customer pays are	
15	loweris that what you're saying?	
16	Q. I'm thinking of the volumetric rate specifically since	
17	the customer can't avoid the fixed charges, only the volumetric	
18	rate would be relevant to their decision about how long it would	
19	take to pay back their investment.	
20	A. Well, as I said, I would evaluate the entire rate	
21	structure if I were in that position making an investment.	
22	Q. So you might evaluate whether there's an extra	
23	fixed charge for installing solar in your house?	
24	A. I would consider it, yes.	
25	Q. And if you thought that extra fixed charge might go	



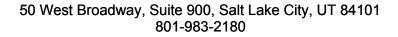
1	up over time, might that be an extra disincentive for installing
2	solar?
3	A. All else equal, it may provide aan increased
4	disincentive.
5	Q. Okay. Thank you.
6	A. And let me add that typically, all else is never equal.
7	Q. Very true. We like to make that simplifying
8	assumption, don't we?
9	With respect to the potential that the net metering
10	facility's charge could increase over time, either due to inflation
11	or changing numbers of net metering customers or the Company
12	deciding to seek recovery for different categories of fixed cost, at
13	what point would that increasing rate go outside your zone of
14	reasonableness?
15	A. The zone of reasonableness, again, is a subjective
16	measure, but to the extent that the rates were too high to be just
17	and reasonable or to reflect the principle of cost causation, that's
18	where it would go outside of my zone of reasonableness.
19	Q. Okay. Your zone of reasonableness is not a
20	doesn't involve any quantitative assessment of the costs and
21	benefits of net metering?
22	A. No, I think it does. But it is, again, a subjective
23	assessment and I would have to consider the numbers at the
24	time going forward.
25	Q. Is it likely that once a net metering facility's charge



is imposed, it would ever be eliminated from the rate structure?

- A. I think it could be. And again, it would depend on the Commission's determination of the benefits and costs of the net metering program, and in particular, how they affected utility costs as a whole because those are paid by all customers.
- Q. So at a certain point, the Commission might decide that the fee was no longer within the zone of reasonableness, undertake a cost/benefit analysis and determine that no fee was justified; is that possible?
  - A. I suppose anything is possible like that, yes.
- Q. Okay. Thank you. On page .10 of your rebuttal testimony--and this is actually--it's actually continuation of a question that was asked on page .9, beginning on line 154 of your--your rebuttal testimony--you evaluate whether Dr. Mulvaney provided a proper cost/benefit portrayal of net energy metering and skipping over onto page .10, you note that his testimony didn't involve consideration of forgone Rocky Mountain Power retail rate revenues or, from the NEM customer perspective, the value of retail energy rate avoidance as a credit. Do you agree that cost/benefit analysis can be done from many different perspectives?
  - A. I do.
- Q. Okay. And are you familiar with the recent report done for the Nevada Public Utilities Commission evaluating net metering in that state?

1	A. Familiar, yes; an expert on it, no.	
2	Q. Okay. Have you read the portions of that report	
3	where it evaluates the benefits of net metering from using	
4	different tests and different perspectives?	
5	A. I'm aware that that's the structure of the report, yes.	
6	Q. Do you think that that kind of report might be useful	
7	to this Commission in determining the costs and benefits under	
8	SB 208?	
9	A. Along with other evidence produced by Company	
10	and all intervenors, it could potentially play a role, yes.	
11	Q. Correct. And that kind of study led by an outside	
12	independent party could take into consideration information and	
13	perspectives provided by the company and other intervenors,	
14	correct?	
15	A. Yes.	
16	Q. Did you hear earlier when Dr. Powell stated in	
17	response to Ms. Hayes's question that he thought that any	
18	reductions in the distribution peak caused by net metering	
19	customers would be reflected in the cost-of-service study for the	
20	residential class?	
21	A. Yes, I was there.	
22	Q. If reductions in distribution peak that are caused by	
23	output from rooftop solar panels are already reflected in the cost-	
24	of-service study for the residential class, does that mean that net	
25	metering customers are reducing the revenue requirement for	



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that class?

- A. Could you restate that, because it appeared that your question had the answer embedded within it.
- Q. My question did have a premise related to my previous question. And the premise is: If reductions in distribution peak load are caused by output from rooftop solar panels during the distribution peak period and that reduced distribution peak is reflected in the cost of service for the residential class--we'll just stop with those two premises. I'm sorry to make this too complicated of a question.
- A. I'm trying, but could you restate that, please, because I--
- Q. We'll break it down. If net metering customers-their solar panels produce output during the time of distribution
  peak and it reduces the overall distribution peak by some
  percentage, then the distribution peak associated with the
  residential class would be lower, correct?
  - A. All else being equal, yes.
  - Q. Thank you. Yes.

And if the distribution peak for the residential class is lower, then the revenue that the Company can recover from the residential class as a whole due to distribution costs would also be lower, correct, all else being equal?

- A. Please restate.
- Q. Okay.

t. Okay.



1	A. I did not understand that.			
2	Q. If the distribution peak for the residential class is			
3	lower, then lowerlower than it would be without net metering			
4	customers, then the Company can collect less revenue from the			
5	residential class associated with distribution system costs,			
6	correct?			
7	A. Without any other adjustment in rates, including			
8	potentially a net metering facilities charge or other increases to			
9	other rates, the answer is "Yes."			
10	Q. Okay. So if the amount of revenue that is being			
11	collected from residential customers is less due to net metering			
12	customers, then residential rates, all else being equal, would			
13	decrease slightly, correct?			
14	A. Again, please restate. I did not understand the			
15	premise of that.			
16	Q. Okay. If the amount of revenue that the Company is			
17	collecting from the residential class based on distribution costs			
18	goes down, then rates will go down, correct, all else being			
19	equal?			
20	A. I just don't understand the based on distribution			
21	costs piece.			
22	Q. The cost-of-service studies that the utility does for			
23	each class look at what overall system costs can be attributed to			
24	that class, correct?			

That's correct.

25

A.



1	Q. And the rates for that class are based on the costs		
2	that can be attributed to that class?		
3	A. That's correct.		
4	Q. Okay. If one of those costs goes down, all else		
5	being equal, the rate for that class would go down, correct?		
6	A. That's correct.		
7	Q. So if distribution costs attributable to the residential		
8	class go down, all else being equal, rates for the residential		
9	class would go down?		
10	A. That's correct.		
11	Q. Okay. So if output from net metering systems		
12	reduces distribution costs by any amount, residential rates would		
13	go down, correct?		
14	A. If they were attributable to the net metering and that		
15	was traceable back to residential class andwith the caveat that		
16	all else is equal, the answer is yes.		
17	MS. ROBERTS: Okay. Thank you very much. No		
18	further questions.		
19	THE HEARING OFFICER: Ms. Hayes.		
20	MS. HAYES: Thank you, Commissioner Clark.		
21	EXAMINATION		
22	BY-MS.HAYES:		
23	Q. Good morning.		
24	A. Good morning.		
25	Q. Would you accept, subjectsubject to check, that		

1	for an average net metering customer using 511 kilowatt- hours a			
2	month that a \$4.65 increase is roughly an 8.3 percent rate			
3	increase? And I can walk you through my math, if you want.			
4	A. Please do that.			
5	Q. All right.			
6	A. I think I'm going to answer your question the way			
7	you want it, but			
8	Q. Well, so what I did isand for simplicity sake, I			
9	assumed an 11 cents-per-hour kilowatt rate and multiplied by 511			
10	kilowatt-hours to arrive at \$56.21 and then divided thator rather			
11	divided 4.65 by 56.21 to arrive at what percentage 4.65 is of			
12	56.21.			
13	A. Okay. I think I follow your math, yes.			
14	Q. All right. And theand I got 8.27 percent.			
15	Following that same math, but dividing 4.25 cents by			
16	56.21, I got seven dollars7.56 percent as the rate increase with			
17	a \$4.25 net metering fee. Does that sound correct, subject to			
18	check?			
19	A. Yes.			
20	Q. All right. Do you remember your conversation with			
21	Mr. Rossetti while youMr. Rossetti where you talked about the			
22	principle of gradualism?			
23	A. I do.			
24	Q. So is it your position that at \$4.25 a month, a 7.6			
25	percent rate increase complies with gradualism while an 8.3			

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1	percent increase is just a bridge too far, if you will?		
2	A. The 4.25 per month is arepresents a share of		
3	distribution cost recovery that has been deemed acceptable by		
4	the Commission in light of the fact that gradualism is a worthy		
5	grade objective.		
6	Q. Do you mean the Division?		
7	A. I'm sorry. The Division. I'm sorry.		
8	Q. Thank you. So then you agree that 7.6 percent		
9	increase is gradual, but thatbut that the difference between 7.6		
10	and 8.3 takes it over the top?		
11	A. Not necessarily, no. The 4.25 per month has been		
12	deemed acceptable by the Division.		
13	Q. I have no more questions.		
14	A. Thank you, counselor.		
15	MS. HAYES: Thank you.		
16	THE HEARING OFFICER: Mr. Jetter. Mr. Jetter,		
17	redirect?		
18	MR. JETTER: I do have a brief set of redirect		
19	questions.		
20	FURTHER EXAMINATION		
21	BY-MR.JETTER:		
22	Q. Mr. Faryniarz, are you familiar with how costs are		
23	allocated in Utah to the residential customer class?		
24	A. I am.		
25	Q. And are those based on circuit loading or		

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1	transformer loading?	
2	A. At the aggregate level for particularly the residential	
3	class, yes, that is all circuits considered together.	
4	Q. Okay. And all circuits are considered as an	
5	average; is that correct?	
6	A. That's correct.	
7	Q. And could you explain briefly why it wouldwhy they	
8	are not done on an individual circuit level?	
9	A. Well, first of all, the data is probably not there, but	
10	more importantly, if you had numerous circuits, each with their	
11	own rate, the rate schedule would be quite confusing and violate	
12	other ratemaking objectives, including simplicity for customers	
13	and potentially others as well.	
14	Q. Thank you. And so would having the data on	
15	individual circuits, as opposed to having the data on the circuits	
16	that provide residential customer classes as a whole, change the	
17	way that the distribution costs are allocated?	
18	A. Yes, it would. It would to those individual circuits	
19	and the customers on them. As an aggregate matter, the	
20	average residential class tariff would remain the same because,	
21	you know, the way it's currently done is it's an average over all	
22	those circuits.	
23	MR. JETTER: Okay. Thank you.	
24	That'sconcludes my follow-up questions.	
25	THE HEARING OFFICER: Questions from the	



1	Commission?
2	Thank you. You're excused.
3	THE WITNESS: My pleasure. Thank you.
4	THE HEARING OFFICER: This brings us to Mr.
5	Michael Rossetti, I believe, and
6	MS. HAYES: Commissioner Clark?
7	THE HEARING OFFICER: Yes.
8	MS. HAYES: As it's just past 11:00, I'd like to
9	inquire when you were thinking of breaking for lunch and whether
10	we may be able to hear from Mr. Gilliam before we break for
11	lunch.
12	THE HEARING OFFICER: I think that's a good
13	suggestion. If there's no objection, let's do that.
14	Mr. Rossetti, you
15	MR. ROSSETTI: Perfectly fine with me. Thank you.
16	THE HEARING OFFICER: All right.
17	MS. HAYES: So should we call him now?
18	THE HEARING OFFICER: That's great.
19	MS. HAYES: All right. Utah Clean Energy will call
20	Mr. Rick Gilliam. He hasn't been sworn.
21	THE HEARING OFFICER: Do you solemnly swear
22	that the testimony you are about to give shall be the truth, the
23	whole truth, and nothing but the truth?
24	THE WITNESS: I do.
25	THE HEARING OFFICER: Please be seated, Mr.

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1	Gilliam.		
2	RICK GILLIAM, being first duly sworn, was		
3	examined and testified as follows:		
4	EXAMINATION		
5	BY-MS.HAYES:		
6	Q. Mr. Gilliam, would you please state your name,		
7	position, and business address for the record?		
8	A. My name is Rick Gilliam. I am the program director		
9	of DG regulatory policy for the Vote Solar Initiative. My business		
10	address is 590 Redstone Drive in Broomfield, Colorado.		
11	Q. Did you file direct, rebuttal, and surrebuttal		
12	testimony in the cost of service case in this proceeding?		
13	A. Yes, I did.		
14	Q. If I asked you the same questions as outlined in		
15	your testimony today, would your answers be the same?		
16	A. They would.		
17	MS. HAYES: I would now move the admission of		
18	Mr. Rick Gilliam's direct, rebuttal, and surrebuttal testimony into		
19	the record.		
20	THE HEARING OFFICER: Any objections?		
21	Any objections?		
22	They're received. The direct's in evidence currently		
23	and the rebuttal and surrebuttal are now received. Thank you.		
24	MS. HAYES: Thank you.		
25	BY MS. HAYES:		



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Q. Mr. Gilliam, do you have a summary of your testimony that you would like to present?

- Α. Yes, I do.
- Q. Go ahead.
- Α. Thank you. Commissioners, first I'd like to say thank you for accommodating my schedule today. I appreciate that.

This is a fairly complex case, although now we're down to one single issue. And I'd like to really try and take a step back and focus on what the critical elements are of that issue because we, at various times, have gotten into a lot of minutia about this--this net metering issue.

This issue is worth about \$100,000, which is pretty small and as we've heard, it is a lot to individual customers, but it's fairly small in the grand scheme of things. The issue really comes down to one key point: Whether or not the Commission should evaluate the costs and benefits of net metering in more depth than is currently available in evidence in this proceeding.

But this issue is also about the rights of individual customers, that is, the right to self-determination. We believe that electricity customers, the retail customers and residential customers, in particular, have the right to use as much or as little electricity as they so choose. That says nothing about the rate structures, but that--that is a choice that customers may make. They may choose to put in efficient refrigerators or to buy an

electric vehicle. They may choose to put on a solar system or they may choose to change appliances from gas to electricity for a variety of reasons, but that's their personal choice.

The net metering issue almost brings a visceral reaction from some. And I'd like to explore what net metering is just a little bit. And to do that, I want to refer to a couple of things that are Utah-based. First of all, the statute. In the statute, net metering is defined as measuring the amount of net electricity for the applicable billing period. Net electricity is the difference as measured at the meter owned by the electrical corporation between the amount of electricity that the utility supplies to the customer participating in the program and the amount of customer-generated electricity delivered to. So that's where the netting occurs, at the meter. To the extent that there is no export of electricity, there is no net metering. There is nothing to net.

In Ms. Steward's testimony in this proceeding, in her direct testimony, she narrows that down as well in her concerns about the cost shift issue of net metering. And she says it this way: The net metering customer is not contributing to fixed-cost recovery through the usage that the customer's excess generation is credited against. And we've had a lot of discussion about that excess generation.

In support of the charge, a number of parties in this proceeding have talked about cost causation. And I would have



to say that our view is that there has been no evidentiary showing that there are any incremental costs associated with net metering that are being passed on to other customers.

And in fact, as we just heard with the last witness's testimony, cost causation is really tied to cost allocation or perhaps I should say that in reverse: Cost allocation is a result of the Company's view of--or the Commission's view of how those costs are incurred.

And I'll talk about the individual allocations in a minute. But Rocky Mountain Power incurs the cost to provide service to customers, as we heard yesterday, for a homogeneous neighborhood where all the houses are pretty much the same, the costs are pretty much the same as well. But having said that, the amount of contribution by each of the residents in that neighborhood varies and can vary substantially, as we can see in some of the exhibits that have been presented in this proceeding.

Now, some would have us believe that cost recovery based on 511 kilowatt-hours of grid electricity, which is that the actual amount per month that net metering customers continue to take from Rocky Mountain Power, is somehow different than the cost recovery that occurs when another customer that doesn't have a net metering system also uses or consumes, on average, 500 kilowatt-hours per month. Bottom line is, they are the same. The 511 kilowatt-hours is the same in either case, the same cost



 recovery occurs.

So there's no evidence in the record that the former-that is, the net metering customer--causes any more cost on a
utility than does the customer that does not have the net
metering system and consumes the same amount.

I have a number of examples I think I'll pass through right now. But the issue that I want to highlight is that the calculation the Company has made here and the evidence in this record is solely based on the change in net consumption. And that is not the same thing as cost causation. It is very different.

Now, I mentioned I was going to talk about the allocation, and as we again recently heard, that cost causation is reflected in the methods of the cost assignment to customer classes. I think the exchange we just heard between the Sierra Club and Mr. Faryniarz demonstrates that to the extent there is any reduction in the load at the time of the distribution system peak by a net metered system, there will be a commensurate reduction in the allocation of costs to that customer class, and that results in a savings. Those savings are not reflected in this calculation of the charge that Rocky Mountain Power would like to implement.

However, those reductions in the allocation factor will, by their nature, be reflected in the actual calculation of the allocation ratios whenever that occurs because they are endemic to the system. That's just what happens at the time of that peak.



So whether the utility includes those numbers, those savings, those benefits as a reduction to the cost that they want to charge net metering customers, those benefits still exist and are passed on to all other residential customers.

So does net metering shift costs? We've heard a lot of testimony about the revenue reduction related to net metering and a superficial mathematical equation that assumes you start with a fixed pie--a total pie that you have to recover will result in some shifting of costs from one group to another. Unfortunately, we don't know how much and in what direction unless we do a full-blown cost/benefit analysis.

But let's talk about the pie itself. Because Rocky

Mountain Power is a member of PacifiCorp, it is assigned certain costs of the utility--the large utility as a whole. Those costs are based on certain allocation factors. For example, production and transmission plant are assigned across the PacifiCorp system 75 percent on demands coincident with the system peak and 25 percent on an energy basis. While clearly the reduction in energy caused by a net metering system will reduce that portion of the allocator. And because the system peaks are more coincident--the broad system peaks, not the distribution system peak--are more coincident with the generation profile of solar, you will get a better capacity value for that--that allocator, and you will have an additional reduction on the demand side. So the solar system that is net metered will provide benefits on both the



demand and the energy portion of the production and transmission allocator, meaning that Utah is assigned fewer costs as a result of the net metering system.

MR. MOSCON: Commissioner Clark, I apologize to interrupt, and I--we're trying to be patient. I guess I'd simply like to note that rather than a summary of testimony, the witness appears to be doing a complete new recitation of his entire testimony, in some regards going above and beyond what has been submitted in any of his testimony. And, of course, while it's germane to track a summary and to make cross-examination notes, when a witness is not even responding to questions but is simply allowed to speak, you know, at liberty, it certainly makes it difficult to track cross. So I'm just wondering if we can get some clarification as to the bounds and the scope of this summary.

THE HEARING OFFICER: Ms. Hayes?

MS. HAYES: Thank you. I'm unaware of there being sort of a distinction between having a written summary and being allowed to sort of extemporize on the witness stand. And I think it's appropriate that Mr. Gilliam is--is summarizing his testimony. I think it's reasonable to be mindful of everyone's time, but I think everything he's saying is well related to his testimony.

THE HEARING OFFICER: This practice in the Commission requires judgment and balance. And just from a



time perspective, we're sort of at the outside of what would typically be used for a summary. So, Mr. Gilliam, I want you to be able to continue, but I think it would be well to reach a conclusion soon so that we can have the cross-examination proceed. Are you near the end of what you intended to--

THE WITNESS: Yes. Actually, I have one more point, and then I'll wrap up.

THE HEARING OFFICER: Thank you.

THE WITNESS: That's all I want to say about allocation. I just wanted to clarify the allocation issue.

Finally, there's the issue of single-issue rate-making. Rocky Mountain Power has asked for a charge based on distribution costs only--distribution and retail costs only and only apply to the residential class. Most jurisdictions that I'm familiar with usually look at the comprehensive picture of a particular issue. Otherwise, you can end up in a situation of some expenses going up, and those are the ones that are only--that the utility only wants the Commission to look at while others may go down.

So my point is that only looking at this one narrow piece leaves out other pieces, such as commercial benefits and the transmission and generation benefits, that are not fully explored in this docket.

So with that, I will just summarize my summary.

The--first of all, there is no sense of urgency. This is a very



1	small piece of the overall puzzle here in the state of Utah. For	
2	Rocky Mountain Power, it's about a tenth of a percent	
3	penetration and it will take ten years to getwell, maybe not ten.	
4	Maybe nine years, even growing at thirty percent, to get to the	
5	kind of penetration that we see in Colorado and Arizona today.	
6	So there's no sense of urgency.	
7	I won't repeat all the things I just said. In the	
8	interest of brevity, I'll just say that no other state that I'm aware	
9	of has enacted a charge such as this after an evidentiary	
10	hearing. And I thank you for your time.	
11	THE HEARING OFFICER: Thank you.	
12	MS. HAYES: Thank you. Mr. Gilliam is available for	
13	cross-examination.	
14	THE HEARING OFFICER: Mr. Moscon.	
15	MR. MOSCON: Thank you.	
16	EXAMINATION	
17	BY-MR.MOSCON:	
18	Q. Good morning, Mr. Gilliam.	
19	A. Good morning.	
20	Q. And I will attempt to be brief and actually only touch	
21	on a few points in your testimony. To begin, why don't you start	
22	turning to page .7 in your direct testimony. And while you're	
23	while you're going there, is it a fair statementis it fairI	
24	recognize I'm paraphrasing that one of your main criticisms in	

your materials is you attack the net--the proposed facilities

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charges being discriminatory because you believe that--or allege that energy-efficient customers that consume less are not being charged this, so the fact that the net metered customers are is discriminatory. Is that a fair sort of characterization of one of your points?

- A. The point's a little broader than that. It's not just energy-efficient customers. It's any customer that has a consumption of roughly an equivalent level is not being charged-or not being subject to another charge, nor are customers that have more contribution towards fixed cost--residential customers-being given a credit for that additional contribution.
- Q. Okay. So on page .7, you--I'm looking at line 116-you indicate that the implication of establishing fees and charges
  for consumers based on one specific behavior that reduces
  consumption are problematic and far reaching. That's the point
  you're making now?
  - A. Correct.
- Q. You would agree with me, though, wouldn't you, that net metering really is not about energy consumption, is it? You would agree with me that one net metered customer that consumes a large amount of electricity, they may have a very inefficient refrigerator, they may leave the TV on all night, they may do whatever it is that they do that consumes electricity, and the fact that they put solar panels on their rooftop does not change the amount of energy they consume. Would you agree



with that point?

- A. Well, in your--excuse me--in your example, yes, I would agree with that. But the typical net metering customer is pretty energy conscious and does net metering after doing efficient--other efficient technologies.
- Q. So is your analysis requiring the Commission to have an assumption of this type of personality that you believe is a net metering customer?
- A. No, no. I'm just explaining the kind of person that we typically see net metering.
- Q. One of the points that you made near the end of your summary--I believe, without joking, in the summary of your summary--you said it is dangerous to focus on just one piece of this--you didn't use the word puzzle, but just to limit the Commission's focus.

I'd like you to flip the page over to page .8 in your direct. And at line 134, you indicate, "Therefore, the Commission's net metering focus should be limited to solar generation that leaves the retail customer's premises (i.e., is exported)." Based on what you said in your summary, I assume it's fair to say you do not really intend to say that this Commission should really only focus on exporting energy in their analysis; is that true?

A. In the analysis that we're recommending be done, which is a cost/benefit analysis and a separate process, yes, that

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is what we would be recommending is that exported energy, which is the basis for net metering, which is the issue that Ms. Steward raises in her testimony as the concern for Rocky Mountain Power, is--is--is or should be the basis for the analysis.

- Q. But you would agree with me, would you not, that a typical net metered customer both imports and exports power across the grid; is that correct?
- A. The typical customer would purchase power from the utility, but would not--I wouldn't call it exporting power across the grid. As Mr. Rossetti said yesterday, it really goes into a neighbor's house or business.
- Q. But to get to that neighbor's house, it has to leave the home with--of the person with the panels on their roof going on Company facilities, travel down another Company line, down a Company line to that other neighbor's house; isn't that correct?
- A. Well, when you look at what you just described, the line that gets the power from the solar customer's house to the distribution circuit is paid for without exception--I shouldn't say without exception--is paid for by the net metering customer. It's the service drop. It's part of the customer charge.
- Q. But it's the distribution system that gets it to the neighbor, isn't it?
- A. That's correct. I won't dispute that certainly there is some small section, maybe in rural areas, it could be a bit longer section of line that does get that power to the neighbor, correct.

1	Q. So when you indicated that you're not aware that	
2	the exporting actually uses these Company facilities or importing,	
3	it actually does both importing power when they need power and	
4	when they export power if they have excess, both processes use	
5	Company facilities, do they not?	
6	A. Well, when you import power, they pay for those	
7	facilities. When they export power, the neighbor pays for those	
8	facilities.	
9	Q. So let's actually go to that point here. So when you	
10	say that the neighbor pays for those facilities, isn't it true that	
11	the Company turns around and credits the customer back at	
12	retail rate?	
13	A. That's right. That's right. So it's a net wash for the	
14	utility.	
15	Q. Okay. That'sso when you say it's been paid for,	
16	for the utility, it's not collecting anything. It's a wash, right?	
17	A. It's not collecting anything, but it's not costing	
18	anything either.	
19	Q. Well, the Company has to maintain the two	
20	distribution lines that we just talked about to have that loop	
21	occur, doesn't it?	
22	A. And this is why the full-blown cost/benefit analysis	
23	needs to be done because you should make those arguments in	
24	that proceeding.	
25	Q. We need an argument to determineor an analysis	



to determine whether those systems are utilizable to both import and export a kilowatt of power?

- A. Again, you're already paid for for the import. For the export, there is use of those lines. And I don't disagree: The customers should pay for that. The question is whether or not the benefits of the net metered system are sufficient in total, looking at all of the various pieces to over--overcome to offset those--those additional costs to the extent there are any identifiable.
- Q. Okay. So you would agree with me that if this Commission determines that there are costs associated with net metering, including both the costs of the customer importing power from the system when it needs power and when it exports power, that those costs should be appropriately paid for by that customer in their power bill?
- A. The export--to the extent that there are costs associated with the export, those costs are part of the overall set of costs that the utility incurs and that customers pay for. We are not saying that utilities should not recover its cost. What we're saying is that the Commission should look at all the benefits associated with the distribution system, the transmission system, the generation system, and whatever other factors folks would like to raise to compare to the cost and see: Do the benefits offset the cost or do the costs exceed the benefits?
  - Q. Okay. So you're actually getting the point I wanted

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to make. Initially, I thought you were indicating there were no costs. Now you seem to be indicating that yes, there are costs, but we should weigh the benefits against them to see if the benefits outweigh the costs. Is that a more correct statement?

- Α. That's what I've said all along. And what I said in my summary was that there's no incremental costs associated with the export.
- So let's look at your description and understanding Q. of this exported or generation of power. If you could turn to page .5 of your direct. Actually, before we get there, one of the points you made was--in your summary is that net metered customers are similarly situated to non-net metered customers; therefore, you can't treat them differently--words to that effect. Would you agree with that statement?
  - Α. Something to that effect, right.
- Q. But you would agree with me, would you not, that net metered customers, simply by being that, net metered customers, they're already unique, they're already separately situated than non-net metered customers, aren't they?
- Α. Well, no more so than other customers that have similar characteristics.
- Meaning net metered customers are like other net Q. metered customers and non-net metered customers are like nonnet metered customers?
  - Α. And customers that use less than 200 kilowatt-hours



a month are part of a separate class and those that use over 1,000 kilowatts a month would be a separate class.

- Q. But isn't it a fair distinguishing characteristic to say that by voluntarily entering into net metering, customer knows that they are entering into a separate tariff that is shared only by that group; i.e., net metered customers? That's the way it exists today, correct?
  - A. That's the way it exists today. That's right.
- Q. And it's not uncommon, is it, in your experience, for customers on one schedule or one tariff to be charged at different rates or in different methodologies than customers on a different schedule, under a different tariff. That's not unique is it?
  - A. No, it's not unique.
- Q. And so already, net metered customers know they're going--they're entering on a different tariff than non-net metered customers? That's not a change. That's the way it exists today, correct?
  - A. Okay.
- Q. On page .5, you--starting at line 79, ask yourself the question: to describe the solar generation that's exported by a net metered customer. This is under the larger heading of introduction to the characteristics of distributed solar generation and net metering. And you ask yourself--
  - A. I'm there.

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Q. Would you read for us, beginning at line 80 where it starts, "Exported" and it goes, I believe, two sentences ending at the word, "happened"?

A. "Exported energy tends to be incidental, short-lived, and, as a matter of physics, reduces the loading on the local distribution grid by supplying locally generated energy to a neighboring retail customer. This happens instantaneously and there is no incremental cost to the utility. Indeed, the utility has no control over the flow, is not required to redispatch it in any way, and is unaware that it has happened."

- Q. Thanks. And do you still stand by those two statements?
  - A. Yes.
- Q. So you agree with me that the energy that net metered customers contribute back onto the system is incidental and is short-lived, it happens instantaneously, with the utility having no control over it, and in fact, the utility is unaware that it's even happening or has happened; is that correct?
  - A. Yes.
- Q. So wouldn't you agree with me that if a utility is required to maintain reliable power service to all of its customers, that it would be impossible to offset future generation needs on a source that by your own admission, is incidental, short-lived, utility doesn't even know if or when it's going to happen and over which it has no control?

- A. Well, I think what you're confusing here is that we're talking about exports with these statements. Net metering also reduces the load of the customer for the utility. So that reduction in load also has an impact on the overall class allocations for both distribution system as well as production and transaction.
- Q. Okay. Let's split to the two categories you've indicated, then. The first category is exporting. So you agree that exporting by itself would be very difficult for the power company to be able to, with any kind of reasonable certainty, plan on that exported generation because it is, according to you, incidental, short-lived, there's no control, correct?
- A. Well, you start out saying you want to split it into two, and for some purposes that makes sense, but for planning purposes to understand what is coming--what the effect is on the distribution circuit and on the utility as a whole, you do need to look at the entire picture.
- Q. We'll get back to the second half, but again, my question still stands. Would you agree that power that comes onto the utility's grid from net metered customers is incidental, short-lived, and unpredictable?
  - A. On an individual customer basis, yes.
- Q. Okay. And if all of the individuals are unpredictable and incidental and short-lived, certainly you could not state that, as a whole, it's predictable and long-lived, could you?

A. It's more predictable and probably more long-lived as well. The same way that residential customers have loads that are unpredictable because of the vagaries of why people use their microwaves and blow dryers, etc., etc.--you can smooth that out by aggregating together a group of customers. And that's how you build your distribution system. To--to the same extent, you can do that with distributed solar generation as well.

- Q. So the solar customers, or the net metered customers, their export to the Company, to the grid, is certainly unpredictable on an individual basis, and as a group, while you might have averages as a whole, no one knows when there's going to be sunny days or cloudy days to plan when there's going to be those watts exported to the system; is that correct?
- A. Well, we could unpack that a bit. You do have an idea when there's going to be sunny days and you do know that overall the reduction in the load by--produced by the solar system is going to happen on average a certain amount per month, a certain amount per year. It may not be fully predictable. It is an intermittent resource, after all, but in the aggregate, it provides pretty good assurance of how much generation will be available to you even in a day in advance.
- Q. Okay. I guess so we don't keep going in a circle around this, let me ask this: Isn't it correct that the utility needs to plan and to be able to be sure that it's able to provide power to its customers on every day, not just on average days, on days



that--where the predicted amount of sun or predicted amount of temperature, but on all days; isn't that correct?

- A. Of course. Of course. I completely agree with that. However, we're talking about an incredibly small amount of solar right now that I suspect has very little effect on your planning. However, as you are concerned about the growth of solar, now is an appropriate time to look at what those costs will be over time. Look at what the planning issues may be for you over time and to look at what the benefits are that solar will provide to your system, to your operation, as well as to other customers.
- Q. Okay. So you make the point that right now, solar is a relatively small concept on a system. So is that--would you agree, then, that the amount of projected benefit from the--from the solar is equally small? I mean, it doesn't have a larger benefit than detriment; it's the same size one way or the other, isn't it?
- A. It's hard to speculate on what the total benefits will be, but it's a relatively small cost. It's a relatively small benefit. I'd probably agree with that.
- MR. MOSCON: One second, Commissioner Allen--or Clark. Sorry.

THE HEARING OFFICER: Off the record.

(A discussion was held off the record.)

MR. MOSCON: No further questions.

THE HEARING OFFICER: We're on the record.



1	MR. MOSCON: No further questions.
2	THE HEARING OFFICER: Mr. Jetter.
3	EXAMINATION
4	BY-MR.JETTER:
5	Q. I just have a few brief questions. You talked in your
6	opening statement about self-determination. Iflet's choose a
7	hypothetical customer who is not a net metering customer. Let's
8	say it's a grandmother who lives alone on a fixed income and is a
9	load user. Does she have self-determination to choose any
10	source of her electricity?
11	A. Probably.
12	Q. Does she have another grid that she can connect
13	to?
14	A. No, but there are solar systemsor solar companies
15	that areand I don't know if this is very prevalent in Utah, but
16	certainly in other states, solar companies that are putting solar
17	in, particularly for people like that situation that are on a fixed
18	income and want to fix their energy costs and not have to worry
19	about increasing electricity rates, and so put in a solar system at
20	virtually no up-front cost and start saving money right away.
21	Again, I don't know if that's happening here in Utah, but it's
22	certainly happening in other states.
23	Q. Okay. And if this customer wants to stay connected
24	to an electric grid, Rocky Mountain Power's the only source of
25	that; is that correct?



1	A. Right. Even under the scenario I just laid out, she
2	would still be connected to the grid.
3	Q. Okay. And so if there wasin a hypothetical sense,
4	if there was a cost shift from a net metering customer to the total
5	residential class, that customer would not have the self-
6	determination to choose another grid to connect to; is that
7	correct?
8	A. Well, regardless of whether there's a cost shift
9	towards non-solar customers or a benefit that all other customers
10	share in, she does not have the choice to move to another utility.
11	Q. Okay. And Rocky Mountain Power, in fact, also
12	does not have the self-determination to choose which customers
13	within its network that it's going to supply power to?
14	A. Yeah. That's kind of my point. They have an
15	obligation to serve.
16	Q. Okay. And you mentioned that all customers, in
17	your view, with roughly the same monthly load are the same
18	same cost to serve. Is that your testimony?
19	A. No, what I said was they provide the same recovery
20	of fixed costs to the utility.
21	Q. Okay.
22	A. Talking about residential customers.
23	Q. They may not cost the same to serve
24	A. No.
25	Qbased on that load profile?

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A.	They ma	av not.	And it	can c	go either	wav.

- Q. And would you agree that a customer with a peak year load or that's demanding more instantaneous load during shorter periods is more expensive to serve than one who has a very steady load?
- A. Well, it's a complicated question. It really depends on when that peak occurs and if that's consistent--if it's at the same time as the system peak or it's, you know, in the middle of the night, then there would be a much different answer. If it was at the same time as the system peak, then, yeah, that would be a more expensive load to serve, certainly.
- Q. Thank you. And finally, you had addressed the issue of single-item ratemaking. This is, in fact, a general rate case; is that correct?
- A. Well, the general rate case has settled. This is the one remaining issue. And it is a single issue in the sense that it's only looking at one--the cost for one class of customers and a very narrow definition of the cost that's being reviewed.
- Q. Okay. And so--but this particular docket was, as it initiated, a general rate case where the overall rates for all customers are available to be adjusted?
  - A. That's my understanding, yeah.
- Q. And is there any rate or any component of any rate that you were prevented in this proceeding from presenting evidence on?

1	A. No.
2	MR. JETTER: Thank you. I have no further
3	questions.
4	THE HEARING OFFICER: Mr. Coleman.
5	MR. COLEMAN: Thank you.
6	EXAMINATION
7	BY-MR.COLEMAN:
8	Q. Good morning.
9	A. Good morning.
10	Q. Late morning.
11	A couple of questions to follow up a little bit from
12	Mr. Moscon. If you would turn in your direct testimony to lines
13	74 through maybe 78.
14	A. I'm there.
15	Q. So here youyou outline kind of threeI can't think
16	of the right wordmaybe species or subspecies of customers,
17	threethree categories of customer. Sorry. I'm a former
18	biologist.
19	A. And so is my wife.
20	Actually, it'sif I can jump in, that's not exactly
21	correct. I'm talking about three different times of day
22	Q. Okay.
23	Afor the same customer.
24	Q. Okay. Soso a customer cancan take, under
25	youryour discussion here, three different forms. You can be

as you talk about the amount of energy generated at any one time can be zero. So that would be--and they would be importing energy from the system?

- A. They'd be using energy just like before net metering.
- Q. But in that case, there's actually two different types of that--of that status in that you could be importing energy just like a standard customer and paying for it or you could be importing energy and redeeming credits, correct?
- A. Well, and I have to confess I'm not intimately familiar with the net metering tariff sheet here, but based on your earlier conversations, my understanding is that redeeming of credits, if you will, occurs at the end of the month and not on an as-you-go basis.

In other words, there's two registers on the meter-one that measures inflows and one that measures outflows and
they're not netted on an instantaneous basis. They're netted at
the end of the month on a customer's bill so it's more of an
accounting entry than it is an actual redemption, later on that
same day or the next day.

Q. Okay. So then just--I'm trying to keep it brief because much of my subject matter has been covered. Around-on line 336 of your direct, you're discussing the analysis that you incorporated or--and you called it the Utah CPR analysis. And you admit there on line 36--336-- excuse me--that that analysis



1	did not look at any of the costs of theto the utility?
2	A. That's correct.
3	Q. And so then youa little bit later in your testimony
4	or elsewhere in your testimony, you indicated that you conducted
5	your own cost analysis to supplement that deficiency; is that
6	correct?
7	A. I wouldn't call it deficiency, but yes, I did a cost
8	analysis based on the reduction in consumption and the effects
9	on reduction in demand charges for commercial customers.
10	Q. One of your criticisms of the Company's
11	presentation and the Office's presentation was that there was not
12	a complete cost/benefit analysis, correct?
13	A. Yes.
14	Q. And so under that context, the fact that the CRP
15	analysis didn't providedidn't do a costthe cost side of the
16	coin, only the benefit side of the coin, would be a deficiency,
17	which is why I used the word?
18	A. Yes, if I presented it that way
19	althoughand maybe I didn't write this very artfully, but my
20	intention here was to show an example of another study that was
21	done on the benefits, because it's really the benefit side of the
22	equation for residential and the cost and benefit side for the
23	commercial customers that was missing from the record in this
24	proceeding at the time.
25	Soand as you'll see at the end, I do recommend



that a separate, full, comprehensive cost/benefit study be performed with all stakeholders being involved. So I'm not suggesting that the Commission just accept what I've done here as, you know, the gospel truth and move forward from there and reject the charge on that basis. But I am showing that there are clear benefits that other studies have found that need to be taken into consideration before implementation of any kind of net metering charge.

- Q. So turning to line 381 of your direct testimony, the very--the very last word on that line, and then rolling over through 383, your testimony reads, "The inescapable conclusion is that benefits are likely to outweigh the costs and no justification exists for imposition of a new fee at this time period." So your testimony is that you believe, without performing the cost/benefit analysis that you identify should be done, that you come to the foregone conclusion--inescapable foregone conclusion that benefits are going to be greater than the costs?
- A. Yes. Based on this study, for the purposes of this proceeding, but following this proceeding, we are recommending that the Commission undertake a separate--I don't know if it would be a formal docket or informal workshop process, but a process to look at, to evaluate the costs and benefits of net metering comprehensively across all customer classes.

Maybe to put a finer point on it, I'm using that

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1	conclusion to say that the net metering charge proposed by
2	Rocky Mountain Power should be rejected in this proceeding.
3	Q. I understand that to be your testimony.
4	MR. COLEMAN: I have no further questions.
5	THE HEARING OFFICER: Mr. Rossetti?
6	MR. ROSSETTI: I wasn't expecting to ask a
7	question, but I will, if that's okay.
8	EXAMINATION
9	BY-MR.ROSSETTI:
10	Q. Is itis it difficult for the residential class of
11	consumer to do aan analysis in the aggregate of their system
12	usage patterns?
13	MR. MOSCON: Calls for speculation.
14	THE HEARING OFFICER: I didn't hear that.
15	MR. MOSCON: I'm sorry. I was objecting to the
16	question in that he's asking the witness to speculate about
17	whether residential customers can or can't figure these things
18	out.
19	MR. ROSSETTI: Well, you were asking earlier
20	about aggregate net meteringor no, individual net metering, and
21	then you cast that against the aggregate net metering. I'm just
22	trying to ask about whether the same is true for residential
23	customers in total.
24	MR. MOSCON: I still maintain my objection.
25	THE HEARING OFFICER: Would you restate your



1	question, please, Mr. Rossetti?
2	MR. ROSSETTI: I'm trying to determine if Mr.
3	Gilliam has an opinion on how difficult it is to do a system usage
4	analysis, as Mr. Moscon was talking about earlier for residential
5	customers because Mr. Moscon compared net metering
6	customers to residential customers, and I wasin terms of this
7	analysis and whether we could project the impact of net metering
8	customers.
9	THE HEARING OFFICER: Do you have an opinion
10	on that, Mr. Gilliam?
11	THE WITNESS: The one clarification I would ask is
12	if you're asking me for my opinion on whether an individual
13	customer could evaluate their own
14	BY MR. ROSSETTI:
15	Q. No, the Company
16	Aclass.
17	Qfor example.
18	A. The class as a whole?
19	Q. Whether anybody, specifically the Company, since
20	they have the information, can do that kind of analysis and
21	project peak loads, etc.
22	A. Yes, I do have an opinion.
23	THE HEARING OFFICER: Answer the question,
24	please.
25	THE WITNESS: Yes, the Company has the





1	information and the data to do that type of analysis.
2	BY MR. ROSSETTI:
3	Q. And are they able to accountor Companies similar
4	to themI don't want to just pick on themare they able to
5	account for cloud cover or sudden torrential rains like we had
6	yesterday?
7	A. Yes. They are in the kind of cost/benefit study
8	we're talking about. However, on both the cost side and the
9	customer side as well as on the solar generation side, you take
10	unusual events out. In other words, you sort of normalize to
11	normal conditions on both sides.
12	Q. So it's averaged out?
13	A. Yes.
14	Q. Is it any more difficult to do that for net metering
15	customers?
16	A. Not at all.
17	MR. ROSSETTI: Thank you.
18	Thank you, Commissioner.
19	THE HEARING OFFICER: Thank you.
20	Mr. Culley or Mr. Plenk.
21	MR. PLENK: We have no questions of this witness.
22	Thank you.
23	THE HEARING OFFICER: Ms. Roberts.
24	MS. ROBERTS: I have one question.
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## **EXAMINATION**

**BY-MS.ROBERTS:** 

Q. Mr. Gilliam, is there a certain--and this is responsive to the question that the Office asked you about the benefits analysis presented in the CPR study and then your--the cost analysis that you developed: Would you agree there's a certain difficulty created in trying to compare cost and benefits when those estimates of costs and benefits have been developed by different adversarial parties based on different data and using different assumptions?

MR. MOSCON: Before the witness answers, can I, I guess, just lodge the same objection raised earlier, which is having aligned parties rehabilitate witnesses through friendly cross-examination? And just raising the general Commission rule against that.

THE HEARING OFFICER: I think the answer is obvious to all of us who have been here, but I'm going to allow you to answer this one question for Ms. Roberts.

THE WITNESS: Okay. And yes, the obvious answer is yes. And the follow-on recommendation, of course, would be that to the extent you go forward with a separate evaluation of costs and benefits, it's important that there be much transparency and data availability to do that analysis by all stakeholders.

THE HEARING OFFICER: Thank you.



1	Ms. Hayes.
2	MS. HAYES: I have no further question.
3	THE HEARING OFFICER: Commissioner LeVar.
4	EXAMINATION
5	BY-COMMISSIONER LeVAR:
6	Q. When Mr. Jetter was cross-examining you, he
7	askedhe proposed a hypothetical customer to you with respect
8	to your comments earlier about self-determination. I presume
9	your response to Mr. Jetter's question presumed the hypothetical
10	customer to be a homeowner and not a tenant. Is that accurate?
11	A. Yes, I did.
12	Q. Okay. Thank you.
13	THE HEARING OFFICER: Chairman Allen?
14	Mr. Gilliam, you're excused.
15	THE WITNESS: Thank you. And thank you for your
16	indulgence.
17	THE HEARING OFFICER: Thank you.
18	Be off the record.
19	(A discussion was held off the record.)
20	THE HEARING OFFICER: On the record.
21	We'll be in recess till 1:00. Thank you very much.
22	(Luncheon recess taken, 12:00-1:01 p.m.)
23	THE HEARING OFFICER: On the record.
24	Our next witness will be Mr. Michael Rossetti,
25	unless there's any preliminary matters before we start.



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1	Mr. Rossetti, if you'd step toward the stand and
2	raise your right hand. Do you solemnly swear the testimony
3	you're about to give will the truth, the whole truth, and nothing
4	but the truth?
5	THE WITNESS: I do.
6	THE HEARING OFFICER: Thank you. Please be
7	seated.
8	MICHAEL ROSSETTI, being first duly sworn, was
9	examined and testified as follows:
10	EXAMINATION
11	BY-THE HEARING OFFICER:
12	Q. And you're not represented by counsel, Mr.
13	Rossetti
14	A. I am not.
15	Qas I understand?
16	I believe you prepared direct testimony, rebuttal
17	testimony, and surrebuttal testimony that have been previously
18	filed with the Commission; is that correct?
19	A. Yes, sir.
20	Q. And the direct testimony dated May 21, 2014 has
21	already been received in the record. But did you also prepare
22	the testimony entitled rebuttal testimony and filed June 26, 2014,
23	and surrebuttal testimony filed July 17, 2014?
24	A. Yes, sir.
25	O And these documents are in question and answer



1	format. If you were to address the questions that are presented
2	in both of these documents today, would your answers be the
3	same as those that are reflected in these two documents?
4	A. Pretty much. I've learned a lot during the process
5	of participating in this meeting, or in the case, and there are
6	some things I didn't fully understand and I might have
7	commented on the original testimony having to do with cost
8	causation that I didn't have full understanding of. So with that
9	note, everything else I would say is yes.
10	Q. And you're free at this time, if you want, to make
11	any specific corrections to them if you would like to.
12	A. I'm not prepared to do that.
13	Q. Okay. So you adopt these two documents as your
14	testimony in this proceeding?
15	A. I do.
16	Q. Together with the direct testimony that's already
17	been received?
18	A. I do.
19	Q. And would you begin by, again, offering us your full
20	name, spell it for the record, the organization with which you're
21	affiliated, any other brief background and any brief summary of
22	your testimony that you would like to make at this time?
23	A. Okay. My name is Michael D. Rossetti, R-o-s-s-e-t-
24	t-i. I live at 13051 Shadowlands Lane Shadowlands is one
25	wordDraper, Utah 84020. I'm a professional software engineer,



1	a computer scientist. I have a full-time position and work for
2	some really fun companies over the years.
3	Does that cover the basic questions, sir?
4	Now, I did have a summary of my points. And I
5	prepared a few visual assistants. Would it be okay to talk to
6	those?
7	THE HEARING OFFICER: Is there an objection to
8	that, to the use of flip chart?
9	Mr. Moscon.
10	MR. MOSCON: Conceptually, no. And we
11	recognize and appreciate the deference the Commission's
12	already shown Mr. Rossetti. We understand he's not an
13	attorney. I guessI don't want to waivehaving not seen them, I
14	don't want to waive any objection if it goes beyond the scope,
15	etc., etc., but just conceptually if it's used in a summary format,
16	that's fine.
17	THE HEARING OFFICER: All right.
18	THE WITNESS: And if there's any concern, just
19	give me a sign and I'll flip to the next thing. I tried to make sure
20	that the things that I show in my little chart are directly related to
21	testimony that's been filed by me or other parties.
22	BY THE HEARING OFFICER:
23	Q. They should bethey should summarize what you've
24	presented. That's the
25	A. Yeah.



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Q. --that's your purpose now.

A. Yes.

Q. And to do that in a brief but reasonable amount of time, recognizing we've all read your testimony.

A. Right.

It is my intention just to add color to things I've learned over the last few days, in fact. Discovery that has been filed by the Company subsequent to the surrebuttal for example as well, if that's okay.

Q. Let's begin and we'll see how it goes.

A. And I'm nervous, so I'm going read pretty much what I've got.

Thanks to everyone. I know that your time is valuable and I will try keep my summary short. I do have several key points to make colored by the things I've experienced since yesterday morning. And I've learned a lot since yesterday. For instance, I didn't know I would be allowed to ask questions. The Office was very generous in helping me understand procedural matters, at least up to the point where I expressed some disagreement with their rated capacity approach. So I was pretty ignorant about being able to ask questions yesterday.

I would have been prepared to ask Mr. Walje some questions, but I was in still in shock that I was able to ask those questions, but that's water under the bridge and I'm not going to answer those--or get answer to those and ask questions. If I do

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step out of bounds, please let me know.

I'll skip over the backslapping self-introduction, but give a quick introduction to UCARE and not bore you with how we use our inheritance money to pay for our own particular solar project, except for one particular anecdote, and get to the heart of the matter. Okay. Skip self-introduction.

UCARE is an informal, unfunded group of Utah citizens who believe--of about 82 people, who believe individuals should have the right to choose the sources of their energy. Many have renewable energy. Many have nothing, but they want the right to exercise that in the future without being penalized. Many simply believe that individuals should be able to do everything they can to reduce the nasty air we experience along the Wasatch Front. Many believe in self-reliance. Some are grandparents. Some are young people just starting their families and, like a 401(k), investing in a cleaner, brighter future for their children.

There are many reasons people have supported us at UCARE; however, no one at UCARE--in fact, no one with whom I've spoken who has solar has been opposed to paying his or her fair share, but they all emphasize that the result might be fair to all parties involved, in this case residential customers and residential customers who net meter. We are not basing any of our arguments on emotional gradualism, but on facts. And we are hoping we understand the facts.



So the anecdote: One of the questions our--we were asked by a neighbor after putting in our solar system is, What is the ROI on your system? My wife responded with a question: "What was the ROI on that home theater system you just put in?" The point is, we did it for many reasons, not just because of potential ROI. That was part of it.

So let me summarize our main concerns about the proposed net metering fee. There are at least four significant flaws in the current proposal.

First, the primary foundational number used to calculate the proposed aggregate fee is inappropriate. I'll demonstrate that in a minute.

Second, the fee calculation is based on the flawed perceived system usage which does not actually match real system usage. My terms might not match what goes on in the industry, but hopefully as we talk about it and in my testimony that I filed that there will be understanding.

Third, there are claims of wear and tear and required system modification which has no evidence has been provided.

And fourth, any benefits of residential renewable energy have been dismissed out of hand while UCARE and others have shown that there is an actual financial benefit that the company has not been taking into consideration, as well as energy savings benefits.



Beyond the flaws, we've also shown that any kind of flat fee is inequitable and that a capacity based fee is no better in the fairness department. And finally, we have shown that the current level of net metering does not warrant a hasty and imprudent decision.

I need to apologize for the confusion I caused yesterday in my written testimony—and in my written testimony by the use of the term "gross consumption." I knew that RMP did not generally know what a net metering customer's total electricity consumption was, so I was assuming that from there and everyone's point of view, gross would mean the total amount of electricity flowing into the residents from the grid as measured by the meter. And now that I've got that apology off my chest, I will continue to use that term during my summary comments.

So let's--if I may use my little . . .

This is . . .

THE HEARING OFFICER: Mr. Rossetti--Mr.

Rossetti, could you move that closer to us? I want to get you as close to the reporter as I can so I'm sure that he can hear you.

And counsel will also need--well, but you'll need to point it so that counsel can see it.

THE WITNESS: Is this good?

THE HEARING OFFICER: That will be good for

24 l them.

THE WITNESS: I'll do some rotation.



Okay. This is--Ms. Steward's spreadsheet unchanged. Okay. So let's take a quick look--we'll get it. Don't worry.

MR. MOSCON: While he's setting that up,
Commissioner Clark, could I again interject and say we're very
happy with the deference the Commission's given, but to the
extent this is going to evolve from a summary of testimony to a
presentation critiquing the testimony of others, I guess I'd just
like to, you know, raise an objection that that is not the point of a
summary as we've kind of already discussed today.

And so we're now moving to exhibits from other people's testimony that I believe we're going to hear a critique of, so I think we're just starting to stray a little bit from the purpose. And I, again, recognize the different circumstance. I just don't want to waive that objection.

THE HEARING OFFICER: The point of, Mr.

Rossetti, the prefiling of testimony is so that counsel can prepare to cross-examine and the process allows each witness to--to present all of their--all of their views and opinions and supporting material, again, so that counsel can prepare and so if this is going to be a new analysis that isn't--that isn't in your testimony--

THE WITNESS: Oh, it is in my testimony.

THE HEARING OFFICER: Then--then-then that will be fine if you can do this in a brief way, but I just want to make



1 sure you understand Mr. Moscon's concern that if we start into 2 new--new areas of opinion or of purported factual support for 3 your opinions, then there probably is a different way for you to 4 approach the Commission with this information. 5 THE WITNESS: Okay. This is based on existing 6 testimony that I've written in my surrebuttal and--7 THE HEARING OFFICER: Okay. 8 THE WITNESS: --so--I'll make the key point here, 9 and then--10 THE HEARING OFFICER: Sure. 11 THE WITNESS: --I'll look and see if you still . . . 12 THE HEARING OFFICER: Please go--please go 13 forward. 14 THE WITNESS: Great. So this whole analysis is--15 everything on which this case is based depends on this number 16 right here (Indicating) line 11, net metering kilowatt-hours, 17 13,012,995. And I had--and I had been--I'm going to go off 18 record--or off my notes here. I had been under the assumption 19 this entire time that that number represented the excess kilowatthours recorded by the meter, the energy flowing out of the house 20 21 into the grid. What that number actually is the number of 22 kilowatt-hours flowing into the house from the grid. So it's the 23 total aggregate number provided by the utility. 24 So the application of this 2.6 cents across that 25

So the application of this 2.6 cents across that entire number means--let's make sure I say it properly--it means

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that they are being billed this 2.6 cents for every single kilowatthour that they have consumed except for the net--well, including the--including the netted electricity if this passes.

Which means that depending on their consumption, if they consumed 1,500 kilowatt-hours in a month and only generated 200,000 kilowatt-hours of excess, they would have been billed for about \$12.00 kilowatt-hour, which has means they would have paid 2.6 cents on the 1,419 over the month. And that's not right.

I'm getting off my script here, but that was the key point I wanted to make, that this number here is the wrong number to be used. And I'll summarize up, I'll skip everything in here because we want to be brief. The bottom line is, we need a better calculation. And we haven't done our homework. The calculations should be based upon the gross amount that the consumer has used from the utility and the net amount that they put back into the system compared to other residential customers. This would--this would be my proposal is that they be billed for the difference.

So if, in addition--okay. So if they use 1,419 kilowatt hours in a month, that means--and they only generated 200,000 kilowatt--or 200 kilowatt-hours in a month, then that 200 kilowatt-hours in the month is the thing that represents the difference, the part they're not paying, instead of the whole 1,419. That's the fundamental issue here. And that's why I think



1	that number on that spreadsheet and that is my key point.
2	So I'll skip to the end because that was the key
3	point.
4	I won't bother you with any other charts. Should I
5	wait?
6	Oh. Yes. I'm sorry. I do need to show one other
7	chart. You will recognize this as the chart that shows how solar
8	does not match the peak residential consumption. We maintain
9	that there is a financial benefit to the Company in the integration
10	of this area of the graph (Indicating) where the two intersect
11	because when solar is generating electricity excess at this point,
12	the Company is offsetting moremore expensive energy. Now, I
13	don't know how much that is, but I do know it's not insignificant.
14	I actually prepared a chart showing an example, but
15	since that's not in the testimony, I'll leave it alone.
16	One final point, if you will, and then I'll be done.
17	May I ask my administrative assistant to come up?
18	THE HEARING OFFICER: Sure.
19	THE WITNESS: And then I will be done.
20	THE HEARING OFFICER: Sure.
21	THE WITNESS: This is a graph. This is a graph of
22	the three billion kilowatt-hours of energy that have been
23	consumed in the test period from the Company ending June 13
24	or JuneJulyJune 2013. This represents that amount of energy
25	that was consumed by residential customers.



1	THE HEARING OFFICER: So for the record, you're-
2	-you'reyou have a red ribbon
3	THE WITNESS: A red ribbon.
4	THE HEARING OFFICER:that extends
5	THE WITNESS: Twenty feet long.
6	THE COURT:twenty feet between you and your
7	assistant?
8	THE WITNESS: Yes.
9	And the green on this graphthe green represents
10	the quarter inch of net generatedexcess electricity that was
11	produced during that same period of time including the 30
12	percent growth that occurred since then, okay? So this is just a
13	representation to show how significant net metering is and why I
14	believe we ought not to be premature in making decision without
15	considering issues like this.
16	Thank you.
17	With that, I'll terminate myself.
18	THE HEARING OFFICER: Please don't do that.
19	MR. PLENK: I object to that.
20	THE HEARING OFFICER: I think we all object to
21	that. Terminate the summary. And you'll now be available for
22	cross-examination, as soon as you are comfortably seated again
23	in the witness stand.
24	EXAMINATION
25	BY-MR.MOSCON:





1	Q. Mr. Rossetti, I actually may not have any questions,
2	but I want to clarify just to make sure I understood what you
3	said. On the first chart when you circled the 13,012,995 number,
4	what did you indicate that your understanding was that you
5	learned that thatyou finally learned what that was?
6	A. Let's see if I can find that in my surrebuttal. In one
7	of our discovery requests, we asked for clarification on that
8	number. And it will just take me a second. And I may have to
9	look in the discovery itself.
10	THE HEARING OFFICER: We'll be off the record.
11	We're off the record, Mr. Moscon.
12	MR. MOSCON: Oh, sorry.
13	THE HEARING OFFICER: Are you ready to
14	proceed?
15	THE WITNESS: Can weI can't find it in my
16	surrebuttal, but it was part of a discovery request.
17	THE HEARING OFFICER: Okay. So we're on the
18	record.
19	BY MR. MOSCON:
20	Q. Okay. My question is, I thought I heard you state
21	that that was the number that represented the total amount of
22	energy that went back or forth through the system. So I'm just
23	wondering if you recall what you said you believedyou know,
24	what you said it was.
25	A. Okay. I originally believenow believe that that



1	number represented the excess generation by solar customers or
2	renewable energy customers, but I was corrected in one of the
3	rebuttalsone of your rebuttals telling me that that was not
4	actually what the number was, the number was actually thewhat
5	I called gross consumption, in other words, the complete
6	kilowatt-hours of energy by the customer, not the netted amount
7	of energy.
8	Q. Okay.
9	A. Do you want me to find that in
10	MR. MOSCON: I guessif I might approach
11	THE HEARING OFFICER: Yes.
12	BY MR. MOSCON:
13	Q. Just to clarify, then, I'm handing you page .18, since
14	you don't have it with you, from the rebuttal of Joelle Steward,
15	line 351, 352.
16	A. Yes.
17	Q. If you can just read that for us.
18	A. Okay. This was a question having to do with
19	identifying errors in our analysis and assertions. The answer
20	you want tojust the underlined part? Okay. " (JRS-8), is not
21	excess electricity produced by net metering customers; instead,
22	13,012,995 kilowatt-hours is the annual net billed usage by net
23	metering customers."
24	Q. So it referred to the net, not the gross; isn't that
25	right?

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1	A. Net billed usage.
2	Q. Right. Okay. And I guess then last question I'd ask
3	you is on the ribbon demonstration where you had the quarter
4	inch, are you aware that the existing Commission order allows
5	for how much of that ribbon could be consumed by net metering?
6	A. I heard a figure, I think it was what, 3 percent or 15
7	percentI don't recall. That's not my area.
8	MR. MOSCON: Thank you. No other questions.
9	THE HEARING OFFICER: Mr. Jetter?
10	MR. JETTER: No questions from the Division.
11	Thank you.
12	THE HEARING OFFICER: Mr. Coleman.
13	MR. COLEMAN: As an initial point, the Office
14	appreciates the Commission's indulgence in assisting Mr.
15	Rossetti give some of the concerns we had with respect to our
16	positions. And with that, the Office has no questions for Mr.
17	Rossetti.
18	THE HEARING OFFICER: Thank you. Mr. Culley or
19	Mr. Plenk.
20	MR. PLENK: We have no questions, your Honor.
21	MS. ROBERTS: No. Thank you.
22	THE HEARING OFFICER: That concludes your
23	testimony, Mr. Rossetti. Thank you very much.
24	THE WITNESS: Thank you.
25	THE HEARING OFFICER: You're excused.

1	MR. PLENK: Commissioner Clark, are you ready to
2	proceed with Mr. Miksis?
3	THE HEARING OFFICER: We are. Thank you.
4	MR. PLENK: TASC would call Nathanael Miksis to
5	the stand, please. And he does need to be sworn.
6	THE HEARING OFFICER: Thank you. Please raise
7	your right hand. Do you solemnly swear the testimony you're
8	about to give shall be the truth, the whole truth, and nothing but
9	the truth?
10	THE WITNESS: I do.
11	THE HEARING OFFICER: Thank you. Please be
12	seated.
13	NATHANAEL MIKSIS, being first duly sworn, was
14	examined and testified as follows:
15	EXAMINATION
16	BY-MR.PLENK:
17	Q. Mr. Miksis, would you please state your name,
18	position, and business address?
19	A. Sure. My name is Nathanael Miksis. Last name is
20	spelled M-i-k-s-i-s. I'm a consultant with Keyes, Fox & Wiedman,
21	LLP. Business address is 436 Fourteenth Street, Suite 1305 in
22	Oakland, California.
23	Q. In connection with this case, did you prepare
24	rebuttal testimony and surrebuttal testimony that's been prefiled
25	with the Commission?



1	A. Yes, I did.
2	Q. Do you have any changes or corrections that need
3	to be made to that testimony?
4	A. Yes, I do.
5	Q. Will you please go ahead and tell us what those
6	are?
7	A. I have a few minor edits to my surrebuttal, which
8	were submitted as errata, I believe.
9	MR. PLENK: So let me indicate, Commissioner
10	Clark, I provided the court reporter with the changes that Mr.
11	Miksis is about to indicate they aware on two pages of his
12	testimony. They're brief, so I believe the parties will be able to
13	pick them up as he indicates them from the stand.
14	THE HEARING OFFICER: Thank you.
15	MR. PLENK: If you prefer a different method, we
16	could certainly do that.
17	THE HEARING OFFICER: That's just fine.
18	MR. PLENK: Thank you.
19	BY MR. PLENK:
20	Q. Go ahead with the corrections, Mr. Miksis.
21	A. Okay. Surrebuttal, page .17, line 7, the testimony
22	read, " reduction in contribution to CP," which is coincident
23	peak. That was replaced with, "distribution system peak."
24	On line 9, I had
25	THE HEARING OFFICER: Could you

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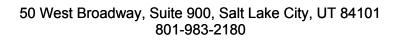
1	THE WITNESS: Oh, I'm sorry.
2	THE HEARING OFFICER:could you give us a
3	moment to make those in our copies?
4	BY MR. PLENK:
5	Q. Mr. Miksis, why don't you go ahead and repeat that
6	just to make sure everybody understood it.
7	THE WITNESS: Page .17 of my surrebuttal, line 7, I
8	deleted abbreviation "CP" and replaced it with the three words,
9	"distribution system peak."
10	THE HEARING OFFICER: Okay.
11	BY MR. PLENK:
12	Q. Okay. Thank you. Let's go to the next correction.
13	A. Same page, line 9, replaced "CP" with "distribution
14	system peak," or rather replaced "system CP" with "distribution
15	system peak."
16	THE HEARING OFFICER: That shows on line 8 for
17	myin my copy, I believe, so
18	THE WITNESS: I'm sorry?
19	THE HEARING OFFICER: I said that shows on line
20	8 in my copy, just for the record.
21	THE WITNESS: Okay.
22	THE HEARING OFFICER: I think I'm at the right
23	place, but
24	THE WITNESS: Yeah.
25	MR. JETTER: Can I make a suggestion that just



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1	read the complete sentence in which that applies and make sure
2	we're all on the right spot?
3	THE WITNESS: Thank you. I'll begin on what I
4	have as line 6. It says, "In Ms. Steward's example, it appears
5	that rooftop solar has a greater reduction in contribution to
6	distribution system peak, and that the customer with rooftop
7	solar contributes only about 60 percent of the residential class
8	average to distribution system peak."
9	Does that work?
10	THE HEARING OFFICER: It does. Thank you.
11	BY MR. PLENK:
12	Q. Thank you, Mr. Miksis. Let's go to the next change
13	or correction on that same page.
14	A. Okay.
15	Q. And again, perhaps if we could first identify the
16	specific words changed and then have you read the whole
17	sentence as Mr. Jetter suggested.
18	A. Sure. What I have as line 17, deleted was "CP."
19	The correct sentence is, "If the impact of NEM on a customer's
20	contribution to distribution peak"
21	Q. Why don't you go ahead and reread that sentence
22	with the correction in it now?
23	A. Yes. "If the impact of NEM on a customer's
24	contribution to distribution peak were equal to that from EE, the
25	NEM charge would constitute disparate treatment of similarly





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1	situated customers."
2	THE HEARING OFFICER: Thank you.
3	BY MR. PLENK:
4	Q. Okay. Let's go to the next change, please.
5	A. Next change, the sentence begins with, "As it
6	stands, the customers aren't similarly situated; NEM customers
7	appear (from Ms. Steward's diagrams) to have a contribution to
8	system CP that is even lower than EE customers, making the
9	NEM charge constitute both disparate and punitive treatment."
10	The corrected sentence isstart with "NEM
11	customers": "NEM customers appear (from Ms. Steward's
12	diagrams) to have a contribution to distribution system peak that
13	is even lower than EE customers, making the NEM charge
14	constitute both disparate and punitive treatment."
15	THE HEARING OFFICER: Thank you.
16	BY MR. PLENK:
17	Q. Okay. And do we have anotheranother page with
18	changes?
19	A. Yes, page .22.
20	Q. Again, perhaps if you could tell us the specific
21	change and then read the sentence with the correction included.
22	A. Okay. The original sentence begins, the first word
23	of the first line, "contribution to system coincident peak, or CP,
24	the non-solar DG customer." The correction is, "contribution to
25	distribution system peak than a non-solar customer."



1	Q. Are you deleting the words "coincident peak" and
2	the paren "CP," correct?
3	A. That's correct.
4	Q. And the next correction?
5	A. Next correction is line 2, same page: "Because CP
6	is used in cost-of-service to allocate fixed costs" I'll end
7	there for now. The correction is: "Because contribution to peak
8	is used in cost-of-service to allocate fixed costs"
9	THE HEARING OFFICER: Okay.
10	BY MR. PLENK:
11	Q. Is there one more correction, Mr. Miksis?
12	A. Yes, there is.
13	Q. Where is that?
14	A. The end of the sentence. I'll begin with, "A
15	reasonable interpretation is that a customer with this pattern of
16	usage and a 3.2-kilowatt solar DG system bears only 60 percent
17	of class average responsibility for fixed generation and
18	transmission costs."
19	Q. And what's the change?
20	A. The change is replacing the last four words,
21	"generation and transmission costs," with "distribution costs, and
22	perhaps other fixed costs as well."
23	Q. Mr. Miksis, with those changes and corrections,
24	does the surrebuttal testimony and the rebuttal testimony reflect
25	what your testimony would be if you were asked and answered

1	you were asked those questions today?
2	A. Yes.
3	MR. PLENK: We would move the admission of Mr.
4	Miksis' rebuttal testimony and surrebuttal testimony with the
5	corrections he's indicated.
6	THE HEARING OFFICER: Any objections?
7	They're received.
8	BY MR. PLENK:
9	Q. Mr. Miksis, have you prepared a summary of your
10	testimony to present today?
11	A. Yes, I have.
12	Q. Please go ahead with that summary.
13	A. Good afternoon, Commissioners. Good afternoon,
14	everybody. I appreciate the opportunity to participate in this
15	proceeding. My summary testimony covers several key topi
16	the Commission to consider in their decision on Rocky Mour
17	Power's proposed net metering facilities charge. Let me beg
18	by saying that the primary argument in favor of this charge is
19	that a cost shift occurs between net metering and non-net
20	metering customers.
21	This argument has two foundations: First, that net
22	metering customers have adverse operational and cost impa
23	on the power grid; and second, that net metering customers
24	continue to have residential class average responsibility for

25

ed a summary of your ummary. ners. Good afternoon, unity to participate in this y covers several key topics for decision on Rocky Mountain lities charge. Let me begin in favor of this charge is metering and non-net ations: First, that net perational and cost impacts net metering customers verage responsibility for fixed costs while they have less than residential average contribution 50 West Broadway, Suite 900, Salt Lake City, UT 84101 801-983-2180



to these costs through variable energy purchases.

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THE REPORTER: A little slower.

Am I reading it at an okay pace?

THE WITNESS: The operational and cost impacts have not been proven in the record, and in fact, several assertions made by the Company have been unsupported or contradicted by the Company's responses to data requests. The second foundation in the simplest terms is that net metering customers continue to use the Company's infrastructure, and particularly the distribution system. This is, of course, true at the present time, but it's not a binary use-or-no-use issue.

Cost allocation methods approved in cost-of-service proceedings allocate responsibility for fixed costs through several metrics that vary widely among individual residential customers and groups of residential customers. The metrics most applicable to this case are contribution to system coincident peak, distribution system peak, and non-coincident peak, all of which are affected by on-site solar generation and for all of which the data record is sparse.

What evidence has been presented, for example, by witnesses Steward and Marx shows an approximate 40 percent reduction in contribution to distribution system peak and a minimum of seven percent contribution to circuit peak, respectively. I say a minimum of seven percent because the level of analysis is properly at the customer level and not the



neighborhood level in Salt Lake City covered by the Northeast Substation analysis, since we are talking about a customer charge and not a neighborhood charge.

If even a small fraction of rooftops in the study did not receive a solar installation, the remaining that did would have a greater-than-seven percent reduction in their own contribution to circuit peak.

The most appropriate evidence we have is Steward's Diagram A in her rebuttal, which shows an approximate 40 percent reduction in contribution to distribution peak, though smaller, perhaps 4 percent, reduction in non-coincident peak compared with an average customer.

The 40 percent reduction is applicable to distribution-related fixed costs, in quotes, "Distribution substation," "Distribution P&C"--protection and control--and "Distribution Transformer," which together comprise approximately \$17.37 of the \$24.19 in distribution and retail-related costs the Company is asserting the residential class average customer is responsible for. Forty percent of \$17.37 is \$6.95, which exceeds the Company's requested NEM facilities charge.

Admittedly, the record is sparse, and this 40 percent reduction is one data point. Another is 7 percent. But these values derive from their respective peak hours--distribution level in the first case and circuit peak in the second--of 6:00 p.m. and



7:00 p.m., respectively. As was demonstrated yesterday, various peak hours--for system coincident peak, distribution peak, and circuit peak--can occur as early as 3:00 p.m. The earlier in the day the peak occurs, other things equal, the greater the reduction in peak contribution of NEM customers.

I will now turn to my summary of my submitted testimony, if that is okay with the Commission.

In my direct testimony on behalf of TASC, I raised two primary points regarding the Company's justification for the net metering charge. First, I asserted that the company did not provide evidence supporting their assertion that net metering customers contributed less than their fair share to fixed-cost recovery. And second, I disputed the Company's statement that net metering customers had harmful or costly impacts on the grid or on other customers.

In rebuttal, the Company continued to assert that net metering customers avoided their fair contribution to fixed costs, introducing as evidence a diagram showing an imperfect match between peak solar production and peak distribution system demand and citing cost-of-service cost allocation methods. I have citations, but I don't think I need to--unless you would like them.

The Company also introduced testimony from a witness who made statements shown later to be either unsupported or contradicted by the record and alleged that an



experience of a Company affiliate with large solar plants causing operational problems in Oregon was relevant to discussion of small residential-scale solar installations in Utah.

Additionally, the Company in rebuttal also referred to a separate Commission proceeding referred to as the Qualifying Facilities, or QF, docket in which an avoided cost value for utility-scale solar was calculated, asserting that this avoided cost was directly applicable to the benefits calculation of distributed solar.

In rebuttal, witness--I apologize--Faryniarz--for the Division of Public Utilities indicated that Utah Clean Energy witness William--witness Gilliam and Sierra Club witness Mulvaney did not make a conclusive--did not make conclusive cases in their respective testimonies that the benefits of net metering clearly outweighed the costs for residential customers.

Okay. In my surrebuttal, I address the points made by the Company and witness Faryniarz, holding that the record remained insufficient to justify the proposed net metering charge.

In response to witness Steward's assertion that net metering customers do not fully pay for the costs that their usage imposes on the distribution system, I maintained that the record did not support her assertion. I highlighted how the Company's own diagram, which showed the modeled impact of a solar installation on a residential customer's net energy demand, actually shows an apparent reduction in the customer's



 contribution to distribution peak of approximately 40 percent.

I also mentioned how the Company was unable to provide TASC with data on actual net metering customers' load curves in order to establish actual contributions to system peak, distribution peak, and non-coincident peak, which would be necessary to positively show that net metering customers were avoiding their responsibility for generation, transmission, and distribution system costs through lower energy sales.

In response to witness Marx's testimony that RMP affiliate Pacific Power had incurred costs to replace transformers in order to accommodate net metering customers, I highlighted that the Company's data response contradicted the statement. In response to witness Marx's anecdote about operational issues affecting customers resulting from incorrect operation of equipment at two large solar plants in Oregon, I cited TASC's data request for information on operational issues in RMP's Utah territory about which customers had complained. The Company had responded that they were unable to determine whether these complaints were attributable to distributed solar installations.

Additionally, it is important to note that the large solar plants mentioned are on the order of 100 two 200 times larger than typical residential distributed generation systems.

In response to witness Marx's explanation of a situation in which DG could cause an overvoltage condition, I cited the Company's response to TASC's date request on any



events like these, in which DG exceeded load on a circuit, actually occurring in RMP territory. The response was that this had not occurred, to the best of its knowledge.

In response to Company witnesses Walje and Duvall asserting that the QF dockets showed that net metering customers receive compensation well above the "value of PV solar," quote/unquote, I highlighted three major problems with this comparison.

First, the QF docket utility-scale solar PV avoided cost does not account for costs avoided by having DG meeting on-site load at a customer's home--such as transmission and distribution-related costs, line losses, and geographic diversity.

Second, the referenced QF docket identified a transmission constraint that would affect the avoided energy and possibly capacity costs at different locations on RMP's system, but the study did not calculate locationally-differentiated avoided costs, which would be relevant for solar DG on the import or load pocket side of the constraint.

Third, the utility-scale solar PV avoided cost in the QF docket was reduced by integration cost, although integration costs were incurred to interconnect distributed generation, as I understand it, are the responsibility of the interconnecting customer, not the utility or other customers.

In response to DPU witness Faryniarz's criticism that intervenors had not made a conclusive case on net metering



benefits exceeding net metering costs, I noted that my understanding--and I'm not a lawyer--is that witnesses for intervenors opposing the Company--opposing the Company--sorry--opposing the Company's proposal do not bear the burden to prove this case. The burden, I believe, rests with the party proposing the change; namely, the Company.

I'm almost done.

In testimony, I consistently maintain that the record does not support critical assertions made by the Company to justify the net metering facilities charge. The assertions of negative impacts on the grid, the Company, or on other customers caused by net metering customers is unsupported and in cases, contradicted by the record.

The remaining justification is related to allegations of a cost shift from net metering customers to non-net metering customers. At the highest level, the cost shift justification offered in support of the net metering facilities charge is based on cost causation; namely, that net metering customers have unchanged peak use of the grid after installing solar.

Because they reduce net consumption, it is true that net metering customers contribute less to fixed costs than they did before installing on-site generation. However, the second part of the cost causation argument, that overall consumption falls while peak use does not, is not shown by the record. In witness Steward's rebuttal--



1	MS. HOGLE: Excuse me. I'm sorry. I hate to
2	interrupt you, but how much more do you have? It just seems
3	like
4	THE WITNESS: A page and a half.
5	MR. COLEMAN: A lot.
6	MS. HOGLE: Your Honor, it just appears he's taking
7	a lot more time.
8	THE HEARING OFFICER: It's a pretty extensive
9	summary.
10	THE WITNESS: Okay.
11	THE HEARING OFFICER: We wantwe're familiar
12	with the testimony, so if you can keepkeep your focus on what
13	you think is most important for us to know.
14	THE WITNESS: Of course. I would like to make the
15	pointwell, I already made it.
16	Okay. So my summary observations. If you'll
17	indulge. Shouldn't take too long.
18	MS. HOGLE: I thought that was your summary. I
19	apologize. Wasn't that your summary?
20	THE WITNESS: That wasthat was most of it.
21	MS. HOGLE: So you have a summary of your
22	summary?
23	THE WITNESS: I have a bullet list of observations.
24	I canI can skip to the last one, if you
25	MS. HOGLE: Please.





THE HEARING OFFICER: Just give us what you think is most important for us to know, recognizing that we're acquainted with your--your prefiled testimony.

THE WITNESS: Okay. In that case, I will say two things. I believe that with better data on actual load profiles, and data on customers' net loads at the time coinciding with system and distribution-circuit peaks, this issue may be settled one way or another, but for now, it is not possible to show there is a cost shift.

And finally, witness Steward testifies that the Company's load research study may include exploring development of a new rate schedule class that could involve three-part rates, including a fixed monthly charge--sorry. You're familiar with that.

I believe that an optional rate schedule of this type could align cost causation with cost recovery for many customers, including those with on-site generation. With sufficient data from the load research study in hand, a collaborative rate design initiative could potentially allow parties who disagree on the justification of the net metering charge to find common ground for developing fair and efficient residential rates for all residential customer types.

MR. PLENK: Thank you, Mr. Miksis.

Mr. Miksis is now available for cross-examination.

MS. HOGLE: Thank you.



1	THE HEARING OFFICER: Ms. Hogle.
2	EXAMINATION
3	BY-MS.HOGLE:
4	Q. Mr. Miksis, I believe you said in your summary, if a
5	few more customers were on the Northeast Substation or
6	excuse meattached to the Northeast Substation had rooftop
7	solar, they would reduce peak by more than seven percent?
8	A. No, what I was referring to is in the study, as I
9	understand it, the graph showing the seven percent
10	Q. Uh-huh (Affirmative).
11	Awas for the entire region served by that substation.
12	Presumably not every rooftop there has solar. And so those that
13	do would have a higher than 14than 7 percent reduction in
14	contribution to the circuit peak.
15	Q. All right. Do you agree thatdoesn't the study
16	assume that if all customers on the circuit who had rooftop solar,
17	there could be a contribution to peak on that circuit of only seven
18	percent at peak, assuming solar were operating optimally, every
19	day of the month? I meanso you're talking optimal conditions
20	every customer on that circuit?
21	A. I'm presuming that the total peak demand on the
22	substation included customers with and without solar. Therefore,
23	so I would consider that to be the denominator.
24	Q. Right. Do you agree that that's what the study
25	assumed the study presented by the Company? Liust



A. That every customer with a roof had rooftop solar.

Q. And that the rooftop solar photovoltaic was generating at the optimal level?

(Reporter/attorney discussion to clarify the record.)

THE WITNESS: Yeah, solar PV. Again, my--my presumption is that, yes, per the assumptions of the study, it is a best-case scenario. That said, if, for example, half of the, let's say, metered customers in that territory had roofs and half did not, those that did would have a greater than seven percent reduction because the seven percent reduction, as I understand it and please correct me if I'm wrong, is among all customers served by that substation--sorry--by that circuit.

- Q. And would you agree that it would take a mandate for even half or all of these customers to install solar PV and--and for your results to show up as you just state? I mean, it would have to be a situation where every customer would have PV solar and--and that's an unrealistic assumption, correct?
- A. I agree that it would take a mandate to require that level of installation. What I'm talking about is for those customers who do have solar, the ratio between their solar production and their peak load is higher than 7 percent of the 100 percent shown in the graph. If I'm not being clear, please say so.
- Q. Well, I'm just wondering if you're stating that based on facts. I mean--

1	A. I'm stating it based on a presumption that not every	
2	meternot every metered customer served by that substation had	
3	solar.	
4	Q. Thank you. Okay. I'm just going to ask you a	
5	couple more questions. In your direct testimonyand I don't	
6	know that you need to gobut on page .15, you cite a recent	
7	study by Sandia National Laboratories, correct?	
8	A. Yes.	
9	Q. And just to clarify, the study focused on a 2-	
10	megawatt utility-scaled system, not rooftop solar, correct?	
11	A. I don't recall.	
12	MS. HOGLE: Your Honor, just a few seconds,	
13	please.	
14	THE HEARING OFFICER: Sure.	
15	THE WITNESS: I believe my testimony isdoes not	
16	say one way or the other.	
17	MS. HOGLE: Your Honor, can I approach the	
18	witness?	
19	THE HEARING OFFICER: Yes.	
20	MS. HOGLE: I apologize. I don't have any copies. I	
21	will provide it to you once	
22	BY MS. HOGLE:	
23	Q. Can you read that into the record?	
24	THE HEARING OFFICER: Could you	
25	MR_PLENK: Could you identify what we're looking	

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1	at or what he's looking for the record and the rest of us, please?	
2	MS. HOGLE: It is in his direct testimony, page .15	
3	and his citation to footnote 6.	
4	MR. PLENK: And what are you showing him?	
5	BY MS. HOGLE:	
6	Q. And that is, I believedoes this look like the study	
7	that you were citing?	
8	THE WITNESS: I believe	
9	MR. PLENK: You're showing him the study	
10	MS. HOGLE: Yes.	
11	MR. PLENK:that he referred to?	
12	MS. HOGLE: Yes.	
13	MR. PLENK: I couldn't see what you were showing	
14	him.	
15	MS. HOGLE: I apologize.	
16	BY MS. HOGLE:	
17	Q. Would you mind reading it?	
18	A. Of course. "A follow-up study was initiated in 2011	
19	focusing on potential utility-scale PV deployment specifically a 2-	
20	megawatt""specifically 2-megawatt nominal systems on a	
21	distribution feeder in Utah."	
22	Q. Okay.	
23	A. So my interpretation would be it says utility-scale,	
24	but it's also a distribution feeder.	
25	Q. And do you agree that rooftop solar customers	

1	completely rely on and use the Company's distribution facilities,	
2	any facilities at this point?	
3	A. I would say at some times, they reply completely,	
4	yes.	
5	MS. HOGLE: Okay. Thank you. I have no further	
6	questions.	
7	THE HEARING OFFICER: Mr. Jetter?	
8	MR. JETTER: No questions from the Division.	
9	Thank you.	
10	THE HEARING OFFICER: Mr. Coleman?	
11	EXAMINATION	
12	BY-MR.COLEMAN:	
13	Q. I do have a few questions. OneMr. Miksis, one	
14	sort of preliminary issue: In yourthe r,sum, that you attached	
15	to your direct testimony, in your selected experience, the first	
16	item reads, "Drafted motion to intervene in opposition on behalf	
17	of the appliance for solar choice in Colorado PUC Dockets 14A-	
18	0301E and 14A-0302E." I have those documents, and you didn't	
19	sign them. You drafted them?	
20	A. I did.	
21	Q. And then Ms. Smart assumed your discussion; is	
22	that	
23	A. ThatI believe so. I'll take your word for it.	
24	Q. You don't know if she signed it?	
25	A. I believe she did.	

1	MR. PLENK: Is that the end of that one, Mr.	
2	Coleman, or do I have to object?	
3	MR. COLEMAN: I'm just curious onI mean, he	
4	representedmade a representation of his experience. I'm trying	
5	to better understand.	
6	BY MR. COLEMAN:	
7	Q. In your direct testimony on page .11, you start with a	
8	discussion	
9	A. If you hold on	
10	Q. Sure.	
11	A. Which line are you referring to?	
12	Q. Page .11, linewell, startsyour question answer	
13	starts about line 6. And through theto summarize the answer	
14	that you give in lines 8 through 13, you identify three different	
15	categories of benefits of grid-related distributed solar generation-	
16	-excuse megrid-connected. You refer to grid-related benefits,	
17	general and environmental benefits, and societal benefits, those	
18	three categories of benefits that youthat you believe are	
19	should are calculated?	
20	A. I see that in my testimony, yes.	
21	Q. And then with respect to the grid-related benefits,	
22	on the same page, line 17 through the next page, page .12, line	
23	line 3, you discuss issues like avoided energy costs, avoided	
24	capacity costs of generation, avoided and deferred capacity	

costs of transmission, fuel price hedging, and energy market

25



1	impacts. And you believe that those are grid-related benefits		
2	that should be attributed to distributed solar; is that correct?		
3	A. I believe, depending on the analysis, those could		
4	be.		
5	Q. Are you aware that this Commission has previously		
6	rejected approval of those specific benefits?		
7	A. In which contexts?		
8	Q. In the avoidedin the avoided cost qualifying		
9	facilities context.		
10	A. Yes, I am.		
11	Q. And continuing on in the general environmental		
12	benefits, you talked about zero associated air or water emissions		
13	and allowing the utility to avoid environmental- related costs.		
14	And you believe those are general environmental benefits that		
15	should be attributed to solar?		
16	A. Again, it depends. I would say, for example, if the		
17	utility retained the RECs, that could be considered a benefit to		
18	the utility.		
19	Q. And if a utility did not retain the RECs?		
20	A. It would depend.		
21	Q. And then for the societal benefits, you believe that		
22	issuesor that the societal values of distributed solar should		
23	include things like job creation and the attraction of investment		
24	capital. That's your testimony?		



I believe I listed some that could be.

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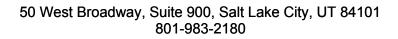
Q.	And then you actually assert that the societal value
is, quo	ote, a necessarily broad category and could account for all
the be	nefits that are enjoyed by the public at large?

- A. I would agree with that.
- Q. So that's a pretty broad?
- A. Yes.
- Q. And then you turn the page, if you would. And when it comes to the costs to be associated with the net metering program, your question that begins on line 7, your answer is that the costs, quote, should be those costs that are directly attributable to the net metering program. That would be--
  - A. Yes, I do say that.
- Q. So when it comes to some costs, let's hypothetically, if--if distributed solar residential grew to the point where the Company could offset a coal fired generation facility, would those jobs lost at the coal-fired generation facility be a cost that would be attributed to solar, distributed PV?
- A. I believe it would be difficult to directly attribute it to solar. I believe jobs lost at the closing of a coal plant would, of course, be jobs lost and negative impact. But I would preface that with if it were directly attributable, I could agree with that.
- Q. So if the production from the coal-fired plant, let's say, at Huntington, Utah, was directly replaced by net metering generation, would you agree that those generation facility jobs lost would be costs assigned to the PV--to the net metering

1	program?	
2	A. My understanding, based on testimony that I've	
3	heard earlier today, is there's a ways to go in terms of reduction,	
4	and market purchases	
5	Q. Sure.	
6	Afor a coal plant would be	
7	Q. My question's hypothetical.	
8	A. Okay.	
9	Q. Would you agree that those are costs assigned to	
10	the net metering program?	
11	MR. PLENK: Mr. Coleman, did you say could be or	
12	were? I think I missed a word there.	
13	BY MR. COLEMAN:	
14	Q. It's a hypothetical question. Ifif the Huntington	
15	plant coal-fired generation capacity could bewaswas offset	
16	due to net metering generation, would youwould you assign	
17	those generation facility jobs lost as a cost to the net metering	
18	program, under your definition of cost?	
19	A. I believe that that is one of very many potential	
20	factors that should go into a cost/benefit study, and	
21	hypothetically, among the many factors, it could be there.	
22	Q. So you would agree that that wouldunderunder	
23	when you talk about it being directly attributable, would you	
24	believe that that's a directly attributable cost?	
25	A. I would sayremaining in the realm of hypothetical	



1	Q. Yeah.
2	Adirectly attributable? Sure. I mean, it seems
3	logically to fall.
4	Q. And then with the understanding that the Huntington
5	plant is a mine-mouth operation
6	A. I'm sorry. Say that again.
7	Q. The Huntington plant in Emery County, Utah, is a
8	mine-mouth operation. So if the Huntington generation plant
9	shuts downand you agreed hypothetically that the generation
10	facilities jobs are lostif the mine operation shuts down, because
11	Huntington is a mine-mouth operation, would you agree that the
12	mining jobs lost would be directly attributable to
13	A. That requires us to extend into another hypothetical
14	because my understanding is, there's still a market for coal
15	elsewhere.
16	MR. PLENK: Mr. Coleman, I'm sorry. Is that the
17	end of that one?
18	MR. COLEMAN: I have further questions onon the
19	issue.
20	MR. PLENK: I think I'm going to object to any
21	further hypotheticals beyond the power plant and the mine. And
22	is next the shipping of the coal someplace else, that shipping
23	jobs might be lost? I think we've reached the limit of any
24	reasonable hypothetical. And I would object to any further
25	questions along that line about potential job loss following out as







far as you've gone.

MR. COLEMAN: I'm trying to better understand the definitional scopes, because as the societal values, he's testifying--he's categorized it as a necessarily broad category. So I'm trying to understand the corresponding scope and breadth of what is a cost as opposed to what is a benefit. And I think it's appropriate to explore, particularly when he talks about on the societal benefits of job creation and attractive to investment capital. Those things are, in my opinion, relatively tenuated on trying to understand how far that the equivalence goes on the cost side. And I think that's an appropriate line of questioning.

MR. PLENK: And I think his answer was, it depends on a whole bunch of other factors and other hypotheticals. And you seem to keep ignoring that and keep asking the same question with only one hypothetical, not listening to his response and asking your hypotheticals, or allowing him to answer based on his response. His response, I think, is pretty clear, that your hypothetical depends on a whole bunch of other hypotheticals which you haven't included.

MR. COLEMAN: Well, I--

MR. PLENK: I'll raise the objection. That's fine.

I've let you go to this point.

THE HEARING OFFICER: It's overruled. And construct a hypothetical as you choose to, Mr. Coleman. I know you're trying to explore where the limit is. And so let's see if we



1	can get there relatively quickly.	
2	MR. COLEMAN: I'm doingI can onlyI can only	
3	THE HEARING OFFICER: Sure.	
4	BY MR. COLEMAN:	
5	Q. I can't compose the universe of hypotheticals, so I'm	
6	trying to make one increment at a time. So in this case, with the	
7	mine-mouth operation, if jobs are lost due to the closure of the	
8	generation facility, would those mine lossesmining jobs lost be	
9	a cost under your scope of costs ofassigned to a PVnet	
10	metering program.	
11	A. Can I ask Commissioner Clark a question?	
12	THE HEARING OFFICER: Nobody gets to ask a	
13	commissioner. (Laughter.)	
14	THE HEARING OFFICER: If you have an answer	
15	THE WITNESS: Oh, okay.	
16	THE HEARING OFFICER:we'd like to hear the	
17	answer. Thank you.	
18	THE WITNESS: Okay. I believe my answer hasn't	
19	changed. It's a long line of hypotheticals. At the end of any	
20	chain of hypotheticals, if you're asking for a yes or no, I would	
21	say you probably know the answer logically, sure.	
22	BY MR. COLEMAN:	
23	Q. Okay. At this the point in time, I feel like I need to	
24	be the one who constructs the hypotheticals, so we're going try	
25	to stick with mine. And I have just one more. Associated with	

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the job creation, again an attraction of investment capital,
understanding and perhapsperhaps you don't, but the location
of the Huntington operation in Emery County, would you attribute
the hypothetical reduction in economic activity in that part of
Emery County as a cost to the net metering program that
resultedthe reduction in economic activity that results from the
loss of generation facility jobs and the loss of a portion of the
mining facility jobs, the resulting economic slowdown in that
portion of Emery County, Utah, would you assign that as a cost
to the solar net metering program?

- A. I don't know if this is appropriate, but can I suggest that this line of questioning may be as relevant to utility-scale solar as it is to net metering, and in that case, there may be precedent in other cases. I don't know if they've--if there have been, but this line of questioning seems to--you're referring to displacement of coal by any other resources.
- Q. You can suggest that, but I'm still going to ask you to answer my question.
  - A. Okay. I'll suggest that.

THE HEARING OFFICER: Do you have an answer to the question, or do you have the question in mind?

THE WITNESS: I would say with the caveat that there's a long--long chain of hypotheticals, I would say that, yes.

BY MR. COLEMAN:

Q. And when you--thank you. When you come to the



societal values, do you also believe that the same caveat of long line of hypotheticals involved in job creation and attraction of investment capital may reduce the benefits that you would assign such--to the same degree--the other side of the coin that you've been--been couching or limiting your answers to my cost questions, would you believe the same--the same limitations may apply on the benefit side?

- A. Can you restate the question?
- Q. The answers to my cost questions, you've included a long line of additional hypotheticals in addition to the one I provided. Would you--in your societal values of distributed solar, you talk about job creation and attractment-- attraction of investment capitals--capital as being benefits that should be assigned to net metering program. Would you also limit the scope of those benefits based upon this long line of similar type of hypotheticals?
- A. I would suggest that there's an earlier discussion about what the effect on the distributed generation market of a NEM charge would be. I don't know that that's been settled, so I'm not sure that that's relevant.
- Q. Okay. Well, you--you've hedged your answers by saying there's lots of other hypotheticals and lots of other variables that play into the costs and whether, for example, the mining jobs lost would be appropriately assigned as a cost. But you've included the idea of job creation as a benefit. Would you



1	hedge that job creation value the same that you've hedged the
2	job loss value? Is it the other side of the coin?
3	A. I understand what you're saying.
4	I believe in this context and in my testimony, I
5	wasn't trying to make a positive case for what a cost/benefit
6	study should entail. Given that, I would accept an equivalent
7	hedge, sure.
8	Q. Okay. Thank you. In your direct testimony, starting
9	on page .20, you express some concern about the proportion of
10	costs being assigned to the residential class?
11	A. Yes.
12	Q. Can you explain to me the elements of or the
13	methods involved with a cost-of-service study?
14	A. The elements involved in the cost-of-service study?
15	Q. Have you ever conducted a cost-of-service study?
16	A. I have not, but I have somewhat familiarized myself
17	with the cost-of-service study in this proceeding.
18	Q. Have you everso would the answer to never have
19	conducted a cost-of-service studythen, I would presume that a
20	follow-up question of that, have you ever conducted a cost-of-
21	service study on Rocky Mountain Power assets under the
22	jurisdiction of this Commission, the answer would be no?
23	A. That's correct.
24	Q. Are you aware that the Office of Consumer Services
25	challenged the cost-of-service study presented by the Company



1	in this case?
2	A. I was not party to that part of the proceeding.
3	Q. And youI believe that you addressed this issue in
4	your surrebuttal testimony, but you talked about your calculations
5	of the appropriate costs to be assigned to the residential class
6	based upon kilowatt-hour sales
7	(Reporter/attorney discussion to clarify the record.)
8	BY MR. COLEMAN:
9	Qas a back-of-the-envelope calculation?
10	A. Yes. The back-of-the-envelope calculation, I
11	believe, stands, because it says asas a function of kilowatt-
12	hour sales.
13	Q. Is that how costs are assigned in Utah?
14	A. No, and I believe I address that in my surrebuttal.
15	Q. And one final point of discussion:
16	Within your testimony, youyou have a discussion of the
17	analogous status ofbetween a net metering customer and is an
18	energy efficiency customer?
19	A. Can youwhich part of the my testimony are you
20	referring to?
21	Q. Well, that's probably a detail that I'm not sure I'm
22	going to be able to pull out.
23	So rebuttal testimony, page .7
24	A. I'm there.
25	O You're there?

1	A.	Yes.
2	Q.	you have a discussion about what you call price
3	discrim	nination comparing energy efficiency customers with or
4	energy	-efficient customers with net metering customers?
5	A.	Yes.
6	Q.	And there is some testimony or positions presented
7	that the	e average net metering customer continues to purchase
8	from R	ocky Mountain Power just a little over 500 kilowatt-hours a
9	month1	?
10	A.	Witness Steward says 511. I had calculated 518. I'll
11	go with	hers.
12	Q.	Well, if we can just go, for ease of discussion, 500,
13	in this	discussion. So if an energy-efficient customer consumes
14	has a 5	500-kilowatt purchase
15	A.	Kilowatt-hour.
16	Q.	Kilowatt-hour, thank you.
17	-	-and a net metering customer has a net 500
18	kilowat	t-hour purchase, from your position, is thosethat those
19	custom	ners are identical and this proposed charge is a
20	discrim	ninatory pricing?
21	A.	My position, as I believe I explained in my
22	testimo	ony, is that there's another side to this, which is there are
23	establi	shed factors in cost-of-service study determining
24	contrib	ution to system peak, contribution to distribution system
25	neak a	nd notcontribution to non-coincident peak, and those



factors should determine the cost responsibility of each individual customer.

So I would say if an energy efficiency customer has a comparable reduction to a net metering customer in terms of those three factors, yes, they are similar-- similarly situated.

- Q. But from a gross standpoint, isn't it true that the net metering customer could have a larger transactional effect or transactional history over the Company's system than the 500 kilowatt-hour purchased?
- A. Can I ask a clarifying question? When you say transactional, do you mean energy sales or do you mean exports?
- Q. Complete--complete transaction scope. So export, import, with credit redemption and import with a retail purchase. So it's possible that a 500--a comparison of 500 kilowatt-hour bills--
  - A. Uh-huh (Affirmative).
- Q. --is not a correct or comprehensive representation of the actual use from a net metering customer over the system?
- A. My understanding, if we exclude the consideration of exports, if we're only talking about offsetting on-site load from the Company's perspective, they are analogous if you can also show data of their load curve and their peak load as it coincides with those three factors: distribution system peak, system coincident peak, and non-coincident peak. And I believe I

1	addressed this in my summary. But if those are the same and		
2	their net purchases from the company are the same, I would say,		
3	yes, they are similarly situated and charging them charge is price		
4	discrimination.		
5	Q. So if a net metering customer has a net retail		
6	purchase of 500 kilowatt-hours, the same as the energy		
7	efficiency customer, but the gross movement of electrons was		
8	higher because of exporting and importing		
9	A. I think I said excluding exports in this scenario.		
10	Q. In my scenario, if we haveif there's exporting and		
11	importing		
12	A. Yes.		
13	Qand the net is 500, it looks like the energy-		
14	efficient and the net metering customer use the system the		
15	same?		
16	A. There's not enough data, because the meters, as I		
17	understand it, are read on a monthly basis. So exports at any		
18	particular time arethe data on exports at any particular time are		
19	not available.		
20	Q. But on a monthlyon a monthly basis, the		
21	cumulative billing, the		
22	A. On a monthly basison a monthly basis, if the net		
23	metering customer is exporting, they simply exported more than		
24	they imported in that month, there's no way they're comparable		
25	to the energy efficiency customer unless the energy efficiency		



1 customer somehow has on-site generation to export and 2 consumes nothing. 3 Okay. Let me--let me try this one more time. And if Q. 4 I fail, then we'll be done. Energy efficiency customer has a retail 5 complete purchase of 500 because of energy efficiency issues. 6 If a net metering customer at the end of the billing cycle also has 7 a 500-kilowatt retail bill, that doesn't necessarily mean--8 Α. Kilowatt-hour. 9 Q. Kilowatt-hour thank you. 10 --doesn't necessarily mean that the usage between 11 those two customers is identical even though their bills are 12 identical, correct? 13 I'm sorry. Just rephrase your question. You're 14 saying they are not or not--15 Q. The fact that the bill--both bills say 500 kilowatt-16 hours--17 Α. Yes. 18 Q. --doesn't necessarily mean that both customers had 19 the same usage level. The energy efficiency customer used 500 20 kilowatt-hours. The net metering customer, due to the 21 opportunity--the billing mathematical process at the end of the 22 cycle of being able to cash in some credits that resulted in a 500 23 net bill, but it's possible, is it not, that that net metering 24 customer had more usage than 500 kilowatts, more usage than 25 the energy--kilowatt-hours, more usage than the energy-efficient



1	custor	mer?
2	Α.	Again, what is missing here is their contribution to
3	use of	the system is at particular times during the day and during
4	the me	onth by which cost of service methods allocate
5	respo	nsibility for fixed costs.
6	Q.	The total use although it looks the same could have
7	been (	different?
8	A.	Absent the data, it's notit's impossible to prove
9	one w	ay or another.
10	Q.	It's possible that it could have happened?
11	A.	Again, without the data, you can't prove one way or
12	the other.	
13	Q.	I'm not asking you
14	A.	Is it possible?
15	Q.	Is it possible?
16	A.	It is possible that they have
17	Q.	That thethat the net metering customer's bill of
18	500 ki	lowatt-hours
19	A.	Yeah.
20	Q.	is not representative of the total use value
21	becau	se of the potential of the cash in credits?
22	A.	Okay. So now you're talking about cashing in
23	credits	s for the previous month?
24	Q.	Yes.
25	A.	So you're saying after cashing in the credits, they

1	would	have a 500 kilowatt-hour net consumption.
2	Q.	Their bill from the company is 500 kilowatt-hours,
3	exactl	y the same number as the energy efficiency customer.
4	A.	Right.
5	Q.	But the fact is, it's possible that their actual usage
6	levels	are different?
7	A.	First of all, I would say speaking of kilowatt-hour
8	consu	mption misses the entire picture of thoseresponsibility for
9	distrib	oution and transmission and generation costs.
10		I'll concede it's possible.
11		MR. COLEMAN: I have no further questions.
12		THE HEARING OFFICER: Mr. Rossetti?
13		MR. ROSSETTI: No questions. Thank you.
14		MS. ROBERTS: No questions either.
15		THE HEARING OFFICER: Ms. Hayes.
16		MS. HAYES: No. Thank you.
17		THE HEARING OFFICER: Redirect.
18	FUF	RTHER EXAMINATION
19	BY-	MR.PLENK:
20	Q.	Just one question, Mr. Miksis: In light of that very
21	length	y series of hypotheticals aboutabout jobs and jobs lost
22	and g	ained, could you explain the relative number of jobs that
23	would	be involved with producing enough energy from solar as
24	Mr. C	oleman laid out to displace a power plant versus the
25	emplo	ovment at the power plant, for example?



MR. PLENK: Okay. Nothing further. Thanks.
THE HEARING OFFICER: Questions?
Thank you, Mr. Miksis. You're excused.
We'll be in recess until twenty till the hour, at which
time we'll hear from Dr. Mulvaney, I believe. Thank you.
(Recess taken, 2:27-2:40 p.m.)
THE HEARING OFFICER: Ms. Roberts.
MS. ROBERTS: Thank you, your Honor. Sierra
Club calls Dr. Dustin Mulvaney.
THE HEARING OFFICER: Please remain standing.
Raise your right hand. Do you solemnly swear that the testimony
you're about to give shall be the truth, the whole truth, and
nothing but the truth?
THE WITNESS: I do.
THE HEARING OFFICER: Thank you. Please be
seated.
MS. ROBERTS: Thank you.
DUSTIN MULVANEY, being first duly sworn, was
examined and testified as follows:
EXAMINATION
BY-MS.ROBERTS:
Q. Good afternoon, Dr. Mulvaney. Will you please
state and spell your name for the record?
A. Dustin Mulvaney. D-u-s-t-i-n, M-u-l-v-a-n-e-y.

1	Q. And please state your occupation.
2	A. I'm a principal with EcoShift Consulting and
3	assistant professor at San Jose State University.
4	Q. Dr. Mulvaney, you filed direct testimony on May
5	22nd and surrebuttal testimony on July 17th, correct?
6	A. That's correct.
7	Q. And do you have any corrections to your prefiled
8	testimony?
9	A. I do. On page .4
10	MR. PLENK: Which set?
11	THE WITNESS: I'm sorry. Of the surrebuttal
12	testimony, lines 18 through 20, starting after the sentence that
13	says, "No," I would like to remove the sentencethe next
14	sentence that starts with, "My conclusion," and ends with,
15	"proposed 4.65 net metering fee."
16	THE HEARING OFFICER: So we should strike that
17	sentence?
18	THE WITNESS: Yes, please strike that sentence.
19	BY MS. ROBERTS:
20	Q. And, Dr. Mulvaney, does the omission of that
21	sentence change your analysis in any way?
22	A. No.
23	Q. Does it change your conclusions?
24	A. No. It was an inaccurate recast of my conclusion.
25	Q. Thank you. Do you have any further corrections

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1	A. I do.
2	Qto your testimony?
3	A. I do. One more. On page .15 of the same
4	surrebuttal testimony, lines 9 through 11. That last sentence in
5	the paragraph beginning with, "Our approach to valuing energy"
6	and ending with, "conducted by the Company," I would like to
7	strike that sentence.
8	Q. Thank you, Dr. Mulvaney. Does the striking of that
9	sentence from page .15 of your surrebuttal testimony change your
10	analysis in any way?
11	A. No.
12	Q. Thank you.
13	MS. ROBERTS: And I have a question for the
14	Commission and perhaps the reporter about would you like us to
15	provide a digitala marked-up copy of the surrebuttal testimony
16	for the reporter or file anything electronically or is this record
17	adequate?
18	THE HEARING OFFICER: This is an adequate
19	record. Thank you.
20	MS. ROBERTS: Thank you.
21	BY MS. ROBERTS:
22	Q. Dr. Mulvaney, aside from those two corrections, if
23	you were asked the same questions contained in your direct and
24	surrebuttal testimony today, would your answers remain the





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same?

1	A. Yes, my answers would remain the same.
2	Q. Thank you.
3	MS. ROBERTS: At this time, I would ask that Dr.
4	Mulvaney's direct and surrebuttal testimony as modified be
5	entered into the record and admitted as evidence together with
6	the exhibits attached to those testimonies.
7	MR. MOSCON: We have an objection, if we could
8	speak to it just for a moment. On
9	THE HEARING OFFICER: Yes.
10	MR. MOSCON:Dr. Mulvaney's surrebuttal
11	testimony, there is an exhibit attached which is a study. And I'm
12	happyI'll ask maybe this: Do you want me to proffer what the
13	concern is versus taking the witness on voir dire? I'm happy to
14	do whatever you prefer.
15	THE HEARING OFFICER: Sure.
16	MR. MOSCON: Proffer.
17	THE HEARING OFFICER: Make your proffer, Mr.
18	Moscon.
19	MR. MOSCON: I will proffer that we do not object to
20	Dr. Mulvaney referencing this study. There's manythere are
21	many studies referenced in his papers. Attaching this as an
22	exhibit and entering it into evidence, however, we do object to.
23	The authors of this study are not present to be cross-examined
24	on this.
25	I would also proffer that it is part of an incomplete



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cycle, meaning while it's used, I believe, to try to imply that this speaks for Nevada, that the Nevada commission has not accepted it yet, that it has asked for comments from other parties including the Nevada utility. Those comments have not yet been received. And since the witness did not participate in the study, there's really no way for the Company to cross-examine, you know, this study. So again, we don't move to strike references to it, but we would object to the study itself being included in evidence.

THE HEARING OFFICER: Ms. Roberts.

MS. ROBERTS: Thank you, Commissioner.

The study that Mr. Moscon is referring to is the study recently completed for the Nevada Public Utility

Commission at their request. And Sierra Club would ask--or would submit that this study is extremely relevant to this

Commission's determination, that is--as it is a--another study by a public utility commission at the request of that public utility commission relating to the costs and benefits of net metering, and it's illustrative of the kinds of analysis that could be undertaken, and which have been discussed by many of the witnesses already here.

And with respect to the objections raised by Mr.

Moscon, it would simply go to the manner in which the

Commission considers the exhibit. We're not seeking to submit it
as proof of every fact contained therein or proof of the Nevada



Commission's approval of it, but simply that it is another study that has been done similar to the one that many of the intervenors have requested here.

THE HEARING OFFICER: Anything more?

MR. MOSCON: Yeah.

THE HEARING OFFICER: Mr. Moscon, before I--

MR. MOSCON: I don't think that really speaks to the objection. Again, there are many studies referenced by Mr. Mulvaney in all three of his filings, so to say there was such a study and this is an example of what the Commission considered, etc., is already contained in his testimony that we're not moving to strike.

But again, these study itself, there is no foundation in this case for it. It is hearsay. There is no way that I can cross-examine it. If the Sierra Club thought that the study itself really was crucial and important, they could have had one of these authors be a witness or otherwise, you know, acted to introduce it appropriately. But again, there's just no foundation for this exhibit, particularly, as I indicated, in the context of it being still subject to review and correction in Nevada.

MS. ROBERTS: May I respond?

THE HEARING OFFICER: Sure.

MS. ROBERTS: Mr. Moscon's objections all go to the weight of the evidence, not to admissibility. And there is no hearsay problem, because we're not seeking to submit this study



1 for the truth of the matter asserted, only for, evidence that such 2 an approval was undertaken in another jurisdiction. 3 THE HEARING OFFICER: And our rules allow us to 4 receive hearsay, although the kinds of limitations that Mr. 5 Moscon has described--and I would invite you to bring those out 6 in your cross-examination, if you choose to-- certainly affect the 7 weight of the Commission's consideration of the study or--8 MR. MOSCON: Maybe I could ask this: Would the 9 Commission allow the Company to file as a late exhibit 10 addendum to some of its testimony the utility response to this 11 study? 12 THE HEARING OFFICER: Is there an objection to 13 that, Ms. Roberts? 14 MS. ROBERTS: In that none of--yes, there is an 15 objection in that our witness will not have any--any ability to 16 respond to the utility's response to that. It would be an exhibit 17 coming in after the hearing without the benefit of any discussion 18 at this hearing among the witnesses and counsel for the benefit of the Commission. 19 20 THE HEARING OFFICER: We're going to be in 21 recess. 22 MR. COLEMAN: Mr. Commissioner? 23 THE HEARING OFFICER: Yes. 24 MR. COLEMAN: I'm sorry. 25 THE HEARING OFFICER: Mr. Coleman.



1	MR. COLEMAN: In addition to the objections
2	propounded by the company, the Office also has objection to
3	certain subsections of the surrebuttal testimony filed by Dr.
4	Mulvaney. And so if youas you head to recess, if you would
5	like me to present those subject matters or if you'd like toto
6	address them.
7	THE HEARING OFFICER: Thank you, Mr. Coleman.
8	Let's hear et al. if there's more, and then we'll have a few
9	minutes to consider it together.
10	MR. COLEMAN: How would you like me to
11	proceed? Just identify the particular
12	subsection
13	THE HEARING OFFICER: Uh-huh (Affirmative).
14	MR. COLEMAN:my concerns?
15	THE HEARING OFFICER: Uh-huh (Affirmative),
16	please. If we're done with thisthis report and the Company's
17	offer to provide
18	Go ahead, Commissioner.
19	COMMISSIONER LeVAR: Maybe this is self-
20	evident, but, Mr. Moscon, I just want to know: Were you
21	referring to a response that Nevada Power will file to this report
22	or are you referring to a response by Rocky Mountain Power?
23	MR. MOSCON: Yeah, that the Nevada utility will file
24	a response.
25	Also, I neglected to state my understanding that



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those will be prepared on August 5th, so as far as delay or impact on these proceedings, it's not like that would get filed, you know, two days before Commission order came out.

THE HEARING OFFICER: Anything else on this particular objection?

Okay. Thank you.

Mr. Coleman.

MR. COLEMAN: The first area of concern that the Office has is on page .21 of Dr. Mulvaney's surrebuttal testimony. The question-answer sequence that begins on page .21, line 17, and rolls over to page .22, line 6. The Office's position is that this is a response to testimony provided by the Office in non-Company direct testimony. The Sierra Club elected not to file rebuttal testimony.

And this discussion or critique of the alternate proposal presented by the Office is untimely. It should have been presented or discussed--the Sierra Club's position should have been presented at the time of rebuttal testimony. And the fact that they elected not to file rebuttal testimony, but waited until surrebuttal to criticize the Office's position prejudices the Office's ability to present information to the Commission and limits the ability of the Commission to have a complete record on the issue. And we feel like we would object and ask those lines to be stricken.

THE HEARING OFFICER: Just so I understand the



1	material that you're describing,
2	it'sbegins with line 17 on page .21 and ends with line 6 on page
3	.22?
4	MR. COLEMAN: Correct.
5	THE HEARING OFFICER: Ms. Roberts.
6	MS. ROBERTS: Commissioner, I have not had an
7	opportunity to go back and review when this chargethis
8	alternative proposal was raised by OCS for the first time, so I
9	feel a bit handicapped in responding to this particular objection.
10	But I would submit that the Office has adequate opportunity to
11	cross-examine Dr. Mulvaney about this statement at this time
12	and so they're not prejudiced in any way by his raising it in his
13	surrebuttal testimony.
14	THE HEARING OFFICER: Thank you.
15	Any other objections that we should consider during
16	the recess?
17	MR. COLEMAN: I have two more.
18	THE HEARING OFFICER: Mr. Coleman.
19	MR. COLEMAN: Surrebuttal page .9. The
20	discussion that begins on line 1 of page .9 and rolls through line
21	4 of page .10. The Office would have objection to it. The
22	testimony refers to testimony provided inas nonfrom non-
23	Company direct testimony of Maurice Brubaker from UIEC. That
24	testimonythat am Iam I
25	The testimony from that party and that portion of the



record is closed. Mr. Brubaker's testimony went unrebutted due to the settlement of--of that portion of this case. And the Office believes that reliance upon Mr. Brubaker's testimony and assertions that are unrebutted is prejudicial to the Company's--excuse me, to the office's position, and again, prohibits the completion of a full record for the Commission to consider.

THE HEARING OFFICER: Ms. Roberts--

MS. ROBERTS: Thank you.

THE HEARING OFFICER: --response?

MS. ROBERTS: Do I understand that the objection-if it relates solely to the reference of testimony of Mr. Brubaker,
that would actually cover only lines 21, beginning on page .9
through line 2 on page .10? Are those portions that you're
objecting to the admission of?

MR. COLEMAN: Yes. I wasn't sure exactly how to excise out that portion of the discussion, whether it was-- it was appropriate to.

MS. ROBERTS: Commissioner, I would suggest that if Dr. Mulvaney agrees that the remainder of his answer to that question beginning on page .9 does not depend on his statement regarding material from the testimony of Maurice Brubaker, then Sierra Club would accept excising those portions based on the office's concern with the remainder of the question and answer in that section remain in his testimony.

THE HEARING OFFICER: Dr. Mulvaney, you've



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heard the--the question. How does it affect your testimony to remove the sentence that refers to Mr. Brubaker's testimony?

THE WITNESS: I think the answer remains complete with that removed.

THE HEARING OFFICER: And then your final objection?

MR. COLEMAN: My final one is--and I'll do my best to limit it appropriately--is then on page .12 of the surrebuttal, again, Dr. Mulvaney relies upon and incorporates testimony from a UIEC witness Mr. Jonathan Lesser. And again, that part of the record is closed. Mr. Lesser's testimony went unrebutted due to the resolution of related issues. And--I'm sorry. It does spill over--thank you--to page .13 through the end of line 6.

THE HEARING OFFICER: Will you give me the entire section?

MR. COLEMAN: I apologize. Page--page .12, beginning on line 14, and then the testimony related to both Messrs. Brubaker and Lesser spills over to page .13, line 6. And we believe that, again, the record on--from--from that portion of the case was closed at the resolution of those--those issues and the inclusion of those testimonies that went unrebutted due to the resolution is improper and prejudices the Office and prevents the Commission from developing a complete record for consideration.

THE HEARING OFFICER: Ms. Roberts.



1	MS. ROBERTS: My response would be the same as
2	relates to this previousthe previous request by the office. If Dr.
3	Mulvaney could take a moment to review the question and
4	answer containing that material and offer his opinion about
5	whether his opinion would remain the same, I think that would
6	that would be helpful to this discussion.
7	If you would please take a moment to do that, Dr.
8	Mulvaney.
9	THE HEARING OFFICER: We'll be off the record.
10	THE WITNESS: It reads a little
11	THE HEARING OFFICER: Pardon me. On the
12	record.
13	Dr. Mulvaney.
14	THE WITNESS: It reads a little funny, but I think it-
15	-the substance of the answer remains the same.
16	THE HEARING OFFICER: So wethe proposal
17	would be to delete the sentence that begins on line 16 using data
18	from the Company Mr. Lesser.
19	THE WITNESS: (Moves head up and down.)
20	MR. COLEMAN: No starting on lineexcuse me
21	starting page .12, line 14 through page .13, line 6. Both of those
22	complete paragraph.
23	THE HEARING OFFICER: Was that your
24	understanding, Dr. Mulvaney, when you
25	THE WITNESS: Let me read that one more time.



THE HEARING OFFICER: Sure.

THE WITNESS: I think it still works. Page .13, lines 2 and 3, sentence that starts, "In other words, summer peak is driving"--"is the driving factor for capacity," this, I think, should stay in because that's kind of the point that I'm making. And I can make that point without referring to the other experts.

MR. COLEMAN: It's a little hard for me to follow that--that analysis presentation, given that that sentence is embedded right in the middle of that area and testimony. Concern that I have is the reliance upon the UIEC.

MS. ROBERTS: I would suggest if Dr. Mulvaney can offer alternative basis for his statement that summer peak is the driving factor for capacity additions, then it's fine that that sentence stands alone without the surrounding material, and the Office would be free to question Dr. Mulvaney on his basis for that statement, that summer peak is the driving factor for capacity additions. He would not be allowed to refer to the excised material.

MR. COLEMAN: So that--that would entail receipt of novel testimony? Is that--to support that sentence or is there--

THE WITNESS: That answer's speaking to the question that winter does not drive capacity additions.

Therefore, it can be concluded that it must be summer that is driving capacity.



1	THE HEARING OFFICER: So the sentence would
2	remain and you can cross-examine on it if you would like to on
3	the basis for the statement. I think that's the proposal. Am I
4	am I right?
5	MS. ROBERTS: That is correct. I think if Dr.
6	Mulvaney believes he has alternative basis for that statement
7	aside from the UIEC testimony, then there's no reason to strike
8	that sentence from his testimony.
9	THE HEARING OFFICER: So that's the proposal
10	we're going to consider.
11	MR. COLEMAN: Sure.
12	THE HEARING OFFICER: Do you have anything
13	else to
14	MR. COLEMAN: I will leave it.
15	THE HEARING OFFICER: Any further argument
16	on
17	We'll be in recess until ten minutes after. Thank
18	you.
19	(Recess taken, 3:01-3:25 p.m.)
20	THE HEARING OFFICER: On the record.
21	Regarding the motions to strike, let me first take up
22	the report prepared for the State of Nevada Public Utilities
23	Commission that's attached to Dr. Mulvaney's testimony. I
24	believe you stated, Ms. Roberts, that this is being offered, not for
25	the truth of the matters asserted in the report, but to



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24 25 demonstrate the existence of the report. Do I have that right?

MS. ROBERTS: That is correct.

THE HEARING OFFICER: So with that limitation, we will receive it.

The response that Mr. Moscon referred to that has yet to be published or distributed and--will not come into being until after our record's closed will not be received.

And as to the Office's objections, we very much value the order of our process for the preparation of testimony, direct testimony, rebuttal, surrebuttal. When a party skips that stage, it deprives other parties of their full opportunity to address it and challenge it. We're going allow the material into the record, but we will view it in the light of those limitations; that is, the limitations that are created by the fact that it was introduced in surrebuttal rather than rebuttal.

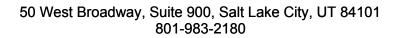
And as to the second and third objections which relate to references in the testimony to other witnesses who are not specifically participating--references to the prefiled testimony of other witnesses who are not specifically participating in this phase, that testimony's in the record and the references are not going to be stricken.

So it will be received--Dr. Mulvaney's testimony in those areas will be received as he prepared it.

Is that--did I leave anything out? Any--any questions?



1	So Ms. Roberts
2	MS. ROBERTS: Yes.
3	THE HEARING OFFICER:back to you.
4	MS. ROBERTS: Thank you very much.
5	BY MS. ROBERTS:
6	Q. Dr. Mulvaney, have you prepared a summary of your
7	testimony that you can share with the Commission?
8	A. Yes, I have.
9	Q. Please proceed.
10	A. Okay. Thank you.
11	To evaluate Rocky Mountain Power's claim that
12	NEM customers are not paying their fair share of costs of grid
13	operations, I conducted an avoided cost analysis to understand
14	how the cost of serving NEM customers compared to the benefits
15	these same NEM customers provide. I developed a simulation
16	model that accounts for hourly grid load, electricity electricity
17	costs, NEM electricity generation, and other variables.
18	Results of my analysis, as described in my direct
19	testimony, are that NEM facilities result in avoided cost of 1.4
20	million annually and \$56.27 per NEM customer bill in the test
21	year period. These results include only four benefits: avoided
22	cost of energy generation, generation capacity value,
23	transmission and distribution value, and an ancillary services
24	value. As such, 1.4 million is likely an underestimate of the
25	benefits because it does not include avoided costs that are



typically included in such analyses, such as avoided environmental regulatory costs, costs for criteria air pollutants and greenhouse gas emission.

From the period 2015 to 2040, NEM customer generation results in avoided cost of 139 million and substantial greenhouse gas emissions reduction.

My recommendation to the Commission based on this analysis is to reject the proposed NEM charge because even a conservative estimate of the avoided cost attributable to the NEM generation exceeds the Company's estimate of costs imposed on the grid by NEM customers. As such, the Company has not shown that its fee is based on cost causation.

I also show that the original combined fixed charges increased economic payback times on distributed PV systems by nearly 1 year to 6.1 years. Economic payback time is a key metric used by customers to evaluate whether to invest in a photovoltaic system. A potential NEM customer who received a quote one month ago of a 9-year payback on their system might find tomorrow this payback to be as high as 15.1 years.

This is based on a simple payback model, which did not include net present value in the final analysis, because when net present value is included in the model, it requires evaluating sensitivities to assumptions about the rate of finance, discount rate, inflation, and any increased NEM charge imposed in the future to account for inflation or fixed-cost recovery.



Overall, these fixed charges undermine the Company's solar incentive by 21 to 38 percent and could ultimately deter such investments. I recognize that the charges have been modified since the start of the proceeding and I'm happy to submit a new analysis for the record to update the impacts.

The Company alleges that NEM facilities negatively impact the Rocky Mountain Power electricity system by causing increased wear on equipment. My direct and surrebuttal testimonies explain why I believe the Company's claims of increased wear are incorrect and not based on empirical evidence.

My surrebuttal testimony also clarifies misinterpretations of my avoided cost analysis, some of which arise from confusion about the differences between avoided cost analysis, cost/benefit analysis, and ratepayer impact analysis. This suggests the issue deserves a separate dedicated docket to explore these issues in greater detail with a more common understanding of various tools to assess the costs and benefits from NEM customers.

My reading of the Company's rebuttals and surrebuttals has not changed my recommendations to the Commission.

And that concludes my summary.

THE HEARING OFFICER: Thank you.



1	MS. ROBERTS: MrDr. Mulvaney is available for	
2	cross-examination.	
3	THE HEARING OFFICER: Mr. Moscon.	
4	MR. MOSCON: Thank you.	
5	EXAMINATION	
6	BY-MR.MOSCON:	
7	Q. Good afternoon, Dr. Mulvaney.	
8	A. Good afternoon. Nice to meet you.	
9	Q. I think that we can be relatively brief. And to try	
10	and accommodate that, I'm going to try to lay just a tiny bit of	
11	background where I think we're in agreement, to highlight where	
12	we have differences.	
13	You agree with me, do you not, that in Utah, certain	
14	fixed costs are recovered by the utility through volumetric energy	
15	charges that are passed on to customers? Do you agree with	
16	that?	
17	A. That's what I understand from Ms. Steward's	
18	testimony.	
19	Q. And among those costs are distribution facility	
20	costs; is that correct?	
21	A. Sure.	
22	Q. And you agree, do you not, that under the current	
23	rate structure in Utah, taken as a whole, net metering customers	
24	shift some of those costs to non-net metering customers?	
25	Δ Which costs?	





1	Q. Fixed costs, those costs that arethat we just talked
2	about that are recovered through volumetric energy charges.
3	A. Can you restate it the original way? I'm sorry. Can
4	you repeat that?
5	Q. I think I said words to the effect of taken as a
6	whole, net metering customers shift some costs to non-net
7	metering customers?
8	A. I would disagree with that, taken as a whole.
9	Q. Let me put it this way: Isn't it the position that
10	you've taken in your testimony that's been filed that while you
11	acknowledge that there are costs shifted, you contend that the
12	benefits provided by net metered customers outweigh the costs
13	that are shifted?
14	A. II would agree thatI'm sorry. Can you repeat that
15	one more time? I just want to make sure I understand the
16	question.
17	Q. I understand from your testimony that you have
18	taken the position, yes, we recognize that there are some costs
19	being shifted, however, the benefits exceed those costs that are
20	shifted?
21	A. Yes.
22	Q. So I'm just trying to establish the baseline. We
23	don't need to argue about whether there is a cost shift, it's really
24	a focus on the benefits, if that makes sense?
25	A. Mymy testimony, yes, is focused on the benefits.

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correct.

- Q. There's not a dispute there is some cost shift, but the question becomes: What's the value of the benefits provided by the net metered customers?
- A. Right, an avoided cost analysis is purely looking at benefits.
- Q. Okay. Thank you. So you've prepared this cost/benefit analysis that you talked about. And on page .22 of your direct is where we find--well, there are several-- they're on page .22, there is one of the figures, a bar chart where you kind of show the incremental parts of the benefits that you calculate in your study; is that correct?
  - A. For the test year, yes.
  - Q. Okay. For the test period.

Now, looking at this, I see that if the math here is correct of the approximate \$1.4 million benefit of avoided cost that you have calculated, by far, the majority--in fact, over 80 percent--comes from avoided cost of energy?

- A. That's correct.
- Q. And you concede in your filings, don't you, that the value of that benefit is going to vary based on how you define it? What your input is is going to determine the output; isn't that correct?
- A. For the particular line item, the avoided cost of energy?

1	Q. The question probably holds for any of them, but	
2	yeah, in this case, I was talking about avoided cost of energy,	
3	but the question probably is the same without regard.	
4	A. Right. What'sI'm sorry. What's the question?	
5	Q. Well, here. I guess I'll refer to your own testimony.	
6	On page .10 of your testimony, starting at line 20, you state, "For	
7	example, the choice of electricity-generating unit can drive the	
8	outputs of the avoided cost model"?	
9	A. That's correct.	
10	Q. So my point is, if you're going to do an analysis of	
11	what this benefit is, you can vary or change your result	
12	depending on what input you put in, right?	
13	A. That's correct, yes.	
14	Q. And in fact, I have to concede you with candor make	
15	that same point in other places in your testimonyexcuse me	
16	wherein fact, page .9 going over to page .10, you ask the	
17	question, "How large are the avoided costs?" The answer	
18	usually resides in the assumptions about how to value these	
19	resources, right?	
20	A. I'm sorry. I'm not finding that. In which lines and	
21	page are you talking about?	
22	Q. The very last line of page .9	
23	A. Oh, yes.	
24	Qline 30.	
25	A. Yes.	

- Q. So the point is, if you wanted--when I say you--if anyone was performing this kind of analysis, they could target a particular result based on what they determine we're going to value--we're going to assign numbers to these categories. By manipulating the inputs, you can focus the output, correct?
- A. I wouldn't put it that way. I would put it the way I described it in the testimony.
- Q. Okay. So--I mean, I guess I don't see the distinction. You say, for instance--using specifics, not generic hypotheticals, in your specific case, you indicate that on the avoided energy cost analysis, by choosing which electricity-generating unit you put into the model is going to determine what the output--what the result is, correct?
- A. Correct. And that's why we show--let's see if I can find it--on page number 21--I'm sorry. That's not it. Page number 25, we looked at the various natural gas plants in--in--that the utility owns--
  - Q. Right.
- A. --for avoided cost. And we took an average of those, because we actually weren't sure which is the marginal unit. And that seems to vary at different times of the year based on the system capacity, so we took an average between the natural gas fleet that could be used to provide that.
- Q. Right. But what's interesting is, as you pointed out, you went straight to natural gas plant and you averaged those,

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but you didn't allow--and your result here for anything other than a natural gas plant to be the avoided facility; is that correct?

- A. That's correct, because usually in these--these avoided cost determinations, the plant that will come off line will be a thermal plant that's running inefficiently and cost the most. And usually hydro power or other resources that might be available, if they're inexpensive, will be running in base load.
- Q. So in the work papers that you provided with your materials, in one of the papers, you had a drop-down box where you could change whether it was a gas plant, a coal plant or some kind of step down--I can't remember--
- A. Correct. Yeah, our model's built to evaluate various generation scenarios.
- Q. And with the gas plant that you selected of the three choices that your work papers had, your model, again, the gas plant had an approximate 5 cent per kilowatt-hour as being the avoided cost benefit. But isn't it true that if you had inputted a coal plant, that that would drop from 5 to approximately 1.9 cents?
- A. I'd have to look at--at the--I don't--that model has millions of cells. I'm not sure exactly, but in principle, yes, we could have chosen a coal plant, if that's what you're asking.
- Q. And so if--if--if you don't recall whether it's exactly 1.9 or 1.6 or what it was, would you agree with me, at least

conceptually, the benefit you're showing here as far as the value being provided by the net metering customer, since 80 percent of it is avoided energy costs and if the coal number--if you, subject to check, take my word for it as 1.9--is less than half of the 5 cents that is the gas number, half of that number--more than half of it could just go away by you selecting a different input model or different input factor, right?

- A. I think the analysis always could be improved with collaboration with the utility to better understanding of what is the marginal unit at any point in time, so I don't know if that answers your question. But yes, we could always improve the assumptions, but from my understanding, the thermal--the natural gas plants are an appropriate resource to use for this.
- Q. Okay. Let's quickly make sure that I understand, then. Your--when you concede at the beginning that there are costs that are shifted, but again, the contention is the benefits outweigh the costs, you have as an underlying--you understand that in this jurisdiction, net metered customers are allowed to export excess generation back on to the grid, correct?
  - A. Uh-huh (Affirmative), yes.
- Q. And they receive a retail credit for any excess power they put back on--
  - A. That's my understanding, yes.
- Q. And you would agree with me that the--those customers that are--the net metered customers, that they use



1	Company distribution facilities, whether they're either importing
2	or exporting power? Would you agree with that?
3	A. Yes.
4	Q. And you've already conceded that net metered
5	customers, again, as a whole or an average, don't pay all of the
6	fixed costs for those distribution facilities, they shift some of
7	those costs, correct?
8	A. My testimony doesn't spoke to costs at all. I'm just
9	looking at avoided costs.
10	Q. Well, on page .6 of your testimony, beginning at line
11	20, when you say, "In my testimony, I demonstrate that the
12	benefits created by NEM customers for the entire system far
13	exceed the amount of fixed costs that are not recovered," I
14	that's the costs that I'm talking about. You concede there are
15	some costs that are not recovered from those net metered
16	customers?
17	A. Right, and that's in reference to the costs that are
18	being purported to be costs by NEM customers by the Company.
19	Q. Okay. So we are saying the same thing?
20	A. Yeah. Yeah.
21	Q. One of the other categories of benefits that you
22	discuss in your analysis is called, "Transmission and
23	Distribution."
24	A. Yes. "Capacity." "Transmission and Distribution
25	Capacity "

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1	Q. Yes. And you come up with a value for this extra	
2	capacity that's brought onto those systems by virtue of the net	
3	metered customers?	
4	A. Correct, yes.	
5	Q. You would agree with me, would you not, that a net	
6	metered customer relies on the Company's distribution system	
7	continually, do they not?	
8	A. Of course, yes.	
9	Q. And so that if a net metered customer has	
10	distribution facilities that connect them to the grid, even if there	
11	was a theoretical point in time in which they were generating	
12	exactly the amount that they were usingso none's being	
13	imported exported, they're in harmony, those distribution	
14	facilities are still needed solely for serving that customer, the	
15	ones that go to that customer's property?	
16	A. Yes.	
17	Q. So even if there was a hypothetical calculation that	
18	said there's some capacity on that specific line, there's really not	
19	anything the Company can do with that line at the time because	
20	it's dedicated to that resource; isn't that correct?	
21	A. Right, but the value that we generate isn't just about	
22	the line. It's about other elements of the distribution system.	
23	Andtransmission and distribution system.	
24	Q. Right.	
25	Off the record for one minute, with your permission.	



1	THE HEARING OFFICER: Off the record.	
2	MR. MOSCON: Back on the record.	
3	THE HEARING OFFICER: On the record.	
4	MR. MOSCON: We have no further questions at this	
5	time. Thank you very much.	
6	THE WITNESS: Thank you.	
7	THE HEARING OFFICER: Mr. Jetter.	
8	MR. JETTER: No questions from the Division.	
9	Thank you.	
10	THE HEARING OFFICER: Mr. Coleman.	
11	MR. COLEMAN: I do have a few.	
12	EXAMINATION	
13	BY-MR.COLEMAN:	
14	Q. Good afternoon.	
15	A. Hello.	
16	Q. Dr. Mulvaney, in yourtry to move it so I don't bump	
17	itin your direct testimony, you present somea wide variety of	
18	study proposals that have been the subject is of some discussion	
19	orin the last few minutes. One of those	
20	A. Can you clarify what you mean by study proposals?	
21	Q. Studies on valuing the beneficial attributes of	
22	A. Yes.	
23	QNEM installations, sort ofagain, on page .7 of	
24	yourof your direct testimony.	
25	One of the studies that you referred to was	

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conducted in the jurisdiction of Minnesota, and on line 14, you talk about how Minnesota went beyond the avoided cost approach to estimated value of solar, taking into account other avoided costs that the public benefits--excuse me--that the public benefits, such as improved environmental quality and avoided health care costs. You're aware, are you not that the Minnesota conducted those studies under legislative direction and the scope of breadth of benefits was set by the legislature?

- A. Yeah, the intention of this was to talk about the various different ways it can be valued.
- Q. And Minnesota did their approach pursuant to legislative guidance?
  - A. Sure. Yes.
- Q. Do you know if Utah's legislature has directed the similar scope and breadth of definition of what a benefit is?
- A. They have not defined the benefit, as far as I'm aware, but I think they have directed to do an analysis of cost and benefits. Benefits, of course, would be looked at from the avoided cost approach. That's the purpose of me putting this in here.
- Q. One of the other examples that you provide is the California feed-in tariff and their scope and discussion of benefits of net installations. Do you feel that's an appropriate analog or potential example for Utah to rely upon?
  - A. No, the intention of this is to, again, give an

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1	overview of all the different approaches that can be used in an	
2	avoided cost approach. I'm not necessarily recommending	
3	anything. I think that's up to the Commission to specify through	
4	a collaborative process or through another docket.	
5	Q. Okay. One point that Ipoint of clarificationI	
6	apologize, but I think it's necessary. In surrebuttal testimony,	
7	page .3, starting on line 16, you quote Mr. Gimble, and your	
8	sentence reads in its entirety, "In his rebuttal testimony, Mr.	
9	Gimble conveys OCS's recommendation that 'the Commission	
10	open a new docket to explore NEM costs and benefits, which	
11	could be subsequently considered in a future rate proceeding,"	
12	period, end quote of your quote internally and end quote of your	
13	testimony. Correct?	
14	A. Yes.	
15	Q. And then you cite to Mr. Gimble's rebuttal testimony	
16	on page .2. You follow that cite. Mr. Gimble, in that testimony,	
17	is actually summarizing the Division's position. Is thatare you	
18	aware of that?	
19	A. I would have to reread that.	
20	Q. Subject to check?	
21	A. That's myif that's my misinterpretation, then I	
22	apologize.	
23	Q. Let's turn to some of the testimony that I had	
24	concern about earlier. Page .12 of your surrebuttal testimony.	
25	Here you are relying onyou discuss Ms. Steward's contention	



1	and you indicate that it's countered by the expert testimony of
2	Jonathan Lesser for UIEC. Do you know the constituent
3	members of UIEC?
4	A. No.
5	Q. So if I told you that the members of UIEC are
6	Wholesome, Inc.; Kennecott Utah Copper, LLC; Kimberly-Clark
7	Corporation; Malt-O-Meal; Praxair, Inc.; Procter & Gamble Inc.,
8	and Tesoro Refining and Marketing, that would be novel
9	information?
10	A. That would be novel information to me.
11	Q. And in your testimony here on page .12, you were
12	agreeing with the Kennecott-led group that the residential class
13	are peakier than other classes in that, correct?
14	A. I'm sorry. Can you point me to where again? I
15	missed
16	Q. You claim that Mr. Lesser showed residential class
17	loads are peakier in magnitude that be other classes and you
18	your contention is that testimony counters the Company's
19	position and you apparently are agreeing with the Kennecott-led
20	group thatwith respect to the peaky nature of the residential
21	class?
22	A. Do you mind if I read this again real quick?
23	Q. Sure.
24	A. I'm not sure I remember exactly what's here.
25	Okay. I read it. Could you repeat the question



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again?

- Q. Is it your testimony that you agree with the contentions of the Kennecott-led group that--with respect to the peaky nature of the residential class?
  - A. Yes.
- Q. Do you understand that the Kennecott-led group's intention with presenting that testimony was to shift additional costs and increase the burden above and beyond that currently borne by the residential customer class?
- A. I was not aware of the intent of the other parties using that statement.
- Q. So with the understanding now that the Kennecottled group's intention is to assert, as you state, that the summer peak is the driving factor for capacity additions and that the end result of that is to shift additional cost burden to the residential customer class, your testimony is that you agree with those provisions?
- MS. ROBERTS: Objection. Question assumes facts not in evidence regarding UIEC's intentions. That was counsel's assertion of what their intention was. But that's not in the record.
- MR. COLEMAN: I believe it is in the record. And I believe that UIEC's testimony with respect to cost of service is clear in their--in their position with respect to cost allocation and the purpose behind their testimony.

1	THE HEARING OFFICER: Would you answer the
2	question, please? The objection's overruled.
3	THE WITNESS: Could you repeat it one more time?
4	I'm sorry. I just want to make sure I understand the question
5	completely.
6	BY MR. COLEMAN:
7	Q. Your testimony is that you agree with Messrs.
8	Brubaker and Lesser that the summer peak is driving theis the
9	driving factor for capacity additions?
10	A. Yes.
11	Q. That's your testimony?
12	A. That's correct.
13	Q. And the record demonstrates that the Kennecott-led
14	group's purpose behind making that assertion is to shift
15	additional cost burden to the residential class from the
16	Kennecott-led group, the UIEC group. Do you understand that?
17	A. I understand that now.
18	Q. So if the Sierra Club and the Kennecott-led group
19	were successful in their assertions here, the end result would be,
20	would it not, under the cost of service analysis, that the
21	residential customer class would be burdened with addition cost
22	above and beyond what they bear now in the cost of service
23	that
24	A. Isorry. I have notI don't know how to assess that
25	right now without the information

1	Q. Are you aware that the Company's cost-of-service
2	study that they presented was based on a 12 CP?
3	A. No. I'm sorry. Could you repeat that again? I'm
4	not sure I understand that.
5	Q. The customer's cost-of-service study was based on
6	12 CP. Are you aware of that?
7	A. No.
8	Q. Do you understand what that means?
9	A. No. That last partwhat's thewhat do you mean
10	by that last statement, the cost CP?
11	Q. Twelve coincident peak
12	A. Oh.
13	Qanalysis method?
14	A. Yes. I've heard of that, yes.
15	Q. So if theif the CP value was reduced from 12 to a
16	summer peak of 1 or somethingsomething akin to 1, theand
17	your assertion in that of the Kennecott-led group was that that
18	summer peak was the driving factor for capacity additions, their
19	end result under the cost of service would be an additional
20	burden of cost shifted to the residential customers, correct?
21	A. If that's the way the analysis works, then
22	Q. And then the result of your analysis indicating that
23	there are benefits of over one-
24	pointover \$1 million would result in the ability of net metering

customers to avoid those additional cost burdens that are shifted

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1	through this position propounded by you and the Kennecott-led
2	group, correct?
3	A. I'm not saying that the net metering customers
4	necessarily avoid. I'm saying these are avoided costs to the
5	entire system.
6	Q. That would be a benefit that your intention or
7	contention would beshould be attributed to the net metering
8	customers?
9	A. What would you mean by that?
10	Q. The benefits that youthat you calculated, the one-
11	plus million dollars worth of benefits, is it your contention that
12	the reward for those benefits should be assigned or allocated to
13	net metering customers as opposed to the larger class of
14	residential customers?
15	A. No, these arethese are avoided costs borne by the
16	system as a whole, which would lead to a reduced rates across
17	across the board in some manner.
18	MR. COLEMAN: I have no further questions.
19	THE HEARING OFFICER: Mr. Rossetti. Mr.
20	Rossetti.
21	MR. ROSSETTI: Thank you. I have no questions.
22	THE HEARING OFFICER: Mr. Plenk.
23	MR. PLENK: No questions, Commissioner Clark.
24	MS. HAYES: No. Thank you.
25	THE HEARING OFFICER: Any redirect, Ms.

1	Roberts?
2	MS. ROBERTS: I do have a few questions. Thank
3	you.
4	If I may approach the witness, I'd like to provide him
5	with a copy of Mr. Gimble's testimony that he had cited to that
6	the Office said he was misinterpreting. May I? This is page .2 of
7	Gimble's directI'm sorryhis rebuttal. Mr. Gimble's rebuttal
8	testimony.
9	FURTHER EXAMINATION
10	BY-MS.ROBERTS:
11	Q. Dr. Mulvaney, could you read what is on lines 45 to
12	47 of Mr. Gimble's rebuttal testimony?
13	A. Starting after the comma?
14	Q. Wherever you feel like it provides the best context is
15	fine.
16	A. Okay. " the Office agrees with the Division's
17	process recommendation to open a separate docket to consider
18	NM," which I presume to be net metering, "cost/ benefit issues
19	associated with SB 208."
20	Q. Okay. So that position was shared by the Office
21	and the Division at that time?
22	A. That's what I understood when I originally read this
23	testimony, but I would have to read the whole thing.
24	Q. Thank you very much.
25	I have no further redirect. Thank you

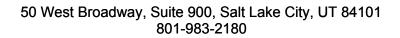
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1	THE HEARING OFFICER: Questions by the
2	Commission?
3	EXAMINATION
4	BY-THE HEARING OFFICER:
5	Q. I have one or two, perhaps. A good jumping off
6	point would be pages 3 and 4 of your surrebuttal, Dr. Mulvaney.
7	A sentence that you've already discussed with counsel, starting
8	on just the last couple of words of line 18 and then over on to
9	page .4, " the full evaluation of costs and benefits"and you
10	use that phrase in this sentencethat phrase, as you
11	contemplate it, is that an evaluation ofof the costs and benefits
12	associated with the residential class generally or solely net
13	metering customers?
14	A. I believe the cost-and-benefit analysis would look at
15	the impact of the net metering customers on the system as a
16	whole. So kind of both, if that makes sense.
17	Q. So the rate design changes that you described in
18	your summary, are you contemplating that rate structure changes
19	would be necessary for the entire residential class in order to
20	complete a proper analysis and application of that analysis?
21	A. I don't think so. It depends on what
22	theI actually don'tI'm not sure.
23	I'm sorry. I haven't thought beyond the cost/benefit
24	analysis.
25	Q. That's fine. I thought I read something in your







1	summary that wasn't there, and so II don't think I need to ask
2	any further questions about this sentence.
3	Any redirect, Ms. Roberts, or any follow-up
4	questions based on mine?
5	MS. ROBERTS: I wanted to offer that we could
6	submit a written version of Dr. Mulvaney's summary if you
7	wanted to revisit the issues that you
8	THE HEARING OFFICER: That's fine. We'll have it
9	in the transcript. That's fine. Thank you very much.
10	You're excused, Dr. Mulvaney.
11	THE WITNESS: Thank you very much.
12	THE HEARING OFFICER: Ms. Hayes.
13	MS. HAYES: Thank you, Commissioner Clark. Utah
14	Clean Energy will call Sarah Wright, who needs to be sworn.
15	THE HEARING OFFICER: Thank you.
16	Do you solemnly swear that the testimony you're
17	about to give shall be the truth, the whole truth, and nothing but
18	the truth?
19	THE WITNESS: I do.
20	THE HEARING OFFICER: Thank you. Please be
21	seated.
22	SARAH WRIGHT, being first duly sworn, was
23	examined and testified as follows:
24	EXAMINATION
25	BY-MS.HAYES:





1	Q. Ms. Wright, will you please state your name,
2	position, and business address for the record?
3	A. Yes. My name is Sarah Wright. I'm the executive
4	director at Utah Clean Energy. My business address is 1014
5	Second Avenue, Salt Lake City, Utah 84103.
6	Q. Thank you. Did you file direct rebuttal and
7	surrebuttal testimony in this case in the proceeding along with
8	one exhibit to your direct testimony?
9	A. Yes, I did.
10	Q. If I asked you the same questions set forth therein,
11	would your answers be the same?
12	A. Yes.
13	MS. HAYES: I would now move the admission of
14	the testimony and exhibitsexhibit of Sarah Wright.
15	THE HEARING OFFICER: Objections?
16	They're received.
17	BY MS. HAYES:
18	Q. Ms. Wright, do you have a summary you'd like to
19	present?
20	A. Yes.
21	Q. Please proceed.
22	A. Well, I'd like to thank the Commission for the
23	opportunity to summarize my testimony on the issue of customer
24	sited resource such as demandsuch as distributed generation
25	and the Company's proposed net metering charge. I also include





some information about rate design, which is relevant to some of the discussions here that was also in my testimony.

Utah Clean Energy is a nonprofit public interest group. We strive to create a more efficient, cleaner, and smarter energy future. Our goal is to transition in the most economic way possible.

My testimony covered three main points. The first is that the world is changing. It's much different than it was when we started regulating electricity nearly a hundred years ago. And increasingly, customer-sited--customer-sited meter investment in energy efficiency, demand response, and distributed generation have the opportunity to bring value and reduce risk for all ratepayers. It's critical that we take proper care and diligence to appropriately analyze and value the customer side of the meter investments. And indeed, our Legislature in 2008, and again in 2014, directed the Commission to consider the cost and benefits of rooftop solar, with the opportunity for public comment, prior to implementing a fee, credit, or other just and reasonable rate design for rooftop solar customers.

Leveraging private investments in pollution-free and fuel-free resources and energy efficiency is an extremely cost-effective way to mitigate risks while reducing the need for rate-based resources.

It's my opinion that it is not in ratepayers' interest to implement a rate design that could undermine lower-cost, risk-



mitigating resources that benefit all ratepayers, and that customers acquire, in large part, at their own personal expense prior to exploring both the costs and the benefits that these resources bring to the system and ratepayers.

In a recent Regulatory Assistance Project report,
Designing Distributed Generation Tariffs Well--Fair
Compensation in a Time of Transition--and we are in a time of transition now--they make the important point that customer-sited choices, energy efficiency, demand response, and customer-sited generation will be a cornerstone of our electricity system in the future.

They further make the case that failure to recognize the benefits and to compensate customers for the values that these services provide will impede their maturation, lead to unnecessary investment in redundant resources, and thus impose unnecessary costs to all electricity customers.

Although the Company says that they don't need new resources until 2027 or later--that the market will be there--I don't speculate in my testimony how the market might change with EPA's proposed carbon rules. And we're not sure what the 2015 IRP will call for. But to be clear, we're not just talking about generation resources. The Company has already invested billions in transmission and in coal plant upgrades.

If we take our demand side management and demand response programs and couple them with solar and,



going forward, with new technologies such as smart thermostats that are already on the market, efficient and smart appliances, smart inverters, storage, electric vehicles, and continue to grow the Company's award-winning DSM program and response programs, we can create a cleaner, lower-risk portfolio for the benefit of all ratepayers, and indeed for the benefit of Utah and Utah familiars and Utah businesses.

But further, RAP acknowledges that the grid will continue to provide important services, and we need to ensure that the utility is adequately compensated.

And Rich Walje clearly acknowledges--and clearly acknowledged that efficiency has already changed demand for their product--for the Company's product, and that their cost recovery in the residential class can be dependent on weather. And we agree. As we move forward and we move toward more customer-sided meter resources--efficiency, demand response, and distributed renewables--under the current rate recovery paradigm, the residents--for the residential class, it will be hard for the Company to recover these costs.

And in my testimony, I suggest that we look at this issue and other ratemaking issues for the entire residential class, not just the small subset of net metered customers, but to look at how we can encourage the types of customer behaviors and customer investments that will serve to clean and de-risk our portfolio, reduce peak demand, reduce need to Company



investment, while keeping rates just and reasonable, and also while ensuring that the Company is fairly compensated for the important services that they provide.

The costs that the Company calculated for these net metered customers was based solely on lost revenues from the solar customers, not only actual cost that those customers impose on the system. And we look at the lost revenues from DSM programs, they dwarf those from--from Utah's nascent solar market.

We have time to get this right is my second point.

Both the 2008 net metering statute that was in place when the rate case was--in the place when the rate case was filed and 2014, and the 2014 net metering statute have a threshold requirement to determine whether costs outweigh the benefits, or vice versa, with the opportunity for public comments before the Public Service Commission determines whether a fee or credit is justified.

I appreciate that solar's growing, and I'm excited by that prospect. But we have a very low penetration of solar in Utah. Approximately 0.3 percent of residential customers will have solar in the forecast year and that, on average, these customers still use 74 percent of the average customer's use. This low penetration and the fact that these customers still rely on the grid for most of their energy indicates that we have time for a more thorough investigation and transparent cost/benefit



analysis prior to implementing a fee.

And finally, perhaps my most important point is that it's Utah Clean Energy's position that there is insufficient evidence in the record and insufficient opportunity for stakeholder input to make a determination on whether the costs outweigh the benefits or whether the benefits outweigh the costs and to determine a just and reasonable fee, credit, or ratemaking structure.

In Utah Clean Energy's direct testimony, we prove that--we presented a value of solar study conducted by a respected firm, Clean Power Research, using Utah and IRP-specific data. CPR used its DGValuator V2 platform to perform this study, a tool that models hourly PV production, calculates line losses and loss savings, and determines value components based on user input data. Clean Power Research has conducted similar analysis in a number of states.

The CPR analysis showed a levelized distributed solar PV value of 11.6 cents per kilowatt-hour. Inputs from the study reflect RMP's system. Inputs included RMP's 2012 hourly load data, and from the IRP, generation and capital costs, years until a new resource needed to be added--which was 11 at the time--fuel costs, heat rates, reserve margins, and discount rate. We included the middle case CO2 costs from the IRP. No other environmental costs were added to this analysis. And if you look at the findings from the environmental benefit section of this



analysis, it was the smallest value stream.

In my testimony, I also noted another indicator was that solar has a value to ratepayers. In PacifiCorp's 2013 IRP model--modeling, using the system optimizer model, it selected every bit of solar it was allowed to select up to 300 megawatts. And it selected those under every single scenario: low-cost gas, high-cost gas, zero carbon, medium carbon, high carbon. The model selected distributed generation as a valuable resource that mitigated risk and resulted in towards--went toward the least-cost portfolio.

Sorry.

The Company did not file their interpretation of the benefits of solar until their rebuttal testimony, nearly six months after their initial filing, and only three weeks before--before final surrebuttal was due, even though both the 2008 net metering statute and the revised 2014 statute called for a cost/benefit look.

It has not been Utah Clean Energy's position that the Commission should take our findings--our position is that with stakeholder input and analysis--excuse me.

It is not our position that the Commission should just take our findings carte blanche, but rather that findings indicate that there is evidence to suggest that solar has value, it has value to ratepayers, and that further analysis is necessary.

In our direct testimony and throughout this docket,



Utah Clean Energy has been advocating for an open, transparent analysis of the costs and benefits of solar before implementing a fee or credit. The analysis must include both residential and nonresidential net metering customers as a whole, as considered by the Legislature.

I appreciate the Office's recommendation for a Commission process for evaluating net metering and support their recommendations, particularly with allowing sufficient time for parties to explore areas of agreement relating to modeling components, inputs and assumption. I agree that a collaborative stakeholder process would help parties focus on particular issues prior to filing testimony.

And I make the following additional process recommendation: I believe there should be neutral process facilitation, that the analysis could be done by--should be done by third-party, and that technical conferences with experts in solar valuation, utility issues, or any issues that are relevant to this analysis should be part so that there's full understanding among all parties.

And I appreciate the Commission looking at this, and that concludes my summary. Thank you.

MS. HAYES: Thank you, Ms. Wright.

Ms. Wright is available for cross-examination.

THE HEARING OFFICER: Ms. Hogle.



## **EXAMINATION**

BY-MS.HOGLE:

Q. Hi, Ms. Wright. I have a few questions to ask you.

First, I want to ask you about something you said in your opening. You testified that you don't think the public has had the opportunity to comment in this case. If there have been seven months between the time that the Commission or excuse me--the Company filed its application in this case with a proposed net metering charge up to date. It's been seven months. You don't think that's enough public-- opportunity for the public to comment on that?

A. Well, they certainly didn't have very much opportunity to comment on your proposed value that you put forth in--so the cost/benefit analysis, look at the costs and the benefits and you put forth your analysis of the cost and then six months later, three weeks before the end of this proceeding, you presented your--your--what you considered the value to be, so I do believe that is not sufficient.

- Q. Fair enough. Fair enough. And just to be clear, the Company--the Commission did not issue its notice until April, correct?
- A. Well, the 2008 statute called for a cost/benefit analysis. So it's--it's not like the new statute. It wasn't called. It was in the previous statute. So--I'm not an attorney, but there was a whole discussion about the burden of proof.

1	Q. Thank you.
2	A. Today I don't want to go there.
3	Q. That was another point of my cross-examination,
4	actually. You brought up about the 2008 docket. You
5	participated in that docket, correct?
6	A. Yes, I did.
7	Q. And isn't it true that in that docket
8	MS. HAYES: Which docket? I apologize.
9	MS. HOGLE: The 2008 net metering docket.
10	THE WITNESS: It was a rule that you referenced.
11	No, I'm talking about the 2008 statute. There was the net
12	metering statute that was revised in 2008, and the Legislature
13	included a requirement of looking at the cost not imposing a fee
14	until there was a cost benefituntil it was shownI'm sorry. I
15	don'tI don't have it in front of me, but it said something to the
16	effect very similar to the language we have on the record now
17	that there needed to be a cost/benefit analysis. So this isn't a
18	new requirement in 2014. This is a requirement that's been in
19	statute since 2008. It's just been tweaked a little bit in 2014.
20	BY MS. HOGLE:
21	Q. Did you participate in the docket where the benefit
22	to the net metering customer changed from avoided costs to a
23	full retail rate?
24	A. I'm trying to remember if there was a docket or
25	rulemaking. Yes, I was part of it. I don't recall. I don't have

1	the details.
2	MS. HAYES: Would you just let me know the docket
3	number?
4	MS. HOGLE: I canI think she acknowledges that
5	she remembers it.
6	THE WITNESS: I don't remember the details.
7	BY MS. HOGLE:
8	Q. Yes.
9	A. There was a rulemaking or something. There was a
10	Commission proceeding and there was also a proceeding on
11	interconnection standards that lasted about two years.
12	Q. Isn't it true in that docketin that proceedingand
13	you participated in that, I
14	believeUtah Clean Energy acknowledged that a full cost/benefit
15	analysis had not been undertaken, yet you supported change
16	from the avoided cost to the full retail rate; is that correct?
17	A. In that docketthe legislation in 2008 didn't require
18	a full cost/benefit analysis to not impose a fee. It required a
19	cost/benefit analysis to impose a fee, so the burden of proof was
20	a little switchand I don'tif we have a copyoh, I do have a
21	copy of the language and my testimony from the 2008, what it
22	said. Would you like me to find that?
23	Q. That's okay. Thank you. Thank you.
24	You also talked a little bit about the study that was
25	attached to your testimony in this case, correct?



1	A. Yes.
2	Q. I'm going take you back to another case that has
3	been referenced here numerous times. Did you present
4	testimony to this Commission in the avoided cost docket?
5	A. Yes, I did.
6	Q. And in that testimony, you urged this Commission to
7	consider capacity values of renewable resources and for risk
8	mitigating effect such resources have on fuel price volatility and
9	environmental compliance costs to determine avoided cost for
10	QF solar; is that correct?
11	A. This was a docket on wholesale sale of electricity
12	under the PURPA statute. It did not mention distributed
13	generation. So just with that caveat.
14	Q. Sure.
15	A. And it had no look at distributed generation.
16	Q. Okay.
17	A. We didand I also seem to remember that the
18	Commission said that those things were included in the IRP
19	values. So first of all, I would notit's not my position thatif I
20	could get three-cent power delivery to my household, I would be
21	thrilled.
22	Q. In its order, the Commission rejected your
23	recommendations. Would you agree to that?
24	A. For QF wholesale of electricity.
25	O Yes Now let's go back to the Clean Power

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1	Resea	arch study that you attached to your direct testimony.
2	A.	Would it be helpful if I refer to it?
3	Q.	Sure. And I think you'll know this even without
4	refere	ncing it, butyou didn't author that study; is that right?
5	A.	No, we used a respected firm.
6	Q.	And in that study, Clean Power Research included in
7	its val	ue of solar avoided environmental costs and fuel price
8	guara	ntee values, right?
9	A.	They included the middle cost case from the IRP
10	and th	ey did include a fuel price guarantee value.
11	Q.	And those factors werethose were the same
12	factors	s that this Commission concluded in the avoided cost
13	docke	t were too speculative to consider with respect to coming
14	up wit	h avoided cost prices?
15	A.	I'll say two things: One, I think we discussed
16	yester	day that there wasn't enough evidence on the record.
17	Q.	I'm sorrygo ahead.
18	A.	Secondly, as I stated in my summary, we're not
19	putting	g this forth as the gospel truth, as Rick said. We're putting
20	this fo	rth as resources have value. And we're alsoour whole
21	thing i	s transitioning to a cleaner system, risk-free system as
22	econo	mically as possible. And these are zero-cost resources for
23	the Co	ompany, so I think they are in the interest of ratepayers.
24	Q.	Ms. Wright
25	A.	And it's worth evaluation.

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Q. I completely understand your position. I completely understand your position.

Do you know if, in the finding of--if, in the Commission's order in that avoided cost docket with respect to the--the finding that the environmental risk factors, including cost associated with adapting to changing climate, was based on the fact that there wasn't sufficient evidence or was based on the fact that they were divergent and speculative projections?

- A. Well, I don't recall, but I didn't use the cost of adjusting to climate here. I used a carbon regulation cost the Company used in its IRP to determine its least-cost, least-risk portfolio.
- Q. Okay. Would you like me to show you where the Commission made its finding so you can see or answer the question--
- A. I thought you were talking about the fuel hedging value when you asked me that question. The environmental costs that are included are in this. I mean, I would love to say that we should include all the costs associated with climate change. They have been projected to be quite large. I'm not proposing that here.
- Q. Thank you. Let me just ask you one more line of questioning, if that's okay.
  - A. Of course.
  - Q. Now, you were in the room when Mr. Gilliam and

1	others testified about the issue with excess solar production or
2	exportI mean, do you remember that sort of discussion, in
3	general?
4	A. In general, of course. I was here.
5	Q. Do you share any of those concerns that were
6	voiced by him and Mr. Rossetti?
7	A. If you want to ask me which concern, I can respond
8	to them.
9	Q. Sure. One of the things that Mr. Gilliam in his direct
10	testimony states is that the Commission's net metering focus
11	should be limited to solar generation that leaves the retailretail
12	customers' premises or is exported?
13	(Reporter/attorney discussion to clarify the record.)
14	BY MS. HOGLE:
15	Qthat leaves the retail customer' premises; i.e. is
16	exported?
17	A. So I can't speak to every aspect of our expert
18	witness's testimony. I'm sorry. So what's your question? If you
19	repeat it again, I'll see if
20	1
21	Q. Sure. Well, I was going to pose a hypothetical for
22	you.
23	A. Please do.
24	Q. Okay. Thank you. So assume a 30-day billing
25	cycle

1	A.	Uh-huh (Affirmative).
2	Q.	okay? Assume further that a net metering
3	custor	mer consumes exactly 30 kilowatt-hours from all sources.
4	A.	Thirty?
5	Q.	Thirty. Or 900 kilowatt-hours for the billing cycle.
6	Thirty	days.
7	A.	Oh, 30 per day?
8	Q.	Yes.
9	A.	Sorry. I was like: Whoa, that's an efficient
10	custor	ner.
11	Q.	Assume further that the net metering customer's
12	genera	ation produces solar generation, self-generation, produces
13	50 kilo	owatt-hours on 18 days of those 30, and zero kilowatt-hours
14	on 12	days on the same billing cycle. So thatlet me tell you
15	what t	he math is.
16	A.	Thanks.
17	Q.	900 kilowatt-hours.
18	A.	Okay. Perfect.
19	Q.	Would you agree that in thatunder that scenario,
20	there i	s no export because
21	A.	No, I wouldn't agree.
22	Q.	So there's 900 kilowatt-hours consumed and the net
23	meteri	ng customer's generation produces 50 kilowatt-hours
24	A.	See, that's
25	Q.	on 18 days

1	A.	Excuse me. I understand what you're saying,
2	Yvonn	eexcuse me, Ms. Hogle. It'snet export would be let's
3	say I h	nave a large load and I have 1-kilowatt system on my
4	house	and I'm just knocking down my power a little bit. That
5	would	mean I'm never sending any to the grid because my
6	demai	nd is so high and the generation is so low.
7	Q.	Okay. Well, this is my hypothetical, Ms. Wright
8	A.	Okay. But I'm just saying there would be export
9	under	yourunder your scenario.
10	Q.	Nine hundred
11	A.	So you're just saying a wash?
12	Q.	Yes, a wash.
13	A.	Okay. That's fine. I was confusing export.
14	Q.	What would be the net metering customerwhy
15	would	the net metering customer pay for the billing cycle under
16	currer	t Utah residential rate, assuming those facts?
17	A.	Assuming those facts for that month, it would be the
18	minim	um bill payment.
19	Q.	And do you know how much that is?
20	A.	Well, seven going to eight.
21	Q.	So for this billing cycle, where the net metering
22	custor	mer uses the grid every day, right, generates no energy for
23	40 pei	cent of the day in the month, the net metering customer
24	pays \$	67 for all the use of the grid, the utility's operations, the
25	mainte	enance, the administrative and general cost, the costs of

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1	generation and the cost of transmission?
2	A. Correct. I would sayI'll start by saying that rates
3	are based on averages in residential class. So there are very
4	few of those that go to zero.
5	Q. Thank you.
6	A. But onon average, that person would be paying \$7
7	for that. The question that we have before us are the benefits
8	that that system provides to the system. They outweigh that.
9	That's the analysis we're asking for.
10	Q. Thank you, Ms. Wright.
11	MS. HOGLE: I have no further questions, your
12	Honor.
13	THE HEARING OFFICER: Mr. Jetter.
14	MR. JETTER: I'll try to be brief.
15	EXAMINATION
16	BY-MR.JETTER:
17	Q. Good afternoon, Ms. Wright.
18	A. Good afternoon.
19	Q. You had mentioned a couple of times that the
20	distributed home solar systems are a zero-cost resource. Did you
21	mean zero cost in total to the Company or possibly zero fuel
22	cost?
23	A. That's a really good question. So it would be
24	whatever their generation and transmissionwhatever it costs to
25	get that energy to that feeder line would be zero.



1	Q. But you would agree that if we use Ms. Hogle's
2	example, there is a cost to Rocky Mountain Power and
3	essentially that would be apportioned to the otherin this case,
4	residential ratepayers. There is a cost to that resource to the
5	other ratepayers?
6	A. There is a cost to be connected to the grid.
7	Q. Okay. And so in that case, thethe home solar
8	system is not necessarily a zero cost to ultimately other
9	ratepayers?
10	A. It would depend on what the values that system
11	brings. If the system brings values and if risk mitigation,
12	especiallyI mean, we haven't decided whatthe universe of
13	values we want to look at in this state. But if the values
14	outweigh the cost, then it would be zero, but we haven't
15	determined that yet.
16	Q. But in giving that example, you would say that there
17	are certainly costs and there may be benefits that are greater or
18	less than the costs?
19	A. And I fully acknowledge in my summary that the grid
20	is not free.
21	Q. Okay.
22	A. Andis that the Company and ratepayers andand
23	rates should be just and reasonable.
24	Q. Okay. Thank you. That's all the questions I had.
25	Thank you, Ms. Wright.





1	A. Thank you.	
2	THE HEARING OFFICER: Mr. Coleman.	
3	MR. COLEMAN: I have one brief line.	
4	EXAMINATION	
5	BY-MR.COLEMAN:	
6	Q. Good afternoon.	
7	A. Good afternoon.	
8	Q. In your summary, you indicatedyou testified that	
9	the feethat your position is the fee was based on lost revenue	e?
10	A. That is how the Company calculated based on that	
11	the average net metered customer usesI don't know a hundr	ed
12	and whatever less than the typical customer. That's how they	
13	calculated the costs.	
14	Q. And you understandyou participated in the docket	
15	from the outset, correct?	
16	A. Correct.	
17	Q. Andand you've participated in the discussions that	
18	led to the partial resolution of the issues?	
19	A. No, we were actually excluded from many of those	
20	discussions. I was at one of them, I think, maybe two, but we	
21	were excluded from those discussions.	
22	Q. You understand that the revenue requirement in this	
23	case has been set?	
24	A. Yes.	
25	Q. And you understand that the resolution of today's	

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1	excuse meyesterday and today's proceedings won't change the
2	revenue requirement in any way?
3	A. I understand.
4	Q. And so you also understand that the revenue
5	requirement allocation to the residential class is also set?
6	A. Yes.
7	Q. And so the underlying issue is what part or what
8	constituent components, members of the residential class are
9	going to pay the residential class revenue requirement allocation,
10	correct? That's what we're talking about?
11	A. Yes.
12	MR. COLEMAN: No further questions.
13	MR. ROSSETTI: I have no questions. Thank you.
14	THE HEARING OFFICER: Mr. Plenk.
15	MR. PLENK: No questions, Commissioner. Thank
16	you.
17	THE HEARING OFFICER: Ms. Roberts.
18	MS. ROBERTS: No questions.
19	THE HEARING OFFICER: Redirect?
20	MS. HAYES: Excuse me. I have no redirect.
21	THE HEARING OFFICER: Thank you.
22	THE WITNESS: You're welcome.
23	THE HEARING OFFICER: You're excused.
24	THE WITNESS: Thank you.
25	THE HEARING OFFICER: Are there other matters

to come before the Commission before we recess until we begin the public witness portion of the hearing at 5:00?

MS. HOGLE: Yes, your Honor. Thank you. I just wanted to make sure to remind you that--to consider or to keep in mind that the--the revenue requirement settlement, I believe, has two different scenarios on whether or not the 4.65 applies and that needs to be taken into consideration when you issue your order. And so just to be clear that that's--you'll rule on that.

THE HEARING OFFICER: Thank you. We intend to do so. Appreciate your attention to that.

Anything else?

MR. MOSCON: Commissioner Clark, I have a question for the Commission. Throughout the proceedings, in fact, in the prefiled testimony, there's been numerous instances where the parties have tried to dance around the issue of parties opining as to legal conclusions and objections made and statements offered. And again, as we just heard from the last witness whether it's burden of proof, old statute, new statute, '09, DSM order from this Commission, the 2013 QF order--I'm wondering if it would be helpful to the Commission if the parties-those that wanted to--it would be a voluntary application just like testimony--filed a legal brief--and I'm thinking of something short and to come, you know, in a short order, limited to those legal topics, because it's been apparent to me throughout these proceedings there's not necessarily consistent agreement among



all the parties on those legal issues, much less the factual issues before the Commission.

And so I was going to ask the Commission if it would be helpful--the kind of thing I had in mind, I would indicate if it we had a due date of about August 8th, that would give the Commission three full weeks before the due date of the order to have those. I'm thinking of something that would be simultaneously filed by all parties, meaning no rebuttal to each other or anything else. And if a party doesn't want to, they're not required to.

In any event, that's my question is if it wouldn't be helpful to the Commission to have some limited briefing on just those matters of law.

THE HEARING OFFICER: Does any other party want to express a view on that proposal?

MS. ROBERTS: Sierra Club was going to make the same recommendation, so I would agree.

MS. HAYES: I would just say that an August 8th deadline would tend to be more beneficial to large organizations with more than one attorney.

THE HEARING OFFICER: Other comments? Mr. Coleman.

MR. COLEMAN: I think the Office--the Office would do their best. I'm not sure it's necessary. I think the Commission is well versed in its--in its history, in its--in its



decision-making processes, but Office would--

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MS. HAYES: I would concur with the Office.

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MR. COLEMAN: We'll do what we're asked to do or maybe take advantage of the opportunity if we feel necessary, but it might be duplicative with respect to the Commission's expertise.

THE HEARING OFFICER: We'll be in recess. I appreciate the proposal. We're going to discuss it for a couple of minutes and I think this will not take long. I do apologize for the delay we imposed on you all the last time. We you put some hard questions to us so do you mind? We'll be in recess about two or three minutes and be back to you. Thank you.

(Recess taken, 4:37-4:41 p.m.)

THE HEARING OFFICER: On the record.

We appreciate the offer. We're amenable to the request. And we'd note it isn't that unusual for parties in our proceedings to be telling us what they think our orders mean. But--that said, we're grateful and appreciate the effort that will go into a briefing process. And I think the 8th is--we've determined that the 8th is an appropriate date, given--we recognize that's a hardship, but because we have to have an order done by September 2nd due to statutory requirements, we'll need to hear from you quickly. I think we should also establish a page limit. Is 15 pages, 10 pages? What are you thinking about as--is 15 an adequate amount to address the



issues?

MS. PLENK: Commissioner Clark, from TASC perspective, we'd be happy to have a 10-page limit.

THE HEARING OFFICER: Is 10--

MR. MOSCON: And I had in my notes 15. I don't have an outline that I can say 10's insufficient, but 15 was my-my proposal. And again, I think we're looking at a cap, not a must use all these pages kind of . . .

THE HEARING OFFICER: Any other views on that subject?

We'll have a 15-page limit and we'll look forward to reviewing your submissions. Again, these are not mandatory. They're voluntary. They will all be filed at the same--on the same date. There won't be replies.

Any other questions about the process?

These will be addressing legal issues. They'll be confined to legal issues, not to arguing the facts that have been presented to us. Any other matters that we need to address? Let's discuss for a moment, then, the public witness hearing. It'll begin in 16 minutes. We're not sure how many people are going to participate or want to be present. There are probably a greater number at least assembling outside than this room would accommodate, and we've planned for that by allowing--if that many people want to come and participate, we've got a couple of rooms with sound that will be sort of overflow. And if people in



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those rooms want to participate, then we'll invite some who have made their statements at some point to excuse themselves so that others with join us.

And I think what we--what we'd like to ask of the parties is that you--you have those members of your team who you consider to be essential here, but let's try to make as much room as we can for the public participants in the room. Any questions about that?

MR. MOSCON: Can I ask you a question? And this is not necessarily that. One thing that we thought might be helpful and eliminate any need of questioning any of the public witnesses, I wonder if the Commission would consider asking members of the public that are going to address the Commission to identify, you know, are they a resident, you know, of Utah, are they a customer of Rocky Mountain Power, whether they're currently a net metered customer, and whether they have an affiliation with any of the parties.

I think if we had that kind of background information, it would be helpful to know is this someone from out of state, is this someone who's going to be impacted by the--and I think that would speed up the process and eliminate a lot of jumping in and saying, Where are you from, and, This isn't going to impact you, kind of thing. Is that something the Commission could consider and have that be a matter of course as they get up to the microphone?



1	THE COURT: Any other counsel want to address
2	that?
3	MS. HAYES: I would just say that whether the
4	customer's a net metering customer or non-net metering
5	customer should not factor into whether they're allowed to speak.
6	They can say it. I'm happy to hear it, but
7	MR. MOSCON: Oh, yeah. Absolutely. I agree.
8	THE HEARING OFFICER: I don't think Mr.
9	Moscon's suggesting that any of the criterion he mentioned
10	would disqualify someone from speaking. It's just a matter of the
11	background information that you would want us to have about
12	each participant, is thatam I correct in that?
13	MR. MOSCON: Correct.
14	THE HEARING OFFICER: So any other comment?
15	Mr. Plenk.
16	MR. PLENK: I'mthank you. I'm assuming that the
17	Commission is following the traditional practice of not allowing
18	cross examination for unsworn testimony?
19	THE HEARING OFFICER: That's right. I'll explain
20	MR. PLENK: Soexcuse me. So there will only be
21	any kind of questioning at all if the person chose to be sworn,
22	and obviously they would know that at the outset?
23	THE HEARING OFFICER: Right.
24	MR. PLENK: Thank you.
25	THE HEARING OFFICER: And I'll explain this to the



participants.

MR. COLEMAN: I think--I'm sorry. I think--I'm working on the answer here with my client. But from previous discussions, I think the Office would probably have a position much in line with Mr. Plenk: If the party wants to be--wants to provide testimony, I think some of those background standard informational bits would be helpful. The Office would just want to make sure, from the public--from the simple public comment standpoint, that there is not any kind of chilling effect or barrier to the public participation classification or category of folks who want to come see--I almost used the "s" word again, but I know-species again. But I know--

THE HEARING OFFICER: I think what I'm hearing is that the questions would be addressed to those who are giving sworn testimony, not to those who are making unsworn statements to the Commission.

MR. MOSCON: Again, it's a suggestion. I--I thought it would be useful just to hear from--as background for any comment, whether they're sworn or unsworn. I'll leave that, obviously, up to the Commission to decide. But I understand the position of the parties, and yes, we agree that you don't have an option to cross-examine someone who's not choosing to give sworn testimony. I'm just saying I still think it would be helpful background to put in context any comment, whether it's under oath or not.

1	THE HEARING OFFICER: Thank you.
2	Any other preliminary matters before we take a
3	recess?
4	MR. JETTER: I think I'd just like to add for the
5	Division, I think we would agree with the Office that for the
6	unsworn testimony, there's a concern that it would have a chilling
7	effect on some witnesses. And we'd like to have as much public
8	participation as possible to provide as much information as
9	possible to the Commission. So in that light, it might be
10	worthwhile to let them know that that's something that might help
11	provide some depth to their testimony, but it's not required, or
12	something along those lines.
13	THE HEARING OFFICER: For those making
14	unsworn statements?
15	MR. JETTER: Making unsworn statements.
16	THE HEARING OFFICER: Okay. Anything else?
17	We'll be in recess until 5:00. Thank you very much.
18	(Proceedings concluded at 4:49 p.m.)
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## **CERTIFICATE**

This is to certify that the foregoing proceedings were taken before me, SCOTT M. KNIGHT, a Registered Professional Reporter and Notary Public in and for the State of Utah, residing at South Jordan, Utah;

That the proceedings were reported by me in stenotype and thereafter caused by me to be transcribed into typewriting, and that a full, true, and correct transcription of said proceedings so taken and transcribed is set forth in the foregoing pages, inclusive.

I further certify that I am not of kin or otherwise associated with any of the parties to said cause of action, and that I am not interested in the event thereof.





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