In the Matter Of:

In Re: RMP - Significant Energy Resource Decision

HEARING, DAY 4 DOCKET NO. 17-035-40

June 01, 2018

Job Number: 451407

```
1
        - BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH -
 2
      Application of
                                 ) Docket No. 17-035-40
 3
     Application of a
      for Approval of a
 4
      Significant Energy Resource ) HEARING DAY 4
     Decision and Voluntary
 5
     Request for Approval
                                 ) PUBLIC SESSION
 6
      of Resource Decision
 7
 8
 9
                           June 1, 2018
10
                     8:59 a.m. to 3:52 p.m.
11
12
                    Public Service Commission
13
                 160 East 300 South, Fourth Floor
14
                    Salt Lake City, Utah 84111
15
16
17
18
19
                       Letitia L. Meredith
20
                 Registered Professional Reporter
                 Certified Shorthand Reporter CA
21
22
23
24
25
   Job No. 451407
```

	Page 2
1	APPEARANCES
2	Public Service Commission:
3	Commissioner Thad LeVar, Chair Commissioner David Clark
4	Commissioner Jordan A. White
5	
6	For Rocky Mountain Power:
7	Katherine A. McDowell
8	Adam Lowney MCDOWELL RACKNER GIBSON
9	419 Southwest 11th Avenue, Suite 400 Portland, Oregon 97205
10	For Utah Division of Public Utilities:
11	Patricia Schmid
12	Justin Jetter UTAH DIVISION OF PUBLIC UTILITIES
13	160 East 300 South, Fourth Floor Salt Lake City, Utah 84111
14	For Utah Office of Consumer Services:
15	Robert Moore Steven Snarr
16	UTAH OFFICE OF CONSUMER SERVICES
17	160 East 300 South, Suite 201 Salt Lake City, Utah 84111
18	For Interwest Energy Alliance:
19	Lisa Tormoen Hickey TORMOEN HICKEY
20	14 North Sierra Madre
21	Colorado Springs, Colorado 80903
22	Mitch M. Longson MANNING CURTIS BRADSHAW & BEDNAR
23	136 East South Temple, Suite 1300 Salt Lake City, Utah 84111
24	
25	

			Page 3
1	API	PEARANCES (Continued)	
2	For Utah Assoc	iation of Energy Users:	
3		Phillip J. Russell HATCH, JAMES & DODGE	
4		10 West Broadway, Suite 400 Salt Lake City, Utah 84101	
5		bate make city, otali offor	
6	For Utah Indust	trial Energy Consumers:	
7		Chad C. Baker PARSONS BEHLE & LATIMER	
8		201 South Main Street, Suite 18	00
9		Salt Lake City, Utah 84111	
10	For Western Res	source Advocates:	
11		Sophie Hayes WESTERN RESOURCE ADVOCATES	
12		150 South 600 East, Suite 2A Salt Lake City, Utah 84102	
13		Steve Michel	
14		WESTERN RESOURCE ADVOCATES	
15		409 East Palace Avenue, Unit 2 Sante Fe, New Mexico 87501	
16	For Utah Clean	Energy:	
17		Hunter Holman	
18		UTAH CLEAN ENERGY 1014 Second Avenue	
19		Salt Lake City, Utah 84103	
20	Also Present:	Sarah Link, PacifiCorp	
21			
22		* * *	
23			
24			
25			

1		INI	DEX		Page 4
2	OFFICE'S CASE WITNESS	Examina	tion by	Comm. Clar	2
3	Philip Hayet		7		_
4			·		
5	UCE CASE WITNESS	DIRECT	CROSS	REDIRECT	RECROSS
6	Kate Bowman	15	22	1122111201	TLE CITO D.D.
7	nace Bownari	13	24		_
8	UAE/UIEC CASE WITNESS	DIRECT	CROSS	REDIRECT	RECROSS
9	Bradley G. Mullins		44	81	85
10	bradiey of Marrins	20	11	01	03
11	EXHIBITS UCE EXHIBITS		I	dentified	Received
12	K. Bowman Prefiled	Testimo	27		
13	and Exhibits	TCDCIMO	·-y	15	16
14	UAEU/UIEC EXHIBITS				
15	B. Mullins Prefile and Exhibits	d Testimo	ony	29	30
16	COMPANY EXHIBITS				
17	Cross No. 22 B. Mu				
18		n PUC, Ja PGE IRP	anuary	54	80
19	Cross No. 23 Order			4-	0.0
20		d Butte 1		45	80
21	Cross No. 24 Order Rate	-	eneral	46	80
22	Cross No. 25 Order			4.5	0.0
23	to Te	rminal L	ıne	47	80
24					
25					

1	I N D E X (Conti	nued)	Page 5
2	COMPANY EXHIBITS	Identified	Received
3	Cross No. 26 Order RMP 2011 General Rate Case		80
4	Cross No. 27 RFP Testimony Excer	nt	80
5	F. Steve Knudsen	53	80
6	Cross No. 30 UAE Data Request 5.18, CONFIDENTIAL	62	80
7 8	(RMP Cross-Exhibit 30 is attached Confidential Session Transcript.	d to 5/31/18	
9	C. Teply Prefiled Testimony		
10	and Exhibits with exception of Highly Confidential Exhibits		
11	CAT $1-1$ CAT $1-7$, CAT $3-1$, CAT $3-2$, and CAT $3-7$	96	98
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			

1	Page 6 PROCEEDINGS
2	CHAIR LEVAR: Okay. Good morning. I think
3	we'll start. We are on the record in Public Service
4	Commission Docket 17-035-40, Application of
5	Rocky Mountain Power for Approval of a Significant
6	Energy Resource Decision and Voluntary Request for
7	Approval of Resource Decision.
8	Any preliminary matters before we go to the
9	next witnesses?
10	MR. SNARR: Excuse me. I have a preliminary
11	matter. Yesterday as we were concluding the hearing,
12	there were some questions posed by Commissioner Clark
13	to our witness, Mr. Hayet. Mr. Hayet has spent some
14	time last evening preparing response, responses, or
15	information in response to those questions. I think
16	it might be most efficient if we just re-call
17	Mr. Hayet to the stand and perhaps Commissioner Clark
18	can reask what he's looking for and Mr. Hayet can
19	respond because he's ready respond.
20	CHAIR LEVAR: Any objection from any other party
21	with proceeding that way?
22	Okay. Mr. Hayet, will you take the stand,
23	and you're still under oath from yesterday.
24	PHILIP HAYET: Okay.
25	///

Page 7 1 PHILIP HAYET, 2 called as a witness on behalf of the Office, having been previously duly sworn, was examined and 3 testified as follows: 4 5 EXAMINATION 6 BY COMMISSIONER CLARK: 7 0. Good morning, Mr. Hayet. Good morning. 8 Α. 9 0. So my question related to statements that I 10 thought I heard in your responses to questions from 11 counsel or it may have been your initial summary, but 12 the substance of the statement was that the 13 independent evaluators had troubles -- I think was 14 your word -- with the PTC modeling, and so -- and I'm going to confine the question to Utah IE's report, so 15 I just was interested in the basis for your statement 16 if I heard it correctly. 17 And I think you asked if I would find 18 Α. 19 references --20 Q. Right. 21 -- in the report, so I've done that, and I 2.2 actually have copies I can give you if you're 23 interested or I can direct you. 24 Ο. I have the report in front of me, so that would be fine. Just some references would be great. 25

Page 8 I'm using the redacted version. 1 Α. Okay. 2 Q. Okay. 3 And therefore the page numbering is Α. 4 different than the unredacted version. I would point you to page 16 as a starting reference because --5 just a note, the last bullet on page 16 is an attempt 6 to explain that comparability between PPA and 7 build-transfer options are of the utmost importance 8 to parties and to the IE. That sets the stage. 9 This was at the point of the development of 10 11 the RFP and submission of the RFP and making sure 12 that everything would be done consistently. So that goes that point. The next reference I would turn 13 your attention to is page 59, and this is where there 14 was a January 9th conference call and both IEs raised 15 the issue. 16 17 I'm referring to the second to the last paragraph on the page, and in that paragraph it 18 discusses the conference call where the IEs were 19 2.0 reminded that in developing the models the PTC values 21 and benefits are included in nominal dollars. 2.2 that's an expression there of their concern about the 23 comparability between the BTA options and the PPA 24 options, and that led to the Oregon IE asking 25 PacifiCorp to run a sensitivity case.

Page 9 1 0. Thank you. I'm with you. 2. Α. The next I would draw your attention to is 3 page 63, and on that page there's some discussion of 4 results of sensitivity. There was a sensitivity that is written up here in which levelized -- levelized 5 modeling was done in comparison. In that case the 6 7 results are shown to be more beneficial in this sensitivity on the to-2036 but more beneficial to the 8 PPA on the to-2050, which is what, in fact, was 9 discussed in the repowering docket, is what the 10 11 Commission decided, was to give their preference. 12 The second paragraph is where we learn that 13 there's considerations of the interconnection queue coming into play and how that had an effect in 14 15 ultimately limiting the number of PPA options that could be considered. The IE's -- the Utah IE, 16 because of this issue, actually requested an 17 additional PPA resource to be held on to the queue --18 sorry -- on to the shortlist for further evaluation 19 2.0 because they wanted to give additional opportunity 21 for that PPA to be evaluated. But ultimately, again, 2.2 because of the interconnection issue that was 23 rendered moot. 24 The next page I would draw your attention 25 to is 64. I'm looking -- I'm counting from the

```
Page 10
 1
     bottom of the page to the third paragraph that begins
 2
     "The IEs on the other hand express some frustration
     that the bid selection process ended up being limited
 3
 4
     to selection of only those projects with favorable
     queue positions."
 5
 6
               So, again, they have this issue; they
     wanted a resource on the shortlist, really rendered
 7
     moot because of the favorable queue position issue.
 8
 9
     And then there's sort of a wrap-up on the issue on
     page 78. And, again, keep in the back of your mind
10
11
     that now the IEs are aware there's little that can be
12
     done.
            They are accepting the interconnection queue
13
     issue limiting the number of bids that can be
     evaluated; there's really not many PPAs that are on
14
     the list that could even be considered.
15
16
               And it may be helpful to read this whole
17
     paragraph which reads "With regard to bias the most
     obvious consideration is whether the process favors
18
     one type of bid over the other. The IE was concerned
19
2.0
     that the nature of the evaluation methodology may
21
     favor BTA bids at the expense of PPAs. The results
2.2
     of the initial shortlist, however, appear to prove
     that this was not the case since the shortlist was
23
24
     comprised on both the BTAs and PPAs.
25
               "We later again raised the point after
```

Page 11 bidders provided revised pricing to reflect the 1 2 impacts of the tax bill that, since the value of the 3 PTCs had declined, our expectation was that the PPA 4 should have higher net benefits. "Based on the comparison of BTA and PPA 5 proposals using the base model, a few PPA options 6 7 actually did have higher net benefit values. 8 However, these proposals were not selected to the final shortlist due to project queue position. 9 "We also question the use of nominal values 10 11 for the PTCs in calculating the portfolio evaluation 12 results. In addition, we question the term of the 13 evaluation, in other words, 2017 to 2036. Our concern was that all these factors could bias the 14 15 evaluation results toward BTA options in which 16 PacifiCorp would be project owner and the cost would be included in the rate base. 17 "At the request of the IEs, PacifiCorp ran 18 19 30-year analysis as well as assessments without using 2.0 nominal dollars for PTC benefits. The results showed 21 the BTA and PPA for the most competitive projects to 2.2 be close in value. We feel that there is perhaps a 23 small bias favoring BTAs based largely on the value attributed to the PTCs." 24 25 So it's an expression that there is a

Page 12 The limitation of queue issue made rendered 1 concern. 2 it essentially moot. The results were fairly close. 3 It doesn't say anything about their evaluation 4 because they didn't conduct one of solar resources. And the same issue that exists with PPA 5 options, the PPA wind options, also exist with the 6 P- -- with the solar PPAs. So that's the points that 7 8 I was trying to bring across. 9 COMMISSIONER CLARK: Thank you. I appreciate your efforts over the evening to answer my question. 10 11 PHILIP HAYET: My pleasure. 12 CHAIR LEVAR: Thank you, Mr. Hayet. 13 PHILIP HAYET: Thank you. MR. RUSSELL: Chair LeVar? 14 15 CHAIR LEVAR: Yes. 16 MR. RUSSELL: Before we leave this topic, do we have a copy of the redacted Utah IE report in the 17 record? I know that we've moved to admit it. 18 don't know whether -- I know that it was attached to 19 2.0 Mr. Link's testimony, but what I've been using is his 21 confidential testimony, but is there a redacted --2.2 CHAIR LEVAR: As I recall, since Mr. Oliver did 23 not have an attorney representing him, I asked him to summarize, but we never had a -- I don't recall ever 24 25 having a motion to enter the redacted IE report into

```
Page 13
 1
     the record. It's on our website. It's been posted,
 2
     but I don't think it's been entered into evidence.
          MS. MCDOWELL: Maybe I can help here. We, as a
 3
 4
     part of Mr. Link's final testimony -- we submitted --
          CHAIR LEVAR: Oh, it was an attachment, yeah.
 5
          MS. MCDOWELL: We submitted three attachments --
 6
     nonconfidential redacted --
 7
 8
          CHAIR LEVAR:
                        Yeah.
 9
          MS. MCDOWELL: -- confidential redacted, and
     highly confidential unredacted just to make sure all
10
11
     bases were covered.
12
          CHAIR LEVAR: Okay. I remember that now.
13
          MS. MCDOWELL: It's in the record as, I think,
14
     his second exhibit.
15
          CHAIR LEVAR: Does that satisfy your question?
          MR. RUSSELL: Yeah, it is his second exhibit. I
16
     just wanted to make sure that all forms of Mr. Link's
17
     testimony, because it is an attachment there, were
18
     accepted into the record. Since we have two
19
2.0
     different versions with different page numbers, I
21
     think it's important.
2.2
          CHAIR LEVAR: Yes. None of that was subject to
23
     the portions that we struck from Mr. Link's
24
     testimony.
25
          MR. RUSSELL:
                       Right.
```

1	Page 14 CHAIR LEVAR: Mr. Snarr?
2	MR. SNARR: Yes. I'm wondering if there's no
3	further questions of Mr. Hayet, we would like to make
4	sure that he could be excused so he can see what's
5	left of his week elsewhere.
6	CHAIR LEVAR: Sure. If any party or
7	commissioner has reason not to do so, indicate to me.
8	I'm not seeing any.
9	So thank you, Mr. Snarr and thank you,
10	Mr. Hayet.
11	PHILIP HAYET: Thank you.
12	CHAIR LEVAR: Why don't we go to Utah Clean
13	Energy next.
14	Mr. Holman.
15	MR. HOLMAN: So we had discussed no? Okay.
16	In that case we'll call Ms. Bowman to the stand.
17	CHAIR LEVAR: Okay. Thank you.
18	Ms. Bowman, do you swear to tell the truth?
19	KATE BOWMAN: Yes, I do.
20	CHAIR LEVAR: Thank you.
21	KATE BOWMAN,
22	called as a witness on behalf of Utah Clean Energy,
23	being duly sworn, was examined and testified as
24	follows:
25	//

	Page 15
1	DIRECT EXAMINATION
2	BY MR. HOLMAN:
3	Q. Good morning, Ms. Bowman.
4	A. Good morning.
5	Q. Can you please state your name and business
6	address, please.
7	A. Yes. My name is Kate Bowman. My business
8	address is 1014 Second Avenue, Salt Lake City 84105.
9	Q. And on whose behalf are you testifying
10	today?
11	A. On behalf of Utah Clean Energy.
12	Q. And are you the same Kate Bowman that
13	provided direct testimony on December 5, 2017;
14	rebuttal testimony on January 16, 2018; surrebuttal
15	on March 16, 2018; and second surrebuttal testimony
16	on May 15, 2018 in this docket?
17	A. Yes, I am.
18	Q. If asked you the same questions today as
19	set forth in your testimony, would your answers be
20	the same?
21	A. Yes. But I would like to make two
22	corrections to my second surrebuttal testimony filed
23	on May 15, 2018. This has to do with the UCE
24	Attachment A, Exhibit 3. The first correction would
25	be to my testimony on lines 307 to 308. The numbers

1	74 billion and 231 billion should read 74 million and
2	231 million, respectively. And the second correction
3	is in the attachment Exhibit 3, Cell B27 should be
4	corrected from 8762 to read 8760. And this change
5	doesn't result in material changes to the cells which
6	it impacts which are referenced in my testimony.
7	That's all.
8	Q. And those are the only corrections you
9	have?
10	A. Yes.
11	MR. HOLMAN: At this time I would like to move
12	to enter Ms. Bowman's testimony with the corrections
13	she mentioned into the record.
14	CHAIR LEVAR: If any party objects to that
15	motion, please indicate to me.
16	I'm not seeing any objections, so the
17	motion is granted.
18	(Prefiled Testimony and Exhibits of K. Bowman
19	were received.)
20	Q. (BY MR. HOLMAN) Ms. Bowman, have you
21	prepared a statement today?
22	A. Yes, I have.
23	Q. Please proceed.
24	A. Thank you. Good morning, Chairman LeVar,
25	Commissioner Clark, and Commissioner White. I have

```
Page 17
     prepared the following summary of my testimony filed
 1
 2
     on behalf of Utah Clean Energy. The purpose of my
 3
     testimony is to outline policy considerations
 4
     relevant to the Company's application for approval of
     a significant energy resource decision and make
 5
     recommendations.
 6
               Proactive economic investments in energy
 7
 8
     resources that protect ratepayers from increases in
 9
     future fuel costs and the consequences of carbon
     regulation are in the public interest. The combined
10
11
     projects which take advantage of a limited time
12
     opportunity to use federal production tax credits,
13
     are an opportunity to invest in lower-cost resources
     that will provide significant long-term benefits and
14
15
     avoid future risks for Utah ratepayers.
16
               Utah Code Title 54, Chapter 17, Section 302
17
     quides the Commission to consider whether a resource
     will most likely result in the acquisition,
18
     production, and delivery of electricity at the lowest
19
2.0
     reasonable cost, which is important, but also factors
21
     including long-term and short-term impacts, risk,
22
     and, a final category, other factors determined by
     the Commission to be relevant when ruling whether a
23
24
     request for approval of a significant energy resource
25
     decision is in the public interest.
```

1	Page 18 By helping to decarbonize PacifiCorp's
2	energy system and leveraging tax credits to acquire
3	these tax credits more affordably for ratepayers, the
4	combined projects will service as an important hedge
5	against long-term costs and risks stemming from
6	increased fuel and carbon prices.
7	Additionally, the 30 percent federal
8	investment tax credit creates a similar opportunity
9	to acquire lower-cost solar resources, further
10	mitigating long-term costs and risks for ratepayers.
11	Several other parties agree that the solar RFP
12	results indicate that solar projects located in Utah
13	offer benefits to ratepayers even in conjunction with
14	the combined projects.
15	The investment tax credit creates an
16	immediate opportunity to acquire solar resources at
17	lower costs, and for this reason I ask the Commission
18	to carefully evaluate the results of the solar RFP.
19	The combined projects offer long-term benefits to
20	ratepayers by providing fuel-free, carbon-free power,
21	avoiding risks and costs associated with future fuel
22	prices and carbon emissions.
23	The risks and costs associated with fuel
24	prices are asymmetrical. While the future price of
25	fuel is unknown, there's potential for fuel prices to

Page 19 rise much higher above the Company's forecast than 1 2 there is potential for costs to fall lower than the 3 Company's forecasts. The combined projects will also 4 protect customers from risks related to carbon emissions and the impacts of climate change. Prudent 5 decision-making requires that we understand and 6 address the mounting costs of climate change and 7 continued carbon emissions. 8 9 Scientific consensus shows a need to drastically curtail carbon emissions in the near term 10 11 to avoid costly and catastrophic impacts. A growing 12 number of countries including China and U.S. states 13 have responded by implementing carbon pricing policies or mechanisms. 14 These actions indicate that an increase in 15 future costs associated with carbon emissions is not 16 just possible, it is probable. This year the Utah 17 legislature passed HCR 7, Concurrent Resolution on 18 19 Environmental and Economic Stewardship. This bill 2.0 encourages corporations and state agencies to reduce 21 emissions and reinforces the importance of 22 considering the risks of climate change on Utah 23 ratepayers when evaluating PacifiCorp's proposal. 24 The future of carbon regulation is unknown, 25 and, once again, there's much more potential for

Page 20 1 carbon prices to rise above the Company's forecast 2 than to fall below the Company's low forecast, which 3 in fact assumes zero costs on carbon. 4 As an example, I've used the Company's carbon price forecast and information from the 5 Company's February 16, 2018 filing to estimate that 6 7 just reverting to the Company's conservative carbon price forecasts from June 2017 as opposed to the 8 9 updated carbon price forecasts filed on January 18, 2018, would result in an additional 74 to 231 million 10 11 in benefits to ratepayers. 12 There's significant costs and risks 13 associated with climate change above and beyond the future costs of carbon regulation. The Company has 14 not accounted for value of mitigating the climate 15 change and its associated costs for Utahns in its 16 analysis of the benefits of the combined projects. 17 The status quo of continued carbon 18 19 emissions will results in changes that impact 2.0 electricity generation and are likely to increase 21 costs for Utah ratepayers specifically. Scientific 22 research analysis predicts higher temperatures, more severe heat events, a rise in the incidence of forest 23 24 fires, and disruptions in seasonal water 25 availability.

```
Page 21
               Continued carbon emissions will also impact
 1
 2
     the health and well-being of Utahns generally through
 3
     impacts that include ground-level ozone, economic
 4
     consequences, job losses, and increased droughts.
               The combined projects are an important step
 5
     towards a low-carbon energy portfolio. The wider
 6
 7
     lens of Utah Code Title 54, Chapter 3, Section 1
     includes "as a consideration for determining whether
 8
     charges demanded by a public utility are just and
 9
     reasonable" the impact on the well-being of the state
10
11
     of Utah.
12
               The combined projects are in the public
13
     interest due to their ability to provide long-term
     benefits, avoid risks for customers, and reduce
14
     carbon emissions, and the PTC allows our Utahns and
15
     ratepayers to realize these benefits at lower costs.
16
17
               In summary, Utah Clean Energy supports the
     combined projects with the inclusion of the Office's
18
19
     recommended consumer protection provisions to
2.0
     safequard benefits for ratepayers.
21
               Further, we strongly encourage careful
2.2
     consideration of the results of the solar RFP to take
     advantage of time-limited opportunities to acquire
23
     solar at a reduced cost and to increase the benefits
24
25
     and further reduce the risks of the combined
```

Page 22 1 projects. 2 That concludes my statement. 3 MR. HOLMAN: Ms. Bowman is available for 4 cross-examination, questions from the commissioners. CHAIR LEVAR: Okay. Thank you. 5 6 Mr. Michel, do you have any questions for 7 Ms. Bowman? MR. MICHEL: I don't have any questions. 8 Thank 9 you, Mr.Chairman. 10 CHAIR LEVAR: Ms. Hickey, do you have any 11 questions for her? 12 MS. HICKEY: No thank you, sir. 13 CHAIR LEVAR: Thank you. 14 Ms. McDowell or Mr. Lowney? 15 MR. LOWNEY: The Company has no questions for 16 Ms. Bowman. Thank you. 17 CHAIR LEVAR: Okay. Thank you. Mr. Russell, do you have any questions for 18 Ms. Bowman? 19 2.0 MR. RUSSELL: I do. 21 CROSS-EXAMINATION 2.2 BY MR. RUSSELL: 23 Q. Ms. Bowman, are you -- I ran across an article that was released yesterday evening that 24 maybe you've seen and maybe you haven't, but it 25

Page 23 1 reports a Trump administration plan -- I may get this 2 wrong -- that at least as it is in the planning stages seeks to force companies to -- to order grid 3 4 operators to buy electricity from struggling coal and nuclear plants to keep those operating even if they 5 6 are not economic. 7 Have you seen that report? 8 Α. I'm not aware of the specific report or 9 article you're referring to. I have seen over the course of the year a number of efforts to do 10 generally what you've described. There are a number 11 12 of different mechanisms, and as far as I know, none 13 of them have thus come to fruition. Yeah, and as I indicated, this is an 14 article talking plans that are currently in rule. 15 Ι 16 guess my question to you is, how, if at all, the reports that I'm referring and the ones that you've 17 run across may affect your testimony? And I will 18 caveat that with I realize that it's difficult to 19 answer that questions because they are just reports 20 21 and we don't have specifics yet. 2.2 Α. Sure. Well, you know, I will say 23 there's -- as far as I know, you know, while none of

the kind of plans have come to fruition, and I think

it demonstrates the volatility and the difficulty of

24

25

Page 24 predicting how these changes, kind of both due to the 1 2 current political environment and then going forward 3 moving beyond the next four to eight years -- the 4 volatility of these events makes it difficult to predict and to know exactly how carbon prices or 5 policies will be implemented in the future. I think 6 for that reason it's especially important to protect 7 ratepayers from risk associated with changes in the 8 9 political environment. 10 MR. RUSSELL: Okay. Thank you. I have no 11 further questions. 12 CHAIR LEVAR: Thank you. 13 Mr. Baker, do you have any questions for 14 Ms. Bowman? 15 MR. BAKER: I do. Thank you. 16 CROSS-EXAMINATION BY MR. BAKER: 17 Good morning, Ms. Bowman. 18 Q. 19 Α. Good morning. 20 Just following up on that conversation or Q. 21 exchange you just had with Mr. Russell, is it fair to 22 characterize that the purpose of those plans is to 23 help -- one of the purposes of the plans is to help stabilize the grid from the fear of intermittent 24 renewables and that traditional thermal generation 25

Page 25

1 hei	ps provide	resilience	and	reliability?
-------	------------	------------	-----	--------------

- 2 A. Without knowing the specific plan you're
- 3 referring to -- I've seen a few different plans, and
- 4 I think that purpose of the plans and the question of
- 5 whether the plans will effectively achieve that
- 6 purpose has been the subject of a lot of debate.
- 7 Q. So although debated, one side of that
- 8 debate is the need for grid reliability; is that
- 9 correct?
- 10 A. I believe the purpose of some of the plans
- 11 has been stated as a need for grid reliability, but
- 12 U.S. Department of Energy has also found in
- 13 conjunction with one of the many variations of these
- 14 plans that there is not a need for grid reliability,
- 15 imminent need for grid reliability upgrades or
- 16 reliability problem as described.
- 17 Q. Are you aware this year that -- or it might
- 18 have been the tail end of last year that the
- 19 Department of Energy had proposed a plan that FERC
- 20 evaluated regarding favorable pricing for energy
- 21 generators that could maintain a 90-day supply?
- 22 A. I'm generally aware of it. I don't believe
- 23 it was implemented.
- 24 Q. Correct. And in FERC not implementing that
- 25 specific plan, are you aware that they had noted that

Page 26 1 they were going to open the docket to study the 2 reliability impacts and find ways to shore up the grid with thermal resources? 3 I'm not aware of the specifics of the decision. 5 6 MR. BAKER: Okay. Thank you very much. 7 CHAIR LEVAR: Thank you, Mr. Baker. 8 Mr. Snarr, do you have any questions for 9 Ms. Bowman? 10 MR. SNARR: No questions this morning. 11 CHAIR LEVAR: Okay. Thank you. 12 Ms. Schmid? 13 MS. SCHMID: No questions. CHAIR LEVAR: Commissioner Clark? 14 15 COMMISSIONER CLARK: Good morning, Ms. Bowman. 16 KATE BOWMAN: Good morning. 17 COMMISSIONER CLARK: You encouraged us in your summary to examine the results of the solar RFP. 18 Were you referring to the Company's 2017S RFP? 19 2.0 KATE BOWMAN: Yes. 21 COMMISSIONER CLARK: And do you know the status 2.2 of the RFP? 23 KATE BOWMAN: I believe it's under appeal -- oh, 24 sorry. The solar RFP? 25 COMMISSIONER CLARK: Correct.

1	Page 27 KATE BOWMAN: I'm not familiar with the most
2	recent status.
3	COMMISSIONER CLARK: So you wouldn't know
4	whether or not the Company chose not to select any
5	bids under that RFP?
6	KATE BOWMAN: I haven't been personally involved
7	in tracking the status of the solar RFP, so I'm not
8	aware.
9	COMMISSIONER CLARK: That concludes my
10	questions. Thank you.
11	CHAIR LEVAR: Okay. Thank you.
12	Commissioner White, do you have any
13	questions?
14	COMMISSIONER WHITE: I have no questions. Thank
15	you.
16	CHAIR LEVAR: And I don't have anything else.
17	So thank you for your testimony this morning,
18	Ms. Bowman.
19	KATE BOWMAN: Thank you.
20	CHAIR LEVAR: Anything further, Mr. Holman
21	MR. HOLMAN: Nothing further.
22	CHAIR LEVAR: from Utah Clean Energy?
23	MR. HOLMAN: Thank you.
24	CHAIR LEVAR: Okay. Thank you.
25	Mr. Russell or Mr. Baker, you're doing this

Page 28 1 witness jointly, I suppose. 2 MR. RUSSELL: We are. UAE and UIEC will call 3 Brad Mullins to the stand. 4 CHAIR LEVAR: Good morning, Mr. Mullins. Do you swear to tell the truth? 5 BRAD MULLINS: Yes. 6 7 CHAIR LEVAR: Thank you. 8 BRADLEY G. MULLINS, 9 called as a witness on behalf of the UAE and UIEC, being duly sworn, was examined and testified as 10 11 follows: 12 DIRECT EXAMINATION 13 BY MR. RUSSELL: Good morning, Mr. Mullins. Could you state 14 0. and spell your name for the record, please. 15 16 My name is Bradley Mullins. Last name is Α. spelled M-u-l-l-i-n-s. 17 Can you tell us by whom are you employed 18 Q. 19 and give us your business address, please. 2.0 I am a self-employed consultant. Α. 21 business address is 1750 Southwest Harbor Way, 2.2 Suite 450, Portland, Oregon 97201. 23 0. And on whose behalf are you testifying 24 today? 25 I'm testifying today on behalf of the Α.

Page 29 Utah Association of Energy Users and the Utah 1 2 Industrial Energy Consumers. 0. Did you prepare testimony that has been 3 4 prefiled in this case? I did. 5 Α. 6 Q. And specifically did you prepare testimony that was -- direct testimony filed on December 5th 7 with associated exhibits, rebuttal testimony filed on 8 December 5th of 2017, and then rebuttal testimony 9 filed on January 16 of 2018 with an associated 10 11 exhibit, and supplemental rebuttal testimony filed on 12 April 17 of 2018 with associated exhibits? 13 Α. Yes. 14 0. Okay. And if I asked you the same questions today that you responded to in that 15 16 testimony, would your answers be the same? 17 They would. Α. 18 Q. Do you have any changes to make to your 19 testimony? 2.0 I do not. Α. 21 MR. RUSSELL: At this point, Chairman LeVar, 2.2 I'll move for the admission of Mr. Mullins's 23 testimony. 24 CHAIR LEVAR: If any party objects to that 25 motion, please indicate to me.

Page 30 1 I am not seeing any objection, so the 2 motion is granted. (Prefiled Testimony and Exhibits of B. Mullins 3 4 were received.) 5 Q. Mr. Mullins, have you prepared a summary of 6 your testimony? I have. 7 Α. 8 Before you give that, it's my understanding 0. you haven't testified live before this Commission. 9 If you can take -- very briefly introduce yourself to 10 11 the Commissioners so they can get a better sense of 12 who you are. 13 Okay. So I'm a consultant. I represent 14 large customer groups throughout the West. graduated from the University of Utah, so I have some 15 16 background in the area and very pleased to be here today. 17 Okay. Go ahead and proceed with your 18 0. 19 summary if you would. 2.0 Good morning, Commissioners. As I Α. 21 mentioned, I appreciate the opportunity to be here 2.2 today to testify and on behalf of UAE and UIEC on 23 PacifiCorp's request for making treatment on the \$1.9 billion combined wind and transmission projects. 24 25 From my perspective, the most significant

Page 31 thing about PacifiCorp's proposal in this case is the 1 2 parties who oppose it. So representatives from all 3 rate classes, large customers, the Office, the 4 Division -- all oppose PacifiCorp's resource proposal and for a project. 5 6 CHAIR LEVAR: I usually don't interrupt. think you may have made a brief statement that 7 included a confidential material. I'll just let 8 9 everyone know if we -- let's be conscious of that, and if someone does, please jump in. I don't know 10 11 there's anything that can be done about this one but 12 just ask you to conscious of that in your summary. 13 MR. LOWNEY: Chairman LeVar, if I might 14 interject, what we've kind of settled upon is we can 15 refer to it as around \$2 billion, is the current 16 estimate, and that way we can refer to it in a nonconfidential way but get the point across. 17 18 BRAD MULLINS: Okay. I'm sorry. 19 MR. LOWNEY: Thank you. 2.0 BRAD MULLINS: I thought I was working under 21 that framework but okay. 2.2 So from my perspective, the most 23 significant thing is the parties who oppose it. We have customers from all rate classes opposing the 24 project. For a project that's justified on providing 25

Page 32 economic benefits to customers, I think that's an 1 2 important fact, and, you know, PacifiCorp may develop 3 its own view of what the future might look like and 4 what risks might be out there, but what it can't do is speak for customers and their risk preferences. 5 And on behalf of large customers, we view 6 such a significant investment to be extraordinarily 7 risky. Based on our analysis, we view the likelihood 8 that the projects will provide economic benefits to 9 customers through reduced rates is slim to none. 10 11 Even in the medium case in PacifiCorp model --12 PacifiCorp's model, the combined projects end up 13 costing ratepayers money over the first ten years of the study period, and I showed that in my 14 15 supplemental rebuttal testimony. 16 And if you go beyond that period, it's really anyone's guess as to what the world might look 17 18 If you think back ten years ago, things like the EIM, they maybe were in development or thought 19 20 about, but we probably couldn't have predicted what 21 ultimately has transpired with that. 2.2 And importantly, this is not a circumstance 23 where system reliability is at risk if the projects are not constructed. The Wyoming wind projects are 24 primarily energy resources, and they provide very 25

Page 33 1 little capacity relative to the amount of investment 2 involved, and in addition, you know, we've built out 3 PacifiCorp's system over the years to have robust 4 access to different markets throughout the West, and doing that wasn't without cost to ratepayers. 5 6 And, you know, from that, when PacifiCorp enters into front office transactions, there's no 7 capital involved in turning those transactions. 8 9 from that perspective front office transactions are much less risky than locking in, you know, a 30-year 10 11 project at such a high price. 12 And, further, you know, ratepayers just 13 have no assurance that the underlying economic benefits will materialize, but in contrast, 14 15 PacifiCorp has relatively high assurance that it will 16 be able to earn returns on the investment, and so from that perspective, there's asymmetry which 17 18 ratepayers view to be problematic. 19 And, you know, in terms of risks, I won't 2.0 go through all of the different risks that have been 21 outlined in the hearing. Previously -- I'll touch on 22 a few. One of them certainly is low energy prices. 23 We're in a period where there's a lot of renewables coming online and those are driving down market 24 prices for electricity. 25

```
Page 34
               We're also in an environment where loads
 1
 2
     are declining, so we're seeing a lot of DSM.
 3
     seeing a lot of private generation, and then,
 4
     further, we're in this transitionary period with
     respect to the MSP, which creates a whole range of
 5
 6
     uncertainty.
               So if PacifiCorp is to, in the future, move
 7
     to a subscription model, the economics of these
 8
 9
     projects from a Utah perspective are going to be
     different than the economics from the total system,
10
11
     and so when you consider all of those risks, you
12
     know, it's really not an opportune time to be making
13
     such a large investment.
14
               With respect to the economic analysis, we
15
     fundamentally disagree that there are benefits even
     in using PacifiCorp's medium price forecast. In my
16
17
     supplemental rebuttal testimony, I outlined a number
18
     of adjustments that we proposed to their model and
     showing the projects ended up costing customers
19
2.0
     104 million on an NPVRR basis over the 30-year study
21
     period, and that's before considering, you know, the
22
     forecasting issues that have been identified with
23
     respect to PacifiCorp's forward price curve.
24
               And in my direct testimony, I performed an
     empirical analysis where I took every price curve
25
```

Page 35 that PacifiCorp has issued over the period 2007 1 2 through the present to figure out how accurate 3 PacifiCorp's price groups have been in the past 4 because there's been a lot of speculation about, you know, "Oh, their curves are not accurate and it 5 6 appears that they consistently overstate market prices." 7 So my analysis using the actual curve 8 PacifiCorp's issued, has issued, you know, 9 conclusively determined that, you know, with the 10 11 high -- very, very high percentage that PacifiCorp is 12 overstating -- the curves of PacifiCorp are 13 overstating market prices and that the overstatement is greater the further into the future that the 14 forecast is made. 15 16 And so, you know, based on that, we concluded that it's more reasonable to rely on the 17 18 low price scenarios in PacifiCorp's analysis, if not, 19 you know, going even further and adopting a scenario of even lower market prices. And, you know, in terms 20 21 of relying on the price curve, you know, this is not 22 sort of the first time we've seen proposals similar 23 to this. 24 And in my direct testimony I pointed to a gas hedging contract which was executed in 2012. 25 Ιt

Page 36 was a long-term gas hedge, and it was justified on 1 2 similar ground as this proposal where the Commission 3 was -- or there was a stipulation that PacifiCorp was 4 only to proceed if the price of the hedge was better than the forward price curve, and it's turned out 5 that that hedge has been extraordinarily costly to 6 ratepayers and is expected over time to result in 7 8 even greater losses. 9 And so, you know, with that experience, I 10 think ratepayers are understandably concerned about 11 relying on PacifiCorp's price curves for an even 12 larger, longer-term investment. 13 And then finally, turning to 14 competitiveness issues, you know, we're dealt with -we have an RFP that, you know, is set up in a manner 15 16 that really could only lead to the selection of a very limited set of resources. I think throughout 17 this hearing the Commission is well aware of the 18 19 issues with the interconnection queue. 2.0 But I think kind of an important point from 21 my perspective is that, you know, while PacifiCorp 22 had the foresight to go out and acquire the low queue 23 position resources, it didn't have similar foresight to go to FERC, for example, and seek a waiver of the 24 25 serial queue requirements, which other utilities have

Page 37 done in the past. And so this issue is obviously 1 2 concerning to ratepayers. 3 And then with respect to the solar 4 sensitivity studies, PacifiCorp's -- its own model, as you're aware in the nominal studies in its model, 5 showed that the best and final pricing from those 6 solar resources produced nominal benefits that were 7 2.5 times greater than the combined projects. 8 9 And not only were the benefits greater, the 10 risk of those projects were also significantly lower, 11 and I point that out in my -- or I point out that in 12 my supplemental rebuttal testimony that, unlike the combined projects, where in the low-gas price 13 14 scenarios they were at cost, and for the solar resources there was a benefit in the low-gas price 15 16 scenario. So in that perspective, we viewed them to be much less risky. 17 And then turning to this issue of "Well, 18 19 maybe we could do both the wind and the solar, "well, 20 in PacifiCorp's model in the nominal studies, if --21 you know, after you do the solar projects, if you do 2.2 the wind as well, the incremental benefit was only 23 \$11.2 million doing both. And so, you know, at least from my perspective, undertaking a \$2 billion 24 25 investment for potentially \$11 million of benefit is

Page 38 1 not a prudent course of action. 2 So, you know, in summary, I would just like 3 to observe that, you know, this is a case where we're 4 dealing with really wide ranges of outcomes, and unlike a rate case, there's no single revenue 5 requirement benefit or cost that the Commission has 6 to settle by going through each adjustment in order 7 to make sure that the utility is adequately 8 9 compensated. 10 You know, rather with such a wide range of 11 possible outcomes, it really ends up being just a 12 matter of opinion as to what the future might bring, 13 and where we're dealing with ratepayer benefits or costs, at least I believe, the ratepayer opinions 14 15 should carry the most weight. And with that I'll conclude my summary, and 16 I look forward to questions from the Commission. 17 18 Thank you. MR. LOWNEY: Mr. Chair, before we move on to 19 2.0 cross-examination, I do have a motion to strike a

oross-examination, I do have a motion to strike a portion of Mr. Mullins's summary. He referenced a FERC case and implicated that the Company could have somehow asked for a waiver of its interconnection queue position, and my recollection is that FERC case is not addressed in his testimony.

Page 39 CHAIR LEVAR: Mr. Mullins or one of your 1 2 counsel, if you could point to where that is in your 3 testimony, that would help us address the motion. 4 MR. RUSSELL: I think I'll let Mr. Mullins 5 respond. 6 CHAIR LEVAR: If you need a moment, we'll wait. 7 If a brief recess would help --BRAD MULLINS: I should be able to find it 8 9 quickly. 10 CHAIR LEVAR: I think it's an important enough 11 issue that it's worth taking a little time to see if 12 it's there. 13 MR. RUSSELL: Do you have it, Brad? 14 BRAD MULLINS: Right. So on page 14 of my 15 supplement rebuttal testimony, I say that I was under 16 the impression or -- sorry -- I was under the 17 impression that the Company would be able to --18 CHAIR LEVAR: Give us a moment to get to 19 page 14. Do you have line numbers? 2.0 BRAD MULLINS: Okay. And then on lines --21 CHAIR LEVAR: I see. Where you are. 2.2 BRAD MULLINS: -- 283 to -- I guess through 289 23 I discuss that, you know, how the Company might be 24 able to equalize or mitigate the bidding advantage of 25 higher queue position resources. And that's what I

```
Page 40
 1
     was referring to there. You know, I obviously didn't
 2
     discuss a waiver there, so I'll leave that to the
 3
     Commission to decide whether that exceeds this
 4
     particular paragraph.
          CHAIR LEVAR: With that clarification,
 5
 6
     Mr. Russell, do you want to respond to the motion?
          MR. RUSSELL: Yeah, just very briefly having
 7
     skimmed the section that Mr. Mullins is referring, I
 8
 9
     think his summary touches on -- the testimony that he
10
     just referred to touches on the same topic that his
11
     summary included. While he did clarify that his
12
     summary included something of, I quess, a flourish
13
     about what PacifiCorp could have done with that that
     isn't specifically in his testimony, I think that's
14
     what summaries are for but -- I guess that's how I'll
15
16
     respond.
17
                       If I may clarify, the language in
          MR. LOWNEY:
     particular I believe that goes beyond the scope of
18
     his testimony is the reference to some unidentified
19
2.0
     FERC case that provides authority for the information
21
     that's included in this testimony. That was nowhere
22
     cited in this testimony, and for him to reference --
23
     suggest in his summary today that there's FERC
     authority supporting his position is outside the
24
25
     scope of his testimony.
```

```
Page 41
 1
          MR. RUSSELL:
                        I think maybe Mr. Lowney has
 2
     misunderstood the statement in the summary. As I
 3
     understood it, Mr. Mullins had indicated that the
 4
     Company did not go to FERC to seek the waiver that
     he's referencing. He didn't indicate that FERC had
 5
     granted some waiver or, you know, issued some ruling
 6
 7
     somewhere.
                        I did hear him say other utilities
 8
          CHAIR LEVAR:
     have sought that waiver. I didn't hear whether he
 9
     said other utilities have been successful in seeking
10
11
     that waiver. As I'm considering this objection, I
12
     think I'm inclined to strike any references to the
     existence of a FERC waiver. So I think it's
13
14
     appropriate to strike those from the record.
15
               Obviously, they are not stricken from some
     of our memories, and that question, I think, is
16
     possibly likely to come up during closing arguments
17
     whether there is such a waiver that is potential and
18
     what standards might exist. I certainly think I
19
2.0
     might be likely to ask about that during closing
21
     arguments just for what it's worth.
2.2
               But I think for purposes of this summary,
23
     the motion to strike is appropriate, so it's granted.
24
                        Okav. We will make Mr. Mullins
          MR. RUSSELL:
25
     available for cross-examination and commission
```

Page 42 1 questions. 2 CHAIR LEVAR: Okay. Mr. Snarr, do you any 3 questions for Mr. Mullins? 4 MR. SNARR: No questions? CHAIR LEVAR: Ms. Schmid? 5 6 MS. SCHMID: No questions. Thank you. 7 CHAIR LEVAR: Ms. Hickey? 8 MS. HICKEY: No. Thank you. CHAIR LEVAR: Mr. Holman. 9 10 MR. HOLMAN: No questions. Thank you. 11 CHAIR LEVAR: Mr. Michel. 12 MR. MICHEL: Thank you, Mr. Chairman, just one 13 question. 14 CROSS-EXAMINATION BY MR. MICHEL: 15 16 Mr. Mullins, in your summary you referenced 0. the option of the consumer advocates in this case as 17 justification for rejecting the proposed combined 18 19 projects. 20 Are you aware that in other PacifiCorp 21 jurisdictions consumer advocates have supported these 22 projects? 23 So I guess there's -- there are some examples of that, so in Wyoming there's obviously a 24 25 stipulation that was entered into, and the consumer

```
Page 43
     groups in that state, they accepted PacifiCorp's
 1
 2
     proposal, but I would note that, being that these
 3
     wind resources are actually located in Wyoming, that
 4
     those customers have different interests than the
     customers in this state.
 5
 6
               Because they are being built in Wyoming,
     there's an expectation that they will bring a lots of
 7
 8
     jobs; there will be taxes on the generation output;
 9
     there will be property taxes. And so there
     definitely are different considerations there, and
10
11
     then there's also the case in Idaho, which I was
12
     involved in, and the staff entered into a stipulation
13
     with the Company where they agreed to a CPCN but they
     did not -- there were still some issues outstanding.
14
15
               However, specifically a cost cap was not
     addressed in stipulation and staff litigated that
16
     particular issue. However, the other ratepayers
17
18
     groups -- the industrials and the irrigators -- were
19
     all opposed to the stipulation and to PacifiCorp's
20
     proposal. And that case is fully litigated and they
21
     are expecting an order in that case, I think, within
22
     the next two months -- or I guess they don't a have a
23
     deadline in that case, but there will be an order at
24
     some point in that case.
25
               Do you know for a fact -- do you know for a
          Q.
```

Page 44 fact that the location of the project in Wyoming was 1 2 the basis for the consumer advocate support of the project? 3 4 You know, I couldn't speak specifically to 5 why the consumer advocates in Wyoming supported the 6 project. 7 MR. MICHEL: Okay. Thank you. That's all I have. Thank you, Mr. Mullins. 8 9 CHAIR LEVAR: Okay. Thank you. 10 Ms. McDowell or Mr. Lowney. 11 MR. LOWNEY: Thank you. Before we get started, 12 I'll have Ms. McDowell circulate the 13 cross-examination exhibits we intend to use. 14 CROSS-EXAMINATION BY MR. LOWNEY: 15 16 Q. Good morning, Mr. Mullins. 17 Good morning. Α. If you could turn to your direct testimony 18 Q. on page 5, please. I have some questions about the 19 transmission projects to start. 20 21 Α. Did you say page 4 or 14? 22 Q. Page 5. 23 Α. Okay. 24 Q. And at the very top of that page you acknowledge that the transmission projects include 25

Page 45 1 Subsegment D2 of the Energy Gateway Project. Do you 2 see that? Α. Correct. 3 4 0. Little bit further down on that page, you 5 refer to the fact that other parts of the Energy Gateway Project have been constructed. Do you see 6 that? You refer specifically on line 11 to the 7 Populus to Terminal and Sigurd to Red Butte lines. 8 9 Α. Yes. 10 And on line 12 you say "Both were expensive 0. 11 and controversial." Do you see that? 12 Α. Yes. 13 And the only citation for that statement is 0. 14 a case in Idaho; is that right? You didn't cite anything from Utah indicating that those projects 15 were controversial in this state? 16 17 Α. I did not. 18 And would you agree that they weren't in 0. fact controversial in the state of Utah? 19 2.0 I haven't reviewed the specific cases in Α. 21 Utah on those. 22 Q. Okay. Well, let's do a quick review. 23 you could turn to RMP Cross-Exhibit 23, please. is the Public Service Commission's Order in Docket 24 25 12-035-97, and this was a case where the Company

```
Page 46
 1
     requested CPN for the Sigurd to Red Butte line, and
 2
     I'll read from the synopsis on the front page.
               It says, "The Commission approves an
 3
 4
     uncontested settlement stipulation and issues a
     certificate of public convenience and necessity,
 5
     authorizing construction of the Sigurd-Red Butte
 6
     No. 2 345 kV transmission line."
 7
               Do you see that?
 8
               T do.
 9
          Α.
10
               And then if you could turn to
          0.
11
     Cross-Exhibit 24, this is the Report and Order from
12
     Docket 13-035-184. This is the Company's 2014
13
     general rate case. And at the front the first line
14
     of the synopsis says, "The Commission approves a
     comprehensive, multi-year, uncontested settlement
15
16
     stipulation."
17
               And then if you could turn to page -- I did
     not include the entire order. It's quite voluminous,
18
19
     but page four of the settlement stipulation which was
     attached to that order. Paragraph one says, "The
20
21
     Parties agree that the Sigurd to Red Butte
22
     transmission line investment is prudent and cost
23
     recovery will occur in Step 2 rate change."
24
               Do you see that?
25
               I do.
          Α.
```

Page 47 So, collectively, at least with the regard 1 Q. 2 with the Sigurd to Red Butte line, there was no controversy involving either the CPCN or rate 3 4 recovery in Utah, was there? I would observe the mere fact there's a 5 6 stipulation doesn't mean there wasn't controversy 7 surrounding the investment, so -- but, you know, I 8 haven't gone through the record in these cases to see 9 what issues parties have raised. 10 But I do know the case in Idaho certainly was very controversial, and within the IRP context, 11 12 the Gateway proposal, since its inception, has 13 been -- I can represent that it has been very controversial, that, you know, parties have -- a lot 14 of parties have raised questions with it. 15 16 0. Mr. Mullins, I'm going to draw you back to Cross-Exhibit 25, and let's talk a little bit about 17 the Populus to Terminal line, which you also 18 19 specifically cite as a controversial line, again, though, not in the state of Utah. 20 21 So Exhibit 25 is the Commission's order 22 from Docket 08-035-42. This is the Order granting a CPCN for the Populus to Terminal line. 23 Do you see that? 24 25 Α. Okay.

Page 48 1 And if you turn to page two of that order, 0. 2 it indicates that "position statements or comments were submitted" -- I should be a little clear. 3 4 Page two, the first full paragraph that begins with the statement "By our Scheduling Order," and about 5 6 halfway down, there's a sentence that begins "Pursuant to the Scheduling Order, testimony, 7 8 position statements or comments were submitted by the Division of Public Utilities, the Committee of 9 Consumer Services, and WRA." 10 11 Do you see that? 12 Α. I do. 13 And then on the next page, page three, Q. 14 about the fifth line down by my count, it says, "The Committee concludes that the factual support for the 15 assumptions upon which Rocky Mountain Power bases its 16 claim that these transmission facilities will serve 17 18 the public convenience and necessity, while minimal, 19 is legally sufficient to support the certificate." 20 Do you see that? 21 Α. I see it. 22 Q. And the next paragraph describes the 23 Division's position, and it states that the Division believes that the facilities -- excuse me -- that it 24 25 concludes it supports RMP's decision to build a

Page 49 transmission line. Do you see that? 1 2 Α. I see it. And then on page four it says, "WRA 3 Q. 4 specifically notes it does not oppose the Transmission Line," at the very top second line; 5 6 right? 7 Sorry. What page was that? Α. Page four. I believe very top, the second 8 Q. 9 sentence. I see that line. 10 Α. 11 All right. So, again, the CPCN for the Q. 12 Populus to Terminal in Utah at least was not very 13 controversial, was it? Well, once again, I wasn't involved in this 14 docket, and I can't speak to all the issues that were 15 raised in this docket because I --16 17 I understand that. I note that your --Q. Hold on. 18 Α. 19 Q. -- testimony --2.0 So I do -- you know, as I'm kind of reading Α. 21 through, I do -- it looks like there are other issues 2.2 that were raised in this docket, and so, you know, to 23 say that it's not controversial on the basis of this 24 order, I wouldn't agree with that. And just to be clear, you made the 25 Q.

1 statement that both were expensive and controversial
2 with apparently not investigating any of these orders

- 3 in Utah, didn't you?
- 4 A. I did not investigate this order. Correct.
- Q. Let's move on. If you could turn to page
- 6 eight of your direct testimony.
- 7 A. Okay.
- 8 Q. Now, at the top of that page, beginning on
- 9 Line 1, you state "The analysis" -- you're referring
- 10 to the Company's analysis -- "suggested there was a
- 11 \$530 million range of potential outcomes."
- 12 Do you see that?
- 13 A. I do.
- 14 O. Just to be clear, those numbers that you're
- 15 referencing on Line 2 are from the Company's economic
- 16 studies using the IRP models through 2036; is that
- 17 right?
- 18 A. So these would have been based off of the
- 19 analysis in PacifiCorp's direct testimony. So, yeah,
- 20 so there was no nominal revenue requirements
- 21 presented in that testimony, and I believe it was a
- 22 shorter time frame. Correct.
- Q. Well, you cite to Mr. Link's Table 2
- 24 testimony, which you're correct was the 2036 study.
- 25 I do just want to clarify, there was a nominal

Page 51 1 revenue requirement in the direct case. You don't 2 recall that? I don't think it's the same nominal written 3 Α. 4 requirement study that was presented in the second case, but that's -- subject to check I'll accept 5 6 that. 7 0. Thank you. And that wasn't the Okay. 8 point of my question anyway. I just wanted to make 9 sure the record was clear on that point. 10 If you could turn to page 30 of your direct 11 testimony. 12 Α. Okay. 13 And on Line 9 of that page, you also, 0. 14 again, reference the 20-year study period that was used in the Company's direct case. Do you see that? 15 16 Α. I do. All right. If we could turn to page 37 of 17 0. your direct testimony, and I'd like to direct your 18 attention to Confidential Table 2, although I'm not 19 intending to asking you anything confidential. I 20 21 just want you to confirm for me, please, that the 22 numbers that you were using in that table to 23 calculate your adjustments were taken off of the 20-year studies; correct? 24

Right. So I guess the -- I guess --

25

Α.

Page 52 Mr. Mullins, I just want to confirm the 1 Q. 2 time period you're using here. I'm not asking about any of the particular adjustments. I just want to 3 4 make sure you're using the 20-year studies that were used in the IRP models. 5 6 Α. Yes. And I would like to explain why I used those studies, which I think is appropriate. 7 So the -- right. So in the initial filing, PacifiCorp 8 9 had, I quess, different levelization assumptions than in its supplemental filings. I think the Commission 10 11 is aware, so it changed the way it treated PTCs. 12 There were terminal value amounts added in. And so 13 that's why I relied on those particular studies here. So you relied on the 20-year studies in 14 December because in January the Company changed its 15 16 modeling? I mean, let's just be clear, your reliance on the 20-year studies predated any change in the 17 modeling that occurred in January; correct? 18 19 Α. Right. 20 You were presented with two different 0. 21 studies, 30-year and 20-year. You chose to rely on 22 the 20-year. 23 I did rely on the 20-year in this case. If you could turn, please, to page 42 of 24 0.

your direct testimony, and on lines 11 to 12 -- I

25

Page 53 1 quess it begins on line 9 through 12 -- you have a 2 statement, and the footnote to support that statement refers to testimony that was filed by Mr. Knudsen --3 4 I may be mispronouncing that name. Mr. Knudsen in the RFP docket. Do you see that? 5 6 Α. I do. Isn't it also true Mr. Knudsen testified in 7 0. that same docket that the 20-year evaluation horizon 8 was the horizon used in the IRP and that's the only 9 10 appropriate or comparable evaluation horizon? 11 So I can't speak to what he would have Α. 12 testified to. The specific thing that I'm talking 13 about here is the assumption about reduced line 14 losses, so PacifiCorp included an assumption where, you know, it assumed that line losses would be 15 reduced as a result of the wind generation and the 16 transmission line. And, given that those projects 17 18 are so far away from load centers, at least my 19 understanding of what the analysis, what Mr. Knudsen did, he demonstrated that it wouldn't reduce line 2.0 21 losses and that, in fact, it would result in higher 2.2 line losses. 23 0. Well, and if you turn to RMP Cross-Exhibit 27 -- that's a brief excerpt from 24 the same testimony you rely on for your testimony. 25 Ι

Page 54 1 would like to direct your attention to page 18 of the 2 testimony. Again, this is just an excerpt, but lines 373 to 375 is the statement that I just quoted. 3 4 And Mr. Knudsen, just to be clear, was a UAE witness in that docket; correct? And he 5 testified that the IRP horizon is the only 6 "appropriate or comparable evaluation horizon" for 7 studying these projects? 8 Right. So I see he's testified to that 9 here. So I think there might be some confusion about 10 11 sort of the time horizon and the study assumptions. 12 So the issue from my perspective is the use -- the 13 levelized analysis that PacifiCorp performed, not the 14 time period that they performed it over. 15 And, in fact, I would support using a shorter time frame to analyze economic benefits so 16 long as it was analyzed in, I think, a nominal basis 17 18 based on the actual impacts to ratepayers. And if we were -- if you're to do that, I think even in 19 PacifiCorp's analysis, the benefits drop materially. 20 21 0. Mr. Mullins, if I could direct your 22 attention, please, to RMP Cross-Exhibit 22. 23 Α. Okay. And these are comments that you filed with 24 0. the Public Utilities Commission of Oregon in

25

Page 55 January of 2017 in Portland General Electric 1 2 company's IRP docket; is that correct? Α. Correct. 3 4 And if you could just turn to page 12 of 0. 5 those comments, please. 6 Α. Okay. 7 At the very top of these comments there's a 0. 8 heading of No. 3 that says "A 34-year Planning Period 9 is Too Long," and then further down on that same page your comments indicate that "PGE's IRP" -- that your 10 analysis of PGE's IRP was limited to 20 years because 11 12 a 34-year planning period is, quote, "too long and 13 puts too much weight on speculative assumption about distant future conditions." Correct? 14 15 Α. Correct. And then you also testified that a longer 16 Q. study period may provide, quote, "some useful 17 18 information, but modeling portfolio performance that 19 far into the future is problematic." Correct? 2.0 Α. So this is -- it's not testimony so --21 I'm sorry. Your comments. Q. 2.2 Α. I commented that, yes. 23 Q. They weren't sworn statements. And you 24 also supplied comments that "Forecasting conditions far into the future is inherently speculative." 25

Page 56 I did. 1 Α. 2 Q. And then you say "For purposes of making resources decisions today, a twenty-year planning 3 4 period is sufficient to make informed resource decisions." Is that correct? 5 6 Α. Yep. And you would agree that over the 20-year 7 0. IRP planning horizon that you used exclusively in 8 9 your direct testimony and that you use exclusively in PGE's 2016 IRP, the combined projects provide net 10 11 benefits in every single price policy scenario; 12 correct? 13 Right. So I think we're once again, kind Α. 14 of conflating the issue of the study period and the use of the levelization techniques that PacifiCorp 15 16 used in its supplemental direct testimony. So, you know, I didn't agree with the way that PTCs were 17 being levelized, and while -- you know, the idea of a 18

terminal value, I didn't necessarily disagree with

that, my view is if you're to view these projects --

if you're to analyze the economics of these projects,

19

20

21

Page 57 have different lives, and so what you do is you 1 2 levelize the costs so you can assign a cost per year 3 to those resources, but where you have -- and then 4 compare them to the cost per year of other resources. But where you have a discrete resource, at 5 least my view is that the nominal approach is better, 6 and I just observe that these studies here were 7 performed on a nominal basis, and while I advocated 8 for a shorter period -- and, in fact, I even said 9 10 they should look it over a ten-year period here -- it 11 would still be a nominal analysis. 12 And if you were to look at PacifiCorp's 13 study over a ten-year period, as I mentioned in my opening remarks, that would actually be a cost to 14 customers even using all of PacifiCorp's assumptions. 15 And just one quick question on that 16 0. statement you just made -- little bit out of my order 17 18 here, when you refer to the first ten years, you're referring to the period from 2017 to 2027; correct? 19 2.0 I think it was 2018 through 2027. Α. 21 0. And that's not the first ten years of 22 project lives, is it? 23 Right, yeah, because the -- because the net present value was calculated back to 2017, the study 24 period actually begins in 2018. So if you look at 25

- 1 the first ten years -- so the first three years
- 2 there's not much activity, so that's a point taken.
- 3 Q. If you look at the first ten years of the
- 4 actual project lives, so 2000 -- the study through
- 5 2030, you would agree there actually are net benefits
- 6 to customers; correct?
- 7 A. I could do that calculation, but probably
- 8 not on the stand. It would probably be pretty close
- 9 to --
- 10 Q. It's actually fairly easy to do. We can do
- 11 it right now. If you could turn to your testimony
- 12 please, where you quote that number for 2027.
- 13 CHAIR LEVAR: Mr. Lowney, could you, for our
- 14 recollection, remind us where we are in his
- 15 testimony.
- 16 MR. LOWNEY: It would be on page -- this would
- 17 be the April testimony, and this would be on page
- 18 six, Figure 1.
- 19 Q. And when you calculate through 2027 in the
- 20 medium gas case, Mr. Mullins, you calculated net cost
- 21 of \$77 million. Do you see that?
- 22 A. T do.
- Q. If you look at Mr. Link's second
- 24 supplemental direct testimony on page 20, he has a
- 25 Figure 1SS that indicates the annual revenue

Page 59 1 requirement amounts for each of the years. 2 Α. I don't have that in front of me. Okay. Perhaps your counsel could provide 3 0. 4 you with a sheet or I could just represent to you that the numbers on this figure for 2008 is 5 \$56 million for 2000- -- these are net benefits, I 6 should say, \$56 million. 7 That's present value or --8 Α. 9 0. Present value. CHAIR LEVAR: Could you give us specifically 10 11 where -- which exhibit to which testimony. 12 MR. LOWNEY: I'm sorry. It's Mr. Link's page 20 13 of his second supplemental direct testimony. That 14 was in February. 15 So 56 million in 2028, 85 million in 2029, Q. and 91 million in 2030. 16 17 Α. Okay.

- And so if you had --18 Q.
- 19 MR. RUSSELL: Can I have counsel repeat that.
- 2.0 I'm trying to check it. I'm a little behind in
- 21 getting to the testimony here.
- 2.2 MR. LOWNEY: So it's 56 million in '28,
- 85 million in '29, and 91 million in '30. 23
- 24 0. And if you add those two numbers up and
- subtract 77, it's greater than -- it provides a net 25

Page 60 1 benefit; correct? 2 Α. Fair enough. Fair enough. I just observed that -- well, yeah, point taken so --3 4 Now, I'd like to move on to talk about your Q. 5 gas price forecast testimony. So if we could just 6 turn, please, to your supplemental rebuttal testimony. This would be the April 17 testimony, 7 page 26. And that would be Table 1 at the top of 8 9 that page. Do you see that? I do. 10 Α. 11 And this summarizes your -- the proposed Q. 12 modeling adjustments that you recommend to the 13 Company's results; correct? 14 Α. Correct. And one of the adjustments you make is 15 Q. based on the approximate impact of the declining 16 market prices. Do you see that? 17 I do. 18 Α. 19 Q. And that's an \$88 million adjustment --2.0 Correct. Α. 21 -- one of your larger ones; correct? Q. 22 And if you could turn to -- I guess it's 23 page 28 on line 566. 24 Α. Okay. 25 You make reference to the fact the Company Q.

Page 61 1 has received more recent third-party forecasts. Do 2 you see that? Α. T do. 3 4 And then we're going to tread on 0. confidential material. My hope is we can avoid 5 having to close the session, but obviously if you 6 need to go to confidential to answer one of my 7 8 questions, we can make that happen. 9 And you refer to the fact that there's a forecast that was received, and the particular name 10 11 of the forecast is confidential so I won't say that. 12 And then you chart the results of that 13 additional forward price curve relative to the 14 Company's medium and low case from the December official forward price curve; is that correct? 15 16 Α. Correct. You claim that based on that updated 17 0. 18 third-party forecast that gas prices have actually 19 decreased; correct? 2.0 Α. Correct. And just to be clear, you reference the 21 Q. 22 fact the Company provide this to you as part of 23 UAE DR 5.18, but you didn't actually attach the substantive data from that response to your 24 testimony, did you? 25

- 1 A. I did not attach the data which is in
- 2 Cross-Exhibit 30; correct.
- 3 Q. Let's turn our attention to
- 4 Cross-Exhibit "33," particularly page two, which is
- 5 the material you didn't attach to your testimony.
- 6 Again, this is confidential so I'm going to try to
- 7 not have to say anything confidential by referring to
- 8 the line and columns as necessary.
- 9 CHAIR LEVAR: I think you meant to say
- 10 Exhibit 30 instead of 33.
- 11 MR. LOWNEY: Yeah. That's correct. Exhibit 30.
- 12 My apologies.
- 13 Q. Just to be clear, the curve that you
- 14 reported in your Confidential Figure 3, it appears
- 15 anyway, is that the gas prices are reflected in
- 16 Column M; is that correct?
- 17 A. Well, I thought I used Column H.
- 18 However --
- 19 Q. And I'm just going from the name you put in
- 20 your testimony as well just kind of eyeballing the
- 21 numbers that are reflected in the table to the lines
- 22 that appear on your chart.
- 23 A. Yeah, I think they are pretty close.
- 24 O. It may be a distinction without difference
- 25 in a lot of ways.

Page 63 Right, right. 1 Α. 2 Either way you did either M or H? Q. Right. My understanding was these were the 3 Α. 4 most recent of these in this sheet. And just to be clear, the Company also 5 6 provided third-party forecasts that are reflected in Columns B, C, D, and E as well; correct? 7 8 Α. Correct. 9 0. And you didn't report any of those results 10 in your Confidential Figure 3? 11 Α. No. 12 Q. And if we look at Column D, this would be a 13 Henry Hub forecast, which is also the forecast you used in your Confidential Figure 3; correct? 14 15 Correct. Α. 16 And just looking at the Confidential Q. Figure 3 relative to the numbers that are shown in 17 Column D, without divulging a particular number, you 18 would agree that the numbers in Column D are 19 generally higher than the Company's December 2017 20 21 medium curve that you reflected in the Confidential 22 Figure 3; right? 23 They are certainly higher. So kind of -when I reviewed this, raised a number of questions to 24 25 me about how PacifiCorp selects between these

```
Page 64
 1
     different curves.
                        And, you know, as we see, if you
 2
     select one or the other, that can flip the economics.
 3
               And so, you know, I did select that one,
 4
     and I recognize that the curve in Column D is higher,
     but I think it gets back to the general point that,
 5
 6
     you know, really it's just -- when you go that far
 7
     out, it's a just a matter of opinion as to what
 8
     prices might be.
               Well, so just to clarify, you were aware
 9
     that column -- that that forecast reflected in
10
11
     Column D, which the date is at the top of that in
12
     Cell D2 -- you were aware that that actually
13
     contradicted what you wrote in your testimony and you
14
     just chose to ignore. Is that what I'm
     understanding?
15
16
               Right. So my understanding was that the
          Α.
     S&P -- sorry -- strike that. The amounts in Column H
17
     were the most recent, and so that's why I selected
18
19
     that amount. During this time period there were --
2.0
     there had been a lot of dramatic changes in gas
21
     markets, particularly in the forward period, so
22
     traditionally gas prices are up-sloping but towards
23
     the tail end of last year, gas prices went into
24
     backwardation, which means the current spot price is
     actually higher than the forward price that you can
25
```

Page 65 transact at one or two years into the future. 1 2 And so that's basically the market saying that it thinks that gas prices are going to fall, and 3 4 so, you know, picking the most recent, in my mind, 5 was important. Just to be clear, though, if you had picked 6 Q. the forecast shown in Column D, your conclusion would 7 8 have been that market prices were actually increasing; right? 9 I think it was -- you know, I haven't done 10 Α. that comparison, but I think Column D is fairly close 11 12 to the December curve, but I think it just goes to 13 show what a large impact that these price curve 14 assumptions can have. 15 And just going back to the Columns M, N, O, Q. and P, and each of these columns, the particular 16 forecast or third-party forecaster provided a 17 18 reference, a low and a high case as well as an 19 expected value; correct? 2.0 I see that. Α. 21 And isn't it true, based on the percentages Q. 22 found on at the top of each column, that this 23 particular forecaster weighted the reference and high

So I couldn't speak as to what those

case more than the low case; correct?

24

25

Α.

Page 66 1 If that's what those are intended percentages are. 2 to represent, then yes, but I couldn't say what those 3 are intended to represent. 4 Well, if I represent to you that the 0. expected value column is simply each of those 5 percentages multiplied by the figure in the 6 appropriate column and then added together, they just 7 did a weighting based on those percentages --8 9 Α. Fair enough. 10 -- and that's the expected --Q. 11 Yeah. Α. 12 Q. And just to be clear then, the expected 13 value column in Column P is also higher than the 14 numbers you reported in your Confidential Figure 3; 15 correct? 16 Those numbers are higher. As we mentioned Α. earlier, the reference case in that forecast is 17 similar to what is in Column H. 18 19 0. Just one moment. 20 Mr. Mullins, let's move on for a moment 21 Now, you would agree that the Company's anyway. 22 economic analysis in this case does not include any 23 value for Renewable Energy Credits, or RECs; correct? 24 That's correct. Α. And Mr. Link's testimony, in his second 25 Q.

- 1 supplemental testimony filed in February, indicated
- 2 that through 2050 for every dollar of RECs
- 3 included -- for every dollar assigned to RECs, it
- 4 represented an additional customer benefit of
- 5 \$43 million. Is that your recollection of the
- 6 testimony?
- 7 A. It sounds like Mr. Link's testimony.
- 8 Q. All right. If I could have you turn back,
- 9 please, to those PGE comments that you filed. This
- 10 would be RMP Cross-Exhibit 22 and page 15 of that
- 11 case. And at the top of that page you testified in
- 12 the very first -- it's an incomplete paragraph, but
- 13 the very first paragraph at the top of the page, that
- 14 for purposes of analyzing PGE's portfolio, you
- 15 assumed that the Company could acquire RECs at a
- 16 nominal levelized price of \$10 per megawatt hour;
- 17 correct?
- 18 A. So I'll provide an answer, but I would like
- 19 to explain, if that's okay.
- 20 Q. You will have an opportunity. I just want
- 21 to get the groundwork here that your comments here
- 22 assumed a \$10 per REC price; correct?
- 23 A. So, yeah, right, so this analysis -- yes, I
- 24 assumed a \$10 REC price. So to provide some
- 25 background on what this analysis was, was a case

Page 68 where the issue at hand was whether PGE should go out 1 2 and acquire unbundled RECs to fulfill its RPS 3 requirements or whether it should build a physical 4 generation resource. And so, you know, in doing that analysis 5 there's a lot of uncertainty about what REC prices 6 will be, and so for purposes of, you know, 7 demonstrating that it's much more beneficial to use 8 9 unbundled RECs, we assumed a very high REC value and 10 showed that even if you assume \$10 per nominal 11 megawatt hour for RECs, that it's still -- you're 12 still better off to use RECs rather than build a new 13 resource. 14 And, in fact, the price per REC could go up to \$32.75 per megawatt hour before building a 15 16 physical resource in this case made more sense. the question in this case is whether it makes sense 17 18 to assume any sort of REC price when evaluating the economics of the combined projects, and I agree with 19 2.0 Mr. Link that it's not appropriate. 21 You know, as we've seen, the prices for 2.2 RECs -- the market for RECs has basically evaporated. 23 Prices are very low, and utilities are having problems even marketing the RECs that they are 24 25 generating, so I agree with the Company's assumption

- 1 there.
- Q. Just to be clear, if you assign a \$10 per
- 3 REC price to the \$43 million figure in Mr. Link's
- 4 testimony, that would increase the net benefits of
- 5 everyone of those scenarios through 2050 by
- 6 \$430 million; correct?
- 7 A. I haven't done the math on that, but if you
- 8 were to assume such a high REC value, certainly it
- 9 would produce a lot of dollars.
- 10 Q. By "such a high REC value," you mean the
- 11 value you assumed when you were analyzing another
- 12 utility's IRP at the beginning of 2017; correct?
- 13 A. For the purposes that I just described.
- 14 O. If you could turn to your supplemental
- 15 rebuttal testimony, this is your April testimony on
- 16 page 30, please.
- 17 A. Okay.
- 18 Q. And just to lay some background here, the
- 19 Company assumed that 12 percent of the cost of the
- 20 transmission projects would be recovered through
- 21 third-party transmission revenues; is that correct?
- A. Correct.
- 23 Q. And that 12 percent assumption results in
- 24 an incremental transmission revenue of about
- 25 \$72 million; right?

- 1 A. Could you repeat that.
- 2 Q. That assumption of a -- 12 percent of the
- 3 cost would be recovered from third-party transmission
- 4 customers results in an incremental transmission
- 5 revenue of \$72 million on a net present value basis?
- 6 A. So I don't recall the exact number, but let
- 7 me just check here.
- 8 Q. If you -- it --
- 9 A. It sounds correct. Subject to check, I
- 10 think I would accept --
- 11 Q. I will represent to you that it's in -- if
- 12 you look at Exhibit RMP RTL-3SS. This was an exhibit
- 13 to Mr. Link's February testimony. It has a line item
- 14 for each of the different scenarios studied that
- 15 shows that \$72 million figure.
- 16 A. And, of course, that would depend on
- 17 whether you're looking at the nominal or the
- 18 quasi-levelized studies. So in my direct
- 19 testimony -- let's see.
- 20 Q. And I'll represent to you that the exhibit
- 21 I'm reading from is the nominal results through 2050,
- 22 so I think we're on the same page here, figuratively.
- 23 A. So right. So yeah, that is within the
- 24 range of costs associated with that assumption.
- 25 Q. And you propose an adjustment, and you

- 1 calculate it -- you describe how you calculate it,
- 2 but the end result is you adjust that 12 percent
- 3 figure down to 11.62 percent; correct?
- 4 A. Sorry. Going back to that.
- 5 Q. Line 664, page 32 of your testimony has
- 6 that 11.62 percent figure.
- 7 A. Okay.
- 8 Q. And so you would agree then that your
- 9 adjustment here effectively reduces the Company's
- 10 forecast incremental transmission revenue by
- 11 3.2 percent.
- 12 A. Right. And that -- to be clear that
- 13 applies to the totality of transmission revenue
- 14 requirement, not the incremental transmission revenue
- 15 requirement. So if you were to apply that -- the
- 16 difference to just the incremental transmission
- 17 revenue requirement, that would give you a different
- 18 result than if you applied it to the totality.
- 19 Q. To be clear, the Company's 12 percent does
- 20 not apply to the totality of its revenue requirement.
- 21 It's applied to the incremental revenue requirement
- 22 associated with the new transmission facilities;
- 23 correct?
- 24 A. In the economic analysis, the 12 percent
- 25 only applies to the incremental. However, if the

Page 72 nd

- 1 percentage changes as a result of these new wind
- 2 resources coming online and based on mechanics I've
- 3 described here, it will apply to all revenue
- 4 requirement.
- 5 Q. And just to be clear then, a 2.3 percent
- 6 reduction of \$72 million is an adjustment of about
- 7 \$2.3 million, not 25.6; right?
- 8 A. Right, and that gets to the point I was
- 9 just making. If the percentage declines as a direct
- 10 result of building the wind resources and still
- 11 having to have transmission for front office -- to
- 12 access the market and get front office transactions,
- 13 that that reduction applies to the totality of
- 14 revenue requirement, not just the incremental.
- 15 Q. So just to be clear then, the 12 percent
- 16 and the 11.62 percent figures in your testimony,
- 17 apparently are completely unrelated to one another?
- 18 A. They are not, no.
- 19 Q. One is applied to the incremental
- 20 transmission revenue, and you're applying your number
- 21 to the entire Company transmission revenue
- 22 requirement?
- 23 A. No. So they are not unrelated. So the
- 24 12 percent applies to all revenue requirement.
- 25 However -- or all transmission requirement. However,

- 1 PacifiCorp's analysis only considered the incremental
- 2 piece, and so when they figured out the additional
- 3 revenues that would come in from third parties as a
- 4 result of that incremental investment, they only
- 5 considered that 12 percent would be funded by other
- 6 OATT customers.
- 7 However, if the percentage actually
- 8 declines when PacifiCorp builds these resources, then
- 9 it's not just the incremental that gets impacted.
- 10 It's the totality of revenue requirement that gets
- 11 impacted.
- 12 Q. So then that 12 percent would apply to the
- 13 entire revenue requirement instead of the --
- 14 A. The 12 percent is calculated based on the
- 15 total revenue requirement. That's the total revenue
- 16 requirement currently that's being funded by OATT
- 17 customers, and so if the percent declines, then
- 18 the -- it applies to the total, not just the
- 19 incremental.
- Q. Well, just to be clear, though, the
- 21 12 percent -- you arrive at the \$72 million figure by
- 22 multiplying the cost of the transmission projects by
- 23 12 percent; correct?
- 24 A. State that again.
- Q. You arrive at the \$72 million -- so the

- 1 Company assumed \$72 million in incremental
- 2 transmission revenue, and you arrive at that figure
- 3 by multiplying the transmission project costs by
- 4 12 percent.
- 5 A. Right. So --
- 6 Q. And now I just want to get clarity here.
- 7 So your adjustment takes that 12 percent to
- 8 11.62 percent and then applies the 11.62 percent to
- 9 an entirely different number?
- 10 A. Right. It applies it to the totality of
- 11 revenue requirement, and I feel like I've given this
- 12 answer a few times, but the -- PacifiCorp's analysis,
- when they are looking at the incremental REC
- 14 revenues, it only focuses on the incremental -- the
- incremental revenue requirement because it's assuming
- 16 that that 12 percent remains constant for both
- incremental and the other portion for the -- and the
- 18 totality of revenue requirement.
- 19 So it's assuming no change to the totality
- 20 of the percent that's funded for the totality of
- 21 revenue requirement and no change on the incremental
- 22 as well. So what I'm saying is that, if that
- 23 percentage declines down to 11.62 percent, that
- 24 doesn't just impact the amount of costs that are
- 25 allocated for the incremental piece; it also impacts

Page 75

1 the costs that are allocated for the totality of

2 revenue requirement. So to be clear, that's what I

3 have done here and -- all right.

- 4 CHAIR LEVAR: Maybe this might be a good time
- 5 for a brief recess and then continue with
- 6 cross-examination. Is there any objection to that
- 7 from you?
- 8 MR. LOWNEY: That's fine.
- 9 CHAIR LEVAR: Okay. Why don't we recess for
- 10 about 10 minutes. Well, considering issues on the
- 11 floor, why don't we recess for about 15 minutes and
- 12 we'll reconvene. Thank you.
- 13 (A break was taken, 10:33 to 10:51.)
- 14 CHAIR LEVAR: Okay. We're back on the record,
- 15 Mr. Lowney.
- 16 MR. LOWNEY: Thank you. I just have a few final
- 17 questions.
- 18 Q. Mr. Mullins, if you could turn to your
- 19 directs testimony, please.
- 20 A. Okay.
- 21 Q. Page 27. And just to provide a little
- 22 background, this is something you also discussed in
- 23 your summary this morning, and this section of your
- 24 testimony is describing the analysis you did on the
- 25 Company's historical forward price curves; correct?

- 1 A. Correct.
- 2 Q. And on the top of page 27, you described
- 3 how your comparison looked at the percentage
- 4 difference between a price that was forecast in a
- 5 forward curve and the ultimate spot price for the
- 6 given prompt-month; correct?
- 7 A. Correct.
- Q. Are you aware that Mr. Link testified that
- 9 market participants cannot transact on a spot price
- 10 forecast?
- 11 A. So I'm -- I don't recall him saying those
- 12 specific words, but to explain, you know, what I did
- 13 here was I used the actual monthly -- reported
- 14 monthly prices, which, you know, maybe not actually
- 15 spot prices per se, but just the prices that are
- 16 reported based on actual transactions that occurred
- over the course of the month, and those were provided
- 18 by PacifiCorp so --
- 19 Q. I guess what I'm taking issue with a little
- 20 bit is you're comparing it to the spot price and --
- 21 here I'll just read you what Mr. Link testified to.
- 22 This is from his supplemental direct and rebuttal
- 23 testimony. This was the January filing. On page 58,
- 24 line 1185, he testified that "comparing forward
- 25 prices to actual spot prices is a misapplication of

Page 77 1 forecast error because market forwards, which are 2 used in the first 84 months of the official forward price curve, are observed and not forecasted." 3 4 Does that refresh your recollection about Mr. Link's testimony in this case? 5 Right. But I don't understand that to mean 6 Α. 7 that the Company can't transact on spot prices, so on 8 a day-ahead basis, the Company will go out and buy 9 gas for its power plants and it buys that on -- based on -- and those are the transactions that get 10 11 summarized into the monthly values that I use in this 12 analysis. So I'm not necessarily -- I don't 13 necessarily agree with what you've stated there. 14 And Mr. Link also testified on the very next page, page 59, that "market forwards reflect 15 16 pricing for contracts that reflect a price on a given quote date at which buyers and sellers are 17 transacting for future delivery." Correct? 18 19 Α. Sorry? The forwards? 20 Q. Yes. 21 Right. So -- right. So PacifiCorp's Α. 2.2 forward price curve, the first, I think, 72 months, 23 is based off of market forwards, and so part of this analysis or -- actually, I quess all of this analysis 24 25 would -- it compares the -- PacifiCorp's price curve,

Page 78 1 which is really market forwards, to what the actual 2 prices were. 3 And it shows overwhelmingly that those 4 forward prices are higher than the actual prices that occur in any given month, and so that actually is a 5 lot of different implication on just the utility's 6 planning and hedging. Because if we're going out and 7 8 executing hedges, for example, based on this curve, we're basically, you know, based off of this pattern, 9 we're locking in hedging losses as a result of 10 11 relying on that curve. 12 And I believe one of the DPU witnesses may 13 have touched on that, but I guess -- and also -- I didn't do this analysis here -- but I've done 14 longer-term analyses for other utilities going back 15 as far to 2000, and it shows that this trend very 16 consistently increases with an upwards slope. 17 18 Now, in this case we asked for the longer 19 period of data, but PacifiCorp -- or we asked 20 PacifiCorp to provide whatever data that it believed 21 would be relevant in performing this analysis, and 22 this is the information that they provided. 23 same trend is true if you view it over a longer period, and, in fact, it's exacerbated further over a 24 25 longer period.

```
Page 79
               Just to be clear, Mr. Mullins, I think you
 1
          Q.
 2
     testified to this fact, but I just want to confirm
     it, that the Company's, in the first 84 months of the
 3
 4
     official forward price curve, it's based on actual
     forward prices, meaning it's prices based on observed
 5
     market transactions, not forecasts; correct?
 6
               PacifiCorp's forecast is based off of
 7
          Α.
 8
     forward prices, and so, you know, it's one and the
 9
     same, I guess. Whether you're calling it a forecast
     or forward prices, you come to the same result, and
10
11
     you can conclude that the -- you can conclude that
12
     PacifiCorp forecast is overstated or you could
13
     conclude that the forward prices are overstated,
14
     either way.
15
               If you're viewing it from the
     forward-prices perspective, basically what you would
16
     be concluding is that there's actually, you know,
17
     risk premiums embedded in those forward prices, and
18
     so that means that in order to enter into one of
19
2.0
     those forward contracts, the counter-party is going
21
     to demand an extra amount above what they expect the
22
     ultimate market price to be in order to lock in that
     price over the long term.
23
24
               And so, you know, really I think it's a
25
     point kind of without distinction in this case,
```

Page 80 1 whether, you know, you view this period to be forward 2 prices or a forecast, because the forward prices are 3 the forecast. 4 MR. LOWNEY: Thank you, Mr. Mullins. I have no further questions. And just before I end, I would 5 just move to admit Cross-examination Exhibits 23, 24, 6 7 25, 26, 27, 22, and 30. CHAIR LEVAR: Okay. I'll add one clarification 8 9 to that motion, that the Cross-Exhibit 30 if it's entered should only be reflected in the confidential 10 11 transcripts. 12 MR. LOWNEY: Correct. 13 CHAIR LEVAR: And should not be in the public 14 transcript. 15 Is there any objection to that motion? 16 MR. RUSSELL: No. CHAIR LEVAR: Okay. The motion is granted. 17 (RMP Cross-Exhibits 22, 23, 24, 25, 26, 27, and 30 18 were received.) 19 2.0 CHAIR LEVAR: Mr. Russell, do you have any 21 redirect? 2.2 MR. RUSSELL: Have we finished with cross? 23 know the Company is done. I don't know if we made it 24 all the way around the room. 25 CHAIR LEVAR: I think I got to everyone for

Page 81 1 cross. 2. MR. RUSSELL: I forgot. CHAIR LEVAR: If I missed you, let me know right 3 4 now, but I don't think I missed anybody. I do have some redirect and it may 5 MR. RUSSELL: 6 well be that Mr. Baker also has some redirect, but I'll get through mine and we'll see where we are. 7 8 REDIRECT EXAMINATION BY MR. RUSSELL: 9 10 Mr. Mullins, do you recall counsel asking you questions about -- I believe it was 11 12 Cross-Exhibit 22 -- relating to some comments you 13 made regarding pricing or prices for renewable energy 14 credits? 15 Α. Yes. 16 Okay. And you indicated in your responses 0. to counsel's questions that your statement regarding 17 18 a price for renewable energy credits was a --19 perhaps -- I don't want to put words in your mouth --20 you can just explain to us what analysis you were 21 performing there and what for what purpose it was 22 provided. 23 Right. And so the \$10 per megawatt hour 24 that I used there was really an illustrative value to prove the point that I mentioned earlier that it's 25

Page 82 much more cost effective for PGE to go out and 1 2 acquire RECs rather than build a new resource. 3 And, you know, the same doesn't apply in 4 this case, and so, you know, from my perspective the reasonable way to view it is to assume there won't be 5 6 a market for RECs, and so with that we agree with the 7 Company's approach. Just to clarify that point, the Company has 8 Q. not assumed a value for RECs; is that correct? 9 10 Correct. Α. 11 Q. And you agree that's a reasonable approach? 12 Α. Yes. 13 Okay. Counsel also asked you a number of Q. 14 questions about your use or your reflection of the 15 Company's 20-year analysis or economic analysis in 16 your testimony. By using that 20-year analysis, are you endorsing either the use of a 20-year time frame 17 or the numbers involved? 18 19 Α. No. In my direct testimony I referred to 20 the 20-year period, but as I mentioned earlier, you 21 know, I didn't necessarily object to the assumptions 2.2 in the initial -- in the 20-year study in the initial testimony, but once the PTC levelization and the 23 terminal value were changed in PacifiCorp's 24 supplemental testimony, there was a gap between, you 25

- 1 know, the nominal and the levelized, and so that's
- 2 why I believe that, you know, nominal studies in
- 3 PacifiCorp's supplemental direct testimony are more
- 4 appropriate.
- 5 Q. I want to make it clear what you're
- 6 referring to when you're talking about this gap
- 7 between nominal and levelized.
- 8 Do you want to address just that issue? I
- 9 can ask it to you question by question, but we might
- 10 get there more quickly if you just explain it.
- 11 A. Yeah, and I guess I would -- when I
- 12 reviewed the supplemental testimony, it was apparent
- 13 to me that the economics between the nominal study
- 14 and the levelized study, they departed quite
- 15 dramatically. And I don't have the numbers memorized
- 16 off the top of my head.
- But, you know, as a result of -- and that
- 18 was primarily due to these levelization assumptions
- 19 that were used, and, you know, my expectation is that
- 20 if you were to use a levelized study, really the idea
- 21 is to -- should be fairly close to what the nominal
- 22 results are. Present value to levelized should equal
- 23 or be about equal to the present value of the nominal
- 24 study, and we saw that, you know, diverge quite
- 25 substantially in the supplemental filing.

Page 84 1 0. Okay. I want to get to this point on the 2 record, and so I'll try to just ask. When you're 3 talking about the levelized study and levelized 4 treatment of tax credits, does that mean that those tax credits are given an equal value in every year of 5 the term of the project? Is that how that works? 6 Well, I think it gets into the way that 7 Α. those benefits get levelized to the resource costs, 8 9 and so by including them nominally since they occur in the study period, you know, you avoid the capital 10 11 costs beyond the end of the study period, but you're 12 including all of the PTC benefits within the study 13 period. And so, you know, without considering the 14 costs beyond the end of the study period, it doesn't 15 make sense to include the levelized -- or the PTCs in 16 there on a nominal basis. 17 And just to be clear, the Company did 18 0. use -- or did the Company use a levelized basis for 19 20 tax credits in its IRP in its direct filing here? 21 Α. They did use a levelized approach to 2.2 production tax credits in their initial filing. And it was -- I don't remember which round 23 Q. of testimony it was, but they at some point switched 24 to using --25

Page 85 1 Α. Right. 2 Q. -- a nominal basis is for PTCs; is that --3 Right. And so my concern is they were Α. 4 mismatching nominal and levelized assumptions, and so from that perspective I didn't view the semi -- the 5 quasi-levelized 20-year studies to be appropriate. 6 MR. RUSSELL: Okay. I don't have any further 7 redirect questions. 8 CHAIR LEVAR: Did that redirect prompt any 9 recross from any party? Please indicate to me if it 10 11 did. Anyone else besides Mr. Michel? I'm not seeing 12 any indication? 13 Okay. So, Mr. Michel, I'll allow you some 14 recross. 15 MR. MICHEL: Thank you, Mr. Chairman. 16 RECROSS-EXAMINATION BY MR. MICHEL: 17 Mr. Mullins, counsel asked you about your 18 Q. use of a \$10 REC price. Do you recall that? 19 2.0 Α. Yes. 21 And the reason REC prices currently are Q. 22 priced so low is because there's currently a surplus 23 of RECs in the market. Would you agree with that? 24 Α. Yes. And the reason there is a surplus is 25 Q.

1 because many utilities are developing renewables for economic reasons without regards to RPS requirements; 2 is that right? 3 4 I would agree that utilities are developing a lot of renewables, but it's not just limited to 5 There's a lot of independent power 6 utilities. producers developing renewables. There's a lot of 7 8 individual consumers building rooftop solar, for 9 example. 10 In fact, I think a few weeks ago there was a new rule or requirement in California where all new 11 12 residential dwellings were required to have rooftop solar installed. And so it's not just limited to 13 utilities, and from my perspective, I'm expecting 14 that trend to increase or to -- into the future. 15 16 And you also anticipate that state RPS 0. requirements are going to be increasing over time? 17 Absolutely. On the West Coast there is 18 Α. 19 continual pressure to up those. We've seen it in 2.0 There's -- I don't have the years memorized. Oregon. 21 I think it's in 2040s where they transition to a 2.2 50 percent RPS, but what we're seeing is utilities 23 have already built so many renewables that they are 24 resource-sufficient for a very long time into the 25 future, and certainly that could change, but, you

Page 87 1 know, my expectation is that it will be a long time 2 before that might flip. MR. MICHEL: That's all I have. Thank you, 3 4 Mr. Mullins. CHAIR LEVAR: Thank you, Mr. Michel. 5 6 Commissioner White, do you have any questions for Mr. Mullins? 7 8 COMMISSIONER WHITE: Yeah, just one question. 9 You may have touched on this some in your summary, but there's been a lot of discussion back and forth 10 11 about this transmission and its need and whether its 12 need is tied to the wind or, you know -- I guess 13 "chicken and egg" kind of thing. 14 BRAD MULLINS: Right. 15 COMMISSIONER WHITE: Is there any reason to believe, based upon your expertise, that the 16 transmission line will not be needed in 2024? 17 BRAD MULLINS: Well, so the way I've been kind 18 of looking at it -- and, you know, need I guess 19 2.0 that's also kind of a perspective kind of issue, but, 21 you know, what if we can avoid building the 2.2 transmission line is the way I'm thinking about it. 23 And, you know, if you look to -- at least to the northwest, we've seen -- there are a lot of 24 25 transmission lines being planned, the

Page 88 BPA I-5 Corridor project, for example, had been 1 2 planned for many years, but utilities are finding 3 ways to mitigate those transmission constraints without going through the very expensive process of 4 building transmission. 5 6 And so, you know, I can't speak to the 7 assumptions that were put into the NTTG studies, for 8 example, but what I can say is that, you know, we 9 really should try to take efforts to try to avoid these expensive transmission investments and looking 10 11 to non-wired solutions, for example, DSM and these 12 other options, to avoid expensive build-outs of the 13 transmission system. 14 So if you do it from that perspective, you know, by not proceeding with the wind projects, we 15 can avoid the -- is that a confidential number? 16 The costs of the transmission projects? 17 18 MS. MCDOWELL: No. The 600 to \$700 million 19 BRAD MULLINS: 2.0 investment in the transmission system. 21 COMMISSIONER WHITE: So if I'm hearing you 2.2 correctly, you're saying that if the line is needed 23 but they potentially could explore DSM to avoid the need to build the line? 24 25 Well, so, you know, I personally BRAD MULLINS:

Page 89 don't think it's a needed investment. I think we 1 2 heard Mr. Hayet mention earlier that there's a lot of, you know, transmission segments included in that 3 4 plan. So the fact that it's included in the plan or 5 not wouldn't -- doesn't necessarily mean that it will 6 actually be built. 7 And, you know, as we go forward, at least from my perspective, we should try to find ways to 8 9 avoid building new transmission, and so by not approving the wind projects and the transmission, we 10 11 can do that. 12 And given the fact that loads, at least in 13 Wyoming, are not increasing and we have these 14 opportunities for solar resources located much closer 15 to load, I think that's a reasonable thing to expect. 16 COMMISSIONER WHITE: Thank you. That's all questions I have. 17 CHAIR LEVAR: Commissioner Clark, do you have 18 19 any questions? 2.0 COMMISSIONER CLARK: Mr. Mullins, you have some 21 testimony in your supplemental rebuttal that 2.2 addresses the solar RFP. You're referring to the 23 2017S RFP --24 BRAD MULLINS: Correct. 25 COMMISSIONER CLARK: -- that's been referred to

```
Page 90
     elsewhere in this docket?
 1
 2.
          BRAD MULLINS:
                         Yes.
 3
          COMMISSIONER CLARK: And you represent that
 4
     there were 1419 megawatts of measured nameplate
     capacity -- by the way I'm on page 20 of your --
 5
 6
          BRAD MULLINS:
                         Okay.
          COMMISSIONER CLARK: -- supplemental rebuttal.
 7
               What's your source for that number?
 8
          BRAD MULLINS: You know, I don't recall.
 9
10
     have been the -- the solar IE report so -- and I
11
     obviously don't have a cite there, but that was, I
12
     quess, based off my understanding that was the number
13
     that I understood.
14
          COMMISSIONER CLARK: Later on that page you
15
     compare the nominal benefit of the combined
16
     projects -- by that I mean the wind projects under a
17
     medium gas/medium CO2 scenario -- from Mr. Link's
     testimony, identified as $166 million and some
18
     change, I'll call it. That's a lot of change for me,
19
2.0
     but roughly $166 million.
21
               And then you state that the modeling of the
2.2
     final shortlist for the solar RFP produced a nominal
23
     revenue requirement benefit of $424 million and some
24
     additional, in the same medium case -- medium
25
     gas/medium CO2 case. So what's the source of that
```

Page 91 1 number? 2 BRAD MULLINS: So that is from the work papers 3 provided in Mr. Link's -- I want to say it was the 4 corrected -- you know, I forget the names of all the filings, but it's the corrected February filing, so 5 there was sort of an initial filing and then there 6 was some minor corrections to that. 7 It was February -- maybe February 23rd or something. 8 9 COMMISSIONER CLARK: February 23, 2018 is what I 10 show for that. 11 BRAD MULLINS: Right. And there were work 12 papers provided along with that, and in those work 13 papers there were annual revenue requirements for both the combined projects viewed in isolation, for 14 the solar projects viewed in isolation, and for the 15 16 solar and wind projects combined. 17 And so if you compared the annual -- the 18 present value of those annual revenue requirements of 19 the wind -- wind projects to the solar projects, it 2.0 was -- on a nominal basis, it was very apparent that 21 the solar projects were, as I say here, 2.5 times --22 they produced 2.5 times greater net benefits to 23 ratepayers. 24 COMMISSIONER CLARK: On the next page you present a benefits number of 216 million-plus that is 25

Page 92 associated with the solar RFP also but derived using 1 2 the zero carbon price-policy scenario and the low 3 gas --4 BRAD MULLINS: Right. 5 COMMISSIONER CLARK: -- assumption. Is the source of that number the same as --6 7 BRAD MULLINS: Yes, yes. And so there were --8 for the wind projects there were revenue requirements 9 listed for all of the cases, but for the solar projects, if I am remembering correctly, there were 10 11 only -- the revenue requirements were only reported 12 for a medium gas/medium CO2 scenario and for a 13 low gas/zero CO2 scenario. 14 So we didn't look at, I guess, the flip side, you know, the high gas scenarios with respect 15 16 to solar, and that's why in this case I selected the zero carbon absent -- I would normally select the 17 medium carbon in that -- if I were to do this 18 19 scenario -- or this analysis. Excuse me. 2.0 COMMISSIONER CLARK: Those are all my questions. 21 Thank you. 2.2 CHAIR LEVAR: Thank you. I think I just have 23 one more. 24 You criticized some of the utility's modeling with respect to the EIM and how that might 25

```
Page 93
     affect the benefit of these projects. A little more
 1
 2
     broadly than that, if we assume a future that has
     increased regionalization across the West to some
 3
 4
     extent in some form, is there a way to say generally
     whether that has a positive or a negative impact on
 5
 6
     the benefits to ratepayers of these combined
 7
     projects?
 8
          BRAD MULLINS:
                         I think that's actually a good
     question, and I think that, you know, I was -- I'm
 9
     struggling with that, and I view it to be a rather
10
11
     large -- large risk. You know, when we're going
12
     through the whole CAISO process, looking at the
13
     regional expansion of the CAISO, one of the issues
14
     was how transmission costs get spread amongst all of
15
     the participants.
16
               And so, you know, if you were to -- right.
     So that could have some impacts, so potentially if
17
     you had -- that could spread the costs of the
18
19
     transmission projects even further if those get
20
     regionalized or -- but in the flip side, if you adopt
21
     sort of a single transmission rate for the whole
22
     region, you would be picking up the high cost of
     California transmission.
23
24
               And then the other issue is how the --
25
     besides the transmission, how does the generation get
```

Page 94 treated in the market, and so, you know, it would 1 2 actually probably relate a lot to how the MSP 3 develops going forward as well. But, you know, in 4 the market, basically what happens is the generation gets priced at whatever the nominal price is at any 5 6 given point, and you also have the loads that get 7 assigned a separate price. PacifiCorp system, it's all one big system, 8 9 so it's the same price for generation as it is for loads, but in the market you could have situations 10 11 where the costs at the generator is different than 12 the -- or the price at the generator is different 13 than at loads, and so whether -- depending on whether that's a positive or negative spread, that will 14 affect the overall economics. 15 16 Now, what we've seen in Wyoming is that there has been congestion -- at least in the EIM 17 there's been congestion, and those locational prices 18 have been quite low in Wyoming. And so if you were 19 20 to take that example and sort of move it into a 21 regionalization, you would be marking the generation 22 from these resources at a pretty low price, but then 23 the load that's being used to serve -- or the --24 yeah, the load that those resources are being used to serve would be assigned a higher price. And so based 25

Page 95 1 off of that, it wouldn't produce the same economics 2 It would be less favorable. 3 And the same is true in like a subscription 4 framework, for example. So if these are subscribed resources, then Utah's load will pay the Utah price 5 but the generation will receive the Wyoming price, 6 and if that price is lower, then that will harm Utah. 7 8 And so, you know, that's one of the reasons 9 for my -- at least from my perspective, you know, as we're planning going forward, it makes a lot of sense 10 11 to be building resources close to your loads because 12 then the resources and the loads are assigned about 13 the same price. You don't have that potential for diversion between the resources -- the value of the 14 resources and value of loads. 15 16 So that's a long-winded answer, but generally speaking, we view that to be a large risk, 17 18 and I don't know the precise way that it goes, but it does have a lot of potential to diminish the value of 19 2.0 the projects. 21 CHAIR LEVAR: Thank you. I appreciate that 2.2 answer. I don't have any other questions. So thank 23 you for your testimony today. 24 BRAD MULLINS: Thank you. 25 CHAIR LEVAR: Anything else from UAE or UIEC?

Page 96 MR. RUSSELL: No, I don't believe. 1 So 2 Mr. Mullins has very much enjoyed his time, but I 3 think he probably would like to leave. Is there any 4 objection to Mr. Mullins being excused? CHAIR LEVAR: Let me ask if any party or 5 commissioner has any reason otherwise -- I'm not 6 seeing any, so thank you for spending the last few 7 days with us, Mr. Mullins. 8 9 BRAD MULLINS: I appreciate it. CHAIR LEVAR: So nothing else further from UAE 10 11 or UIEC? 12 MR. RUSSELL: That's correct, Mr. Chairman. 13 CHAIR LEVAR: I've had an issue brought to my 14 attention that we probably need to make an 15 improvement in the record. A couple of days ago when 16 you entered Mr. Teply's testimony and exhibits for the record, you referred to the highly confidential 17 exhibits that were stricken out on your exhibit list. 18 19 And you started to read those and I 2.0 suggested you didn't need to bother reading the ones 21 that were stricken out because we all had this in 2.2 front of us, but this exhibit list is not in the 23 record. 24 So we don't have anything on the record 25 that shows which of these exhibits were not entered.

Page 97

1 I can see two options. We can either redo your

- 2 motion and read those into the record or we can enter
- 3 this exhibit list into the record, whichever you
- 4 prefer.
- 5 MR. LOWNEY: Either one is fine. I will note
- 6 there's only five exhibits that are stricken, so it
- 7 won't take very long to walk through them orally.
- 8 I'm fine if it's logically easier to just enter the
- 9 exhibit list, whatever your preference is.
- 10 CHAIR LEVAR: Why don't we redo the motion to
- 11 enter Mr. Teply's testimony and exhibits into the
- 12 record and then we'll have it in the transcript.
- 13 MR. LOWNEY: I would move to introduce
- 14 Mr. Teply's testimony and exhibits into the record,
- 15 that would be his direct testimony, his supplemental
- 16 direct and rebuttal testimony, his second
- 17 supplemental direct testimony, and his surrebuttal
- 18 testimony along with all of the exhibits with the
- 19 exceptions of the following five exhibits, which we
- 20 are not moving into the record.
- 21 Those would be exhibits numbered CAT 1-1,
- 22 CAT 1-7, and those were both part of Mr. Teply's --
- 23 in support of Mr. Teply's direct testimony. And then
- 24 CAT 3-1, CAT 3-2, and CAT 3-7. And those were,
- 25 actually, also in support of Mr. Teply's direct

Page 98 1 testimony. 2 CHAIR LEVAR: Okay. If there's any option to 3 this modified motion, please indicate to me. I'm not 4 seeing any, so thank you, the motion is granted. MR. LOWNEY: Thank you. 5 (Prefiled Testimony and Exhibits of C. Teply 6 were received with exception of CAT 1-1 CAT 1-7, CAT 7 3-1, CAT 3-2, and CAT 3-7.) 8 9 CHAIR LEVAR: And I'm sorry for creating that problem for us. 10 11 Anything else before we move to closing 12 statements? 13 MS. SCHMID: Yes. CHAIR LEVAR: Mr. Schmid. 14 15 MS. SCHMID: In light of the hour, with the two-hour closing statement window the Commission 16 offered, we're going to be going into the afternoon 17 18 anyway. 19 CHAIR LEVAR: Yes. 2.0 MS. SCHMID: I would like to suggest we have a 21 slightly longer than normal lunch break and resume at 22 perhaps 1:00. 23 CHAIR LEVAR: Is there any objection to that 24 from anyone in the room? 25 MR. MICHEL: Mr. Chair, if that's what the

- 1 Commission desires, we can certainly accommodate
- 2 that. I do have a flight at 3:00 and would need to
- 3 leave by 2:00, and I was planning to be the one that
- 4 would present our closing arguments, so to the extent
- 5 we could get done by 2:00, that would be preferable
- 6 from our standpoint, but we can accommodate whatever
- 7 the Commission desires.
- 8 CHAIR LEVAR: Is there any reason we couldn't
- 9 take WRA closing statements now? Is there any reason
- 10 we need to go in any particular order? Would anybody
- 11 feel prejudiced by doing Mr. Michel's closing
- 12 statement now before we break.
- MR. MICHEL: I think we'd feel prejudiced, but
- 14 we can do that. We're happy to do that, certainly.
- 15 That would be fine. Or if we could go first after
- 16 lunch that would work as well.
- 17 CHAIR LEVAR: Preference for either of those
- 18 outcomes? Which would you prefer?
- 19 MS. MCDOWELL: Maybe just to give you a little
- 20 bit of context --
- 21 CHAIR LEVAR: Sure.
- 22 MS. MCDOWELL: -- on how we've decided to
- 23 allocate the time. I believe that the parties have
- 24 agreed that the Company would take 40 minutes and the
- 25 other three interveners would take 20, and I

Page 100 believe --1 2 CHAIR LEVAR: Between the three. Okay. 3 MS. MCDOWELL: Yeah, and I think what we had 4 decided tentatively that the Company would have an opening -- the opening aspect of its closing argument 5 would be 20 to 25 minutes and then another 6 7 three parties would go to supplement what we were -what we had argued, and then we would save the 8 remainder of our time, 15 or 20 minutes for rebuttal 9 10 so --11 CHAIR LEVAR: Sure. 12 MS. MCDOWELL: I think what is being articulated 13 to you is it would be most natural for them to go after our statement which would then -- our argument 14 15 which would then frame the argument probably for 16 them. 17 CHAIR LEVAR: As long as we finish by 2:00 are 18 you --MR. MICHEL: Yes, that would be fine. 19 2.0 CHAIR LEVAR: Although questioning from us for 21 yours -- if we break until 1:00 questioning from us 22 after your opening statement might push us close on 23 yours, so with all those caveats -- we only have a 24 couple of options. We can go out of order or we can 25 come back at 1:00 and hopefully get through him in

Page 101 1 time to get his flight. 2 MS. SCHMID: Alternatively, perhaps we could 3 come back at 12:30. 4 CHAIR LEVAR: Okay. Any objection to breaking until 12:30? 5 6 MR. MICHEL: That would be helpful. Thank you. CHAIR LEVAR: Okay. Why don't we adjourn until 7 12:30. Not adjourn. Recess until 12:30. 8 9 (A lunch break was taken.) (Start of recording supplement to page 122) 10 11 CHAIR LEVAR: Okay. We're back for closing 12 statements in Public Service Commission 13 Docket 17-035-40, Application of Rocky Mountain Power for Approval of a Significant Energy Resource 14 Decision and Voluntary Request for Approval of 15 Resource Decision. 16 17 So I think the first closing statement was 18 going to be by Rocky Mountain Power. 19 MS. MCDOWELL: Thank you. 2.0 CHAIR LEVAR: You had agreed for a total of 21 40 minutes where you were going to reserve ten for 22 rebuttal or 20 for rebuttal. 23 MS. MCDOWELL: Yeah. My goal will be 15 to 20 24 but probably --25 CHAIR LEVAR: Okay.

```
Page 102
          MS. MCDOWELL: -- 15 is what we'll shoot for and
 1
 2
     we'll just see how it rolls.
 3
          CHAIR LEVAR:
                        Okay.
 4
          MS. MCDOWELL: So let me just say good afternoon
     and thank you. I want to thank you both for managing
 5
     this procedurally complex case during the last year
 6
     and for presiding over a very important hearing this
 7
 8
     week. We are grateful. And I also want to thank you
 9
     for the opportunity to provide a closing argument
10
     today in support of Company's request.
11
               We are here because the Company is
12
     convinced and believes we have demonstrated through
13
     this proceeding that the combined projects will
     provide significant net benefits to Utah customers
14
15
     including 1.2 billion in production tax credits,
     additional capacity, and reduced market reliance,
16
17
     zero-fuel-cost energy, and improved system
18
     reliability.
19
               The Company's request for resource approval
2.0
     is under Part 3 of Title 54 Chapter 17 for the
21
     Cedar Springs Ekola Flats and TB Flats wind projects
2.2
     and under Part 4 for the 140-mile 500 kV Aeolus-to
23
     Bridger/Anticline transmission line and network
24
     upgrades.
               Bringing the requirements of parts 3 and 4
25
```

```
Page 103
     together, the Commission must find, first, that the
 1
 2
     wind projects were acquired in compliance with the
 3
     solicitation process approved by the Commission; and,
 4
     two, that the combined projects are in the public
     interest, taking into consideration the six factors
 5
     specified in Utah Section 54-17-302(3)(c) and
 6
 7
     54-17-402 (3)(b).
               Those same six factors are matched in the
 8
     solicitation statute, so in each of the three
 9
     operative statutes, we have the six specified
10
11
     factors, which I'll go through in my arguments today.
12
               Now, it's important to note that with
13
     respect to the public interest standard, the statute
     does not dictate how the Commission should weigh
14
     those specified factors or otherwise restrict the
15
     Commission's discretion in determining whether the
16
17
     public interest standard is specified.
               This is consistent with the Commission's
18
     overall framework in which it operates. Courts have
19
2.0
     recognized that the Commission is charged with the
21
     responsibility of regulating utilities in the public
2.2
     interest and has considerable latitude in how it
23
     carries out that responsibility.
24
               And the cite for that in case you want to
25
     check it, it's White River Shale Oil Corp versus
```

```
Page 104
     Public Service Commission, 700 Pacific 2d 1088 1985.
 1
               So, in other words, while the Commission
 2
 3
     must consider the evidence related to each factor and
 4
     state its findings, it is not required to give any
     factor any particular weight. The Commission looks
 5
     at that on a case-by-case basis.
 6
               So let me move to the first requirement and
 7
     whether or not the wind projects were acquired in
 8
 9
     compliance with an approved RFP, and the answer is
10
     yes, they were. The Commission approved the
11
     2017R RFP in Docket 17-035-23 in its September 22,
12
     2017 Order. As a result of that Order, an IE was
13
     appointed to monitor the solicitation, and we all
     heard the findings of the IE over the last few days.
14
               The IE found that the RFP was robust.
15
     There were 72 bids, and the amount exceeded the
16
17
     capacity requested by a ratio of 5.5 to 1.
     found that PacifiCorp conformed to the requirements
18
     of the solicitation rules. The IE found that the
19
2.0
     final portfolio was in the public interest and that
21
     the wind projects will result in significant savings
2.2
     to customers.
23
               The Division in Mr. Peterson's testimony
24
     supported these findings, notably including the IE's
25
     determination that the solicitation was in the public
```

Page 105 1 interest. 2 Now, the Commission's RFP approval order 3 suggested but did not require a modification to the 4 RFP to add solar resources to the solicitation. respond, the Company conducted a separate but 5 concurrent solar RFP and then evaluated both wind and 6 solar resources as if offered under a single RFP. 7 When the bid selection model, which is the 8 system optimizer, or SO model -- that's our portfolio 9 model -- was able to select from both the wind and 10 11 solar bids, it did not select solar over wind. 12 Instead it chose both. In other words, it saw that 13 there were benefits of wind and benefits of solar, 14 but together there were the greatest benefits. 15 And this demonstrates that the Company's strategy of moving forward sequentially, first with 16 wind and then later moving to solar, is the 17 lowest-cost resource choice for customers. 18 As both Ms. Crane and Mr. Link testified, 19 2.0 the Company is currently engaged in discussions with solar developers following up on opportunities that 21 2.2 were identified in the solar RFP. 23 Now, while there has been some discussion 24 in this hearing about whether the Company should have conducted an all-source RFP, the Company's IRP 25

Page 106 portfolio modeling -- again, done under its SO 1 2 model -- made clear that wind was the most 3 cost-effective resource choice available. 4 We have addressed and tested how solar resources compare, and no party has provided any 5 evidence that any other resource choice would have 6 been cost effective. In this context, especially 7 given the time limited opportunity involved, a 8 targeted solicitation like the one the Company 9 conducted was reasonable. 10 11 Now, let me move to the second requirement 12 which is whether or not the combined projects are in 13 the public interest, taking into account the 14 six specified factors in the statute. And I should 15 say "statutes" because we're operating under both the 16 voluntary resource statute and the significant energy resource decision statute. 17 18 Since they have the same factors, I'm going 19 to go through them together for both sets of 20 resources. So, first, the evidence shows that the 21 combined projects will most likely result in the 22 acquisition, production, and delivery of electricity at the lowest reasonable cost to Utah retail 23 24 customers. 25 Like the repowering case, the totality of

Page 107 1 our modeling or all of the modeling supports the 2 finding that the combined projects will most likely 3 result in net customer benefits. The Company's 4 economic analysis measured customer benefits under nine different price-policy scenarios through 2036 5 and 2050, the same price-policy scenarios used in the 6 7 repowering case. The 18 scenarios presented, the combined 8 9 projects showed net customer benefits in 16 of 10 18 scenarios, using the base case assumptions, the 11 net benefits of the combined projects are 338 million 12 when assessed through 2036, and they are 174 million 13 when assessed through 2050. Now, as you've heard, particularly from 14 Mr. Link, these projected net benefits are 15 conservative and leave significant upside benefits. 16 The modeling, first of all, does not include the 17 300 million net present value cost of building the 18 19 Aeolus-to Bridger/Anticline transmission line in the 2.0 There is a near term need for this line, base case. 21 which I'll discuss when we get to the reliability 2.2 factor. 23 Considering these costs, the 300 million MPV costs in the base case would result in 24 25 substantial net benefits in any of the sensitivities

Page 108 and also demonstrates substantial additional value 1 2 for wind as compared to the solar resources which 3 would be developed independent of that transmission 4 line. 5 Other conservative assumptions in the 6 Company's analysis include un-modeled transfer 7 capability. I think that's about a 27 percent increase in transfer capability that ultimately came 8 out of our latest assessments, which was not 9 10 incorporated in our net benefits analysis; O&M 11 savings resulting from the use of larger turbine 12 blades at a couple of the projects; REC values, same 13 factors that you looked at in the repowering case; and understated CO2 assumptions. 14 15 So moving on to the second factor, which 16 is -- basically the impact of the resource decision in both a short- and long-term view. We've 17 interpreted that factor is really what is the impact 18 The Company has, you know, measured 19 on customers? 20 those impacts through forecasts that look at a range 21 of time horizons, both short- and long-term. 2.2 Over the 30-year life of the wind projects, 23 we've demonstrated that the time combined projects 24 are expected to generate net customer benefits in 24 25 of the 30 years. And you've also heard evidence that

1	Page 109 in the first full year of operation, the Company
2	expects rate impacts of about 1.4 percent with an
3	expectation of declining rate impacts thereafter.
4	So turning to the third factor, which is a
5	factor that just states risk, I think you can look at
6	it from both sides, the risk of foregoing the project
7	and the risk of going forward. In our opinion, the
8	risks of foregoing of the combined project are
9	greater than the risks of approval of the project.
10	A do-nothing strategy increases the
11	Company's reliance on the market, which is
12	problematic as you move into I think as we're
13	looking forward to a period of retirement of numerous
14	plants, it increases the carbon intensity of
15	PacifiCorp's system and includes the very real and
16	substantial risk that customers will bear the cost of
17	needed transmission infrastructure without the
18	benefit of PTC-eligible wind resources to subsidize
19	that line.
20	On the risk side, the risks of going
21	forward, you've heard evidence that the Company has
22	worked hard to manage the project risks and has
23	assumed the risks within its control, particularly
24	the critical risk of PTC qualification.
25	You've also heard that the installed

Page 110 capacity for the wind projects has decreased 1 2 significantly from the proxy projects we began with. 3 We market tested those wind projects and the costs 4 have come down substantially over the course of this 5 case. The risk of delay beyond 2020 has also 6 7 Through the Wyoming CPCN process, the decreased. Company has resolved key rights-of-way issues with 8 9 approximately 50 percent of the largest landowners affected by the combined projects, clearly the way 10 11 for the Company to meet its project schedule and 12 budget for obtaining its rights-of-way. 13 The Company has also agreed to negotiate a 14 mechanical availability quarantee at the market 15 standard, which is 97 percent, in any third-party maintenance agreements, ensuring that the wind 16 17 projects will be available to perform as forecast. Now, the fourth and fifth statutory 18 factors, which is whether the combined projects will 19 20 enhance system reliability and whether they will have 21 any impact on the Company's financial status, neither 22 of those factors have really been disputed by any 23 party. With respect to enhanced reliability, it's clear that the Bridger -- Aeolus line is in the 24 25 Company's long-term transmission plan. There's no

Page 111 1 dispute about that. 2 It also provides critical voltage support 3 and additional operational flexibility for the 4 system, allowing the Company to avoid reliability issues, not to wait until they happen, but to 5 actively, proactively work to avoid those issues on 6 7 its system. And to be clear, the congestion on the 8 transmission system will persist without the new line 9 even if there is no additional wind and even after 10 11 the Dave Johnston plant retires. Without the new 12 line, the existing generation would still exceed the 13 existing transmission capacity even after Dave Johnston retires. 14 15 Now, there is a last catchall factor which is basically any factor that the Commission 16 17 determines is relevant and important to its consideration. It seems like under that factor is 18 19 where the parties have suggested that the Commission 2.0 needs to look at the need requirement. The need 21 requirement is not specified in the factor but 22 certainly -- in the factors, but certainly is an 23 issue the parties have addressed. So presumably that 24 is where the parties are suggesting you take a look 25 at it.

1	Page 112 And I want to just make clear that we
2	believe the evidence demonstrates clearly that there
3	is a capacity need. The most recent IRP load
4	forecast and resource balance shows an immediate
5	capacity shortfall, nearly 600 megawatts in 2021
6	rising to over 3,000 megawatts by 2036.
7	Now, folks have said a lot of things about
8	need, but nobody has disputed those numbers which are
9	the most recent numbers coming out of the IRP update
10	that was just filed. Those numbers are also the
11	numbers that are reflected in the Company's economic
12	analysis. The load and resource balance, that is,
13	you know, a part of the IRP update is also a part of
14	the Company's updated economic analysis.
15	You've also heard that the capacity
16	contribution of the proposed new wind projects is
17	just over 180 megawatts, which is well below the
18	projected near-term and long-term need. It would be
19	contrary to basic least-cost principles and IRP
20	standards and guidelines to reject the combined
21	projects as unneeded when they are more economic than
22	market purchases or front office transactions.
23	Now, because the combined projects are in
24	the public interest and meet each of the factors
25	required for approval under the applicable statutes,

1	Page 113 the Commission should reject the parties' proposals
2	for conditions on approval including a hard cost cap.
3	Basically there are several proposals being
4	made by the parties that the Company be capped at its
5	current estimated costs of construction. We believe
6	that to condition approval on a hard cap is contrary
7	to the statute inasmuch as it would prospectively and
8	arbitrarily preclude the Commission's ability to
9	review costs later that may be prudently incurred.
10	We also believe that the resource approval
11	statutes provide appropriate procedures for the
12	Commission to closely scrutinize the Company's
13	performance in implementing these projects, making
14	such conditions unnecessary.
15	So in summary, the evidence provided by the
16	Company demonstrates the combined projects are in the
17	public interest and meet each of the specified
18	statutory requirements. The combined projects are
19	most likely to lower customer costs, have a
20	beneficial near- and long-term customer impact, are
21	lower risk than a do-nothing resource strategy across
22	a broad range of potential future market and system
23	conditions.
24	So for the future energy needs of Utah
25	customers, the Company respectfully requests that the

1	Page 114 Commission approve its request for resource approval
2	in this docket. Thank you.
3	CHAIR LEVAR: Okay. Thank you. We appreciate
4	that statement.
5	Commissioner White, do you have any
6	questions for her? And if we're tracking time, you
7	used about 16 minutes.
8	MS. MCDOWELL: Okay.
9	COMMISSIONER WHITE: I have no questions right
10	now. Thanks.
11	CHAIR LEVAR: Commissioner Clark?
12	COMMISSIONER CLARK: No questions. Thank you.
13	MS. MCDOWELL: Thank you.
14	CHAIR LEVAR: I have a few. You discussed
15	capacity need as falling under the catchall "other
16	factors to consider." Is there any argument that
17	capacity need relates to the first factor, whether
18	it's whether solicitation will most likely in the
19	acquisition, production, and delivery of electricity
20	at lowest reasonable cost to retail customers?
21	Doesn't capacity need relate to other electricity
22	that might be available through front office
23	transactions and which will be the low which
24	option will provide the lowest cost to retail
25	customers?

Page 115 1 MS. MCDOWELL: You know, I suppose it could. 2 You know, in looking over the parties' filings in both this case and the repowering docket where 3 4 similar issues were made, it seemed like folks were suggesting it was under the other factors -- the 5 6 other considerations factor. But -- and really, as the Commission -- in the cases I've looked at where 7 you're looking at that -- low-cost factor I think is 8 what people call it -- you know, my interpretation of 9 the orders has really been that that is the factor 10 11 where the Commission looks at the net benefits; it 12 looks at the economic issues. 13 So while I think some people have suggested 14 you have to compare every resource, I think the 15 Commission has reasonably construed that low-cost factor to really be the factor that asks the 16 Commission to scrutinize the economic analysis and 17 determine if there's net benefits, determine if it's 18 a cost-effective resource. 19 2.0 And the Commission appears to, you know, 21 have looked at a variety of considerations in making 2.2 that determination, certainly capacity need could be 23 one of those. 24 CHAIR LEVAR: Okay. Thank you. A couple more 25 questions -- and please don't read anything into

Page 116 1 these questions, but I think we just want to develop 2 the record of options in front of us. 3 If the Commission were to decline to 4 approve the application, what would you view as being the regulatory status of sunk costs that were 5 expended to meet the Safe Harbor 2016 requirements? 6 MS. MCDOWELL: You know, I would need to 7 research that issue. I know there is a provision in 8 9 the statute around benchmark -- recovery of benchmark resources and, you know, I just -- I think there are 10 11 some particular statutory provisions that might 12 apply. So that is a question I can't just give you 13 an answer to without taking a closer look at it. I 14 quess I haven't like tried to go to that scenario 15 so --16 CHAIR LEVAR: Understandably, yeah. 17 MS. MCDOWELL: Trying to be optimistic here. CHAIR LEVAR: You haven't provided us those 18 options in your case. 19 2.0 MS. MCDOWELL: No, no. I'm trying not to think 21 about that. 2.2 CHAIR LEVAR: Well, I have one more question 23 along that same line. Again, you may not be ready to answer right at this moment. Part five of the 24 chapter we're dealing with has a waiver option. 25 Ιf

```
Page 117
     we issued a decision denying the application, in your
 1
 2
     view is the waiver option still applicable or is it
 3
     only applicable in lieu of what the Utility's already
 4
     done?
 5
          MS. MCDOWELL: Are you saying do you have the
 6
     option of denying the application but allowing a
              Is that the question?
 7
     waiver?
          CHAIR LEVAR: I think that's essentially what
 8
 9
     I'm asking although I think waiver statute has some
     required steps that haven't occurred in this docket,
10
11
     at least arguably, but that's roughly the question
12
     I'm asking.
13
          MS. MCDOWELL:
                         Well, let me just say this:
     the wind projects, which are a significant energy
14
     resource decision, for the Company to move forward it
15
     would require a waiver if you deny the resource
16
     application. So, you know, my sense is that the
17
18
     record we've developed here would probably be
19
     sufficient to meet the requirements of the waiver
20
     statute. I mean we would have to go through and look
21
     to see whether there was any additional process that
22
     would be required, but, you know, certainly if your
23
     intention is to allow the project to go forward but
     reserve judgment on them, then that would require a
24
     waiver for the wind projects. The Company couldn't
25
```

Page 118 move forward without them. 1 2 CHAIR LEVAR: Okay. Thank you. I appreciate 3 those answers. I think those are all my questions, 4 so with that we go to Mr. Michel next. 5 MR. MICHEL: Thank you. And good afternoon, Chairman LeVar, Commissioner White, Commissioner 6 I want to thank you, again, for shortening 7 Clark. 8 the lunch hour a bit to accommodate my travel, and 9 thank you for providing the opportunity for us to present closing arguments. 10 11 As you heard from Ms. Kelly yesterday, WRA 12 supports approval of the combined projects. 13 believe the projects are in the public interest to 14 meet the statutory requirements of the Utah Code Sections 54-17-302 and -402. The statutory scheme in 15 16 Utah allows the Commission to approve the projects if they are in the public interest after considering a 17 set of enumerated factors. 18 19 With regard to those factors, WRA and other 2.0 parties have presented evidence that the projects 21 result in utility services at the lowest reasonable 2.2 cost to customers, that they reduce risk and 23 uncertainty, provide short- and long-term benefits, 24 enhance system reliability, and provide the Company

an opportunity to earn a return on invested capital.

25

```
Page 119
               In addition, development of the combined
 1
 2
     projects is environmentally responsible and -- quote,
 3
     will promote the safety, health, comfort, and
 4
     convenience of the public -- consistent with Utah
     Code 54-3-1.
 5
 6
               The hearings over the past few days have
     shown a need for the combined projects. They would
 7
     reduce risk, reduce PacifiCorp's capacity shortfall,
 8
 9
     and are very likely to reduce system costs and
     provide customer savings. On the other hand, denial
10
11
     of the projects and foregoing the associated
12
     production tax credits will most likely result in
13
     higher costs and risks for PacifiCorp customers.
14
               While some have argued that the combined
     projects provide little capacity value to
15
16
     PacifiCorp's system -- and that is true -- the
     projects nevertheless are the least-cost means by
17
     which to provide 180 megawatts of capacity.
18
     because the PTC opportunity -- because of the PTC
19
20
     that now exists, the projects will very likely
21
     provide that capacity while at the same time saving
22
     customers money. This is a much better alternative
     than continued reliance on front office transactions
23
     with their inherent costs and risks.
24
25
               But at the end of the day, the Division's
```

Page 120 witness Mr. Peaco testified that if the Commission 1 2 found that the projects were likely or would lower 3 costs and risks, then they should be approved. 4 Another of the arguments you have heard is that development of solar resource be pursued instead. 5 That is a false choice. 6 7 If both types of resources are beneficial, they should both be developed. In fact, as Ms. Kelly 8 testified, solar and wind resources can compliment 9 each other with their production profiles, meaning 10 11 that their combined system benefits can be more than 12 additive if the two projects are both developed. 13 Because of the PTC timing and limitations, however, the wind project is before you first. 14 With regard to the specific savings that 15 the projects can provide, the wind projects will 16 displace more costly and risky fossil fuel energy. 17 PacifiCorp's evidence in this regard is, in our view, 18 conservative, and we believe the cost and risk 19 20 benefits of the project are in fact significantly 21 more than the Company portrays. 2.2 PacifiCorp's natural gas price forecasts are lower than those of other vendors, which 23 24 understates the benefits of the projects. To assume

that as the project opponents have, that because

25

Page 121 natural gas prices have been recently trending 1 2 downward -- they will continue to do so -- ignores 3 that today's prices are at historic lows and can go 4 up much more than they can go down. It also ignores, as Ms. Kelly's analysis 5 found, that most recent Henry Hub gas prices show an 6 upward trend. The overly optimistic notion that 7 natural gas prices will remain very low over the next 8 9 20 to 30 years ignores history and the volatile 10 nature of that industry. 11 Similarly, the Company's projections of CO2 12 costs are overly conservative. Reliance on a 13 scenario with zero economic costs for CO2 over the 14 next 30 years is simply not realistic. 15 Mr. Chairman, would you like me to pause a 16 second and allow the court reporter to --17 CHAIR LEVAR: You know, we're going to have to 18 rely on the recording, so why don't you just go ahead and continue. 19 2.0 MR. MICHEL: Okay. Thank you. So similarly the 21 Company's CO2 project costs we believe are overly 2.2 conservative. Reliance on a scenario with zero 23 economic cost for CO2 over the next 30 years is simply not realistic. 24 25 (end of audio supplement)

1	Page 122 MR. MICHEL: Despite the current inaction on CO2
2	regulation at the federal level, the rest of the
3	world in much of PacifiCorp's service area has moved
4	or is moving towards regulating carbon dioxide. Utah
5	customers cannot be isolated from this trend,
6	particularly given today's regional electricity
7	markets.
8	It would be imprudent to ignore the risk
9	and likelihood of a future with a price on carbon.
10	As Ms. Kelly testified, even PacifiCorp's medium and
11	high carbon dioxide cases are below the lowest
12	estimates of future carbon costs provide by other
13	industry sources.
14	The conservative nature of PacifiCorp's
15	economic analysis in the project is deepened by the
16	Company's use of deflated 2012 dollars to measure
17	carbon costs, its exclusion of revenues from
18	potential REC sales, and its exclusion of potential
19	benefits from the sale of credits similar to ERCs and
20	EPA's now-stalled Clean Power Plan. While, of
21	course, these benefits are speculative, they are
22	important nevertheless to consider as part of the
23	overall evaluation of the projects' economics and
24	risks.
25	But even if one ignores these benefits,

Page 123 uses a uniform levelized or nominal approach to both 1 2 PTC benefits and capital costs, as the Office suggests, and removes the unrealistic zero CO2 cost 3 4 assumption that even the Office's witness disallowed, the combine projects nevertheless provide economic 5 benefits to PacifiCorp customers in five of six 6 price-policy scenarios, whether evaluated through 7 2036 or 2050. 8 Or looked at another way, a denial of the 9 projects would harm PacifiCorp's customers in every 10 11 scenario except the one that assumes perpetually low 12 gas prices and minimal carbon regulation for the next 30 years. Denial of the projects is not a good bet. 13 14 Perhaps most significant in assessing the merits of the projects is a hedging value that they 15 provide. As Ms. Kelly testified, this benefit was 16 not fully captured by either PacifiCorp's stochastic 17 analysis or by its scenario analysis. 18 The hedging value is a key attribute of the 19 20 projects that by itself could far outweigh the other 21 substantial benefits. Robust resources provide 22 hedging value because they avoid unexpected, 23 high-priced events and the shock of changing planning environments. The combined projects hedge against 24 25 the potential for tightening wholesale power markets,

1	Page 124 fluctuating and volatile prices in the natural gas
2	market, the likely imposition of carbon regulation.
3	As such, they're a resource that is
4	well-suited to mitigate the impacts of events and
5	circumstances that the electricity industry may face
6	in the future.
7	Finally, one cannot ignore that foregoing
8	these projects also foregoes the opportunities to
9	strengthen the transmission system at the same time
10	reduce customer rates by taking advantage of hundreds
11	of millions of dollars of currently available
12	production tax credits.
13	While WRA supports approval of the combined
14	projects, we are not blind to some of the risks to
15	customers that other parties have legitimately
16	identified. Specifically, those risks include
17	capital cost overruns, delays in the start of
18	operation, and underproduction from the facilities.
19	Because of those risks and recognizing the
20	financial benefit to the Company that the projects
21	would provide, WRA supports reasonable customer
22	protections as part of the approval as identified in
23	Ms. Kelly's testimony. These would include no
24	track no resource tracking mechanism, a cap on the
25	recoverable capital investment and O&M, a ten-year

Page 125 quaranty of 95 percent of PTC and energy benefits 1 2 assumed in the Company's May 17th testimony, a limit on the allocation of transmission costs to Utah 3 4 customers equal to the jurisdictional of 88 percent of those costs, and a limit to Utah's financial 5 commitment to the projects to no more than its 6 jurisdictional share using the 2017 protocol. 7 In conclusion, we ask that you approve the 8 9 combined projects and enable what we believe is a very beneficial resource for PacifiCorp's customers 10 11 and the public. Thank you again for the opportunity 12 to present our position. 13 CHAIR LEVAR: Okay. Thank you, Mr. Michel. 14 Commissioner Clark, do you have any questions for him? 15 16 COMMISSIONER CLARK: No questions. Thank you, Mr. Michel. 17 CHAIR LEVAR: Mr. White? 18 19 COMMISSIONER WHITE: No questions. Thank you. 2.0 CHAIR LEVAR: I have a question about one of the 21 Office's conditions that your witness has supported 2.2 in lieu of a full grant of the application, the hard cap on the expenses. You heard earlier 23 Ms. McDowell's argument that any kind of hard cap 24 25 like that would not be statutorily authorized; it

Page 126 would tie the hands of a future commission's ability 1 2 to do a prudence review and whether we can -- the 3 issue is whether we have the authority to restrict a 4 future commission's statutory authority to conduct a prudence review of additional costs. 5 What's your view of that issue? 6 MR. MICHEL: Commissioner -- Mr. Chairman, my 7 view is that a conditional approval, if that was a 8 9 condition of the approval that the Company would accept or not accept, would not run into those 10 11 pitfalls that you've identified. 12 In other words, it would be a condition of 13 approval that the Company would accept; if they did that, then my understanding is they could be bound by 14 15 that. 16 CHAIR LEVAR: Okay. I think that's my only question. Thank you. 17 Thank you. 18 MR. MICHEL: I did have a couple more questions 19 CHAIR LEVAR: 2.0 for Ms. McDowell that I intended to ask and I failed 21 to do so, so I don't think -- I think I'm going to 2.2 back to you and ask these other two. I have two 23 questions that are related, so I'm going to ask both of them and maybe you can address them together. 24 25 As we're evaluating that first factor on

Page 127 1 electricity at the lowest reasonable cost, one of the 2 things that we have to look at is the robustness of 3 the RFP response. We had a lot of discussion over 4 the last few days. As we consider that -- as we consider 5 whether the response was sufficiently robust to lead 6 to a finding on that first factor or a consideration 7 of that first factor, how should we consider eligible 8 9 bidders versus those who are ineligible because of 10 the transmission queue? Should an ineligible bidder 11 be considered as part of the robustness of the 12 response? 13 And the second question that's related is is there any flexibility or waive-ability with 14 15 respect to the FERC requirement, with respect to the 16 interconnection queue or are those pretty firm requirements with an extremely high standard for ever 17 having any flexibility? 18 19 MS. MCDOWELL: Okay. Let me answer your first 2.0 question first, and I think if you listened carefully 21 to the testimony of both the IE and Mr. Peterson, both said the same thing, which is that the 2.2 23 transmission queue issues were unfortunate, and they 24 both recommend future steps and future RFPs to try to 25 mitigate that problem. That problem is not a problem

Page 128 of PacifiCorp's making, but I think both felt that 1 2 perhaps through additional communication with bidders that issue could have been managed better. 3 4 So for the future we certainly take those recommendations and considerations into account, but 5 for purposes of this RFP, both said the same thing, 6 7 which is, ultimately, the most economic bids were selected, that Mr. Peterson's were fortuitously, the 8 interconnection issue did not interfere with the 9 market testing of the wind projects. 10 11 So that's really what that robust response 12 I think you're looking to get market information 13 to verify that the projects that are before you are the lowest cost, and here, we can say that because 14 the final shortlist was -- initial final shortlist 15 was selected before the transmission restudy results 16 were done. 17 And the results of that were to change out 18 one Company project for another, so it's not as if 19 2.0 there were, you know, PPAs or other bidders out there 21 whose participation was thwarted because of, you 22 know -- that they didn't make it because of that 23 interconnection queue. I think the IE identified one 24 PPA that was close, but ultimately he concluded that 25 the final shortlist was the most economic shortlist.

Page 129 1 So, you know, Mr. Peterson did say he 2 believed that the response was robust, that there 3 were 72 bids, there were thousands of megawatts 4 received. All that happened and was not -- that didn't get undone by the fact that there was a 5 6 transmission-queue issue at the end. So that's the 7 answer to your first question. 8 With respect to your second question, I was 9 ready for it because you suggested you might have an interest in that answer, and my understanding is that 10 11 on the transmission-queue issue, ultimately there 12 is -- you cannot get -- FERC will not waive the 13 requirement that you follow serial order in a 14 transmission queue. That is a non-waive-able requirement. That's just the way it works. That's 15 the rules of the road. 16 17 Those transmission queues are public. 18 People can sort out, you know, through the kinds of 19 options and agreements how to move themselves up in 20 the queue by getting a better queue position, but 21 ultimately, you follow a serial order in queue 22 positions. 23 Now, what is potentially waive-able, what FERC has looked at and given some flexibility is 24 different ways to study the queue, but ultimately 25

Page 130 when it finally comes down to who gets the 1 2 transmission rights, it's strictly serial queue order 3 and that is not waive-able. 4 CHAIR LEVAR: Thank you. I appreciate those Does that leave any follow-up questions? 5 Commissioner White. 6 COMMISSIONER WHITE: Well, not those specific 7 questions, but I want to follow up on a question you 8 asked previously. Again, I don't want folks to read 9 anything into this also, but help me understand in 10 11 terms of the process in Oregon and where the Company 12 stands now with respect to the combined projects and 13 help me understand what that would look like or how it would differ from if there was a rejection here 14 15 and yet a potential waiver approval. 16 Does that leave the Company to be in the same spot or does it -- help me understand how that 17 might or might not be different. 18 19 MS. MCDOWELL: Let me just talk about the Oregon 20 process. The Company -- I think as we went through 21 and reviewed that Order in the context of this

process. The Company -- I think as we went through
and reviewed that Order in the context of this
hearing, the Company has IRP acknowledgment, and the
Commission was clear in not approving the shortlist,
that that didn't take anything away from that IRP
acknowledgment, and ultimately that is the critical

1	Page 131 approval or acknowledgment that the Company needed.
2	So in Oregon the next step would be to use
3	the mechanisms that are statutorily allowed for
4	recoverability of renewable resources in that
5	jurisdiction, so that there's a particular statute
6	that allows the company outside of a rate case to use
7	deferral mechanisms and a specific automatic
8	adjustment clause mechanism to recover renewable
9	resources and associated transmission.
10	So the Company would proceed through that
11	process. That's the Company's intention. So it
12	would not require a general rate case. It would be a
13	fairly straightforward process, and, basically, once
14	the resources go online, there would be a deferral to
15	capture those full amounts and then they would go
16	into rates through that renewable adjustment clause.
17	There would be a prudence review of the resources in
18	that context, so that's the Oregon process.
19	Here, if the Commission waived the
20	requirement for resources approval, I think that puts
21	the Company in a position of needing to file a rate
22	case to get recovery of those resources, and, you
23	know, that would follow in the normal rate case
24	process. I guess I would say that, you know, the
25	reason we're here is because and the reason

Page 132 there's this statute is because we've heard loud and 1 2 clear from folks that they don't want us to go out and spend a lot of money without having a 3 4 pre-approval process. So certainly if this Commission denied 5 6 pre-approval, you know, that would give the Company pause about moving forward on such a significant 7 8 investment just because of the context. I mean, 9 pre-approval matters. It matters because that's the statutory scheme here, and I think since it's not the 10 statutory scheme in Oregon, it has a different flow 11 12 to it and would make the Company consider its options 13 as, I think, Ms. Crane indicated in her testimony. 14 COMMISSIONER WHITE: Thank you. CHAIR LEVAR: Did you have anything else before 15 16 we move on? 17 COMMISSIONER CLARK: If I may. 18 CHAIR LEVAR: You just thought you were done earlier. 19 2.0 MS. MCDOWELL: Pardon me? 21 CHAIR LEVAR: I said you just thought you were 2.2 done earlier. 23 MS. MCDOWELL: Yeah, I know. I just left you

COMMISSIONER CLARK: My questions relate to

24

25

speechless.

Page 133

- 1 Chair LeVar's first position about queue position.
- 2 From the record, what did a bidder that had a queue
- 3 position greater than 0713 learn from the restudy
- 4 that the bidder wouldn't have known in the
- 5 information that the Company could provide when the
- 6 bidding process occurred?
- 7 MS. MCDOWELL: Let me just check with my
- 8 transmission queue expert here.
- 9 COMMISSIONER CLARK: Sure.
- 10 MS. MCDOWELL: And, you know, perhaps if it's
- 11 acceptable, I can just have Ms. Link, who really
- 12 manages those issues for the Company, respond
- 13 directly.
- 14 COMMISSIONER CLARK: It's fine with me. I know
- 15 she's been here throughout the hearing. Just so,
- 16 Ms. Link, your comments are confined to the record.
- 17 SARAH LINK: Yes, they are confined to the
- 18 record. Sarah Link on behalf of PacifiCorp.
- 19 As Mr. Vail testified, before the
- 20 interconnection restudies were performed, it was
- 21 public knowledge on Oasis that the interconnection
- 22 studies for Queue Position 708 triggered the need for
- 23 the full the build-out of Segment -- of at least
- 24 Gateway South.
- When we performed the interconnection

Page 134

- 1 restudies, that trigger point was moved down to
- 2 Queue Position 713, so anybody below 713 was
- 3 unaffected. Before the restudies they needed the
- 4 full build-out of Gateway South and after the
- 5 restudies they needed the full build-out of
- 6 Gateway South, and that was publicly available
- 7 information.
- 8 COMMISSIONER CLARK: Thanks. I appreciate you
- 9 reminding me of how that worked.
- 10 CHAIR LEVAR: With that, I think we're ready to
- 11 move to Mr. Holman next.
- 12 MR. HOLMAN: Thank you, Chair LeVar. Good
- 13 afternoon, Commissioners White and Clark. I just
- 14 want to first thank the Commission for letting us
- 15 wrap this up with closing arguments. I appreciate
- 16 the opportunity to reiterate our case.
- 17 As you've heard from Ms. Bowman's testimony
- in her statement today, Utah Clean Energy is in
- 19 support of the combined projects, but the scope of
- 20 Utah Clean Energy's testimony throughout this
- 21 proceeding has largely focused on the benefits that
- 22 the combined projects afford Utah ratepayers as they
- 23 relate to risk mitigation and climate change
- 24 specifically.
- Ms. Bowman filed testimony and her

1	Page 135 statement today provided details of our position in
2	this docket and in the interest of brevity, to wrap
3	this up a little bit faster, I'll only briefly
4	summarize those questions now, but I'm happy to take
5	questions if you have any after the fact.
6	Title 54, Chapter 17, Parts 302 and 402
7	list some of the factors that the Commission
8	considers when determining whether a proposal is in
9	the public interest. These factors include whether
10	the proposal would provide the lowest-reasonable cost
11	electricity but also the long-term and short-term
12	impacts, risk, reliability, and other factors
13	determined by the Commission to be relevant.
14	Generally, our position is that the
15	combined projects are a positive initial step towards
16	the decarbonizing PacifiCorp's energy generation
17	fleet, which can be realized more economically for
18	ratepayers through the production tax credits. The
19	combined projects will also proactively position the
20	Company to respond to increases in fuel and carbon
21	costs as well as regulatory changes that may require
22	additional renewable resource capacity in the future.
23	This alleviates risks for ratepayers.
24	The risks identified by other parties in
25	this proceeding can be mitigated with the inclusion

Page 136 of ratepayer protections outlined by the Office and 1 2 just summarized by Mr. Michel from WRA. Utah Clean 3 Energy also supports these positions as reasonable 4 safequards designed to help ratepayers realize the short-term and long-term benefits of the combined 5 6 projects. While Utah Clean Energy's testimony in this 7 docket addresses many of the public interest factors 8 from parts 302 and 402, I would like to focus for a 9 moment on the last fact, the other factors that the 10 11 Commission may deem relevant. Throughout our 12 testimony Utah Clean Energy has explained why the 13 risk and costs of climate change are relevant to consider when determining whether the benefits of the 14 combined projects outweigh the costs. 15 There's widespread scientific consensus 16 based on existing information that significant carbon 17 dioxide emissions reductions are necessary to 18 19 mitigate the adverse impacts of climate change. 20 Utah Clean Energy cites the climate science special 21 report in our testimony, which broadly outlines the 22 body of knowledge regarding the anticipated impacts 23 of a changing climate. 24 A number of U.S states and countries have began to address this issue through policies that 25

```
Page 137
     regulated carbon emissions.
                                  In Utah, during the 2018
 1
 2
     general legislative session, the Utah legislature
 3
     enacted and the governor signed, House Concurrent
 4
     Resolution 7, which is entitled Concurrent Resolution
     on Environmental and Economic Stewardship.
 5
               This resolution acknowledges a change in
 6
     climate and reasonably encourages state agencies to
 7
     reduce emissions through incentives. It encourages
 8
     reliance on and understanding of climate science and
 9
     states in relevant part, quote, that "We should
10
11
     prioritize our understanding and use of sound science
12
     to address causes of a changing climate and support
13
     innovation and environmental stewardship in order to
     realize positive solutions, " end quote.
14
15
               It also states, quote, that "The
16
     Legislature and the Governor encourage individuals,
17
     corporations, and state agencies to reduce emissions
18
     through incentives in support of the growth in
19
     technologies and services that will enlarge our
2.0
     economy in a way that is both energy efficient and
21
     cost effective, " end quote.
2.2
               These selections from the resolution
23
     represent an acknowledgment by the legislature and
24
     the governor that our climate is changing and that
25
     reduction -- and that reducing emissions through
```

Page 138 incentive like the PTCs will benefit the public. 1 2 such, emission reduction is a relevant factor that 3 the Commission should consider when conducting its 4 public interest analysis. 5 The combined projects represent a time-limited opportunity to leverage tax incentives 6 that encourage the acquisition of resources that we 7 believe will impute benefited to ratepayers over 8 their useful lifetimes and in part as result of 9 reducing emissions. 10 11 The combined projects will also protect 12 ratepayers from future uncertainty and risk related 13 to increasing fuel and carbon costs. For these reasons we believe the combined projects are in the 14 public interest and I respectfully recommend that the 15 16 Commission approve them. Thank you. 17 CHAIR LEVAR: Thank you. Commissioner White, do you have any 18 19 questions for Mr. Holman? 2.0 COMMISSIONER WHITE: Yeah, just one. familiar with that resolution. I'm not probably as 21 22 familiar as UCE is. From your perspective, does it 23 matter where these resources are located? In other 24 words, these resources are located in eastern Wyoming 25 and not in the state of Utah. Does that resolution

Page 139 1 point to any kind of locational specificity or is it 2 just --3 MR. HOLMAN: I don't think the resolution, you 4 know, specifically disqualifies resources that operate outside of bounds of Utah. I think because 5 6 it was the Utah legislature and the Utah governor generally they had Utah in mind, but because of 7 PacifiCorp's system and the nature of it, resources 8 9 in another state benefit Utah ratepayers. So by 10 making changes in the PacifiCorp system largely or 11 generally, you are benefiting Utah ratepayers. 12 COMMISSIONER WHITE: That's all I have. Thank 13 you. CHAIR LEVAR: Commissioner Clark. 14 15 COMMISSIONER CLARK: I don't have any questions. 16 Thank you very much for your participation. 17 MR. HOLMAN: Thank you. CHAIR LEVAR: I think I have one. I apologize 18 19 if this would have been a better question for your 2.0 witness this morning. I think it might have been to 21 address to her. 2.2 MR. HOLMAN: I'll try my best. It's my second

position is you're suggesting some kind of

CHAIR LEVAR: Okay. I'm understanding your

23

24

25

month so --

Page 140 value-adder that we should consider for climate 1 2 change in addition to the CO2 pricing that's in the 3 modeling. Do you have any kind of quantification 4 that you're suggesting for that? Or in the alternative, how would we go about quantifying that 5 as economic regulators? 6 I think in Ms. Bowman's final round 7 MR. HOLMAN: of testimony there is a short quantification of the 8 9 amounts of carbon that these resources would offset, 10 so by introducing that added value or attributing a 11 value to that carbon and then adding that value to 12 the benefits of the combined projects, you would be 13 able to, in that regard at least, introduce some sort of quantitative benefit when considering whether the 14 combined projects are as a whole in the public 15 16 interest. But beyond that, we haven't done any quantitative analysis to enable the Commission in 17 this proceeding to determine the benefits 18 19 holistically of climate change mitigation from the 20 combined projects. Okay. I think the clarification 21 CHAIR LEVAR: 22 I'm looking for is your position is that value you 23 describe should be an adder-to modeling potential CO2 24 costs? Is that UCE's position? 25 MR. HOLMAN: That's correct, yes.

```
Page 141
 1
          CHAIR LEVAR:
                        Okay. Thank you for your closing
 2
     statement.
 3
               Ms. Hickey.
 4
          MS. HICKEY:
                       Thank you, sir. Lisa Hickey
     representing the Interwest Energy Alliance.
 5
     Interwest is a trade association of wind, solar,
 6
     geothermal, and energy storage developers working
 7
 8
     with nongovernmental organizations to promote the
     growth of renewable energy around the intermountain
 9
     region including here in Utah.
10
11
               Interwest promotes the combined projects
12
     because they will provide fuel cost free, stable
13
     price, low-cost emissions-free energy with some
     capacity benefits for Utah ratepayers.
14
15
     retained Gregory Jenner due to his tax expertise
     related to the PTCs because we anticipated that
16
     potential changes to the PTC may be at issue early in
17
     the proceeding and we thought it may be of help to
18
     the Commission and the parties.
19
               In the end, he testified that
2.0
21
     Rocky Mountain Power's tax analysis seems to be
2.2
     valid, confirm that it is not all-or-nothing
23
     eligibility but is determined on a turbine-by-turbine
24
     basis and said that PacifiCorp's quarantee of PTC
25
     eligibility is a valuable one and reliable even in
```

Page 142 the event of unforeseen roadblocks because there's 1 2 some ability to prove excusable delays due to permitting and other matters outside of PacifiCorp's 3 4 control while building the transmission line. That said, it's clear time is of the 5 essence as described by Rocky Mountain Power to gain 6 7 these hundreds of millions of dollars in discounts brought by the PTCs available to the wind projects. 8 Mr. Jenner also confirmed that while Interwest 9 clearly supports additional solar acquisitions in the 10 11 near term, because of solar energy's benefits to 12 balancing the system when added in addition to wind, as testified by other parties including Ms. Kelly, 13 and to acquire the 30 percent ITC levels, Rocky 14 15 Mountain Power's planning follows industry trends delaying solar until wind has been acquired to 16 17 acquire the PTCs. We do look forward to hearing more about 18 19 solar acquisitions arising out of the solar RFP or 2.0 other negotiations in the near future. Interwest 21 recommends that Rocky Mountain Power continue to grow 2.2 its wind fleet because of its hedge values, providing 23 a hedge against natural gas volatility provided over 24 the long-term. That's been testified to by several 25 witnesses.

1	Page 143 Renewable energy can provide reliability
2	benefits to the system, especially through a
3	combination of wind and solar as testified by
4	Ms. Kelly. Replacing a system run on fossil fuels
5	with capital investments in modern technologies will
6	be more efficient and reduce regulatory costs going
7	forward.
8	Interwest and other parties including the
9	Division have consistently recommended that
10	PacifiCorp reduce its reliance on FOTs, front office
11	transactions, due to the likelihood that power costs
12	will rise while natural gas prices rise.
13	And because of the risks of power price
14	volatility over time, the capacity need is growing to
15	over 3000 megawatts, as testified by the UCE witness
16	Kate Bowman, by the end of the planning period. Even
17	Mr. Peaco from the Division agrees that natural gas
18	prices are likely to rise, so the costs of front
19	office transactions will rise.
20	Interwest, along with the Division and
21	other IRP stakeholders, have also recommended that
22	PacifiCorp continue its transmission planning to
23	improve reliability and allow it to integrate
24	renewables from remote areas, both wind- and
25	solar-rich regions.

1	Page 144 Overall transmission planning will also
2	serve Utah directly through enabling solar
3	interconnections along with the winds as you go
4	forward. Utah can benefit in the meanwhile from the
5	advanced wind technologies brought with these
6	combined projects.
7	As testified by Rocky Mountain Power
8	witness Teply and Mr. Vail Chad Teply and
9	Mr. Vail, this transmission line and upgrades have
10	been planned for about ten years and were anticipated
11	to be built in 2024. Interwest is concerned about
12	the arguments from the Division that transmission
13	upgrades must not be approved until a line is needed
14	for reliability in the immediate future and then must
15	also be separately substantiated through economic
16	principles.
17	We urge the Commission not to wait to
18	approve these upgrades until the line is affecting
19	reliability in the very near term because as we all
20	know it takes years to permit and build a line and by
21	then Utah ratepayers and businesses in Casper will be
22	suffering losses. Interwest recommends you approve
23	these transmission upgrades while you have the new
24	wind projects to pay for it.
25	The PTC has already dropped below

Page 145 1 100 percent and is scheduled to expire completely. 2 The ITC on the other hand continues for a higher 3 level for a longer period, so solar acquisition 4 trends are moving a bit behind wind. Projects must commence construction in 2019 to qualify for the 5 higher 30 percent ITC levels. 6 7 That said, we strongly urge solar acquisitions after these combined projects are 8 9 approved and moving forward. We will be continuing to urge this in the 2019 IRP so that the planning and 10 11 the approval process can move forward sequentially 12 and as it is usually contemplated. 13 I should make some comments about the RFP. Interwest members include the leading wind developers 14 and manufacturers, both winners and losers in this 15 16 IRP bid review process. We are keenly interested in keeping the markets competitive because it lowers 17 costs for ratepayers, but our advocacy does not just 18 include promoting the benefits of PPAs. 19 Interwest 2.0 also supports utility ownership of renewables. While 21 PacifiCorp has been somewhat slower to adopt 2.2 renewables than we might have liked, they are 23 generally following industry trends in this sense, and that's prudent behavior. 24 25 We have seen more utilities want to own

Page 146 1 wind over the last eight to ten years as PacifiCorp 2 has done, and now over the past few years, utilities 3 have shown a growing interest in owning and operating 4 their only solar plants. Interwest encourages this utility ownership so long as the utility ownership is 5 ground in acquisitions out of competitive 6 7 solicitations. We need those solicitations to test 8 the prices against the market. 9 We note that a build-transfer project is not the same as a utility self-build project, and 10 11 there are more inherent risk reductions with the BTA. 12 These BTA projects have been developed in this case by the sophisticated wind developers as described by 13 the IE, which chose and developed the site and 14 acquired the queue positions that eventually were 15 available to Rocky Mountain Power. 16 17 A BTA includes components which have been competitively acquired from the market, again, 18 19 reducing costs and spreading the economic benefits 20 through the supply chain. These benefits and lower 21 costs will now inure to the ratepayers including Utah 22 electricity customers. Utah believes that utility 23 ownership actually can generate more competitive activity in a market because it makes it more likely 24 a utility will actually acquire from a competitive 25

Page 147 solicitation. 1 2 It's important to note that BTAs were 3 derived from the solicitation. They had to compete 4 directly against those PPAs that were bid including the PPA that was ultimately acquired. 5 The Utah IE found -- I'll quote here at page 78 read by Mr. Hayet 6 7 this morning, "At the request of the IEs, PacifiCorp ran a 30-year analysis as well as assessments without 8 using nominal dollars for PTC benefits. The results 9 show that BTA and PPA for the most competitive 10 11 projects to be close in value." 12 Therefore, utility owned projects are not 13 necessarily higher costs when acquired under these conditions. That is not to say we shouldn't continue 14 15 to improve and carefully monitor solicitations 16 developed by PacifiCorp and approved by this 17 Commission. A transmission meeting and improved transparency would be appropriate in the future as 18 requirements for solicitations and including the 19 2.0 solar solicitations. 21 As to the modeling, Interwest concurs that 2.2 Rocky Mountain Power's modeling assumptions appear to be conservative. The totality of the modeling shows 23 24 costs savings to Utah electricity consumers. 25 testified by UCE's Kate Bowman, regulatory and costs

Page 148 of burning fossil fuels are more likely to go up 1 2 rather than down or to remain flat. 3 Ms. Kelly for Western Resource Advocates's 4 testimony reflects the history of PacifiCorp's modeling of higher carbon price in other IRP venues 5 and other trends in the industry to represent higher 6 regulatory costs going forward. Even if we force-run 7 carbon-producing coal units, that doesn't necessarily 8 9 mean that prices will not spike for these resources, especially if we continue to include reasonable 10 11 environment protections in our regulation of these 12 resources. Therefore, the low gas and zero carbon 13 cost scenario seems to be the least likely outcome 14 going forward. 15 Interwest notes that UCE's testimony this morning which shows a much higher level of benefits 16 when you revert to carbon costs used by PacifiCorp in 17 June 2017. 18 19 I wanted to say just something about the 2.0 MSP discussions which causes concern about risks and 21 cost allocations in the future. There certainly is a 22 trend for changing regulatory schemes for utilities 23 going forward that naturally results in a trend to 24 fear the risks of long-term investments. Long-term 25 investments, therefore, are harder to promote all

Page 149

- 1 around the West because each state has its own
- 2 version of deregulation or new regulation going
- 3 forward.
- 4 But I urge you to consider the potential
- 5 inefficiency of avoiding long-term investments.
- 6 There are risks in the future. We always have made
- 7 long-term investments in the face of uncertainty.
- 8 Long-term uncertainty has always existed, but
- 9 considering the potential for grid regionalization,
- 10 one of the major benefits for regionalization, which
- 11 I think is widely known is the likelihood of reduced
- 12 reserve requirements lowering costs. And those
- 13 reduced requirements result from geographic
- 14 diversity. Therefore, we will continue to rely on
- 15 the main-stem grid and transmission planning and
- 16 continued upgrades going forward.
- So we urge continued step-by-step
- 18 transmission development because it will be critical
- 19 to maintain reliability and to continue developing
- 20 stable-price clean energy resources.
- 21 Recognizing the cautions warranted,
- 22 Interwest asks you to find that the combined projects
- 23 are a unique opportunity to acquire generation
- 24 capacity resources at a substantial discount due to
- 25 the PTCs. Interwest promotes combined projects as

	Page 150
1	being economically beneficial over time.
2	Thank you very much for your attention, for
3	the opportunity to appear, and for all of the hard
4	work to yourselves, of course, and your staff and all
5	of the parties. Thank you.
6	CHAIR LEVAR: Thank you.
7	Commissioner Clark, do you have any
8	questions for Ms. Hickey?
9	COMMISSIONER CLARK: No questions. Thank you,
10	Ms. Hickey.
11	CHAIR LEVAR: Commissioner White, do you?
12	COMMISSIONER WHITE: Yeah, this one I mean
13	you may not have information or feedback on this, but
14	you represent the only market participants in this
15	process, and certainly a robust process, you know,
16	with competition is extremely important. There's
17	been a lot discussion specifically about the issues
18	of the transmission queue and what was communicated
19	and what wasn't.
20	What can you tell us in terms of what the
21	market feedback was with respect to how that
22	transpired? I know that's challenging because you
23	represent probably differing market participants, but
24	I think you're the only one who can maybe even
25	provide that because you represent market

Page 151 1 participants. 2 MS. HICKEY: It's a very important question, 3 Commissioner White, and it's a challenge, it is, 4 because I represent all sorts of developers; and we do, as I said, have a real interest in maintaining 5 competitive markets and, therefore, transparent and 6 predictable solicitations. 7 The queue issue was a misstep and could 8 9 have been at least mitigated by a full discussion of the transmission issues going forward by a separate 10 11 meeting probably just as recommended by your EI. 12 Time was of the essence as you know, and there is not 13 a lot of testimony about this, but there is a 14 separation. 15 There was some testimony about the 16 separation in parts of PacifiCorp. Their transmission team can't talk to the generation team, 17 and so there's a built-in lack of communication 18 required by law; and therefore, I think that avoided 19 20 a melding of step-by-step communication for all the 21 bidders in advance when we would have preferred it. 2.2 As one of the IEs described, the generation 23 acquisition got in front of the transmission planning, and the transmission announcements that 24 25 they could even produce fully for the bidders.

1	Page 152 There was disappointment about what
	
2	happened with the queue and how initially it was
3	published to be anyone around the region could bid,
4	and then it turned out well, didn't matter too much
5	if you came from elsewhere. But recall that the
6	queue positions were owned by developers who had held
7	them and stayed in the queue legitimately and then
8	ultimately were acquired by PacifiCorp as part of
9	BTAs, and I don't know about the PPA, where that fits
10	in there.
11	So it wasn't as if PacifiCorp was secretly
12	holding on to them themselves and somehow pivoted so
13	that there was something unfair about ending up with
14	those queue positions. It just disappointed those
15	down the line in that they might not have had full
16	opportunity that they thought they had.
17	So there is some disappointment, but that's
18	why I mentioned that utility ownership now has
19	awakened interest in this market again, and it will
20	bring more robust response in both wind and solar.
21	We've seen that in other areas. I believe that to be
22	true, and it will continue for the next RFP put out
23	by PacifiCorp. We do need to keep monitoring these
24	things. We do need to have the step-by-step approval
25	of the RFPs, requirement for meetings, and, you know,

```
Page 153
     bidder communication that can be monitored by the IE.
 1
 2
               Most of those rules are in place, and in
 3
     the end, these -- you know, some of the best bids
 4
     were chosen, and those competed against each other
     and they were very close in price as far as I can
 5
     tell. I don't have -- anyway, I won't talk about the
 6
     confidentiality and what was available. But you know
 7
     that, and so that makes these very low price bids
 8
 9
     that you've ended up with in these combined projects.
10
               One other thing I wanted to say and I
11
     forgot what it was. So in the end -- oh -- well, I
12
     would analogize this to, you know, we're trolling
13
     along and we hit a snag, but it's not sufficient to
14
     turn the boat around. No RFP and bid review process
15
     is perfect.
16
               I've read a lot of IE reports. I've talked
     to a lot of developers, and you would be surprised
17
     how much they can shrug off and move forward because
18
     they believe this is still a productive market and
19
2.0
     that there will be more to come especially with
21
     regionalization to come.
2.2
          CHAIR LEVAR:
                       Okay.
                               Thank you, Ms. Hickey.
23
               I think we'll move -- do the other parties
24
     have an agreement on what order they wanted to go in
     or should we go in the order we typically do?
25
```

```
Page 154
          MS. SCHMID: We have discussed allocation of
 1
 2
     time and order.
 3
          CHAIR LEVAR: Okay. Before that, I will
 4
     mention, if you reserved time for rebuttal, I believe
     you have roughly 18 minutes after we get through the
 5
 6
     other parties.
 7
          MS. MCDOWELL: Thank you.
          CHAIR LEVAR: Okay. Ms. Schmid.
 8
 9
          MS. SCHMID:
                       The Division gets to start.
10
          CHAIR LEVAR: Okay.
11
                       Thank you for the opportunity to
          MS. SCHMID:
12
     present this closing argument on behalf of the
13
     Division. This case is fundamentally about risks,
14
     not benefits. The Company has failed to prove that
     the approval of the combined projects is in the
15
     public interest because it has neither grappled with
16
     these risks nor adequately considered alternatives.
17
               The Company has seemingly boundless faith
18
19
     in its forecasting that nevertheless ends right at
2.0
     the point where it's risk begins. The future without
21
     these projects is a reasonable one with relatively
22
     low costs. The future with these projects is
23
     uncertain and could involve slightly lower costs or
     significantly higher costs and stranded assets,
24
     particularly in later years.
25
```

1	Page 155 The Company has engineered a changing set
2	of projections, inputs, and assumptions that in
3	association with its anticipatory procurement
4	activities virtually guaranteed that its projects
5	would be selected. These projects are not needed,
6	and they would only be in the public interest if they
7	resulted in lower costs. The Division does not
8	believe that they do.
9	Far from being certain, the prospect of net
10	benefits depends on assumptions about gas prices and
11	carbon prices, demand projections, transmission
12	subscription projections through PacifiCorp's OATT,
13	assumptions about the nature of electricity systems
14	many years in the future, and projections of terminal
15	value based on conjecture.
16	Given that a minor variation in any of one
17	these projections could erode any projected net
18	benefit, the combined projects are not a risk worth
19	taking. Indeed, the Company has evidence its
20	unwillingness to accept virtually any risk of these
21	variations occurring. Even when the Company has been
22	able to mitigate risks, it has come at no cost to it.
23	Rather, it asks the captive ratepayers to bear the
24	risks the Company cannot shift to vendors or others.
25	I'll highlight just a few of these risks.

Page 156 1 I'll start with model inputs. The Company has 2 conducted a large number of analyses and scenarios 3 using complex planning models, but the validity of 4 the results depends on the accuracy of the inputs. It doesn't matter how many runs the Company did or 5 how complex the analysis was, the credibility of the 6 results must be judged by the quality of the inputs, 7 not the volume and complexity of the analysis. 8 9 In this case, the Company's analysis masks key assumptions, omits key alternatives, and ignores 10 11 significant risks resulting in an inflated 12 representation of the benefits of the combined 13 project. The inputs and methods used in the Company's modeling have produced results and analyses 14 that are biased in favor of Company owned wind 15 16 projects over wind power alternatives. And these results are biased in favor of 17 the combined projects in total over other 18 19 alternatives. The Company has repeatedly modified 20 its methodology to omit costs attributed to the 21 combined projects and to impute speculative benefits 22 to justify them. 23 Next, I'd like to talk about gas risks. 24 There is a risk associated with the three natural gas 25 price scenarios presented by the Company. Division

Page 157 witness Dan Peaco determined that the three natural 1 2 gas scenarios were skewed high when compared to 3 then-current forward prices. 4 The Company has updated its natural gas price, but Mr. Peaco continues to believe that the 5 Company's mid and high cases likely overstate the 6 value and that the lower cases should be given 7 significant weight. He also believes that a simple 8 9 weighted average of the three gas price scenarios 10 also skews the risk-weighted analysis to higher 11 projects. In response to a question in yesterday's 12 13 hearing, Mr. Peaco testified that a curious and abrupt bump in gas price projections four or five 14 years in the future raises the gas prices 15 16 significantly from then on. Higher gas prices yield 17 higher estimates of benefits of the combined project. Without that jump in prices when the Company 18 19 transitions its forecast from futures to projections, 20 the prices would be significantly lower, eroding 21 benefits. 2.2 Indeed the Company's prices are projected 23 to rise faster than general inflation for the duration of the wind projects' lives. To put this in 24 25 context, to get to the medium gas case proposed by

Page 158 1 the Company, the Commission would have to assume that 2 natural gas prices would rise from today's pricing at 3 a rate higher than 4 percent a year for year after 4 year for decades. Recent history certainly does not support such inflation projections. 5 Furthermore, the Company has offered no 6 real support of this -- for its projection of 7 gas price inflation other than generalized conjecture 8 9 about LNG exports and demands. 10 Given the Company's poor predicted track 11 record about gas prices, the Division understands why 12 the Company would be unwilling to assume the risks of 13 its projections being significantly wrong. Division remains uncertain about why the Company is 14 15 eager to have ratepayers assume the same risks. Caution is warranted based on the nature of 16 predictions and the Company's history of being wrong 17 in recent years that have led to -- that lead to 18 19 unacceptable risk for ratepayers. The Company claims 20 that the Division's position in the Jim Bridger 21 docket requires or suggests that the Division support 22 approval here, but the two cases are fundamentally In Jim Bridge a choice had to be made. 23 different. 24 The choice was to invest in the SCRs or to convert the plant to gas. Here the no-action alternative is 25

Page 159 reasonable and is the least risk. 1 2 That is to say that the number of magnitude 3 of the risks of doing nothing is smaller than the 4 number and magnitude of risks involved in approving the combined projects. 5 The Company claims its gas forecasts are 6 conservative. Yet in the Jim Bridger case it seeks 7 to use it as an example of how its planning and 8 9 projections work. Actual gas prices ultimately have been lower than the Company's projections. 10 11 appears that converting the plant to gas would have 12 been the most economical decision. 13 This result supports the Division's request that the Commission be cautious in relying upon the 14 15 Company's gas forecast. This case is different from the -39 case, and given the uncertainties here, the 16 no-action alternative available here is the decision 17 most in the public interest. 18 19 I'll focus here on the request to approve 2.0 transmission project. Here the Company seeks 21 approval of a nearly 700 million new transmission 22 line, making the accuracy of the risk/benefit 23 analysis more complicated and more critical in this case than it was in the -39 docket because this case 24 25 not only involves gas forecast but also transmission

Page 160 line estimates. 1 2 These risks include that the transmission line is an all-new greenfield construction, that 3 4 there's a much tighter timeline to meet the PTC 2020 requirement. One-third of the cost of the new 5 6 transmission, whereas none in the repowering, has to be built and fully produced to support the costs as 7 well as the wind project costs. 8 9 Studies are still needed to ensure that transmission will be sufficient to allow full wind 10 11 delivery, and delivery was not an issue in -39. 12 benefit/risk ratios are worse in any of the 13 12 repowering projects in many scenarios. The 12 -the scenarios -- the lower benefits relative to costs 14 15 here present a much higher risk than they did in the -39 docket. 16 The Division is concerned that inaccurate 17 transmission line cost projections could have favored 18 the selection of Wyoming wind resources over projects 19 2.0 outside the constrained area. In declining to 21 acknowledge the RFP shortlist pertaining to the 22 combined projects, the Oregon commission noted its IE's concern that the cost projections for the 23 24 D2 segment, Aeolus to Bridger, are a major driver of 25 selection in this RFP and, if actual costs are

1	higher, it may turn out that a better solution would
2	have been to select more supply from outside the
3	constrained area in Wyoming. And that's with the
4	Commission's Order, DPU Cross-Exhibit 3 at page 4.
5	The Division shares this concern. Because
6	the required transmission studies have not been
7	completed, it's impossible to accurately predict the
8	true cost of the transmission line, making the
9	overall combined project estimates still uncertain,
10	particularly where the cost/benefit analysis and
11	project selection has been based on mid and high
12	cases that likely overstate the value and on cases
13	that dismiss the low-case results.
14	The Division believes these low case
15	results should be given significant weight.
16	Regardless of whether other projects might have been
17	selected, the Company's projections could still
18	suffer from small inaccuracies that erode benefits.
19	I'll talk about MSP risk next. The Oregon
20	decision on the combined projects highlights the
21	risks inherent in this case that are associated with
22	the MSP. In that May order the public the Oregon
23	commission declined to acknowledge PacifiCorp's
24	request for proposals related to the combined
25	projects. Through this action the Oregon commission

```
Page 162
     denied the Company and other stakeholders an advance
 1
 2
     indication that the Commission is satisfied at this
 3
     point in time with the Company's analysis of which
 4
     market opportunities meet or met the IRP's objectives
     as least cost, least risk to customers.
 5
     page nine.
 6
               The Oregon commission decisions and our own
 7
     IEs' concerns reinforce the Division's concern about
 8
     the effect that Oregon policy decisions may have on
 9
10
     Utah ratepayers and their responsibility through
11
     PacifiCorp's multistate process. While the
12
     Commission -- sorry -- while the Company correctly
     pointed out on cross-examination that the failure to
13
14
     acknowledge does not necessarily change the product
15
     stance in Oregon, if Utah were to approve while
     Oregon withholds approval, the Division is concerned
16
     that Oregon will have gained additional leverage in
17
     the current discussions about realigning resources.
18
               The Commission is not convinced that Oregon
19
2.0
     would forego using that leverage, given the higher
21
     costs it will face, from replacing a larger amount of
2.2
     assets in advance of its 2030 commitment to remove
23
     coal from its system. One additional possible
24
     adverse consequence is that in a future proceeding
25
     Oregon could reject its share of the combined
```

Page 163 projects after they are built, leaving the Company 1 2 with the unpalatable option of burdening Utah 3 ratepayers and those of other states with those costs 4 or saddling shareholders with those unassigned costs. That option is surely as unpalatable to the Company 5 6 as burdening Utah ratepayers with Oregon's share is to the Division. 7 Indeed, the history of the MSP reflects in 8 9 part a story of the Company seeking to plug holes created by differing state allocations. This risk 10 11 was acknowledged when the mergers first began. This 12 risk was specifically dealt with in the most recent acquisition of Rocky Mountain Power by PacifiCorp. 13 In that case a stipulation agreed to by the 14 15 parties and approved by the commissions said that the 16 Utah ratepayers were in essence to be held harmless from costs increasing due to the multistate project, 17 but also, I must note, that the stipulation and order 18 approving it did not prohibit the Commission from 19 20 approving prudent costs. 21 But the Utah legislature recognized this 22 complexity too, and its solicitation statute allows consideration of this multistate risk. When taking 23 all these together in light of Oregon's decision, 24 when evaluating this over -- or approximately 25

1	Page 164 \$2 billion project, the Division urges the Commission
2	to recognize what the statute recognizes, that large
3	procurement decisions can have significant
4	implications in the multistate process, especially if
5	there's any indication of skepticism from one or more
6	states.
7	The MSP process is at a critical stage with
8	the 2017 protocol expiring December 31st, 2019 and no
9	agreement on what to do when it expires. Because MSP
10	negotiations are occurring right now, the Division
11	urges the Commission not to make decisions that might
12	adversely affect Utah's negotiating position or
13	unjustly burden Utah ratepayers in the future. We
14	don't understand what those may be, but these are
15	risks that the Company has not addressed.
16	Turning now to benefits, the Company's
17	analysis overstates the benefits and ignores key
18	downside risks, the risk some of which were discussed
19	above. The Company's reliance on speculative
20	assumptions, its omission of key alternatives and its
21	disregard of significant risks, produce an inflated
22	representation of the benefits of the combined
23	projects.
24	In part the Company relies upon speculative
25	benefits to justify the combined projects such as an

Page 165 arbitrary terminal value and the unproven assumption 1 2 that transmission subscription revenues will remain 3 at today's levels for decades even though the 4 electric industry is ever-changing. When combining all of these together, the 5 Company presents a price-policy scenario matrix that 6 7 suggests that most of the outcomes are net benefits for customers, but this conclusion belies the fact 8 9 the Company's modeling does not present a fair 10 analysis of the projects in any of the 11 price-policy scenarios. 12 As a result, simply assuming that more net 13 benefit outcomes in the matrix mean that the combined projects are more likely than not to produce a net 14 benefit for customers is not the correct conclusion. 15 16 However, some parts of the application surely would result in a different type of benefit, a benefit for 17 18 the Company, not for the ratepayers. 19 For example, the Company proposes to create 2.0 a new mechanism, the RTM, to recover its cost from 21 ratepayers, implementing an RTM would permit the 22 Company to put off filing a general rate case in 23 which all aspects of its business would be adjusted 24 to current conditions. Just as the Commission 25 recognized there was no need for an RTM in the -39

Page 166 his docket.

- 1 docket, there is no need for the RTM in this docket.
- 2 A rate case, and one sooner and not later, is the
- 3 most appropriate way to address recovery of costs
- 4 associated with the combined projects.
- 5 Next I'll briefly address need. The
- 6 Division has made much of the distinction between
- 7 need and economic opportunities because in this case
- 8 it matters. The Division understands the Company's
- 9 small short position and the general options
- 10 available to meet it.
- 11 The Company would have you believe that
- only the combined projects will meet the Company's
- 13 need and that an inquiry need to go no further.
- 14 That's wrong. These projects would constitute part
- of the Company's least-cost, least-risk portfolio
- 16 only if they were cheaper and less risky than front
- 17 office transactions, other bilateral transactions,
- 18 different resources, and a host of other resources
- 19 that have not been considered by the Company in its
- 20 modeling or in its RFP design.
- 21 The Division and others believe that the
- 22 Company has failed to analyze these considerations
- 23 and did not solicit capacity from the market
- 24 generally to meet the Company's asserted need. So in
- 25 some cases the Company's failure to analyze was that

Page 167 it failed to adequately consider these other options. 1 2 In others, the failure was that the Company never 3 considered them at all. 4 Further, the Oregon IE confirmed that selected bids were not the least-cost offers but 5 rather the lowest-cost offers that were viable under 6 7 the current transmission assumptions and constraints 8 imposed by the Company in its RFP. The Utah IE also discussed the constraints and restrictions that the 9 RFP put on selected resources. 10 11 These failures, which the Commission has 12 not yet addressed in the IRP docket, appear both here 13 and in that IRP docket. The Company has resisted pre- and post-filing suggestions that an all-source 14 RFP would reveal the full market. It has resisted 15 16 modeling changes that would allow contemporaneous consideration of other renewable resources. 17 It has resisted further development of 18 alternate terminal value and transmission 19 2.0 subscription assumptions. It has resisted calls for 21 it to provide full assessment of the downside risks 2.2 it is asking ratepayers to assume. In short, it 23 appears that the Company has resisted nearly 24 everything that could have jeopardized the Company's 25 projections or competed with the Company built

Page 168 projects, projects that the Company appears to have 1 2 envisioned from before this case was filed. 3 that upon the Company's actions in amassing Safe 4 Harbor assets. Having failed to consider a number of 5 alternative identified by other parties, there is no 6 basis for the Company's claim that these projects are 7 part of a least-cost, least-risk portfolio. 8 9 attempt to justify this resistance from fully 10 discovering the market and analyzing variables, the 11 Company changed its claim that approval of the 12 transmission projects was needed to capture a 13 time-limited economic opportunity to one that is 14 needed in any event. 15 The Company's after-the-fact claims of 16 resource needs are not necessarily supported by its analysis or its procurement actions. Recall the 17 discussion earlier in this hearing about the 18 Company's representation in the Oregon special 19 20 meeting that it would not build the transmission 21 project because it was not needed. 2.2 The Company also acknowledged that the 23 transmission projects are not economic without the wind projects and the associated PTC benefits. 24 25 However, Company questioning of Division witness

Page 169 1 Dan Peaco suggested perhaps the Company intends these 2 projects to meet other state's policies including 3 California and Oregon's carbon policies. Ιf 4 PacifiCorp wishes to satisfy those states' public policy goals, the ratepayers from those states should 5 6 pay for them. The Division has acknowledged that often 7 utilities and regulators must proceed on the basis of 8 9 long-term projections we know will be wrong, but this is not one of those times. Here, the future without 10 11 the combined projects is a reasonably priced future. 12 That is the real conservative assumption. Instead of 13 that future, the Company would have you take a risk for ratepayers while compensating the Company for 14 15 risks it is not taking. 16 Far from the Company proposing a reasonable project after a full study of alternatives using 17 conservative assumptions, the Company asks for you to 18 19 roll the dice. There is some chance it will pay off 2.0 for ratepayers, but the house always wins, and here 21 it will win big with the addition of billions of 2.2 dollars worth of rate base. Locking in billions of dollars of long-term 23 assets that provide very little meaningful capacity 24 25 value for decades is not an appropriate choice for

Page 170 customers when the risks faced with the combined 1 2 projects remain largely unaddressed and alternatives 3 remain unconsidered. The Division submits that Rocky 4 Mountain Power's significant energy resource decision 5 should be disapproved. Thank you. 6 CHAIR LEVAR: Thank you, Ms. Schmid. Commissioner White, do you have any 7 questions for her? 8 COMMISSIONER WHITE: I don't. Thank you. 9 CHAIR LEVAR: Commissioner Clark? 10 11 COMMISSIONER CLARK: I just have a question or 12 two about the multistate risk that you have discussed at some length. I think you acknowledged in your 13 argument that Utah in particular could in effect 14 refuse to accept cost allocations of -- or 15 16 allocations of costs associated with the project if Utah regulators at the time believed that they were 17 unreasonable or weren't serving the needs of Utah 18 customers and that shareholders or someone else could 19 2.0 be forced to bear those costs. Is that -- I think you acknowledged that; isn't that right? 21 2.2 MS. SCHMID: I did acknowledge that, and I did 23 reference the merger condition, and I did note that 24 prudently incurred costs could be approved, but the 25 Commission has jurisdiction to make the

```
Page 171
     determinations that are in the best interest of Utah
 1
 2
     ratepayers.
 3
          COMMISSIONER CLARK: So were the Commission to
 4
     approve the application before it, would it be
     possible, in your view, to assign a condition that
 5
     the -- or at least to warn the utility that the
 6
     Commission would not accept an allocation of cost
 7
     associated with the project beyond what the current
 8
 9
     MSP methodology would dictate without some future
     showing of the reasonableness of that from the
10
11
     perspective of service to Utah customers?
12
          MS. SCHMID: Yes, that is possible, and the
     statute particularly allows the Commission to set
13
     conditions and conditions such as that if the
14
15
     Commission deemed that was in the public interest.
16
          COMMISSIONER CLARK: Okay.
                                      Thank you.
17
          CHAIR LEVAR: I think this question is maybe
     just restating his question in a different way. I
18
     apologize if it's that. But when you talk about MSP
19
2.0
     risk, aren't we our own backstop against MSP risk?
21
          MS. SCHMID:
                       We are. And the Division is urging
2.2
     the Commission not to make decisions now that could
23
     adversely affect Utah ratepayers. What is critical
24
     is that the MSP agreement ends soon and parties are
25
     in the negotiations to see what happens in the
```

Page 172 1 future. I can't discuss those negotiations, and I 2 won't, but the future is uncertain. 3 CHAIR LEVAR: Thank you. A few more questions. 4 As we're considering RFP responses and whether there was a robust response to the RFP, what weight should 5 we give to ineligible bids? 6 MS. SCHMID: I would think that they should 7 receive significant and careful consideration. One 8 9 problem is is that had bidders known that they were too far down the queue, they may not have bid and 10 11 that the additional conditions and restrictions on 12 the RFP and the additional transmission studies, had 13 they known those, they may not have bid. question the robustness of the RFP results. 14 15 CHAIR LEVAR: Okay. You're not suggesting that we should not consider those bids to have ever 16 happened? 17 18 MS. SCHMID: I don't -- that's not my position. I don't believe that's the Division's position. 19 2.0 CHAIR LEVAR: Okay. Do you have a position on 21 whether the condition -- one condition suggested by 2.2 the Office, a hard cap, would violate other statutory provisions that would allow a future commission to 23 24 consider the prudence of any costs that exceeded cap? 25 I honestly don't know, so I'll MS. SCHMID:

Page 173 leave it at that. 1 2 CHAIR LEVAR: Okay. 3 MS. SCHMID: Could I address waiver? CHAIR LEVAR: Yes, that's one of my next 4 questions. Before that I want to ask one other 5 6 question first. If we were to deny the application, what would be your view of the regulatory treatment 7 of the costs that were incurred to meet the 8 9 Safe Harbor requirements? 10 MS. SCHMID: I would think that the Company 11 would have to prove that they were prudently incurred 12 and that the Commission would have the opportunity to 13 review and decide that decision in an appropriate 14 proceeding. CHAIR LEVAR: The waiver, is the waiver an 15 either/or or is it only in lieu of the application 16 17 that we've seen or is it an option if the application were denied? 18 19 MS. SCHMID: I believe it is a statutory option 2.0 if the application is denied, and I believe that the 21 Company could proceed with the waiver process 2.2 quickly. The waiver process requires the Company to 23 submit a verified application. The Company should have all that ready. The Company has finally decided 24 25 what the final projects would be, and it would seem

```
Page 174
 1
     that the Company would be able to move quickly to put
 2
     that together. Furthermore, the truncated process
 3
     established by the statute, I believe, would allow a
 4
     reasonably timed decision and it might even be a
     decision that is far in advance of the execution of
 5
     construction and other pertinent contracts.
 6
                        Thank you. That concludes my
 7
          CHAIR LEVAR:
     question. Were there any follow-ups from --
 8
          COMMISSIONER WHITE: Well, I would just ask
 9
     because I mean -- this might be a pass-along to
10
11
     Ms. McDowell, only if it's in the record. I guess
12
     one is a follow-up to yours that I don't know if it
13
     has been addressed in the record is, putting aside
     the fact there was some frustration in terms of like
14
     bidders who ultimately got to the point where they
15
16
     realized they didn't have the right queue position, I
     guess the question is wouldn't they have had to or
17
18
     someone have had to pay for transmission
     interconnection, you know, whether it -- according to
19
2.0
     the OATT?
21
               So, in other words, even if that weren't
2.2
     the case, wouldn't that be part of the cost of the
23
     project, I quess? I mean does that make sense?
24
     don't want -- I know you're not the expert, but if
25
     you can reflect on the record to provide that answer,
```

Page 175

- 1 that would be helpful to me. If it's not in the
- 2 record, that's fine, but that's part of the question.
- 3 Again, I don't want to mess up the flow if you want
- 4 to wait until your summation.
- 5 MS. SCHMID: One of the other parties might be
- 6 able to address that as well. I do not know. I know
- 7 that some parties here, especially that side of room,
- 8 are more familiar with the transmission and OATT
- 9 process.
- 10 COMMISSIONER WHITE: You can -- you can address
- 11 it now or later.
- MS. MCDOWELL: Why don't we just jump in now so
- 13 we don't forget to come back to it, and, again, I
- 14 think this is one for Ms. Link, who is our
- 15 transmission queue expert.
- 16 COMMISSIONER WHITE: Does that make sense,
- 17 Ms. Link, what I'm asking? Again, putting aside the
- 18 frustration, there's got to be -- you got to have a
- 19 queue position; you got to interconnect; there's
- 20 going to be a cost. Does that make sense?
- 21 SARAH LINK: Yeah. The interconnection queue
- 22 position -- just to put some context around it, the
- 23 positions that the winning bidders had were secured
- 24 in 2015, well before any of this was ever considered
- 25 by independent developers. And the bidders that we

Page 176 had in this were very sophisticated bidders who know 1 2 how interconnection queue position works and know the 3 value of the interconnection queue position, 4 particularly in areas with the transmission They look at reports for people above 5 constraints. 6 them in the queue. They know what those reports say. And so while there may have been 7 frustration -- and I think it -- a belief that maybe 8 9 we were finding a way to move people up the 10 interconnection queue through this bidding process 11 and we perhaps were not great in making it clear 12 "There isn't that way," but that's really what it 13 comes down to. You have your interconnection queue position and you can't really buy your way up. 14 15 You can buy the project that has that queue 16 position, but you can't buy your way up the queue. The only thing that you could potentially do as 17 somebody way down in the queue is pay for the 18 interconnection costs of everybody above you in order 19 20 to go ahead and interconnect. 21 So you basically have to look at all their 22 studies and get everything in place that's required to interconnect all of them before you can 23 interconnect. So it's incredibly expensive, and part 24 of that is not buying -- I mean the most an 25

Page 177 1 interconnection developer can do to get 2 interconnection when a piece of our long-term plan is 3 required is upfront fund that piece of our long-term 4 plan, but we end up reimbursing them. So they could upfront fund, Gateway West, for example, but we would 5 still have to reimburse and that would still 6 7 ultimately be borne by retail customers, and nobody is upfront funding the about 2 billion required to 8 9 build Gateway --COMMISSIONER WHITE: At some point that would 10 11 reflected in the bid cost somehow, somewhere? 12 SARAH LINK: Gateway South wouldn't be because 13 it's part of our long-term plan, and you're not allowed to assign that to any bidder or 14 interconnection position, but the interconnection 15 16 costs associated with buying your way up the queue, would have to be imposed on the bidders. 17 18 COMMISSIONER WHITE: Okay. Thanks. 19 COMMISSIONER CLARK: In the same area, is there 2.0 anything on the record that would offer any more 21 information on why a bidder with a queue position 22 higher than 708 would have submitted a bid, knowing that even if in the first information -- the first 23 24 transmission study information that was available as 25 I understand it, meant that they would -- their bid

Page 178 would not be meaningful, at least if I understand the 1 2 answers to your questions. 3 SARAH LINK: Yes. I think -- that's a good 4 question, and we basically in lifting the requirement for the system impact studies to be completed, not 5 every bidder had their own system impact study, and 6 in opening it up to Wyoming wind generally, you took 7 away sort of the impact of the transmission line on 8 9 the bidding process for evaluation of all the bids. 10 So there was some testimony yesterday that got 11 confusing I think about this, but when the bids were 12 evaluated, the costs of the transmission line were 13 not imposed on any bid. So Uinta -- the costs of the transmission 14 line were not imposed on Uinta or any other bid in 15 16 the bid evaluation process, so they were looked at 17 based on economics alone and what was required in directly assigned interconnection costs, which aren't 18 D2, and evaluated on that basis. So all of them had 19 20 the equal basis to compete. 21 In terms of what that meant in their 2.2 interconnection queue position, at that point nobody knew what the interconnection restudies would show or 23 24 what studies would show once building of D2 was considered as an assumption. So at the point where 25

Page 179 1 we had Gateway South triggered at Oueue 708, we 2 didn't know at that point, nor did any of the other 3 bidders -- they knew it was triggered at Queue 708 if 4 they read the publicly available information -- but they didn't know what evaluating the addition of just 5 D2 would change, how that would change, where 6 interconnection capability would start to -- how far 7 8 down in the queue we'd be able to get. 9 I think bidders and we hoped that we would get further down than we were able to get, but the 10 11 constraints are severe enough that we were only able 12 to get to Queue 713. I hope that's helpful. 13 COMMISSIONER CLARK: Thank you. 14 COMMISSIONER WHITE: Going back to that issue of opening up to Wyoming, how did that change the 15 16 process here, I quess? Remind me, again, was that --I know -- was that an IE request or how --17 18 SARAH LINK: It was. 19 COMMISSIONER WHITE: And how did that change, 20 again, the process by opening it up to Wyoming rather 21 than just naming a specific interconnection point, I 2.2 quess? 23 SARAH LINK: I don't think it changed the process in how we evaluated the bids. It just meant 24 25 that -- I think there was some confusion that we

Page 180 1 opened it up to Wyoming yet we still assigned the 2 cost of this line to any bid, whether they needed it 3 or not, and that was not correct. So projects 4 outside of the constrained area could compete without those costs being imposed on them. So everybody, 5 6 even the Wyoming projects that didn't rely on the line, were, you know -- when they were viewed through 7 8 this process, the economics showed that they were not 9 more economic than the projects that relied on the 10 line, because everything was analyzed without 11 consideration -- without imposing the costs on that 12 line on any bid. 13 CHAIR LEVAR: Why don't we take a ten-minute break, come back about 2:35 and we'll move on --14 15 MS. HAYES: Mr. Chair, pardon me. 16 CHAIR LEVAR: Yes. MS. HAYES: I will first note that Mr. Michel 17 had to leave and, second, that I unfortunately have a 18 conflict that I can't avoid later this afternoon, and 19 2.0 so we'll have to -- I'm requesting to be excused 21 around 3:00, if that's okay. And Ms. Kelly, as an 2.2 employee of WRA, is available to represent us if 23 there are any administrative or cleanup matters at 24 the conclusion of the hearing. 25 CHAIR LEVAR: Okay. Thank you for informing us

Page 181 1 of that. Thank you. 2. MS. HAYES: Thank you. CHAIR LEVAR: Okay. We will recess for about 3 4 ten minutes. (A break was taken, 2:23 to 2:37.) 5 CHAIR LEVAR: We're back on record. And was 6 7 there an agreement for who's going to be next? Mr. Moore. 8 Thank you, Chairman LeVar, thank you 9 MR. MOORE: Commissioner Clark and Commissioner White, and thank 10 11 you in advance for the consideration you'll give the 12 Office's arguments. 13 First and foremost, the Company did not 14 meet the primary requirement of the statute, whether 15 the combined projects would most likely result in the acquisition, production, and delivery of electricity 16 at the lowest reasonable cost. 17 18 I'd like to pause a moment and address a 19 statement made by counsel for PacifiCorp in her 20 opening statement. My memory is that she stated this 21 provision is satisfied because the evidence shows 2.2 that the combined project, together with some future solar acquisition, satisfies this provision. 23 24 However, this contention cannot survive even a cursory statutory construction review. 25

Page 182 example, Section 54-17-302 dealing with significant 1 2 energy resource decision provides "Approval of a 3 significant energy resource decision, the Commission 4 shall determine whether the significant energy resource decision going down is in the public 5 interest, taking into consideration production and 6 delivery of electricity at the lowest reasonable 7 cost." 8 The statute does not say that a significant 9 energy resource decision, together with some future 10 11 unspecified resource acquisition that may or may not 12 occur that, if it does occur, will be approved 13 outside this Commission's present order and that will occur under unknown circumstances. In fact, allowing 14 an open -- such a construction suggested by 15 PacifiCorp would, I believe, eviscerate the purpose 16 17 of the statute. The record in this -- the testimony on 18 19 record clearly show that solar is likely your 2.0 lower-cost resource, less risky since it would not 21 rely on the new transmission line, is not as time 22 sensitive, and is limited to PPAs which provide 23 production guarantees to consumers. 24 Contrary to the Company's assertion, wind 25 does not result in more benefits than solar in the

Page 183 to-36 case. Using level capitalized and level PTCs 1 2 or nominal capital and nominal PTCs, the results 3 favor solar in all the cases the Company ran. In the 4 2050 case, which did not appear in Mr. Link's testimony but was included in his work papers, solar 5 produces hundreds of millions of dollars more 6 7 benefits than wind. Although the exact numbers have been 8 9 designated confidential, the confidential numbers can be viewed on page 27 of Mr. Hayet's confidential 10 11 April 17 rebuttal testimony. Moreover, in the 12 repowering order on page 17, this Commission found 13 that the two hundred and fifty analysis to be more 14 appropriate than the 2036 analysis. 15 The Company's assertion need misrepresents that concept. This project does not fill a need in 16 the standard sense that typically comes before this 17 Commission. While it is true that the combined 18 19 projects will offer 180 megawatts of FOTs, the 2.0 Company has not demonstrated FOTs are no longer 21 available and must be replaced. 2.2 Thus, this is not a case in which the 23 Commission must choose among available resources. 24 Clearly the RFP for this project was designed for a 25 time-limited economic opportunity based on the

Page 184 1 expiring PTCs. It must be emphasized that the Utah 2 IE testified that if the RFP was required for 3 capacity need, he would not have recommended an 4 all-wind RFP but one that would include more types of resources, perhaps an all-source RFP. 5 The contention that the transmission line 6 needs to be built in 2024 strains credibility. 7 The fact that the line is in their long-range 8 9 transmission plan does not support this contention. If simply being in the plan was sufficient to 10 11 demonstrate the transmission line would be built by 12 2024, it would also mean that other large segments of 13 the Gateway transmission plan would need to be built 14 by 2024 at an extreme cost. 15 In addition, the contention that the line needs to be built in 2024 was not mentioned until the 16 January 16 testimony, after tax reform devastated the 17 18 economic analysis presented in the Company's initial direct testimony. If the Company truly considered 19 2.0 transmission line to be needed in 2024, they would 21 have included this in their status quo case. 2.2 Mr. Link's explanation for why it was not 23 included -- i.e., that the Company was being 24 conservative in their analysis -- reflects a lack of credibility that has plagued PacifiCorp's arguments 25

Page 185 throughout this case. Mr. Link emphasized in every 1 2 round of previous testimony that the analysis is 3 conservative based on small and speculative potential 4 additional benefits but did not note the profoundly 5 larger 300 million associated with the transmission line until his May 15 testimony. 6 Clearly it has been demonstrated that the 7 line would not be built without an addition of new 8 wind resources, and it is only because of those 9 resources that the line is needed. The Company 10 11 admitted this much in its Oregon proceeding. 12 Importantly, this Commission must also 13 consider to what extent it is true that this line offsets future investment needs in the region. 14 transmission line would add 951 megawatts of transfer 15 16 capacity, but the combined projects would add 17 1155 megawatts of new resources, and QS in the region would bring in new -- additional resources connecting 18 to the line to over 1500 megawatts. The Company has 19 2.0 not explained how a more fully subscribed 21 transmission addition solves the region's congestion 2.2 problem. Since need is overstated, that brings back 23 24 to the issue of a time-limited economic opportunity. 25 The time limits presented in this case are of the

Page 186 Company's own creation. The Commission has evidence 1 2 in this docket and others, most notably the 2017 IRP, 3 that demonstrates the Company began making 4 Safe Harbor purchases and other preparations that could have allowed it to bring forward the proposal 5 in 2016. 6 The Commission must not limit this 7 opportunity -- review of this opportunity to the 8 9 price-policy cost/benefits results. The costs are known, nearly \$2 billion with uncertain benefits and 10 11 unqualified additional risks. 12 For example, the MSP risk is real. 13 is currently no multistate allocation method in place for these projects that will come into service and go 14 15 on -- there is currently no multistate allocation method in place for when these projects will come 16 into service and ongoing discussions risk the 17 potential of a significantly different paradigm that 18 may place Utah in a difficult negotiation position. 19 2.0 There are significant risks that are not 21 included in this economic analysis. These risks 22 include cost overruns, energy production. 23 PacifiCorp said it does not quarantee the wind will blow and force majeure. The facts that these risks 24 are real and substantial is proven by the fact the 25

```
Page 187
 1
     Company refuses to quarantee against them.
                                                  If these
 2
     risks are too significant for the Company to bear,
 3
     they should be found too profound for the customers.
 4
               The record in this proceeding demonstrates
 5
     that the Company request should be denied.
     if the Commission is inclined to approve the combined
 6
     project, then the Office has presented conditions
 7
     that the Commission should impose that will help
 8
 9
     mitigate this risk.
10
               That's the conclusion of my argument.
11
          CHAIR LEVAR: Thank you, Mr. Moore.
12
               Commissioner White, do you have any
13
     questions for Mr. Moore?
                               I don't. Well, let me ask
14
          COMMISSIONER WHITE:
     you this one question: The conditions you proposed,
15
16
     can you maybe compare or contrast those to what's
     currently available in the solicitation statute,
17
18
     which I don't want to misstate it, but essentially
     allow that at a certain point if there's cost
19
2.0
     overruns for the utility to come in. Help me
21
     understand the protections that affords versus what
22
     the Office is proposing.
          MR. MOORE: Well, our hard cap -- well, first of
23
24
     all, under the significant energy resource decision,
25
     the statute provides that the Company needs to show
```

Page 188 the prudence of cost overruns in a future general 1 2 rate case. Our conditions would provide other 3 procedures that could satisfy that requirement 4 before -- prior to a general rate case, so it leaves some flexibility there. 5 Also, our conditions of our hard cap would 6 give the customers protection against risks that were 7 not in the Company's control and that they will claim 8 9 were caused by decisions that cannot be interpreted as being imprudent. 10 11 This is proper because throughout these 12 proceedings the Company has clearly taken the 13 position that costs are set and there will be no This is what the IE in Oregon relied on 14 15 when he -- I believe it was a man -- gave a condition 16 of an unconditional quaranty cap on costs. 17 Our condition for the multistate service -for the multistate protocol is also something that 18 19 would occur outside a general rate case and would --2.0 is a soft cap and would provide the Company -- I mean 21 the ratepayers with protections in negotiations. 2.2 While the Commission always serves as the backdrop, this will provide us with acknowledgment 23 that the Commission is serious about this cost in 24 25 negotiations.

1	Page 189 In denying the resource tracking method,
2	which is not a condition because it's not called for
3	in the statute, protects the customers from well,
4	protects the customers from the Company from
5	recovering all costs of the project and then when
6	they propose to start a new general rate case this
7	is just their plan in 2020 with a future test year
8	proposed as 2021, that would lead to allowing them
9	recover all the costs from the project even if they
10	are not under-earning and then set their rates on the
11	highest capital costs that are presented in the plan
12	for the combined projects.
13	And, again, the energy benefits should be
14	guaranteed at 95 percent of the forecast, again,
15	reflects the Company's position that the energy
16	costs, the energy benefits are fairly significant and
17	predictable.
18	COMMISSIONER WHITE: Thank you. That's all the
19	questions I have.
20	CHAIR LEVAR: Thank you.
21	Commissioner Clark?
22	COMMISSIONER CLARK: I want to drill a little
23	deeper on the hard cap question because I want to
24	make sure I understood what you said. I think you
25	said that because the Company didn't while it did

Page 190 present alternative scenarios that addressed future 1 2 carbon policy costs or future -- different future 3 scenarios related to the price of natural gas, it 4 didn't evaluate those scenarios in terms of a variety of capital costs for the project. 5 So because of that, then the Commission 6 should be able to, as a condition of approving the 7 8 resource, cap the costs at the cost level that was 9 inherent in the economic analyses of the Company? 10 that -- am I getting the flow right? 11 MR. MOORE: You said it much better than me, 12 Commissioner. I would concur. 13 COMMISSIONER CLARK: Thank you. I understand 14 then. 15 CHAIR LEVAR: Thank you. I would like to get 16 your take on a couple questions I asked earlier. The first one is, if we were to disapprove this 17 application, what would be your view of the costs 18 19 that have been expended to meet the Safe Harbor thus 2.0 far? 21 MR. MOORE: I would concur with the Division. Ι 2.2 believe the statute allows recovery of costs in 23 the -- allows, doesn't require -- recovery of costs 24 in the case of a denial of an energy resource 25 decision, but that should be determined in a later

Page 191 1 proceeding to determine prudence. 2 CHAIR LEVAR: Okay. Thank you for that answer. 3 And then do you view the waiver statute as only being 4 an option in lieu of making the application the Utility has made or is it still an option once the 5 Utility has made its application for approval? 6 I believe that the waiver is still 7 MR. MOORE: an option if this Commission would issue an order 8 9 denying the application. I also believe that the 10 record in this case would more than satisfy most of 11 the requirements of the energy resource decision 12 waiver statute and that that proceeding can proceed 13 quickly, particularly since it would -- the proceedings would be in accord with most of the 14 15 arguments of the parties opposing the application. 16 CHAIR LEVAR: Thank you. I appreciate those I think that concludes our questioning of 17 answers. 18 Thank you for your closing statement. 19 Is there an agreement for who's going next? 2.0 MR. RUSSELL: That would be me. Thank you,

20 MR. RUSSELL: That would be me. Thank you,
21 Chair LeVar, Commissioner Clark, Commissioner White,
22 for the opportunity to present closing arguments.
23 It's been a really long week, and I appreciate your
24 attention to the details of this matter. They are

not easy issues, so I appreciate that.

25

1	Page 192 UAE strongly opposes the Company's
2	application for approval of the resource decisions
3	that are before you today. We do not believe that
4	the Company has presented the case that these
5	resources present the lowest-reasonable cost
6	resources available.
7	We believe that these resources present
8	significant risks to UAE and to other ratepayers. We
9	also are keenly aware of the near-term incremental
10	rate increases that would be guaranteed if the
11	Commission were to approve the application as well as
12	a potential for long-term risks that have been
13	addressed in multiple rounds of prefiled testimony as
14	well as four days now of live testimony.
15	I won't repeat that or summarize it.
16	Rather, I'm going to address a fairly narrow issue,
17	and it is an issue or, rather, a concern that is
18	being expressed by UAE, the independent evaluator in
19	this matter as well as the Commission in the prior
20	docket regarding approval of the solicitation
21	process. And I want to explain how that concern has
22	not been addressed.
23	As the Commission is, of course, well
24	aware, the Commission granted the Company's
25	application for approval of the solicitation process

Page 193 with the suggested modification that the Company 1 2 include solar resources. UAE and other parties had 3 suggested to the Company to expand the RFP to include 4 solar resources or others, and when the Commission granted the application with that suggested 5 modification, it included -- I'll use my term --6 7 warning, I suppose, that in a later proceeding, this 8 proceeding, the Company would have to come in and justify its decision if it elected not to include 9 those solar resources. 10 11 And, of course, we know that the Company 12 did not include solar resources. What the Company 13 has said in response to that statement in the Commission's order is that, having gone through this 14 15 process and placed the projects that were included in the solar RFP final shortlist against the projects in 16 the wind RFP final shortlist into their SO model 17 through 2036 and had that model selected both 18 resources or both sets of resources, that that 19 2.0 satisfies the conditions. And I'm going to talk a 21 little bit about why it does not. 2.2 And indeed I think I'm going to leverage 23 most of that argument on the statements of the 24 independent examiner engaged by this Commission as to 25 why it does not, but first, I want to talk about what

Page 194 we know now that we did not know when the Commission 1 2 approved the solicitation process. We knew when the 3 Commission approved the solicitation process that the 4 independent examiner had said that he can't determine whether the process will lead to the lowest-cost 5 6 resources. Mr. Oliver testified in this proceeding he 7 couldn't know that until the end. It was kind of 8 results-based determination. He won't know until we 9 get to the end. Now that we're at the end, he has 10 11 stated in both in the report and in his live 12 testimony that he can't say that the process -- even 13 now he could not conclude that the process resulted in the lowest-reasonable-cost resources. 14 15 And I'll direct your attention to pages 71 16 and 84 of the independent examiner's report. I'll quote from page 84. What he says is "Since 17 PacifiCorp's solicitation is based solely on the 18 solicitation for system wind resources, it is not 19 20 possible to determine if other resources would have 21 been included in a final least-cost, least-risk 22 system portfolio, potentially displacing one or more wind resources." 23 24 We don't have a transcript yet of the 25 Wednesday proceeding, but I have listened to some of

Page 195 the audio, and I'll direct your attention if you're 1 2 so inclined to the audio of the May 30 proceeding 3 starting at around an hour and nine through around an 4 hour and 13 minutes for his live testimony on that 5 point. Mr. Oliver also testified his 6 recommendation to approve the wind-only RFP process, 7 so to exclude other resources, was based on his 8 9 understanding that PacifiCorp sought to take 10 advantage of a time-limited opportunities to -- for 11 the PTCs. He testified live before you that, had he 12 known PacifiCorp was taking the position that the 13 resources it sought to install would be based on a capacity contribution, that he might have made a 14 different recommendation than the one that he did 15 16 make. 17 I think we also know now, having seen the results of the solar RFP, that the solar -- the cost 18 of the solar resources from PacifiCorp's 2017 IRP 19 20 were wildly inflated. PacifiCorp was wildly wrong 21 about the cost of solar, the cost to produce solar 2.2 and the competitiveness of solar as compared to the 23 competitiveness of wind. 24 My colleagues have discussed it some already. We have seen testimony from Mr. Peaco, 25

Page 196 Mr. Hayet, and Mr. Mullins, all pulling from 1 2 PacifiCorp's own numbers that the solar resources are 3 vastly superior when you look at that 2050 time frame 4 and also that the solar resources provide greater benefits in that 2050 time frame, and there is no 5 price-policy scenario, whether you're looking at 2036 6 or 2050, in which the installation of the solar 7 resources results in costs to ratepayers. 8 9 In contrast, the wind resources, I will 10 acknowledge PacifiCorp's own numbers say the wind 11 resources result in benefits in all nine price-policy 12 scenarios through 2036 but only seven of the nine 13 through 2050. The solar resources provide benefits 14 in all 18, whether you're looking at 2036 and 2050. 15 And I'll point to you the page numbers of 16 the prefiled testimony, page 53 of Mr. Peaco's surrebuttal testimony, pages 25 through 27 of 17 Mr. Hayet's surrebuttal testimony, and pages 18 18 through with 21 of Mr. Mullins's surrebuttal 19 20 testimony. 21 I will also address -- I also want to 22 address PacifiCorp's statement that placing the solar alongside the wind in the SO model, running that out 23 to 2026 satisfies its obligation to demonstrate to 24 you that it was a wise decision or a prudent decision 25

Page 197 1 to exclude solar. I think it actually shows quite 2 the opposite. 3 The fact that the SO model selects solar 4 and wind ought to tell you they should have been included because that's what would have happened if 5 PacifiCorp had priced solar correctly in the IRP to 6 7 begin with. As you recall in the solicitation approval docket, there was a fair bit of discussion 8 9 and disagreement about the cost of solar. 10 I'm not going to repeat the Commission's 11 order on that, but there were parties to the 12 proceeding that indicated solar was a lot cheaper 13 than what PacifiCorp was saying and, if PacifiCorp had priced it correctly, we may have had that result, 14 15 which is their SO model yielding a result that solar 16 and wind ought to be placed in same the RFP and not 17 in separate RFPs. And I also want to talk a little bit about 18 19 the statements of the independent examiner that 20 explain how and why you can't look at that 2036 time 21 frame to adequately compare different price 22 structures. This is PPAs versus BTAs and benchmark 23 resources. And this goes whether the PPA is a solar 24 or a wind resource, but because they are different price structures, because they have different 25

Page 198 1 lengths, it's inadequate to just take look at the 2 20-year price range. So just very quickly, with a 3 BTA or a benchmark, those all run out to 30 years. 4 The way that PacifiCorp has modeled those, the way that it models them now and the way that it 5 modeled them in the SO run that it's talking putting 6 7 them side by side with solar, is to have all of the PTCs using nominal numbers, meaning that they all 8 9 occur in the first ten years. So that 2036 look captures 100 percent of 10 11 the production tax credits from the BTA and benchmark 12 resources. In contrast, when you're talking about a 13 20-year PPA, because the solar resources would have come online at the end of 2020, you're looking at the 14 first 16 years of a PPA, and PPA, the structure is 15 that the developer takes the cost -- or excuse me --16 17 takes the risk that it will bid the right price to -taking the risk of its own capital costs and its own 18 19 ability to harvest ITCs or PTCs, I suppose. 2.0 And so it builds that into its price, and 21 that's then levelized out over a 20-year period, so 22 now, you are looking at 16 of those 20 years because 23 the 2036 model does not go out to the full-term of 24 the solar or the wind PPA. So you're capturing 16 of 20 years of the PPA, which means that you're only 25

Page 199 capturing 80 percent of the tax credit benefits. 1 2 You're also only capturing 80 percent of the cost, 3 assuming the benefits and the cost -- the tax credits 4 and the capital costs are evenly distributed. In contrast, as I mentioned, you're getting 5 100 percent of the tax credits from a BTA or 6 7 benchmark resource, but because PacifiCorp has insisted on continuing to use real levelized costs 8 for those resources -- and we talked about this some 9 in the repowering docket -- but what that means is 10 11 that you take the capital costs and you spread them 12 out evenly every year for 30 years. 13 When you look only at 2036, you're leaving 14 out the last 14 years, or approximately 50 percent of 15 the costs of that project. For all of those reasons, the independent examiner indicated that's not the 16 appropriate way to compare those two different types 17 18 of price structures. 19 There are a number of places in his 2.0 report -- Mr. Hayet talked about them some this 21 morning -- where Mr. Oliver indicated, or the IE 22 indicated, that using the SO model out to 2036 23 presents a bias towards the BTA and benchmark resources for all the reasons I just indicated. 24 25 I can give you those citations. I think

```
Page 200
 1
     Mr. Hayet actually captured them this morning.
 2
     think they are on pages 62, 64 to 65, and 81, and
 3
     those are all from the -- I apologize for this --
     from the confidential version of the IE's report.
 4
     don't have the citations from the redacted version.
 5
               I do want to read from some of those.
 6
     page 62, page 62 of the IE's report he states, "The
 7
 8
     capital cost inputs for the benchmarks and BTAs are
 9
     based on real levelized costs for the period 2017 to
10
     2036, consistent with the IRP methodology. The IEs
11
     raised the issue that this approach could bias the
12
     evaluation results towards BTA options if only a
13
     portion of the capital costs associated with the
     benchmarks and BTAs are recovered during the
14
15
     20-year evaluation period since these projects have a
16
     30-year life and capital-cost recovery period."
17
               He goes on to talk about the IEs, the
     Oregon IE having asked PacifiCorp to run a
18
     sensitivity case in which the PTC values would also
19
20
     be levelized, and that's precisely what Mr. Hayet did
21
     in his analysis that I referenced you to earlier.
2.2
               On page 65 of the Utah IE report, the
23
     statement here is "The Oregon IE requested a
     sensitivity where the PTC benefits produced by BTA
24
25
     and benchmark options would be levelized over the
```

Page 201 full 30-year life of the project. A second issue 1 2 raised by the IEs was whether the term of the 3 analysis through 2036, approximately 16 years, and 4 the real levelized cost treatment for capital revenue requirements adequately reflects all the capital 5 costs associated with utility ownership options over 6 a 30-year project life." That's at page 65. 7 I'll remind the Commission of Mr. Hayet's 8 9 testimony where he stated that in order to determine 10 to place PPAs and BTAs on an equal footing, you have 11 to go out to the end of the life of the project. So 12 he testified for a BTA or benchmark option it's 13 30 years. You have to go out to 30 years. If it's a 14 PPA option, it's 20 years. You go out to 20 years. 15 He also indicated if there's a five-year option, you 16 go out to the end of that option as well. 17 And for those reasons I submit that PacifiCorp has not demonstrated that it was correct 18 or made correct decision in deciding not to include 19 20 solar in the RFP, and I think the results would have 21 been very different if they had. Thank you. 2.2 CHAIR LEVAR: Thank you, Mr. Russell. 23 Commissioner Clark, do you have any 24 questions? COMMISSIONER CLARK: No questions. 25 Thank you.

1	Page 202 CHAIR LEVAR: Commissioner White.
2	COMMISSIONER WHITE: No questions. Thank you.
3	CHAIR LEVAR: We have had a lot of different
4	parties weigh in on a couple issues, so I'll just get
5	your position on them too.
6	What's your do you have a position on
7	the statutory authority for one of the conditions
8	recommended by the Office, a hard cap, as a since
9	we have one statute that says we can impose
10	conditions; we have another statute that refers to
11	future prudence review of any cost overruns, do you
12	have a view on those?
13	MR. RUSSELL: On the hard cap, I don't. The
14	Commission can, of course, impose conditions. I
15	think the statute is fairly clear it can do that.
16	Whether the statutory authorization to impose
17	conditions runs up against other potential concerns,
18	I don't know. I don't know enough about this to be
19	helpful to you here. I wish I did.
20	CHAIR LEVAR: Okay. Well, then another question
21	that I've asked other parties is do you have a
22	position on the waiver statute whether it's an
23	either/or that can only be applied for in lieu of the
24	application we have in front of us now or whether
25	it's still an option that remains available?

Page 203 Yeah, I appreciate that. 1 MR. RUSSELL: Ι 2 don't -- I think when it was written it was probably 3 contemplated as an either/or but when you look at the 4 statute, it doesn't indicate that you have one or the 5 other. So my suspicion is that if we look at the 6 plain language of the statute and the Commission 7 8 elects to decline to approve, that the Company could 9 turn around and file an application for the waiver 10 under the other provision and we could move forward 11 that way. 12 CHAIR LEVAR: Thank you. I appreciate your 13 answers to those. 14 MR. RUSSELL: Can I address one of the questions 15 you've asked other parties? 16 CHAIR LEVAR: Yes. 17 It relates to your question MR. RUSSELL: Okay. about robustness and how the interconnection queue 18 addresses -- I'll be very brief. You will recall I 19 2.0 had the discussion with Mr. Oliver about this issue, 21 and I'll be candid: He testified he thinks the 2.2 robustness element was met. 23 But he also indicated that he thought that 24 the interconnection queue eliminated most, if not all, of the competition for the benchmark resources. 25

Page 204

- 1 And I submit to the Commission that the issue of
- 2 competition is really at the heart of what the
- 3 robustness element is about.
- 4 While Mr. Oliver and I may disagree about
- 5 the definition of that, I think that ought to carry
- 6 some weight. I don't think you should ignore the
- 7 market response, but I do think that the purpose of
- 8 setting up a solicitation process to garner a market
- 9 response is to garner a market response that can
- 10 compete for the benchmark resources.
- 11 CHAIR LEVAR: Thank you. I appreciate that
- 12 additional perspective, and thank you for your
- 13 closing statement.
- MR. RUSSELL: Thank you.
- 15 CHAIR LEVAR: Mr. Baker.
- 16 MR. BAKER: Thank you. Good afternoon,
- 17 Chairman LeVar, Commissioner Clark, and
- 18 Commissioner White. On behalf of the Utah Industrial
- 19 Energy Consumers, I appreciate the opportunity to
- 20 provide these closing arguments and discuss why this
- 21 Commission must deny the Company's request.
- 22 A significant energy resource requires an
- 23 energy resource decision. The Company's decision --
- 24 Ekola Flats, TB Flats I and II, and Cedar Springs --
- 25 was first announced in this docket a short two weeks

Page 205 before the start of this hearing in the Company's 1 2 surrebuttal testimony. Before this final decision 3 PacifiCorp changed its mind not just once or twice 4 but three times, the resource portfolio justifications or analyses changing with each round 5 of filed testimony. 6 The Company's shifting stories date back to 7 at least 2015 when the Company represented to this 8 Commission that it had no resource need for the next 9 decade. During the same 2015 proceeding, the Company 10 11 also argued its desire to protect ratepayers from 12 inherent uncertainties associated with 20-year forecasts and the fixed-cost risk that hedges against 13 14 future prices creates. 15 Prudent concerns, given RMP history of 16 being wrong, as Mr. Mullins's testimony demonstrates, 17 the Company's official forward price curve has exceeded actuals approximately 90 percent of the 18 19 time. Casting these ratepayer concerns aside today, 2.0 the Company is asking the Commission to approve a bet 21 of an estimated \$2 billion against future forward 2.2 forecasts modeled out over 30 years. Based on its 23 earlier statement, this is a bet the Company would not make or not recommend. 24 25 By failing to make a decision and stand

Page 206 still, the Company deprived UIEC and other parties 1 2 from ever having a full and fair opportunity to 3 assess the true project, its costs, risks, or 4 purported benefits. Besides failing to comply with the Energy 5 Resource Procurement Act and its regulations that 6 require a final resource decision before an 7 application is ever submitted, the Company's rush for 8 9 tax credits has affected the entire process, leaving this Commission no choice but to deny the resource 10 11 decision. 12 This Commission cannot preapprove a project 13 and in the process create the uncertainty in this proceeding, taking real money from real ratepayers' 14 pockets on an incomplete record. The Commission must 15 make complete, accurate, and consistent findings of 16 fact in accordance with the Energy Resource 17 Procurement Act, which on this incomplete record, it 18 19 cannot do. 2.0 The resulting failure to undertake a 21 complete review of the facts required by this act 2.2 invites error and would be arbitrary and capricious. 23 As part of its public interest review, this Commission must evaluate risk. As described in the 24 testimony of Mr. Mullins and supported by the 25

Page 207 testimonies of Dr. Zenger, Mr. Peaco, Mr. Vastag, 1 2 Mr. Hayet, opinions from the Oregon and Utah independent evaluators and an order from the Oregon 3 4 commission, the combined projects have much risks -cost overruns, project delays, underproduction, and 5 interstate allocation to name a few. 6 And let's not forget the uncertainty in the 7 Company's modeling assumptions. Mr. Mullins's 8 9 testimony and summary today demonstrated that a few minor adjustments such as wholesale transmission 10 11 revenues and wind integration costs would disrupt the 12 claimed benefits in the Company's preferred medium 13 gas/medium CO2 price-policy scenario. Missing from this record are final drawings 14 of new critical towers as well as the executable 15 16 governing contracts. The foundation of the Company's alleged mitigation measures and their squishy, my 17 18 term, quarantees against these risks. 19 The Company submitted only generic 20 pro forma examples offered to bidders as part of the 21 We have no way of knowing whether or not these 22 pro forma, after having undergone significant 23 redlines, resembled their original form. The Company admitted that the revisions were to material terms 24

and conditions involving contractor guarantees and

25

Page 208 excusable events such as the definition of a 1 2 force majeure, a definition the Company intends to 3 use to limit its PTC qualification commitment, and 4 these agreements still remain in negotiation. An opportunity for limited party review of 5 these ever-changing drafts, which the Company claimed 6 7 to be highly confidential, is an ineffective alternative for the Company's failure to have final 8 executable documents by April 16, 2018 as pledged by 9 Mr. Teply in his January and February testimonies, by 10 11 May 15 with the Company surrebuttal or at this 12 hearing at the latest. 13 And with these last two I'm not suggesting that such a last-minute surprise would not prejudice 14 the parties in this process. One must wonder if the 15 Company is as good at meeting construction deadlines 16 as it professes. Perhaps this demonstrated inability 17 to meet schedules help drive the 7 percent cost 18 19 overrun the Company experienced on portions of the 2.0 Energy Gateway transmission line, an approximately 21 40 million-plus hit to the combined project forecast 22 economics, if history repeats itself. Failure to submit to the record such 23 24 foundational documents deprived UIEC, parties, and 25 the Commission an opportunity to review, explore, or

Page 209

- 1 even verify the Company's risk mitigation claims.
- 2 "Because the Company told you so" is not sufficient
- 3 grounds on which this Commission can render a
- 4 decision.
- 5 We also do not know the impacts of the
- 6 appeal of the RFP approval in Docket 17-035-23.
- 7 Subparagraph (3)(a) of Title 54, Chapter 17, Part 3
- 8 requires that a resource decision comply with the
- 9 Energy Resource Procurement Act and its rules. A
- 10 resource decision cannot comply with the Energy
- 11 Resources Procurement Act if the entire RFP
- 12 process -- the first step under the Act did not
- 13 comply with the Act. This question now rests with
- 14 the Utah courts.
- We do not speculate on this appeal risk.
- 16 It exists and the Company failed to tell this
- 17 Commission how this risk could impact the combined
- 18 projects. More troubling, when asked about options
- 19 to protect ratepayers in the combined projects from
- 20 this risk, Ms. Crane merely indicated the Company
- 21 would comply with future orders, effectively ignoring
- 22 a risk that the Company would not accept in its own
- 23 arm's length agreements and depriving the Commission
- 24 an opportunity to explore this appeal risk, its
- 25 impact, and possible mitigation.

```
Page 210
               The Company similarly failed to explore the
 1
 2
     risks associated with the Oregon commission's refusal
     to acknowledge the RFP shortlist, because -- I refer
 3
     you to page ten of the Order, DPU Cross-Exhibit No. 3
 4
 5
     and quote:
 6
               "We simply cannot conclude at this time
     that the narrow shortlist from the Company RFP, a
 7
 8
     package bundle of mostly Company owned Wyoming wind
 9
     resources connected to a single transmission line
10
     clearly represents the renewable resource portfolio
11
     offering the best combination of cost and risk for
12
     the Company customers."
13
               The Company does not have a pre-approval,
     order, stipulation, or otherwise in Oregon, a state
14
15
     with an aggressive RPS standard, and must now seek
     rate recovery in the future from a commission that
16
     is, at best, skeptical of the Company's decision.
17
               The Company refused to address how Utah
18
     customers will suffer in the event of a full or
19
20
     partial disallowance in Oregon. This Commission
21
     should not race ahead of Oregon and disadvantage Utah
22
     by preapproving a decision that does not offer the
23
     lowest-cost, lowest-risk resource to Utah customers.
24
               Project supporters make much about the
25
     do-nothing alternative. Assuming for the sake of
```

Page 211 argument something to which UIEC does not agree, that 1 2 something needs to be done, do-nothing is not the 3 only alternative. In the Company's own words, solar 4 resources, which the Company sensitivity demonstrates better economic benefit to ratepayers and which 5 offered better capacity to fill a falsely claimed 6 need, can still being built and will get cheaper. 7 The Company's actions deprive an alternative in this 8 9 proceeding. 10 It isn't good enough the combined projects 11 may provide environmental benefits. It isn't good 12 enough that sprinkled with fairy dust, again, my 13 term, the combined projects' economics look good. 14 Marginal, speculative benefits that quickly 15 vanish with the occurrence with any one risk or modest assumption adjustment, let alone a combination 16 of them, do not support a pre-approval. We must know 17 the costs; we must know the risks with much more 18 19 certainty. We must have a complete record. We have 2.0 none of these. 21 Neither the record, nor this process, 22 pressured to chase PTCs, support or permit Commission 23 approval of the combined projects. Accordingly the UIEC requests the Commission deny the Company's 24 25 request. Thank you again for the opportunity to

Page 212 1 present UIEC's position. 2. CHAIR LEVAR: Thank you, Mr. Baker. 3 Commissioner White, do you have any 4 questions for him? I don't. 5 COMMISSIONER WHITE: Thank you. CHAIR LEVAR: Commissioner Clark. 6 7 COMMISSIONER CLARK: No questions. Thank you, Mr. Baker. 8 9 CHAIR LEVAR: Do you want to address any of the questions that I've asked some the other parties? Do 10 11 you want me to repeat them? 12 MR. BAKER: Sure, yeah, there's a couple of them 13 that I would like to comment on them. The first, if 14 I may, just a brief moment respond to your question regarding exceptions to the first-come, first-served 15 16 transmission queue exception. 17 I would like to refer you to 128 FERC P61155 as an example of the cluster study waiver that 18 Ms. McDowell referenced. In this case El Paso 19 2.0 Electric company requested and was granted such a 21 study exception to facilitate studies to help meet New Mexico's renewable portfolio requirement. 2.2 I understand that a cluster study waiver 23 24 can't waive the first -- first there -- first-in, 25 first-selected requirement. However, it can have the

1	practical effect of moving a resource up the queue.
2	For example, if a higher queue project
3	drops out of the queue, for example, as being
4	selected in an RFP, a lower queue project part of a
5	clustered study would move up the queue, and with the
6	benefit of having this advance to a completed study.
7	Such an event could have avoided the queue cut-off
8	impact in dispute, but now we will never know.
9	With respect to the soft cap issue and
10	whether or not future prudence review under the
11	statute would provide inadequate mechanism, I just
12	would argue that once the first I find it
13	problematic and of little comfort that once the first
14	cubic foot of concrete is poured the temptation of
15	the sunk cost fallacy would be too great.
16	With respect to whether the Commission can
17	put in hard caps, I too can't, you know, describe
18	further than what others have, and I would submit
19	that with respect to the waiver question, the law is
20	not clear. I can't cite to anything to say that, you
21	know, the Company cannot proceed with a waiver should
22	this process should it be denied during this
23	process.
24	I will say, however, that that would seem
25	to provide an unfair second bite at the apple, and in

```
Page 214
 1
     some instances render this process meaningless.
 2
               With that, I have nothing further.
          CHAIR LEVAR: Thank you. I appreciate your
 3
 4
     answers and your closing statement.
               Ms. McDowell, we have time reserved for
 5
     final statement.
 6
                         Thank you, Commissioners. Let me
 7
          MS. MCDOWELL:
     just begin by going around the room and addressing, I
 8
 9
     think, the arguments generally in order although I
     may combine some of my responses if it makes sense.
10
11
               First of all, with respect to the DPU's
12
     extensive comments on the MSP process, I would say
13
     most of that was not reflected in testimony and not
     developed in the record, but in any event I think the
14
     reason it was not developed in the record and subject
15
     of much conversation in this hearing is because MSP
16
     is its own separate process.
17
18
               And I guess would urge you to keep it that
19
     way and not prejudge or prejudice what's going on in
20
     that docket by making really advanced or premature
21
     decisions about allocation issues in this docket.
2.2
     Just echoing what Commissioner LeVar said, we don't
23
     think it's necessary for the Commission to address
     MSP or allocation issues at this point because the
24
25
     Commission can always backstop that issue by
```

Page 215 1 reviewing it at a later point and we think that's 2 what's most appropriate here. 3 Moving on to some of the comments that the 4 Committee made. First of all, the Committee reflected or started out its closing argument by 5 referring to the low-cost factor, the first factor in 6 the list of six factors as the primary factor the 7 Commission must decide. 8 I think it's clear that all of the factors 9 are important. There is no direction to the 10 11 Commission to consider one as a primary factor and 12 ignore the others. I think on a case-by-case basis 13 the Commission has looked at different factors in different ways. 14 15 And with respect to how we believe we've 16 satisfied that statute, we believe we satisfied it in 17 the same way that the Commission has historically looked at this issue and in the way the Commission 18 looked at it in the repowering docket, which is to 19 2.0 look at the benefits of resource acquisition and also 21 look at the whole context. 2.2 So the part of the Committee's statement 23 that we're alleging that basically by acquiring wind 24 now with a promise to look at solar later, that 25 that's our position that's how we satisfy it, that's

Page 216 1 just not a correct statement of the record. What we 2 have said is that applying our SO model, applying the 3 model in which we compared all of the bids in the RFP 4 process, if you apply the RFP model, which is the SO model to do the comparative analysis of solar bids 5 and wind bids, we did that analysis head to head and 6 the wind projects came up better. 7 And that's the primary basis for which --8 9 and that's not to say solar didn't have benefits. We've also said solar looks good, so we'll continue 10 11 to explore that, but in terms of what goes first, 12 both the timing of the wind and the benefits of the 13 2036 analysis is what the Company relied on. Now, folks -- and I'll kinds of get into 14 15 some of the UAE at this point too -- folks have said, 16 "Well, but other analyses show that solar is better." 17 I quess this is the point we tried to make 18 throughout, that it is important and it's actually a 19 requirement of the rule to apply consistent analyses 20 across all RFP processes. 21 And the consistent analysis was that 2.2 20-year SO model. That's what we used in the IRP. 23 That's what we used in the RFP. Certainly the IE 24 asked for some sensitivities to 2050. We did those, 25 and the IE's conclusions were, based on those

Page 217 sensitivities, that ultimately there was no bias. 1 2 And if you go to page 81, which people 3 continue to say -- they want to go to this as far as, 4 you know, "The IE says basically the results were basically comparable, perhaps there's a small bias," 5 and folks end there. And then the IE's ultimate 6 conclusion was "We do not believe any bid had an 7 undue inherent competitive advantage within the 8 9 parameters of the solicitation process." That was the conclusion, and it's not fair 10 to just read down to the one section and not take 11 12 into account the conclusion of the IE in that context. Another issue that the Committee -- excuse 13 me -- the Office. 14 15 COMMISSIONER CLARK: Can I ask you a question 16 about that before you leave? 17 MS. MCDOWELL: Of course. 18 COMMISSIONER CLARK: Do you understand that 19 statement to be about the analysis process or isn't 2.0 it really about the information requirements that the 21 bidders had? 2.2 MS. MCDOWELL: So I read the statement and I 23 thought this was the discussion in the hearing with the IE that basically it all follows on that you have 24 25 the discussion about the modeling and then the IE

Page 218 1 concludes that there was no inherent competitive 2 advantage with respect to one type of bid over 3 another, and that is a fair conclusion based on the 4 statement that says that the results above -- the results showed that the BTA and PPA for the most 5 competitive projects to be close in value. 6 7 In addition on page --8 COMMISSIONER CLARK: Thank you. I apologize for 9 interrupting. 10 MS. MCDOWELL: No worries. On page 75 there's a 11 related conclusion from the IE stating "Overall the 12 results indicated that there did not appear to be an 13 inherent advantage associated with the utility ownership bid due to shorter evaluation purposes for 14 purposes of evaluating and selecting a portfolio of 15 16 resources." 17 So, again, that's back to the 2036 18 analysis, and I'm stressing this because, you know, you can't do -- I mean it's a basic premise of the 19 20 RFP process that you need to use a consistent 21 analysis across your bidding process. 2.2 So you can't use one analysis to judge all 23 of -- to comprise your shortlist and to assess the projects and then at the end use a different 24 25 analysis, a 2050 nominal analysis and say, "Oh,

Page 219 that's what the results should have been." 1 2 When we applied the analysis, we used 3 across the board to the comparison of solar and wind, 4 wind came up ahead of solar, and that's before taking into account the cost of the transmission line, which 5 if you do the solar bids, you're left in a position 6 7 where the customers are exposed to the 300 million net present value of the cost of that line. 8 9 The Company's clearly indicated that line is in the plan for 2024. That's a near-term need. 10 11 Now, the Company with its transmission planning has 12 made clear it takes those dates and tries to be as 13 flexible as possible to ensure that those lines can 14 be brought on as cost effectively as possible. 15 But that's not to say when you have a need 16 like that you can continue to push it on and out into 17 the future for forever. I think all the discussion around the transmission queue and the congestion 18 19 reinforces that is it really not a question of if; 2.0 it's question of when with respect to that line. And 21 you've heard that testimony from many of the 2.2 Company's witnesses on that point. 23 So while some folks say "Well, it's an 24 advantage the solar bids don't require the transmission line," from our perspective what happens 25

Page 220 1 if you go forward with the solar bids, they might 2 look attractive because you don't have the 3 transmission costs, but you also don't have the 4 benefits that are paying for that transmission, which is ultimately the 300 million NPV costs for the 5 transmission line. 6 So with respect to the concerns that we, 7 you know, never reviewed other bids outside of solar, 8 9 that we should have done an all-source bidding process, I just want to say no party has ever raised 10 11 this issue that the Company should have looked at a 12 gas plant or that some other kind resource would be 13 competitive. That just was never disputed here. The only issue raised was would solar 14 resources be competitive, and that's simply because 15 16 the IRP process clearly showed that the renewable 17 resources were the only resources that could possibly compete with the front office transactions. 18 that's the evidence on that. 19 2.0 With respect to the need question, I just 21 want to say that on the one hand the Office has said 2.2 that the 2050 analysis is the one that the Commission 23 ought to be looking at even though the 2036 analysis 24 was used in the RFP process, and they are pointing to 25 the wind repowering order for that.

1	Page 221 And it was clear and I think the
2	testimony was clear is that the 2050 analysis in
3	repowering was particularly important because that
4	back-end benefit was such a big part of the analysis
5	of whether repowering made sense.
6	So once basically it's the life
7	extension benefit. Once the old plants were going to
8	go off, what was the value of the remaining years
9	where you presumably would not have had those wind
10	plants, and that's a very large benefit which was not
11	captured in the 2036 analysis.
12	So here, we've got a different set of
13	considerations. We're really looking at how does the
14	RFP compare to bids, and it uses the 2036 model for
15	that. But in any event, on the one hand, the Office
16	is pointing to the repowering order for the use of
17	the 2050 analysis but then not considering how the
18	Commission really reviewed that low-cost factor in
19	the context of the repowering decision.
20	The Commission really looked at benefits,
21	and is there a net benefit, and economic benefit, to
22	customers, not some of the other need arguments that
23	have been raised both here and in the repowering
24	context.
25	So let me just check my notes here for a

```
Page 222
              It's hard to talk and read my notes at the
 1
     moment.
 2
     same time. So just give me one moment to catch up.
 3
               So there is also the contention that simply
 4
     having the line in our long-term plan is not enough
     to show need for that transmission line, and I think
 5
     there's been a fair amount of evidence beyond just
 6
     the fact that that line is in our transmission plan
 7
     to show the need.
 8
               And it's some of the issues I raised
 9
10
     earlier about relieving congestion, providing
11
     additional voltage support, allowing the Company to
12
     manage all of its resources more flexibly, and the
13
     evidence we've produced that even the Dave Johnston
     plant closes and even if there is no additional wind
14
15
     that's brought on, we still are in a place where
16
     we're very close to having -- you know, being put
17
     into that place where we have a reliability need that
     would mandate construction of that line and bring on
18
     that $300 million NPV cost.
19
2.0
               Now, there was -- there have been questions
21
     about the hard cap and the legality of the hard cap.
2.2
     I just want to also make an argument that isn't just
23
     around legality but is around fairness. What we're
     looking at here is a proposal to cap the Company's
24
25
     costs at its estimates to ensure some level of
```

Page 223 benefit. 1 2 And the fallacy of that argument is that 3 you could have a situation where you've capped the 4 Company's costs at the estimated level; you end up having significant benefits that, you know, maybe are 5 either what the Company's estimated or even more than 6 7 that; there's an occurrence that's outside of 8 Company's control that the Company prudently responds 9 to, say, costs at 50 million; and a hard cap would put the Company in a position that, notwithstanding 10 11 the fact customers are enjoying potentially hundreds 12 of million of dollars of benefits, the Company is not 13 going to be able to recover that 50 million in 14 prudent expenditures. 15 So it puts the Company in a position where people are not saying, you know, "Cap this at the 16 17 projected benefits." They are saying, "Cap it at the projected costs irrespective of benefits." So you do 18 get in a position -- we think any hard cap is 19 20 inappropriate and not authorized. 21 But it's also pretty unfair because it 2.2 could lead to a situation where customers have 23 significant benefits and the Company is unable to recover prudent costs. 24 25 So with respect to UAE, some of UAE's

Page 224

- 1 comments around the IE and his conclusions that he
- 2 personally could not say whether -- because he was
- 3 not the IE in the solar resource RFP and had not
- 4 reviewed all the evidence in this docket and the IE
- 5 work in that solar docket, that he personally could
- 6 not say that the wind resources -- well, he said
- 7 certainly that the wind resources provided
- 8 substantial benefits to customers and were the best
- 9 and most competitive bids the market could offer for
- 10 wind.
- 11 He could not say whether they were, on a
- 12 relative basis, lower cost than solar, that that was
- 13 just not his job. I just want to be clear -- and I
- 14 believe the IE testified -- that that's not to say
- 15 that you can't make that decision based on the record
- 16 that we've provided you, which is much more extensive
- 17 than what the IE reviewed.
- So let me just be clear that the IE did not
- 19 say that that decision can't be made by you. He said
- 20 it could not be made by him based on scope of his
- 21 work.
- We believe, based on the record that we
- 23 have provided, that both based on the benefits, the
- 24 analysis the Company did do of the solar resources,
- 25 the conclusions of that analysis -- which is wind

Page 225 1 now, solar next -- that all of that supports the 2 satisfaction of that first factor, that low-cost 3 factor. 4 Now, with respect to the some of UIEC's 5 comments, one of the comments that UIE's counsel made was that the contracts are missing from the record 6 and that's problematic. I just want to reinforce for 7 8 the Commission the point that the resource approval 9 statute really contemplates approval before getting into these binding contracts, that it is the normal 10 11 course of events, at least based on the cases I've 12 read, in particular the Bridger SCR case, where the 13 Company really takes the contracts up to, you know, a 14 sort of finally negotiated point, waits for the regulatory approval process to be depleted, and then 15 files the contracts with the Commission so the 16 Commission can review them. 17 18 Obviously, the Company's implementation of its resource decisions are subject to a prudence 19 20 review by the Commission, so assuming those contracts 21 did not comport with representations the Company made 2.2 in the context of this proceeding, that would be 23 subject to future commission review. 24 Now, with respect to UIEC's position that there is a major risk associated with the appeal of 25

Page 226 1 the RFP, you know, just there's an irony that UIEC 2 has brought this appeal and now claims the Company --3 that there's a huge risk associated with it the 4 Company has not considered. 5 I mean it seems inappropriate or ironic for 6 a party to create a risk and then say, "Oh, there's 7 too great a risk to proceed and the Company can't 8 move forward and the Company hasn't considered that risk." 9 10 I guess we're -- the appeal has yet to go 11 forward, but we believe that just based on similar 12 comments that we've made here about the satisfaction 13 of the low-cost factor, we don't think the appeal has 14 merit. We also think it's inappropriate for a party to create a risk and then claim the Company hasn't 15 16 properly addressed the risk that they've created. 17 And with respect to the UIEC's comments 18 about the Oregon order on the RFP shortlist, UIEC referred to this as, you know, that we did not -- the 19 20 Company did not get a pre-approval order. I want to 21 be clear: There is no such thing as a pre-approval 22 order in Oregon. 23 The closest thing that Oregon has to that would be IRP acknowledgment or RFP shortlist 24 acknowledgment, one or the other; you don't need 25

Page 227

- 1 both. In this case the Company had IRP
- 2 acknowledgment, and that's as good as it gets in
- 3 Oregon. There is no pre-approval scheme like there
- 4 is in Utah. I don't think the commission could have
- 5 been clearer in its order that they were not
- 6 prejudging the outcome and clearly encouraging the
- 7 Company to go forward and present this in the normal
- 8 course under Oregon law.
- 9 COMMISSIONER CLARK: Can I interrupt you there a
- 10 second.
- MS. MCDOWELL: Of course.
- 12 COMMISSIONER CLARK: Would you remind me of the
- 13 timing of IRP acknowledgment in Oregon and your
- 14 pursuit of RFP acknowledgment in Oregon, how those
- 15 operated, what was the timeline for each of them.
- MS. MCDOWELL: So the IRP acknowledgment was in
- 17 December and the RFP shortlist acknowledgment order
- 18 was just a couple weeks ago. So, basically, just
- 19 like here, the RFP went on concurrently with the IRP.
- 20 The IRP was acknowledged first, and then the RFP
- 21 shortlist issue came before the Commission.
- 22 And frankly, you know, I think one of the
- 23 drivers for the commission's decision was that they
- 24 had already provided IRP acknowledgment, so they
- 25 could reserve questions on the RFP shortlist because

Page 228 they -- since they had provided IRP acknowledgment, 1 2 it really wasn't -- you know, it was a redundant acknowledgment in some ways, and I think that was the 3 4 gist of the Commission's order. 5 COMMISSIONER CLARK: Is it something you apply for? You initiate? 6 7 MS. MCDOWELL: It's a requirement --8 COMMISSIONER CLARK: A request? 9 MS. MCDOWELL: It's a requirement of a competitive procurement process in Oregon, so it was 10 not something that the Company -- it had to do it 11 12 because it's just a requirement of the procurement 13 process, so the Company, as a part of the procurement 14 process, it got approval of its RFP. 15 And when it came to -- when it had prepared 16 a final shortlist, it was required as a part of the procurement review to ask the Commission to 17 acknowledge that final shortlist, and that's the 18 19 process that occurred. 2.0 COMMISSIONER CLARK: Thank you. 21 MS. MCDOWELL: Before I conclude, let me check 2.2 with my colleagues to make sure there's nothing else. 23 Just a couple of other points, assuming I 24 have a couple more minutes. 25 CHAIR LEVAR: Assuming time for questions, but

Page 229 1 yeah --2. MS. MCDOWELL: I won't take much longer. 3 CHAIR LEVAR: Maybe two more, yeah. 4 MS. MCDOWELL: There were some questions that 5 came up about the forward price curve and the fact 6 that the Company -- you know, Company's predicted ability to forecast forward prices, that there was 7 8 evidence it was problematic. I quess I just want 9 to -- these were comments from the DPU, and I just want to remind the Commission that when we asked the 10 11 DPU's witness to provide evidence of that, there was 12 never any ability to do that. 13 So, in other words, there were conclusory 14 statements made that the Company had predicted its 15 forward price curves inaccurately, but the Division 16 witness was never able to point to any evidence establishing that. 17 18 And just to remind the Commission, the medium case, the base case forecast, is based on the 19 2.0 Company's forward price curve just like in 21 repowering. And just like in repowering where the 2.2 Commission found that the use of that forward price 23 curve in all kinds of, you know, regulatory contexts 24 here in Utah demonstrated its reasonableness. 25 I mean it's the same curve that we're using

Page 230 here, and, you know, to the extent that we haven't 1 2 captured, you know, some of the decline in natural 3 gas forward price curves, that reflects the fact that 4 our curves are based on market inputs. We're not making this stuff up. We rely on 5 6 third-party experts. We consolidated and synthesize that information, and that's how we construct our 7 curve. Our curves are audited by all of our 8 9 commissions because they are used extensively, and 10 our regulatory processes. 11 And I think the evidence here was pretty 12 clear that compared to, you know, widely relied-upon curves -- namely, the EIA reference case -- the 13 14 Company's curve has always been a little bit lower, a little bit more moderate, a little bit more 15 conservative, if you will. 16 17 So the comparison to the Jim Bridger case, there was never any evidence in the record of actual 18 19 prices and how those forecasts compared to that. 2.0 And then, finally, with respect to this 21 question or the point that UIEC made on the cluster 22 study and the fact that that study could change 23 things with respect to queue position, the point I made remains: The queue -- FERC requires the Company 24 25 to basically go in serial order.

```
Page 231
               So even if you did a cluster study, it
 1
 2
     would still require somebody to drop out. So I guess
 3
     the wishful thinking would be if you did some kind of
 4
     study like that somebody might drop out of the queue,
     but it would still require someone to do that when
 5
     you have a valuable queue position in a place -- a
 6
     transmission constraint place like eastern Wyoming.
 7
               I think you can fairly and safely assume
 8
 9
     that people are not going to drop out of the queue.
     It's valuable to remain in the queue because,
10
11
     obviously, that can be part of a future arrangement
12
     such as the ones that occurred in this case.
13
               So those are all the rebuttal comments I
            I really want to, again, say thank you to the
14
15
     Commission for presiding over this case and presiding
     over this hearing.
16
17
          CHAIR LEVAR: Thank you. I have one very narrow
18
     question on one point you made in your rebuttal
19
     statement.
2.0
               When you were talking about the UIEC
21
     statements about the risk of the current pending
22
     appeal -- with the understanding that I believe UAE
23
     is the appellant -- I think I've got the term
     right -- in that case, UIEC is not a party to that
24
     appeal, does that modify your comments on that risk
25
```

Page 232 to any significant extent? 1 2 MS. MCDOWELL: Yes, it does. So I stand 3 corrected. 4 CHAIR LEVAR: Okay. Do you have any additional 5 questions? COMMISSIONER CLARK: No, I don't. I do want to 6 thank all counsel that have participated, though. 7 This summation has been very helpful for me. 8 it's laborious for each of you, but thank you for 9 your contributions today. 10 11 CHAIR LEVAR: Thank you. And I don't want to be 12 repetitive, but we recognize that asking for closing 13 statements was a not-insignificant burden on those of you who already had -- I'm trying not to use a 14 15 pejorative term -- a pretty rough week. We recognize it was a significant thing to 16 17 ask you do to that. It was helpful. It was 18 meaningful. And it allowed to explore some issues in 19 a way that we couldn't do so in testimony. So we 20 appreciate that. 21 And with that I think -- noting the time 2.2 constraints that were discussed on the first day of 23 the hearing, I don't know that we're ready to make 24 any commitments today on timing of Commission action except to say we will take this under advisement and 25

```
Page 233
     give this matter serious consideration and take
 1
 2
     action when we're able to do so.
               With that, we're adjourned. Thank you.
 3
             (Whereupon the hearing was adjourned
 5
     at 3:52 p.m.)
 6
 7
 9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
```

1	Page 234 CERTIFICATE
2	STATE OF UTAH)
3	COUNTY OF SALT LAKE)
4	THIS IS TO CERTIFY that the foregoing hearing
5	was taken before me, Letitia L. Meredith, Registered
6	Professional Reporter and Notary Public for the State
7	of Utah and Certified Shorthand Reporter for the
8	State of California.
9	That the hearing was reported by me in
10	Stenotype, and thereafter transcribed by computer
11	under my supervision, and that a full, true, and
12	correct transcription is set forth in the foregoing
13	pages, which also includes excerpt taken from PSC
14	recording.
15	I further certify that I am not of kin or
16	otherwise associated with any of the parties to
17	said cause of action and that I am not interested in
18	the event thereof.
19	WITNESS MY HAND and official seal at
20	Spanish Fork, Utah, this 6th day of June 2018,
21	With With
22	Letitia L. Meredith, CSR, RPR
23	
24	
25	

Index: \$1.9..17-035-23

				1
Exhibits	\$2 31:15 37:24 164:1 186:10	(3)(b) 103:7	100 145:1 198:10 199:6	12:30 101:3,5,
EXHIBIT- 00022 4:17	205:21	-	1014 15:8	13 195:4
EXHIBIT-	\$2.3 72:7	-39 159:16,24 160:11,16	104 34:20	13-035-184 46:12
00023 4:19	\$300 222:19	165:25	1088 104:1	14 39:14,19
EXHIBIT- 00024 4:21	\$32.75 68:15	-402 118:15	10:33 75:13	44:21 199:14
EXHIBIT- 00025 4:22	\$424 90:23		10:51 75:13	140-mile 102:22
47:21	\$43 67:5 69:3	0713 133:3	11 45:7 52:25	1419 90:4
EXHIBIT- 00026 5:3	\$430 69:6	08-035-42 47:22	11.62 71:3,6 72:16 74:8,23	15 15:16,23 67:10 75:11
EXHIBIT- 00027 5:4	\$530 50:11 \$56 59:6,7	1	1155 185:17	100:9 101:23 102:1 185:6 208:11
\$	\$700 88:19	1 21:7 50:9	1185 76:24	1500 185:19
\$1.9 30:24	\$72 69:25 70:5,15 72:6	58:18 60:8 104:17	12 45:10 52:25 53:1 55:4 69:19,23	16 8:5,6 15:14,15 20:6
\$10 67:16,22, 24 68:10 69:2	73:21,25 74:1 \$77 58:21	1-1 97:21 98:7 1-7 97:22 98:7	70:2 71:2,19, 24 72:15,24 73:5,12,14, 21,23 74:4,7,	29:10 107:9 114:7 184:17 198:15,22,24 201:3 208:9
81:23 85:19 \$11 37:25	\$88 60:19	1.2 102:15	16 160:13	17 17:16
\$11.2 37:23		1.4 109:2	12-035-97 45:25	29:12 60:7 102:20 135:6 183:11,12
\$166 90:18,20	(3)(a) 209:7	10 75:10	122 101:10	209:7
			128 212:17	17-035-23

Litigation Services | 800-330-1112 www.litigationservices.com

Index: 17-035-40..27

	_	_	_	_
104:11 209:6	91:21,22	2016 56:10 116:6 186:6	219:10	220:22 221:2, 17
17-035-40 6:4 101:13	20 55:11 58:24 59:12 90:5 99:25	2017 11:13 15:13 20:8	2026 196:24	21 196:19
174 107:12	100:6,9 101:22,23 121:9 198:22,	29:9 55:1 57:19,24 63:20 69:12	2027 57:19,20 58:12,19	216 91:25
1750 28:21	25 201:14	104:12 125:7 148:18 164:8	2028 59:15	22 54:22 67:10 80:7,18
17th 125:2	20-year 51:14,24	186:2 195:19 200:9	2029 59:15	81:12 104:11
18 20:9 54:1 107:8,10 154:5 196:14,	52:4,14,17, 21,22,23 53:8 56:7 82:15,	2017R 104:11	2030 58:5 59:16 162:22	23 45:23 80:6, 18 91:9
18	16,17,20,22 85:6 198:2, 13,21 200:15	2017S 26:19 89:23	2036 11:13 50:16,24	231 16:1,2 20:10
180 112:17 119:18 183:19	205:12 216:22	2018 15:14, 15,16,23	107:5,12 112:6 123:8 183:14	23rd 91:8
1985 104:1	2000 58:4 78:16	20:6,10 29:10,12 57:20,25 91:9 137:1 208:9	193:18 196:6, 12,14 197:20 198:10,23 199:13,22	24 46:11 80:6, 18 108:24
1:00 98:22 100:21,25	2000- 59:6	2019 145:5,10	200:10 201:3 216:13 218:17	25 47:17,21 80:7,18 100:6 196:17
1SS 58:25	2007 35:1	164:8	220:23 221:11,14	25.6 72:7
2	2008 59:5 2012 35:25	2020 110:6 160:4 189:7 198:14	2040s 86:21	26 60:8 80:7,
2 46:7,23	122:16	2021 112:5	2050 67:2 69:5 70:21	18
50:15,23 51:19 177:8	2014 46:12	189:8	107:6,13 123:8 183:4	27 53:24 75:21 76:2 80:7,18 108:7
2.3 72:5	2015 175:24 205:8,10	2024 87:17 144:11 184:7, 12,14,16,20	196:3,5,7,13, 14 216:24 218:25	183:10 196:17
2.5 37:8				

Litigation Services | 800-330-1112 www.litigationservices.com

Index: 28..708

28 59:22 60:23	3-7 97:24 98:8	33 62:4,10	450 28:22	566 60:23
283 39:22	3.2 71:11	338 107:11	5	58 76:23
289 39:22	30 18:7 51:10 59:23 62:2,	34-year 55:8, 12	5 15:13 44:19,	59 8:14 77:15
29 59:23	10,11 69:16 80:7,9,18 108:25 121:9,	345 46:7	22	5th 29:7,9
2:00 99:3,5	14,23 123:13 142:14 145:6	37 51:17	5.18 61:23	6
100:17	195:2 198:3 199:12 201:13	373 54:3	5.5 104:17	600 88:19
2:23 181:5	205:22	375 54:3	50 86:22 110:9 199:14 223:9,13	112:5
2:35 180:14	30-year 11:19 33:10 34:20	3:00 99:2	500 102:22	62 200:2,7
2:37 181:5	52:21 108:22 147:8 200:16	180:21	53 196:16	63 9:3
2d 104:1	201:1,7	3:52 233:5		64 9:25 200:2
3	300 107:18,23 185:5 219:7 220:5	4	54 17:16 21:7 102:20 135:6 209:7	65 200:2,22 201:7
3 15:24 16:3 21:7 55:8 62:14 63:10,	3000 143:15	4 44:21 102:22,25 158:3 161:4	54-17-302 118:15 182:1	664 71:5
14,17,22 66:14 102:20, 25 161:4	302 17:16 135:6 136:9	40 99:24	54-17-302(3)(7
209:7 210:4	307 15:25	101:21 208:21	c) 103:6 54-17-402	7 19:18 137:4 208:18
3,000 112:6	308 15:25	402 135:6 136:9	103:7	700 104:1 159:21
3-1 97:24 98:8	31st 164:8	42 52:24	54-3-1 119:5	708 133:22
3-2 97:24 98:8	32 71:5		56 59:15,22	177:22 179:1,

Index: 71..acquiring

3	8762 16:4	105:10 140:13 155:22 174:1	accommodate 99:1,6 118:8	170:22 196:10 210:3 228:18
71 194:15	88 125:4 —————————9	175:6 179:8, 10,11 190:7 223:13	accord 191:14	acknowledge
179:12		229:16 233:2	accordance 206:17	d 163:11 168:22 169:7 170:13,21
72 77:22 104:16 129:3	9 51:13 53:1 90 205:18	above 19:1 20:1,13 79:21 164:19 176:5,	according	227:20 acknowledge
74 16:1 20:10	90-day 25:21	19 218:4 abrupt 157:14	174:19 Accordingly	s 137:6
75 218:10	91 59:16,23	absent 92:17	211:23	acknowledgm ent 130:22,25 131:1 137:23
78 10:10 147:6	95 125:1 189:14	Absolutely 86:18	account 106:13 128:5 217:12 219:5	188:23 226:24,25 227:2,13,14,
8	951 185:15	accept 51:5 70:10 126:10,	accounted 20:15	16,17,24 228:1,3
80 199:1,2	97 110:15 97201 28:22	13 155:20 170:15 171:7 209:22	accuracy 156:4 159:22	acquire 18:2, 9,16 21:23 36:22 67:15 68:2 82:2 142:14,17
81 200:2 217:2	9th 8:15	acceptable 133:11	accurate 35:2,5 206:16	146:25 149:23
84 77:2 79:3 194:16,17	A	accepted 13:19 43:1	accurately 161:7	acquired 103:2 104:8 142:16
84105 15:8	ability 21:13 113:8 126:1 142:2 198:19	accepting 10:12	achieve 25:5	142:16 146:15,18 147:5,13 152:8
85 59:15,23	229:7,12	access 33:4	acknowledge 44:25 160:21	acquiring
8760 16:4	able 33:16 39:8,17,24	72:12	161:23 162:14	215:23

Litigation Services | 800-330-1112 www.litigationservices.com

Index: acquisition..advance

			3.0 40.12.2	
acquisition 17:18 106:22 114:19 138:7 145:3 151:23 163:13 181:16,23 182:11	146:24 actual 35:8 54:18 58:4 76:13,16,25 78:1,4 79:4 159:9 160:25	addition 11:12 33:2 119:1 140:2 142:12 169:21 179:5 184:15 185:8, 21 218:7	181:18 192:16 196:21,22 203:14 210:18 212:9 214:23	adjustment 38:7 60:19 70:25 71:9 72:6 74:7 131:8,16 211:16
215:20	230:18		addressed	adjustments
acquisitions 142:10,19 145:8 146:6	actually 7:22 9:17 11:7 43:3 57:14,25	additional 9:18,20 20:10 61:13 67:4 73:2 90:24	38:25 43:16 106:4 111:23 164:15 167:12	34:18 51:23 52:3 60:12,15 207:10
across 12:8 22:23 23:18 31:17 93:3	58:5,10 61:18,23 64:12,25 65:8 73:7 76:14	102:16 108:1 111:3,10 117:21 126:5 128:2 135:22	174:13 190:1 192:13,22 226:16	administratio n 23:1
113:21 216:20 218:21 219:3	77:24 78:5 79:17 89:6 93:8 94:2 97:25 146:23,	142:10 162:17,23 172:11,12 185:4,18	addresses 89:22 136:8 203:19	administrativ e 180:23 admission
act 206:6,18, 21 209:9,11, 12,13	25 197:1 200:1 216:18	186:11 204:12 222:11,14 232:4	addressing 214:8	29:22 admit 12:18
	actuals		adequately	80:6
action 38:1 161:25 232:24 233:2	205:18 add 59:24 80:8 105:4	Additionally 18:7	38:8 154:17 167:1 197:21 201:5	admitted 185:11 207:24
actions 19:15 168:3,17	185:15,16	additive 120:12	adjourn 101:7,8	adopt 93:20
211:8 actively 111:6	added 52:12 66:7 140:10 142:12	address 15:6, 8 19:7 28:19, 21 39:3 83:8 126:24	adjourned 233:3,4	145:21 adopting 35:19
activities 155:4	adder-to 140:23	136:25 137:12 139:21 166:3,	adjust 71:2	advance 151:21 162:1,
activity 58:2	adding 140:11	5 173:3 175:6,10	adjusted 165:23	22 174:5 181:11 213:6

Index: advanced..all

advanced 144:5 214:20	110:24 160:24	168:15	210:15	13:10,17 16:7 23:16 31:2,4,
advantage 17:11 21:23 39:24 124:10 195:10 217:8	Aeolus-to 102:22 107:19	afternoon 98:17 102:4 118:5 134:13 180:19 204:16	ago 32:18 86:10 96:15 227:18	24 33:20 34:11 43:19 44:7 49:11,15 51:17 57:15 67:8 72:3,24,
218:2,13 219:24	affect 23:18 93:1 94:15 164:12	again 9:21 10:6,10,25	agree 18:11 45:18 46:21 49:24 56:7,17 58:5 63:19	25 75:3 77:24 80:24 84:12 86:11 87:3 89:16 91:4
adverse 136:19 162:24	171:23 affected	19:25 47:19 49:11,14 51:14 54:2 56:13 62:6	66:21 68:19, 25 71:8 77:13 82:6,11 85:23 86:4 211:1	92:9,20 93:14 94:8 96:21 97:18 100:23 104:13 107:1,
adversely 164:12 171:23	110:10 206:9 affecting 144:18	73:24 106:1 116:23 118:7 125:11 130:9 146:18	agreed 43:13 99:24 101:20	17 118:3 129:4 139:12 144:19 148:25 150:3,
advisement 232:25	afford 134:22	152:19 175:3, 13,17 179:16, 20 189:13,14	110:13 163:14	4 151:4,20 163:24 165:5, 23 167:3
advocacy 145:18	affordably 18:3	211:12,25 218:17 231:14	agreement 153:24 164:9 171:24 181:7 191:19	173:24 176:21,23 178:9,19 183:3 187:24
advocate 44:2	affords 187:21	against 18:5 123:24 142:23 146:8	agreements 110:16	189:5,9,18 196:1,11,14 198:3,7,8 199:15,24
advocated 57:8	after 10:25 37:21 99:15 100:14,22	147:4 153:4 171:20 187:1 188:7 193:16 202:17	129:19 208:4 209:23	200:3 201:5 203:25 214:11 215:4,
advocates 42:17,21 44:5	111:10,13 118:17 134:4 135:5 145:8 154:5 158:3	205:17 205:13,21 207:18	agrees 143:17	9 216:3,20 217:24 218:22 219:17
Advocates's 148:3	163:1 169:17 184:17 207:22	agencies 19:20 137:7, 17	ahead 30:18 121:18 176:20 210:21 219:4	219.17 222:12 224:4 225:1 229:23 230:8 231:13 232:7
Aeolus	after-the-fact	aggressive	all 11:14	232.1

Index: all-new..analysis

all-new 160:3	148:21 163:10 170:15,16	117:3 144:25 195:25 227:24	203:23 205:11 209:5 215:20	amassing 168:3
all-or-nothing 141:22	·	232:14	216:10 220:3 222:3,22	among
all-source 105:25 167:14 184:5	allow 85:13 117:23 121:16 143:23 160:10	also 11:10 12:6 17:20 19:3 21:1 25:12 34:1	223:21 226:14 alternate	183:23 amongst 93:14
220:9 all-wind	167:16 172:23 174:3 187:19	37:10 43:11 47:18 51:13 53:7 55:16,24	167:19	amount 33:1 64:19 74:24
184:4 alleged	allowed 131:3 177:14 186:5	63:5,13 66:13 74:25 75:22 77:14 78:13	alternative 119:22 140:5 158:25 159:17 168:6	79:21 104:16 162:21 222:6
207:17	232:18	81:6 82:13 86:16 87:20 92:1 94:6	190:1 208:8 210:25 211:3,	amounts 52:12 59:1 64:17 131:15
alleging 215:23	allowing 111:4 117:6 182:14 189:8	97:25 102:8 108:1,25 109:25 110:6,	Alternatively	140:9
alleviates 135:23	222:11 allows 21:15	13 111:2 112:10,13,15 113:10 121:5	101:2 alternatives	analogize 153:12
Alliance 141:5	118:16 131:6 163:22 171:13 190:22,23	124:8 130:10 135:11,19 136:3 137:15 138:11 142:9 143:21 144:1,	154:17 156:10,16,19 164:20 169:17 170:2	analyses 78:15 156:2, 14 190:9 205:5 216:16,
allocate 99:23	alone 178:17	15 145:20 157:8,10 159:25	although 25:7 51:19 100:20	19 analysis
allocated 74:25 75:1	along 91:12 97:18 116:23 143:20 144:3	163:18 167:8 168:22 184:12	117:9 183:8 214:9	11:19 20:17, 22 32:8 34:14,25
allocation 125:3 154:1 171:7 186:13,	153:13 alongside	185:12 188:6, 18 191:9 192:9 195:6,	always 149:6, 8 169:20 188:22	35:8,18 50:9, 10,19 53:19 54:13,20 55:11 57:11
15 207:6 214:21,24	196:23	17 196:4,21 197:18 199:2 200:19 201:15	214:25 230:14	66:22 67:23, 25 68:5 71:24 73:1 74:12
allocations	already 86:23	201.13		10.17 1.12

Index: analyze..appropriate

75.04.77.40			60,00 4.47.00	70,40 74:0 40
75:24 77:12,	announced	anyone's	62:22 147:22	73:18 74:8,10
24 78:14,21	204:25	32:17	150:3 167:12	
81:20 82:15,			183:4 218:12	apply 71:15,
16 92:19	announceme	anything 12:3		20 72:3 73:12
107:4 108:6,	nts 151:24	27:16,20	appears 35:6	82:3 116:12
10 112:12,14	1113 131.24	31:11 45:15	62:14 115:20	216:4,19
115:17 121:5				· ·
122:15	annual 58:25	51:20 62:7	159:11	228:5
123:18 138:4	91:13,17,18	95:25 96:24	167:23 168:1	
140:17		98:11 115:25		applying
141:21 147:8		130:10,24	appellant	72:20 216:2
156:6,8,9	another 69:11	132:15	231:23	12:20 2 10:2
157:10	72:17 100:6	177:20	201.20	
159:23	120:4 123:9	213:20		appointed
	128:19 139:9		apple 213:25	104:13
161:10 162:3	202:10,20	anyway 51.0		
164:17	217:13 218:3	anyway 51:8	annliachta	annresists
165:10		62:15 66:21	applicable	appreciate
168:17		98:18 153:6	112:25 117:2,	12:9 30:21
183:13,14	answers		3	95:21 96:9
184:18,24	15:19 29:16	apologies		114:3 118:2
185:2 186:21	118:3 130:5	62:12	application	130:4 134:8,
200:21 201:3	178:2 191:17	02.12	6:4 17:4	15 191:16,23,
216:5,6,13,21	203:13 214:4		101:13 116:4	25 203:1,12
217:19		apologize	117:1,6,17	204:11,19
218:18,21,22,	anticipate	139:18	125:22	214:3 232:20
25 219:2	86:16	171:19 200:3	165:16 171:4	
220:22,23	00.10	218:8		annrasah
221:2,4,11,17			173:6,16,17,	approach
224:24,25	anticipated		20,23 190:18	57:6 82:7,11
,	136:22	apparent	191:4,6,9,15	84:21 123:1
	141:16	83:12 91:20	192:2,11,25	200:11
analyze 54:16	144:10		193:5 202:24	
56:21 166:22,	-	apparently	203:9 206:8	appropriate
25		50:2 72:17		41:14,23 52:7
	anticipatory	33.2 / 2.17	applied	53:10 54:7
analyzod	155:3		71:18,21	66:7 68:20
analyzed 54:17 180:10		appeal 26:23	72:19 202:23	83:4 85:6
34.17 180.10	anybody 81:4	209:6,15,24		113:11
	99:10 134:2	225:25 226:2,	219:2	
analyzing	33.10 134.Z	10,13 231:22,		147:18 166:3
67:14 69:11		25	applies	169:25
168:10	anyone 85:11		71:13,25	173:13
	98:24 152:3	anna== 40.00	72:13,24	183:14
		appear 10:22	,	
		•	•	

Index: approval..associated

199:17 215:2	163:15 170:24	areas 143:24 152:21 176:4	around 31:15 80:24 116:9	assertion 182:24
approval 6:5, 7 17:4,24 101:14,15	182:12 194:2, 3	arguably 117:11	141:9 149:1 152:3 153:14 175:22 180:21 195:3	183:15 assess 206:3
102:19 105:2 109:9 112:25 113:2,6,10	approves 46:3,14	argue 213:12	203:9 214:8 219:18 222:23 224:1	218:23 assessed
114:1 118:12 124:13,22 126:8,9,13	approving 89:10 130:23 159:4 163:19,	argued 100:8 119:14 205:11	arrangement	107:12,13
130:15 131:1, 20 145:11 152:24 154:15	20 190:7 approximate	argument	231:11 arrive 73:21,	assessing 123:14
158:22 159:21 162:16	60:16	100:5,14,15 102:9 114:16 125:24	25 74:2 article 22:24	assessment 167:21
168:11 182:2 191:6 192:2, 20,25 197:8	approximatel y 110:9 163:25 199:14 201:3	154:12 170:14 187:10 193:23 211:1	23:9,15 articulated	assessments 11:19 108:9 147:8
209:6 211:23 225:8,9,15 228:14	205:18 208:20	215:5 222:22 223:2	100:12 aside 174:13	assets 154:24 162:22 168:4
approve 114:1 116:4	April 29:12 58:17 60:7 69:15 183:11	arguments 41:17,21 99:4 103:11	175:17 205:19	169:24 assign 57:2
118:16 125:8 138:16 144:18,22 159:19	208:9 arbitrarily	118:10 120:4 134:15 144:12	asks 115:16 149:22 155:23	69:2 171:5 177:14
162:15 171:4 187:6 192:11 195:7 203:8	113:8	181:12 184:25 191:15,22	169:18	assigned 67:3 94:7,25 95:12 178:18
205:20	arbitrary 165:1 206:22	204:20 214:9 221:22	aspect 100:5 aspects	180:1
approved 103:3 104:9, 10 120:3 144:13 145:9	area 30:16 122:3 160:20 161:3 177:19	arising 142:19	165:23 asserted	18:21,23 19:16 20:13, 16 24:8 29:8,
144:13 145:9	180:4	arm's 209:23	166:24	10,12 70:24

Index: association..back

				Detactonback
			1	I
71:22 92:1	assumption	16:3	126:3,4 202:7	19:11 21:14
119:11 131:9	53:13,14			61:5 84:10
156:24	55:13 68:25	-1111-		87:21 88:9,
161:21 166:4	69:23 70:2,24	attachments	authorization	12,16,23 89:9
168:24	92:5 123:4	13:6	202:16	111:4,6
170:16 171:8	165:1 169:12			123:22
177:16 185:5	178:25	attempt 8:6	authorized	180:19
200:13 201:6	211:16	168:9	125:25	
205:12 210:2	2		223:20	
218:13				avoided
225:25 226:3	assumptions	attention 8:14		151:19 213:7
223.23 220.3	48:16 52:9	9:2,24 51:19	authorizing	
	54:11 57:15	54:1,22 62:3	46:6	avoiding
association	65:14 82:21	96:14 150:2		18:21 149:5
29:1 141:6	83:18 85:4	191:24	automatic	10.21 149.5
155:3	88:7 107:10	194:15 195:1		
	108:5,14		131:7	awakened
	147:22 155:2,			152:19
assume	10,13 156:10	attorney	availability	
68:10,18 69:8	164:20 167:7,	12:23	20:25 110:14	40.44
82:5 93:2	20 169:18			aware 10:11
120:24 158:1,	207:8	attractive		23:8 25:17,
12,15 167:22	207.0	220:2	available 22:3	22,25 26:4
231:8		220.2	41:25 106:3	27:8 36:18
	assurance		110:17	37:5 42:20
assumed	33:13,15	attribute	114:22	52:11 64:9,12
53:15 67:15,		123:19	124:11 134:6	76:8 192:9,24
· ·	acymmetrical		142:8 146:16	
22,24 68:9	asymmetrical	attributed	153:7 159:17	0W0V 52:10
69:11,19 74:1	18:24	11:24 156:20	166:10	away 53:18
82:9 109:23		11.24 130.20	177:24 179:4	130:24 178:8
125:2	asymmetry		180:22	
	33:17	attributing	183:21,23	В
assumes		140:10	187:17 192:6	
20:3 123:11	-11b 04 00		202:25	
	attach 61:23	audia 404:05		B27 16:3
] .	62:1,5	audio 121:25	45.0	DZI 10.3
assuming		195:1,2	Avenue 15:8	
74:15,19	attached			back 10:10
165:12 199:3	12:19 46:20	audited 230:8	average	32:18 47:16
210:25	1=1.70 .0.20		157:9	57:24 64:5
225:20		41		65:15 67:8
228:23,25	attachment	authority		71:4 75:14
	13:5,18 15:24	40:20,24	avoid 17:15	

Index: back-end..believed

78:15 87:10	107:10,20,24	176:21 178:4	228:21	155:9 158:13,
100:25 101:3,	168:2 169:22	215:23 217:4,		17 180:5
11 126:22	229:19	5,24 221:6		184:10,23
175:13	220.10	227:18	began 110:2	188:10 191:3
			136:25	
179:14	based 11:5,	230:25	163:11 186:3	192:18
180:14 181:6	23 32:8 35:16			205:16 211:7
185:23 205:7	50:18 54:18	basis 7:16		213:3 222:16
218:17		34:20 44:2	begin 197:7	
	60:16 61:17	•	214:8	
	65:21 66:8	49:23 54:17		belief 176:8
back-end	72:2 73:14	56:22 57:8		
221:4	76:16 77:9,23	70:5 77:8	beginning	haliaa 165.0
	78:8,9 79:4,5,	84:17,19 85:2	50:8 69:12	belies 165:8
	7 87:16 90:12	91:20 104:6		
backdrop	94:25 136:17	141:24 168:7		believe 25:10,
188:23	155:15		begins 10:1	22 26:23
		169:8 178:19,	48:4,6 53:1	
1	158:16	20 215:12	57:25 154:20	38:14 40:18
background	161:11	216:8 224:12		49:8 50:21
30:16 67:25	178:17			78:12 81:11
69:18 75:22	183:25 185:3	haar 100:10	behalf 7:2	83:2 87:16
	194:18 195:8,	bear 109:16	14:22 15:9,11	96:1 99:23
1	13 200:9	155:23	17:2 28:9,23,	100:1 112:2
backstop	205:22	170:20 187:2	25 30:22 32:6	113:5,10
171:20	216:25 218:3		133:18	118:13
214:25		before 6:8	154:12	120:19
	224:15,20,22,		204:18	
1	23 225:11	12:16 30:8,9	204.10	121:21 125:9
backwardatio	226:11	34:21 38:19		138:8,14
n 64:24	229:19 230:4	44:11 68:15	behavior	152:21
		80:5 87:2	145:24	153:19 154:4
Dokor 24:12	baaaa 40:44	98:11 99:12	145.24	155:8 157:5
Baker 24:13,	bases 13:11	120:14		166:11,21
15,17 26:6,7	48:16	128:13,16	behind 59:20	172:19
27:25 81:6		132:15	145:4	173:19,20
204:15,16	basic 112:19	133:19 134:3		174:3 182:16
212:2,8,12				
	218:19	154:3 168:2	being 10:3	188:15
		171:4 173:5	14:23 28:10	190:22 191:7,
balance	basically 65:2	175:24	38:11 43:2,6	9 192:3,7
112:4,12	68:22 78:9	176:23	56:18 73:16	215:15,16
		183:17 188:4	87:25 94:23,	217:7 224:14,
holonoina	79:16 94:4	192:3 195:11	•	22 226:11
balancing	108:16	205:1,2 206:7	24 96:4	231:22
142:12	111:16 113:3	217:16 219:4	100:12 113:3	
	131:13	225:9 227:21	116:4 150:1	
base 11:6,17		220.0 221.21		believed
, 17				

Index: believes..bill

]	
78:20 129:2	165:13,15,17	141:14	better 30:11	bidder 127:10
170:17	211:5 213:6	142:11 143:2	36:4 57:6	133:2,4 153:1
	221:4,7,10,21	145:19	68:12 119:22	177:14,21
holiovoo	223:1	146:19,20	128:3 129:20	178:6
believes		147:9 148:16	139:19 161:1	
48:24 102:12		149:10	190:11 211:5,	
146:22 157:8	benefit/risk	154:14	6 216:7,16	bidders 11:1
161:14	160:12	155:10	0 2 10.7,10	127:9 128:2,
		156:12,21		20 151:21,25
below 20:2	benefited	· ·	between 8:7,	172:9 174:15
		157:17,21	23 63:25 76:4	175:23,25
112:17	138:8	160:14	82:25 83:7,13	176:1 177:17
122:11 134:2		161:18	95:14 100:2	179:3,9
144:25	benefiting	164:16,17,22,	166:6	207:20
	139:11	25 165:7	100.0	217:21
benchmark	100.11	168:24		211.21
116:9 197:22		182:25 183:7	beyond 20:13	
	benefits 8:21	185:4 186:10	24:3 32:16	bidding 39:24
198:3,11	11:4,20 17:14	189:13,16	40:18 84:11,	133:6 176:10
199:7,23	18:13,19	196:5,11,13	15 110:6	178:9 218:21
200:25	20:11,17	199:1,3	140:16 171:8	220:9
201:12	21:14,16,20,	200:24 206:4	222:6	220.0
203:25	24 32:1,9	200:24 200:4	222.0	
204:10	33:14 34:15	_		bids 10:13,21
		211:11,14	bias 10:17	27:5 104:16
	37:7,9 38:13	215:20 216:9,	11:14,23	105:11 128:7
benchmarks	54:16,20	12 220:4	199:23	129:3 153:3,8
200:8,14	56:11 58:5	221:20 223:5,	200:11 217:1,	167:5 172:6,
	59:6 69:4	12,17,18,23	5	16 178:9,11
beneficial	84:8,12	224:8,23	J	179:24 216:3,
	91:22,25 93:6			,
9:7,8 68:8	102:14		biased	5,6 219:6,24
113:20 120:7	105:13,14	besides	156:15,17	220:1,8
125:10 150:1	107:3,4,9,11,	85:11 93:25	,	221:14 224:9
	15,16,25	206:5		
benefit 11:7	108:10,24		bid 10:3,19	big 94:8
37:15,22,25	115:11,18	best 37:6	105:8 145:16	169:21 221:4
38:6 60:1	118:23		147:4 152:3	103.41 441.4
		56:22 139:22	153:14	
67:4 90:15,23	120:11,20,24	153:3 171:1	172:10,13	bilateral
93:1 109:18	122:19,21,25	210:11,17	177:11,22,25	166:17
123:16	123:2,6,21	224:8	178:13,15,16	
124:20 138:1	125:1 134:21		180:2,12	
139:9 140:14	136:5,14	bet 123:13	198:17 217:7	bill 11:2 19:19
144:4 155:18	140:12,18	205:20,23	218:2,14	
		200.20,23	۲۱۵.۲, ۱ ۷	

Index: billion..building

billion 16:1	both 8:15	16:18,20	158:23	brought
30:24 31:15	10:24 24:1	22:3,7,16,19,		96:13 142:8
37:24 102:15	37:19,23	23 24:14,18	Bridger	144:5 219:14
164:1 177:8	45:10 50:1	26:9,15,16,	110:24	222:15 226:2
186:10	74:16 91:14	20,23 27:1,6,	158:20 159:7	
205:21	97:22 102:5	18,19 134:25		DTA 0.00
	105:6,10,12,	143:16	160:24	BTA 8:23
	19 106:15,19	147:25	225:12	10:21 11:5,
billions	108:17,21		230:17	15,21 146:11,
169:21,23	109:6 115:3			12,17 147:10
		Bowman's	Bridger/	198:3,11
hin din a	120:7,8,12	16:12 134:17	_	199:6,23
binding	123:1 126:23	140:7	anticline	200:12,24
225:10	127:21,22,24		102:23	201:12 218:5
	128:1,6		107:19	201112 210.0
bit 45:4 47:17	137:20	BPA 88:1		
57:17 76:20	143:24		brief 31:7	BTAS 10:24
	145:15	D ===1 00.0 0		11:23 147:2
99:20 118:8	152:20	Brad 28:3,6	39:7 53:24	152:9 197:22
135:3 145:4	167:12	31:18,20	75:5 203:19	200:8,14
193:21 197:8,	193:18,19	39:8,13,14,	212:14	201:10
18 230:14,15	194:11	20,22 87:14,		201.10
		18 88:19,25	briefly 30:10	
h:40 040.05	216:12	89:24 90:2,6,		budget
bite 213:25	221:23	9 91:2,11	40:7 135:3	110:12
	224:23 227:1	92:4,7 93:8	166:5	
blades		95:24 96:9		_
108:12	bother 96:20	00.2 1 00.0	bring 12:8	build 48:25
100.12	DOTTIE 1 90.20		38:12 43:7	68:3,12 82:2
		Bradley 28:8,		88:24 144:20
blind 124:14	bottom 10:1	16	152:20	168:20 177:9
			185:18 186:5	
			222:18	1
blow 186:24	bound 126:14	break 75:13		build-out
		98:21 99:12	Bringing	133:23 134:4,
board 219:3	 	100:21 101:9		5
DOBIG 219.3	boundless	180:14 181:5	102:25	
	154:18			
boat 153:14			brings 185:23	build-outs
	bounds 139:5	breaking	190	88:12
	Doulius 100.0	101:4		
body 136:22			broad 113:22	build transfer
	Bowman	 		build-transfer
 barrer 477.7	14:16,18,19,	brevity 135:2		8:8 146:9
borne 177:7	21 15:3,7,12		broadly 93:2	
	21 10.0,7,12	Bridge	136:21	building
				Zanamg
	-	_	-	

Index: builds..captured

68:15 72:10 86:8 87:21	15:5,7 28:19, 21 165:23	calculation 58:7	203:21	185:16 195:14 211:6
88:5 89:9 95:11 107:18 142:4 178:24	businesses 144:21	California 86:11 93:23 169:3	cannot 76:9 122:5 124:7 129:12 155:24	capital 33:8 84:10 118:25 123:2 124:17,
builds 73:8 198:20 built 33:2	Butte 45:8 46:1,6,21 47:2	call 8:15,19 14:16 28:2 90:19 115:9	181:24 188:9 206:12,19 209:10 210:6 213:21	25 143:5 183:2 189:11 190:5 198:18 199:4,11
43:6 86:23 89:6 144:11 160:7 163:1	buy 23:4 77:8 176:14,15,16	called 7:2 14:22 28:9	cap 43:15 113:2,6	200:8,13 201:4,5
167:25 184:7, 11,13,16 185:8 211:7	buyers 77:17	189:2 calling 79:9	124:24 125:23,24 172:22,24 187:23 188:6,	capital-cost 200:16
built-in 151:18	buying 176:25 177:16	calls 167:20	16,20 189:23 190:8 202:8, 13 213:9	capitalized 183:1
bullet 8:6	buys 77:9	came 108:8 152:5 216:7	222:21,24 223:9,16,17, 19	capped 113:4 223:3
bump 157:14	c	219:4 227:21 228:15 229:5	capability 108:7,8 179:7	capricious 206:22
bundle 210:8	CAISO 93:12,	can't 32:4 49:15 53:11	capacity 33:1	caps 213:17
burden 164:13 232:13	calculate 51:23 58:19	77:7 88:6 116:12 151:17 172:1 176:14,16	90:5 102:16 104:17 110:1 111:13 112:3,	captive 155:23
burdening 163:2,6	71:1	180:19 194:4, 12 197:20 212:24 213:17,20	5,15 114:15, 17,21 115:22 119:8,15,18, 21 135:22	capture 131:15 168:12
burning 148:1	57:24 58:20 73:14	218:19,22 224:15,19 226:7	141:14 143:14 149:24 166:23	captured 123:17 200:1
business	calculating 11:11	candid	169:24 184:3	221:11 230:2

Index: captures..Chair

				iptureschair
captures	carry 38:15	200:19	17:22	33:22 41:19
	_		17.22	
198:10	204:5	212:19		47:10 63:23
		225:12 227:1	caused 188:9	69:8 86:25
capturing	case 8:25 9:6	229:19	100.0	99:1,14
198:24 199:1,	10:23 14:16	230:13,17		111:22
2	29:4 31:1	231:12,15,24	causes	115:22
	32:11 38:3,5,		137:12	117:22 128:4
	' '	aaaa by aaaa	148:20	132:5 148:21
carbon 17:9	22,24 40:20	case-by-case		150:15 158:4
18:6,22 19:4,	42:17 43:11,	104:6 215:12	Carritan	216:23 224:7
8,10,13,16,24	20,21,23,24		Caution	
20:1,3,5,7,9,	45:14,25	cases 45:20	158:16	
14,18 21:1,15	46:13 47:10	47:8 92:9		certainty
24:5 92:2,17,	51:1,5,15	115:7 122:11	cautions	211:19
18 109:14	52:23 58:20	157:6,7	149:21	
122:4,9,11,	61:14 65:18,	158:22	143.21	certificate
	24 66:17,22			
12,17 123:12	67:11,25	161:12	cautious	46:5 48:19
124:2 135:20	68:16,17 77:5	166:25 183:3	159:14	
136:17 137:1	78:18 79:25	225:11		Chad 144:8
138:13 140:9,	82:4 90:24,25		1 00 10	
11 148:5,12,	92:16 102:6	Casper	caveat 23:19	
17 155:11	103:24	144:21		chain 146:20
169:3 190:2	106:25 107:7,		caveats	
	10,20,24		100:23	Chair 6:2,20
carbon-free	108:13 110:5	Casting		12:12,14,15,
18:20	115:3 116:19	205:19		22 13:5,8,12,
10.20			Cedar 102:21	15,22 14:1,6,
	131:6,12,22,	CAT 07:01	204:24	
carbon-	23 134:16	CAT 97:21,		12,17,20
producing	146:12	22,24 98:7,8	Cell 16:3	16:14 22:5,
148:8	154:13 156:9			10,13,17
	157:25 159:7,	catastrophic	64:12	24:12 26:7,
	15,16,24	19:11		11,14 27:11,
careful 21:21	161:14,21		cells 16:5	16,20,22,24
172:8	163:14			28:4,7 29:24
	165:22 166:2,	catch 222:2	50.45	31:6 38:19
carefully	7 168:2		centers 53:18	39:1,6,10,18,
18:18 127:20	174:22 183:1,	catchall		21 40:5 41:8
147:15	4,22 184:21	111:15	certain 155:9	42:2,5,7,9,11
177.15	185:1,25	114:15	187:19	44:9 58:13
	188:2,4,19	117.10		59:10 62:9
carries	189:6 190:24			75:4,9,14
103:23	191:10 192:4	category	certainly	80:8,13,17,
	- '	-	-	

Index: Chairman..Clark

20,25 81:3	232:4,11	29:18 64:20	221:25	199:25 200:5
85:9 87:5		72:1 135:21	228:21	
89:18 92:22	Chairman	139:10		oito 45:14
95:21,25		141:17	ah lakan	cite 45:14
96:5,10,13	16:24 29:21	167:16	chicken	47:19 50:23
97:10 98:2,9,	31:13 85:15		87:13	90:11 103:24
14,19,23,25	96:12 118:6			213:20
99:8,17,21	121:15 126:7	changing	China 19:12	
100:2,11,17,	181:9 204:17	123:23		cited 40:22
20 101:4,7,		136:23		
11,20,25	challenge	137:12,24	choice	
102:3 114:3,	151:3	148:22 155:1	105:18 106:3,	cites 136:20
11,14 115:24	101.0	205:5	6 120:6	
116:16,18,22			158:23,24	City 15:8
117:8 118:2	challenging	chapter 17:16	169:25	Oity 10.0
121:17	150:22	21:7 102:20	206:10	
125:13,18,20		116:25 135:6		claim 48:17
1 ' '	chance	209:7	choose	61:17 168:7,
126:16,19	169:19	209.7	183:23	11 188:8
130:4 132:15,	109.19		103.23	226:15
18,21 133:1		characterize		
134:10,12	change 16:4	24:22	chose 27:4	claimed
138:17	19:5,7,22		52:21 64:14	207:12 208:6
139:14,18,24	20:13,16	aharaad	105:12	207.12.208.0
140:21 141:1	46:23 52:17	charged	146:14	211.0
150:6,11	74:19,21	103:20		
153:22 154:3,	86:25 90:19		chosen 153:4	claims 158:19
8,10 170:6,10	128:18	charges 21:9	C1105e11 155.4	159:6 168:15
171:17 172:3,	134:23			209:1 226:2
15,20 173:2,	136:13,19	short C4:40	circulate	
4,15 174:7	137:6 140:2,	chart 61:12	44:12	olorification
180:13,15,16,	19 162:14	62:22		clarification
25 181:3,6	179:6,15,19		airaumatan sa	40:5 80:8
187:11	230:22	chase 211:22	circumstance	140:21
189:20			32:22	
190:15 191:2,		ahaana		clarify 40:11,
16,21 201:22	changed	cheaper	circumstance	17 50:25 64:9
202:1,3,20	52:11,15	166:16	s 124:5	82:8
203:12,16	82:24 168:11	197:12 211:7	182:14	
204:11,15	179:23 205:3			elevity 74.0
212:2,6,9		check 51:5	altation 45:40	clarity 74:6
214:3 228:25	changes 16:5	59:20 70:7,9	citation 45:13	
229:3 231:17	20:19 24:1,8	103:25 133:7		Clark 6:12,17
	,-		citations	,
,				1

Index: classes..combined

7:6 12:9	149:20	136:13,19,20,	cluster	63:7 65:15,16
16:25 26:14,		23 137:7,9,	212:18,23	
15,17,21,25		12,24 140:1,	230:21 231:1	
27:3,9 89:18,	cleanup	19	200.21 201.1	combination
1 ' '	180:23	19		143:3 210:11
20,25 90:3,7,			clustered	211:16
14 91:9,24		close 11:22	213:5	
92:5,20	clear 48:3	12:2 58:8	210.0	
114:11,12	49:25 50:14			combine
118:7 125:14,	51:9 52:16	61:6 62:23	CO2 90:17,25	123:5 214:10
16 132:17,25	54:4 61:21	65:11 83:21	92:12,13	
133:9,14	62:13 63:5	95:11 100:22	108:14	
· '	65:6 66:12	128:24	121:11,13,21,	combined
134:8,13		147:11 153:5		17:10 18:4,
139:14,15	69:2 71:12,19	218:6 222:16	23 122:1	14,19 19:3
150:7,9	72:5,15 73:20		123:3 140:2,	20:17 21:5,
170:10,11	75:2 79:1		23 207:13	12,18,25
171:3,16	83:5 84:18	closely		30:24 32:12
177:19	106:2 110:24	113:12	0001 0004	
179:13	111:8 112:1		coal 23:4	37:8,13 42:18
181:10	130:23 132:2		148:8 162:23	56:10 68:19
189:21,22	142:5 176:11	closer 89:14		90:15 91:14,
190:13	202:15	116:13	Coast 86:18	16 93:6
			Coast 00.10	102:13 103:4
191:21	213:20 215:9	-l 000:44		106:12,21
201:23,25	219:12 221:1,	closes 222:14	Code 17:16	107:2,8,11
204:17 212:6,	2 224:13,18		21:7 118:14	108:23 109:8
7 217:15,18	226:21	closest	119:5	110:10,19
218:8 227:9,	230:12	226:23	110.0	112:20,23
12 228:5,8,20		220.23		•
232:6			colleagues	113:16,18
	clearer 227:5	closing	195:24	118:12 119:1,
		41:17,20	228:22	7,14 120:11
classes 31:3,	clearly	98:11,16		123:24
24	110:10 112:2	•		124:13 125:9
		99:4,9,11	collectively	130:12
	142:10	100:5 101:11,	47:1	134:19,22
clause 131:8,	182:19	17 102:9		135:15,19
16	183:24 185:7	118:10		136:5,15
	188:12	134:15 141:1	column	· ·
	210:10 219:9	154:12	62:16,17	138:5,11,14
clean 14:12,	220:16 227:6	191:18,22	63:12,18,19	140:12,15,20
22 15:11 17:2		204:13,20	64:4,10,11,17	141:11 144:6
21:17 27:22		214:4 215:5	65:7,11,22	145:8 149:22,
122:20	climate 19:5,	232:12	66:5,7,13,18	25 153:9
134:18,20	7,22 20:13,15	۷۵۷.۱۷	00.5,7,15,10	154:15
136:2,7,12,20	134:23			155:18
			columns 62:8	

Index: combining..communicated

				_
156:12,18,21	commence	13 136:11	231:15	187:12,14
157:17 159:5	145:5	138:3,16	232:24	189:18,21,22
160:22 161:9,		140:17		190:12,13
20,24 162:25	comment	141:19	commission's	191:21
164:22,25	212:13	144:17	45:24 47:21	201:23,25
165:13 166:4,	212.13	147:17 158:1	103:16,18	202:1,2
12 169:11		159:14	105:10,18	204:17,18
170:1 181:15,	commented	160:22	126:1,4 161:4	212:3,5,6,7
22 183:18	55:22	161:23,25	182:13	214:22
185:16 187:6		162:2,7,12,19	193:14	217:15,18
189:12 207:4	comments	163:19 164:1,	193.14 197:10 210:2	218:8 227:9,
208:21	48:2,8 54:24	11 165:24	227:23 228:4	12 228:5,8,20
209:17,19	55:5,7,10,21,	167:11	221.23 220.4	232:6
211:10,13,23	24 67:9,21	170:25 171:3,		
	81:12 133:16	7,13,15,22	commissione	commissione
combining	145:13	172:23	r 6:12,17 7:6	rs 22:4 30:11,
combining 165:5	214:12 215:3	173:12 182:3	12:9 14:7	20 134:13
165.5	224:1 225:5	183:12,18,23	16:25 26:14,	20 134.13 214:7
	226:12,17	185:12 186:1,	15,17,21,25	214.7
come 23:13,	229:9 231:13,	7 187:6,8	27:3,9,12,14	
24 41:17 73:3	229.9 231.13, 25	188:22,24	87:6,8,15	commissions
79:10 100:25	25	190:6 191:8	88:21 89:16,	163:15 230:9
101:3 110:4		192:11,19,23,	18,20,25	
153:20,21	commission	24 193:4,24	90:3,7,14	commitment
155:22	6:4 9:11	194:1,3 201:8	91:9,24 92:5,	125:6 162:22
175:13	17:17,23	202:14 203:7	20 96:6	208:3
180:14	18:17 30:9	204:1,21	114:5,9,11,12	200.5
186:14,16	36:2,18 38:6,	205:9,20	118:6 125:14,	
187:20 193:8	17 40:3 41:25	206:10,12,15,	16,19 126:7	commitments
198:14	46:3,14 52:10	24 207:4	130:6,7	232:24
	54:25 98:16	208:25 209:3,	132:14,17,25	
comes 130:1	99:1,7 101:12	17,23 210:16,	133:9,14	Committee
176:13	103:1,3,14,20	20 211:22,24	134:8 138:18,	48:9,15 215:4
183:17	104:1,2,5,10	213:16	20 139:12,14,	217:13
100.17	111:16,19	214:23,25	15 150:7,9,	217.10
	113:1,12	215:8,11,13,	11,12 151:3	
comfort	114:1 115:7,	17,18 220:22	170:7,9,10,11	Committee's
119:3 213:13	11,15,17,20	221:18,20	171:3,16	215:22
	116:3 118:16	225:8,16,17,	174:9 175:10,	
coming 9:14	120:1 130:23	20,23 227:4,	16 177:10,18,	communicate
33:24 72:2	131:19 132:5	21 228:17	19 179:13,14,	d 150:18
112:9	134:14 135:7,	229:10,18,22	19 181:10	
112.0				

Index: communication..competitiveness

communicati	158:1,6,12,	15,20 227:1,7	206:8 207:8,	76:20,24
on 128:2	14,19 159:6,	228:11,13	12,16 208:8	
151:18,20	20 162:1,12	229:6,14	209:1 210:17	
153:1	163:1,5,9	230:24	211:3,8,24	comparison
	164:15,24		219:9,22	9:6 11:5
	165:6,18,19,		222:24 223:4,	65:11 76:3
companies	22 166:11,19,	company's	6,8 225:18	219:3 230:17
23:3	22 167:2,8,	17:4 19:1,3	229:6,20	
	13,23,25	20:1,2,4,6,7	230:14	compensated
oomnon.	i i	26:19 46:12	230.14	38:9
company	168:1,11,22,	50:10,15		36.9
20:14 22:15	25 169:1,13,	51:15 55:2	comparability	
27:4 38:22	14,16,18	60:13 61:14	8:7,23	compensatin
39:17,23 41:4	173:10,21,22,	63:20 66:21	J., ,_J	g 169:14
43:13 45:25	23,24 174:1	68:25 71:9,19		9
52:15 60:25	181:13 183:3,	75:25 79:3	comparable	
61:22 63:5	20 184:19,23	75.25 79.3 82:7,15	53:10 54:7	compete
67:15 69:19	185:10,19	*	217:5	147:3 178:20
72:21 74:1	186:3 187:1,	102:10,19		180:4 204:10
77:7,8 80:23	2,5,25	105:15,25		220:18
82:8 84:18,19	188:12,20	107:3 108:6	comparative	
99:24 100:4	189:4,25	109:11	216:5	
102:11 105:5,	190:9 192:4	110:21,25		competed
20,24 106:9	193:1,3,8,11,	112:11,14	compare	153:4 167:25
108:19 109:1,	12 203:8	113:12	56:25 57:4	
21 110:8,11,	205:8,10,20,	121:11,21	90:15 106:5	competition
13 111:4	23 206:1	122:16 125:2	115:14	150:16
113:4,16,25	207:19,23	131:11 156:9,	187:16	203:25 204:2
, , ,	,	14 157:6,22	197:21	200.20 204.2
117:15,25	208:2,6,11,	158:10,17		
118:24	16,19 209:2,	159:10,15	199:17	competitive
120:21	16,20,22	161:17 162:3	221:14	11:21 145:17
124:20 126:9,	210:1,7,8,12,	164:16,19		146:6,23,25
13 128:19	13,18 211:4	165:9 166:8,	compared	147:10 151:6
130:11,16,20,	212:20	12,15,24,25	91:17 108:2	217:8 218:1,6
22 131:1,6,	213:21	167:24 168:3,	157:2 195:22	220:13,15
10,21 132:6,	216:13	7,15,19	216:3 230:12,	224:9 228:10
12 133:5,12	219:11	7,15,19 182:24	19	22 1.0 220.10
135:20	220:11		13	
154:14,18	222:11 223:8,	183:15		competitively
155:1,19,21,	10,12,15,23	184:18 186:1	compares	146:18
24 156:1,5,	224:24	188:8 189:15	77:25	
15,19,25	225:13,21	192:1,24		oomnotitiyas
157:4,18	226:2,4,7,8,	204:21,23		competitivene
1017.,.0	, .,, ,,,	205:1,7,17	comparing	ss 36:14

Index: complete..conformed

				1
195:22,23	comprehensi ve 46:15	35:17 128:24	concurrently 227:19	conference 8:15,19
complete 206:16,21 211:19	comprise 218:23	concludes 22:2 27:9 48:15,25 174:7 191:17	concurs 147:21	confidential 12:21 13:9,10 31:8 51:19,20
completed 161:7 178:5 213:6	comprised 10:24 concept	218:1 concluding 6:11 79:17	condition 113:6 126:9, 12 170:23 171:5 172:21	61:5,7,11 62:6,7,14 63:10,14,16, 21 66:14 80:10 88:16
completely 72:17 145:1	183:16	conclusion 65:7 125:8	188:15,17 189:2 190:7	96:17 183:9, 10 200:4 208:7
complex 102:6 156:3,6	concern 8:22 11:14 12:1 85:3 148:20 160:23 161:5	165:8,15 180:24 187:10 217:7,	conditional 126:8	confidentialit y 153:7
complexity 156:8 163:22	162:8 192:17, 21	10,12 218:3, 11	conditions 55:14,24 113:2,14,23	confine 7:15
compliance 103:2 104:9	concerned 10:19 36:10 144:11	conclusions 216:25 224:1, 25	125:21 147:14 165:24 171:14	confined 133:16,17
complicated 159:23	160:17 162:16	conclusively 35:10	172:11 187:7, 15 188:2,6 193:20 202:7,	confirm 51:21 52:1 79:2 141:22
compliment 120:9	concerning 37:2	conclusory 229:13	10,14,17 207:25	confirmed 142:9 167:4
comply 206:5 209:8,10,13, 21	concerns 162:8 202:17 205:15,19 220:7	concrete 213:14	conduct 12:4 126:4	conflating 56:14
components 146:17	conclude 38:16 79:11,	concur 190:12,21	conducted 105:5,25 106:10 156:2	conflict 180:19
comport 225:21	13 194:13 210:6 228:21	concurrent 19:18 105:6 137:3,4	conducting 138:3	conformed 104:18
	concluded			

Index: confusing..continue

				singcontinue
confusing 178:11	20:7 107:16 108:5 120:19 121:12,22	considered 9:16 10:15 73:1,5 127:11	166:14	consumers 29:2 86:8 147:24
confusion 54:10 179:25	122:14 147:23 159:7 169:12,18 184:24 185:3	154:17 166:19 167:3 175:24 178:25	constrained 160:20 161:3 180:4	182:23 204:19
congestion 94:17,18 111:8 185:21	230:16	184:19 226:4, 8	constraint 231:7	145:12 203:3
219:18 222:10	consider 17:17 34:11 104:3 114:16 122:22 127:5,	considering 19:22 34:21 41:11 75:10	constraints 88:3 167:7,9 176:5 179:11	contemplates 225:9
conjecture 155:15 158:8	8 132:12 136:14 138:3 140:1 149:4	84:14 107:23 118:17 140:14 149:9	232:22	contemporan eous 167:16
conjunction 18:13 25:13	167:1 168:5 172:16,24 185:13	172:4 221:17 considers	construct 230:7	contention 181:24 184:6, 9,15 222:3
connected 210:9	215:11	135:8	constructed 32:24 45:6	context 47:11
connecting 185:18 conscious	considerable 103:22 consideration 10:18 21:8,22 103:5 111:18	consistent 103:18 119:4 200:10 206:16 216:19,21 218:20	construction 46:6 113:5 145:5 160:3 174:6 181:25 182:15	99:20 106:7 130:21 131:18 132:8 157:25 175:22 215:21
31:9,12	127:7 163:23 167:17 172:8 180:11	consistently	208:16 222:18	217:13 221:19,24 225:22
19:9 136:16	181:11 182:6 233:1	8:12 35:6 78:17 143:9	construed 115:15	contexts
consequence 162:24	consideration s 9:13 17:3 43:10 115:6,	consolidated 230:6	consultant 28:20 30:13	continual
consequence s 17:9 21:4	21 128:5 166:22 221:13	constant 74:16	consumer 21:19 42:17, 21,25 44:2,5	86:19 continue 75:5
conservative		constitute	48:10	121:2,19
	I			I

Index: continued..costs

				icinacacoscs
	I		1	1
142:21	contrast	102:12	16:4 91:4,5	162:5 165:20
143:22	33:14 187:16	162:19	232:3	170:15 171:7
147:14	196:9 198:12	102.15	202.0	174:22
1				
148:10	199:5	copies 7:22	correction	175:20
149:14,19		•	15:24 16:2	177:11 180:2
152:22	contribution			181:17 182:8
216:10 217:3	112:16	copy 12:17		184:14
219:16	195:14		corrections	186:22
	133.14	Corp 103:25	15:22 16:8,12	187:19 188:1,
a antinua d		COIP 103.23	91:7	24 190:8
continued	contributions			192:5 195:18,
19:8 20:18	232:10	corporations		21 197:9
21:1 119:23		19:20 137:17	correctly 7:17	198:16 199:2,
149:16,17			88:22 92:10	3 200:8 201:4
	control		162:12 197:6,	202:11 207:5
continues	109:23 142:4	correct 25:9,	14	
	188:8 223:8	24 26:25 45:3		208:18
145:2 157:5		50:4,22,24	0 1 00 4	210:11
	l	51:24 52:18	Corridor 88:1	213:15 219:5,
continuing	controversial	54:5 55:2,3,		8,14 222:19
145:9 199:8	45:11,16,19	14,15,19	cost 11:16	224:12
140.0 100.0	47:11,14,19	56:5,12 57:19	17:20 21:24	
	49:13,23 50:1	58:6 60:1,13,	33:5 37:14	cost-effective
contract			38:6 43:15	
35:25		14,20,21		106:3 115:19
	controversy	61:15,16,19,	46:22 57:2,4,	
	47:3,6	20 62:2,11,16	14 58:20	cost/benefit
contractor		63:7,8,14,15	69:19 70:3	161:10
207:25	convenience	65:19,24	73:22 82:1	101.10
	46:5 48:18	66:15,23,24	93:22 106:7,	
contracts	119:4	67:17,22	23 107:18	cost/benefits
77:16 79:20	113.4	69:6,12,21,22	109:16 113:2	186:9
		70:9 71:3,23	114:20,24	
174:6 207:16	conversation	73:23 75:25	118:22	
225:6,10,13,	24:20 214:16	76:1,6,7	120:19	costing 32:13
16,20		77:18 79:6	121:23 123:3	34:19
		80:12 82:9,10	124:17 127:1	
contradicted	convert	89:24 96:12	128:14	costly 19:11
64:13	158:24	140:25	135:10	36:6 120:17
J 07.13				30.0 120.17
	oonvorting	165:15 180:3	137:21	
contrary	converting	201:18,19	141:12	costs 17:9
112:19 113:6	159:11	216:1	148:13,21	18:5,10,17,
182:24			155:22 160:5,	21,23 19:2,7,
	convinced	corrected	18,23 161:8	, , ,
		331133104		
	_		-	=

				ocicurrencry
16 20:3,12, 14,16,21 21:16 38:14 57:2 70:24 74:3,24 75:1 84:8,11,15 88:17 93:14, 18 94:11 107:23,24 110:3 113:5, 9,19 116:5	200:9,13 201:6 206:3 207:11 211:18 220:3, 5 222:25 223:4,9,18,24 counsel 7:11 39:2 59:3,19 81:10 82:13	76:17 110:4 122:21 150:4 192:23 193:11 202:14 217:17 225:11 227:8, 11	creating 98:9 creation 186:1 credibility 156:6 184:7, 25	cross- examination 22:4,21 24:16 38:20 41:25 42:14 44:13, 14 75:6 80:6 162:13 Cross-exhibit 45:23 46:11
119:9,13,24 120:3 121:12, 13,21 122:12, 17 123:2 125:3,5 126:5	85:18 181:19 225:5 232:7 counsel's 81:17	courts 103:19 209:14 covered	credit 18:8,15 199:1 credits 17:12 18:2,3 66:23	47:17 53:24 54:22 62:2,4 67:10 80:9 81:12 161:4 210:4
135:21 136:13,15 138:13 140:24 143:6, 11,18 145:18 146:19,21	count 48:14 counter-party 79:20	13:11 CPCN 43:13 47:3,23 49:11 110:7	81:14,18 84:4,5,20,22 102:15 119:12 122:19 124:12	Cross- exhibits 80:18
147:13,24,25 148:7,17 149:12 154:22,23,24 155:7 156:20	counting 9:25	CPN 46:1 Crane 105:19	135:18 198:11 199:3, 6 206:9	cubic 213:14 curious 157:13
160:7,8,14,25 162:21 163:3, 4,17,20 166:3 170:16,20,24 172:24 173:8 176:19	19:12 136:24 couple 96:15 100:24 108:12	132:13 209:20 create 165:19 206:13 226:6,	109:24 111:2 130:25 149:18 159:23 164:7 171:23	current 24:2 31:15 64:24 113:5 122:1 162:18 165:24 167:7
177:16 178:12,14,18 180:5,11 186:9 188:13, 16 189:5,9,	115:24 126:19 190:16 202:4 212:12 227:18 228:23,24	15 created 163:10 226:16	207:15 criticized 92:24	171:8 231:21 currently 23:15 73:16 85:21,22
11,16 190:2, 5,8,18,22,23 196:8 198:18 199:4,8,11,15	course 23:10 38:1 70:16	creates 18:8, 15 34:5 205:14	cross 80:22 81:1	105:20 124:11 186:13,15 187:17

Index: cursory..deemed

cursory 181:25	108:19 109:16 113:25	Dave 111:11, 14 222:13	decarbonize 18:1	25 206:7,11 209:4,8,10 210:17,22
curtail 19:10	114:20,25 118:22 119:13,22	day 119:25 232:22	decarbonizin g 135:16	221:19 224:15,19 227:23
curve 34:23, 25 35:8,21 36:5 61:13,15 62:13 63:21	122:5 123:6, 10 124:15 125:4,10 146:22 162:5	day-ahead 77:8	December 15:13 29:7,9 52:15 61:14	decision- making 19:6
64:4 65:12,13 76:5 77:3,22, 25 78:8,11 79:4 205:17	165:8,15 170:1,19 171:11 177:7 187:3 188:7	days 96:8,15 104:14 119:6 127:4 192:14	63:20 65:12 164:8 227:17 decide 40:3	decisions 56:3,5 162:7, 9 164:3,11
229:5,20,23, 25 230:8,14	189:3,4 210:12,19,23 219:7 221:22 223:11,22	deadline 43:23	173:13 215:8 decided 9:11	171:22 188:9 192:2 214:21 225:19
curves 35:5, 12 36:11 64:1 75:25 229:15 230:3,4,8,13	224:8 cut-off 213:7	deadlines 208:16	99:22 100:4 173:24	decline 116:3 203:8 230:2
customer 30:14 67:4	D	dealing 38:4, 13 116:25 182:1	deciding 201:19	declined 11:3 161:23
107:3,4,9 108:24 113:19,20 119:10	D2 45:1 64:12 160:24	dealt 36:14 163:12	decision 6:6, 7 17:5,25 26:5 48:25 101:15,16	declines 72:9 73:8,17 74:23
124:10,21	178:19,24 179:6	debate 25:6,8	106:17 108:16 117:1, 15 159:12,17	declining 34:2 60:16 109:3 160:20
customers 19:4 21:14 31:3,24 32:1, 5,6,10 34:19	Dan 157:1 169:1	debated 25:7	161:20 163:24 170:4 173:13 174:4,	decreased 61:19 110:1,7
43:4,5 57:15 58:6 70:4 73:6,17	data 61:24 62:1 78:19,20	decade 205:10	5 182:2,3,5, 10 187:24 190:25	deem 136:11
102:14 104:22 105:18 106:24	date 64:11 77:17 205:7	decades 158:4 165:3 169:25	191:11 193:9 196:25 201:19 204:23 205:2,	deemed 171:15
100.21	dates 219:12			

Index: deepened..developed

deepened 122:15	21:9	206:10 211:24	147:3	191:24
deeper 189:23	demands 158:9	denying 117:1,6 189:1	describe 71:1 140:23 213:17	determination 104:25 115:22 194:9
deferral 131:7,14	demonstrate 184:11 196:24	191:9 departed 83:14	described 23:11 25:16 69:13 72:3	determination s 171:1
definitely 43:10	demonstrated 53:20 102:12 108:23	Department 25:12,19	76:2 142:6 146:13 151:22 206:24	determine 115:18 140:18 182:4
definition 204:5 208:1,2	183:20 185:7 201:18 207:9 208:17 229:24	depend 70:16	describes 48:22	191:1 194:4, 20 201:9 determined
deflated 122:16	demonstrates 23:25 105:15	depending 94:13	describing 75:24	17:22 35:10 135:13 141:23 157:1
delay 110:6 delaying 142:16	108:1 112:2 113:16 186:3 187:4 205:16 211:4	depends 155:10 156:4 depleted	design 166:20	190:25 determines 111:17
delays 124:17 142:2 207:5	demonstratin g 68:8	225:15 deprive 211:8	designated 183:9	determining 21:8 103:16
delivery 17:19 77:18 106:22	denial 119:10 123:9,13 190:24	deprived 206:1 208:24	designed 136:4 183:24	135:8 136:14 devastated 184:17
114:19 160:11 181:16 182:7	denied 132:5 162:1 173:18, 20 187:5	depriving 209:23	desire 205:11 desires 99:1,	develop 32:2 116:1
demand 79:21 155:11	20 167.5 213:22 deny 117:16	deregulation 149:2	Despite 122:1	developed 108:3 117:18
demanded	173:6 204:21	derived 92:1	details 135:1	120:8,12 146:12,14

147:16	13:20 23:12	direct 7:23	123:4	167:9 170:12
			123.4	
214:14,15	25:3 33:4,20	15:1,13 28:12		195:24
	34:10 43:4,10	29:7 34:24	disappointed	232:22
developer	52:9,20 57:1	35:24 44:18	152:14	
177:1 198:16	64:1 70:14	50:6,19 51:1,	132.14	diaguaga
177.1 196.16	71:17 74:9	10,15,18		discusses
	78:6 94:11,12	52:25 54:1,21	disappointme	8:19
developers	107:5 129:25	56:9,16 58:24	nt 152:1,17	
105:21 141:7	130:18	59:13 70:18		discussion
145:14	132:11	72:9 76:22		9:3 87:10
146:13 151:4	158:23	82:19 83:3	disapprove	105:23 127:3
			190:17	
152:6 153:17	159:15	84:20 97:15,		150:17 151:9
175:25	165:17	16,17,23,25	l .	168:18 197:8
	166:18	184:19	disapproved	203:20
developing	171:18	194:15 195:1	170:5	217:23,25
8:20 86:1,4,7	186:18 190:2			219:17
149:19	195:15	direction	discount	
149.19	197:21,24,25	direction	149:24	dia a consista
	199:17	215:10	149.24	discussions
development	201:21 202:3			105:20
8:10 32:19	215:13,14	directly	discounts	148:20
119:1 120:5	218:24	133:13 144:2	142:7	162:18
149:18	221:12	147:4 178:18	172.7	186:17
167:18	221.12	147.4 170.10		
107.10			discovering	diamina
	differing	directs 75:19	168:10	dismiss
develops	150:23			161:13
94:3	163:10		l	
0 1.0	100.10	disadvantage	discrete 57:5	displace
		210:21		120:17
dice 169:19	difficult 23:19		discretion	120.17
	24:4 186:19	diocares	103:16	
dietete		disagree	103.10	displacing
dictate	l	34:15 56:19		194:22
103:14 171:9	difficulty	204:4	discuss	
	23:25		39:23 40:2	
differ 130:14		disagreement	107:21 172:1	dispute 111:1
J	diminish	197:9	204:20	213:8
	95:19	131.3	207.20	
difference	95.19			disputed
62:24 71:16		disallowance	discussed	disputed
76:4	dioxide	210:20	9:10 14:15	110:22 112:8
	122:4,11		75:22 114:14	220:13
	136:18		154:1 164:18	
different 8:4	100.10	disallowed		disqualifies
	I		I	I aloqualillos

Index: disregard..during

139:4	163:7 164:1, 10 166:6,8,21 168:25 169:7	215:19 224:4, 5	downside 164:18 167:21	drivers 227:23
disregard 164:21	170:3 171:21 190:21 229:15	documents 208:9,24	downward 121:2	driving 33:24
disrupt 207:11	Division's 48:23 119:25	dollar 67:2,3	DPU 78:12	drop 54:20 231:2,4,9
disruptions 20:24	158:20 159:13 162:8 172:19	dollars 8:21 11:20 69:9 122:16	161:4 210:4 229:9	dropped 144:25
distant 55:14	divulging 63:18	124:11 142:7 147:9 169:22, 23 183:6	DPU'S 214:11 229:11	drops 213:3
distinction 62:24 79:25		223:12	drafts 208:6	droughts 21:4
166:6 distributed 199:4	do-nothing 109:10 113:21 210:25 211:2	done 7:21 8:12 9:6 10:12 31:11 37:1 40:13	dramatic 64:20	DSM 34:2 88:11,23
diverge 83:24	docket 6:4 9:10 15:16 26:1 45:24	65:10 69:7 75:3 78:14 80:23 99:5 106:1 117:4	dramatically 83:15	due 11:9 21:13 24:1 83:18 141:15
diversion 95:14	46:12 47:22 49:15,16,22 53:5,8 54:5	128:17 132:18,22 140:16 146:2	drastically 19:10	142:2 143:11 149:24 163:17 218:14
diversity 149:14	55:2 90:1 101:13 104:11 114:2	211:2 220:9 down 33:24	draw 9:2,24 47:16	duly 7:3 14:23 28:10
Division 31:4 48:9,23 104:23 143:9,	115:3 117:10 135:2 136:8 158:21	45:4 48:6,14 55:9 71:3 74:23 110:4	drawings 207:14	duration
17,20 144:12 154:9,13	159:24 160:16 166:1 167:12,13	121:4 130:1 134:1 148:2 152:15	drill 189:22	157:24
155:7 156:25 158:11,14,21 160:17 161:5,	186:2 192:20 197:8 199:10 204:25 209:6	172:10 176:13,18 179:8,10	driver 460:24	during 41:17, 20 64:19 102:6 137:1
14 162:16	214:20,21	182:5 217:11	driver 160:24	200:14

Litigation Services | 800-330-1112 www.litigationservices.com

Index: dust..employed

205:10	eastern	34:8,10 56:21	EIM 32:19	203:22 204:3
213:22	138:24 231:7	64:2 68:19	92:25 94:17	
		83:13 94:15		
	=0.40	95:1 122:23		eligibility
dust 211:12	easy 58:10	178:17 180:8	either 47:3	141:23,25
	191:25	208:22	63:2 79:14	
dwellings		211:13	82:17 97:1,5	eligible 127:8
86:12	echoing	211.10	99:17 123:17	l engliste (2) (e
00.12	214:22		223:6	
	211.22	economy		eliminated
E		137:20	either/or	203:24
	economic		173:16	
	17:7 19:19	effect 9:14	202:23 203:3	elsewhere
each 38:7	21:3 23:6		202.23 203.3	14:5 90:1
59:1 65:16,22	32:1,9 33:13	162:9 170:14		152:5
66:5 70:14	34:14 50:15	213:1	Ekola 102:21	132.3
103:9 104:3	54:16 66:22		204:24	
112:24	71:24 82:15	effective 82:1		embedded
	86:2 107:4	106:7 137:21	- 1 040 40	79:18
113:17	112:11,14,21		EI 212:19	
120:10 149:1	115:12,17	.		l
153:4 205:5	121:13,23	effectively	elected 193:9	emission
227:15 232:9	122:15 123:5	25:5 71:9		138:2
	128:7,25	209:21	_	
eager 158:15	137:5 140:6	219:14	electric 55:1	emissions
	144:15		165:4 212:20	18:22 19:5,8,
	146:19 166:7	efficient 6:16		10,16,21
earlier 66:17	168:13,23	137:20 143:6	electricity	20:19 21:1,15
81:25 82:20	180:9 183:25	137.20 143.0	17:19 20:20	136:18 137:1,
89:2 125:23			23:4 33:25	,
132:19,22	184:18	efforts 12:10	106:22	8,17,25 138:10
168:18	185:24	23:10 88:9		130.10
190:16	186:21 190:9		114:19,21	
200:21	211:5 221:21	07:40	122:6 124:5	emissions-
205:23		egg 87:13	127:1 135:11	free 141:13
222:10	economical		146:22	
	159:12	EI 151:11	147:24	
a a ultra 4 4 4 4 7			155:13	emphasized
early 141:17	_		181:16 182:7	184:1 185:1
	economically	EIA 230:13		
earn 33:16	135:17 150:1		elects 203:8	empirical
118:25		eight 24:3	1 5.00.0	34:25
	economics	50:6 146:1		01.20
	GCOHOHHCS	1 55.5 175.1	element	
easier 97:8				employed

Index: employee..especially

				cespectarry
28:18	194:8,10 198:14	170:4 182:2, 3,4,10 186:22	60:2 66:9 179:11	148:11
employee 180:22	201:11,16 217:6 218:24 223:4	187:24 189:13,15,16 190:24 191:11	202:18 211:10,12 222:4	environmenta I 19:19 137:5, 13 211:11
enable 125:9 140:17	ended 10:3 34:19 153:9	204:19,22,23 206:5,17 208:20 209:9, 10	ensure 160:9 219:13 222:25	environmenta Ily 119:2
enabling 144:2 enacted	ending 152:13	energy's 134:20 136:7	ensuring 110:16	environments 123:24
137:3 encourage	endorsing 82:17	142:11 engaged	enter 12:25 16:12 79:19 97:2,8,11	envisioned 168:2
21:21 137:16 138:7	ends 38:11 154:19 171:24	105:20 193:24	entered 13:2 42:25 43:12	EPA'S 122:20 equal 83:22,
encouraged 26:17	energy 6:6 14:13,22 15:11 17:2,5,	engineered 155:1	80:10 96:16, 25	23 84:5 125:4 178:20 201:10
encourages 19:20 137:7,8 146:4	7,24 18:2 21:6,17 25:12,19,20	enhance 110:20 118:24	enters 33:7 entire 46:18	equalize 39:24
encouraging 227:6	27:22 29:1,2 32:25 33:22 45:1,5 66:23 81:13,18	enhanced 110:23	72:21 73:13 206:9 209:11	ERCS 122:19
end 25:18	101:14 102:17	enjoyed 96:2	entirely 74:9	erode 155:17 161:18
32:12 64:23 71:2 80:5 84:11,15 119:25	106:16 113:24 117:14 120:17 125:1	enjoying 223:11	entitled 137:4 enumerated	eroding 157:20
121:25 129:6 137:14,21 141:20 143:16 153:3,	134:18 135:16 136:3, 12,20 137:20 141:5,7,9,13	enlarge 137:19	118:18 environment	error 77:1 206:22
11 177:4	143:1 149:20	enough 39:10	24:2,9 34:1	especially

Index: essence..exceeded

123:7 178:12, 19 179:24 evaluating 19:23 68:18	151:25 155:21 165:3 174:4,21 177:23 180:6 181:25 189:9 194:12 209:1	everybody 176:19 180:5 everyone 31:9 69:5	EXAMINATIO N 7:5 15:1 28:12 81:8 examine
163:25 179:5 218:15	220:23 222:13,14 223:6 231:1	everything 8:12 167:24	26:18 examined 7:3 14:23 28:10
9:19 10:20 11:11,13,15 12:3 53:8,10	evening 6:14 12:10 22:24	176:22 180:10 evidence	examiner 193:24 194:4 197:19
54:7 122:23 178:9,16 200:12,15 218:14	eventy 199:4, 12 event 142:1	13:2 104:3 106:6,20 108:25 109:21 112:2	199:16 examiner's
evaluator 192:18	168:14 210:19 213:7 214:14	113:15 118:20 120:18 155:19	194:16 example 20:4 36:24 78:8
evaluators 7:13 207:3	events 20:23 24:4 123:23	181:21 186:1 220:19 222:6, 13 224:4	86:9 88:1,8, 11 94:20 95:4 159:8 165:19
evaporated 68:22	124:4 208:1 225:11	230:11,18	177:5 182:1 186:12 212:18 213:2, 3
even 10:15 18:13 23:5 32:11 34:15 35:19.20	146:15	182:16 exacerbated	examples 42:24 207:20
36:8,11 54:19 57:9,15 68:10,24	changing 165:4 208:6	78:24 exact 70:6	exceed 111:12
93:19 111:10, 13 122:10,25 123:4 141:25 143:16 148:7 150:24	every 34:25 56:11 67:2,3 84:5 115:14 123:10 178:6 185:1 199:12	exactly 24:5	exceeded 104:16 172:24 205:18
	evaluating 19:23 68:18 126:25 163:25 179:5 218:15 evaluation 9:19 10:20 11:11,13,15 12:3 53:8,10 54:7 122:23 178:9,16 200:12,15 218:14 evaluator 192:18 evaluators 7:13 207:3 evaporated 68:22 even 10:15 18:13 23:5 32:11 34:15 35:19,20 36:8,11 54:19 57:9,15 68:10,24 93:19 111:10, 13 122:10,25 123:4 141:25 143:16 148:7	evaluating 19:23 68:18 126:25 163:25 179:5 218:15 evaluation 9:19 10:20 11:11,13,15 12:3 53:8,10 54:7 122:23 178:9,16 200:12,15 218:14 evaluator 192:18 evaluator 192:18 evaluator 192:18 evaluator 192:18 event 142:1 168:14 210:19 213:7 214:14 221:15 evaluator 192:18 events 20:23 222:13,14 223:6 231:1 evening 6:14 12:10 22:24 evenly 199:4, 12 event 142:1 168:14 210:19 213:7 214:14 221:15 evaluators 7:13 207:3 events 20:23 24:4 123:23 124:4 208:1 225:11 eventually 146:15 eventually 146:15 evertually 146:15	19 179:24

Index: exceeds..extensively

exceeds 40:3	96:4 180:20	existing 111:12,13	expense 10:21	197:20
except 123:11 232:25	executable 207:15 208:9	136:17 exists 12:5 119:20	expenses 125:23	explained 136:12 185:20
exception 98:7 212:16,	executed 35:25	209:16	expensive 45:10 50:1	explanation 184:22
21 exceptions	executing 78:8	expand 193:3 expansion	88:4,10,12 176:24	explore 88:23 208:25
97:19 212:15	execution 174:5	93:13	experience 36:9	209:24 210:1 216:11 232:18
excerpt 53:24 54:2	exhibit 13:14, 16 15:24 16:3	expect 79:21 89:15	experienced 208:19	exports 158:9
exchange 24:21	29:11 47:21 59:11 62:10, 11 70:12,20 96:18,22	expectation 11:3 43:7 83:19 87:1 109:3	expert 133:8 174:24 175:15	exposed 219:7
exclude 195:8 197:1	97:3,9	expected	expertise	express 10:2
exclusion 122:17,18	exhibits 16:18 29:8,12 30:3 44:13	36:7 65:19 66:5,10,12 108:24	87:16 141:15 experts 230:6	expressed 192:18
exclusively 56:8,9	80:6 96:16, 18,25 97:6, 11,14,18,19, 21 98:6	expecting 43:21 86:14	expire 145:1	expression 8:22 11:25
excusable 142:2 208:1	exist 12:6 41:19	expects 109:2	expires 164:9	extension 221:7
excuse 6:10 48:24 92:19 198:16	existed 149:8	expended 116:6 190:19	expiring 164:8 184:1	extensive 214:12 224:16
217:13 excused 14:4	existence 41:13	expenditures 223:14	explain 8:7 52:6 67:19 76:12 81:20 83:10 192:21	extensively 230:9

				extentrekt
extent 93:4 99:4 185:13 230:1 232:1	47:5 53:21 54:15 57:9 60:25 61:9,22	215:7,9,13	222:23	favorable 10:4,8 25:20 95:2
extra 79:21	68:14 78:24 79:2 86:10 89:4,12	facts 186:24 206:21	fairy 211:12 faith 154:18	favored
extraordinaril y 32:7 36:6	119:18 120:8, 20 129:5 135:5 136:10	factual 48:15	fall 19:2 20:2	160:18 favoring
extreme	165:8 174:14 182:14 184:8 186:25 197:3	failed 126:20 154:14 166:22 167:1	65:3 fallacy 213:15	11:23
184:14 extremely	206:17 222:7 223:11 229:5 230:3,22	168:5 209:16 210:1	223:2	favors 10:18 fear 24:24
127:17 150:16	factor 104:3,5	failing 205:25 206:5	falling 114:15 false 120:6	148:24
eyeballing 62:20	107:22 108:15,18 109:4,5	failure 162:13 166:25 167:2	falsely 211:6	February 20:6 59:14 67:1 70:13
F	111:15,16,18, 21 114:17 115:6,8,10,16	206:20 208:8, 23	familiar 27:1 138:21,22	91:5,8,9 208:10
face 124:5 149:7 162:21	126:25 127:7, 8 138:2 215:6,7,11	failures 167:11	175:8 far 23:12,23	federal 17:12 18:7 122:2
faced 170:1	221:18 225:2, 3 226:13	fair 24:21 60:2 66:9 165:9 197:8	53:18 55:19, 25 64:6 78:16 123:20 153:5	feedback 150:13,21
facilitate 212:21	factors 11:14 17:20,22 103:5,8,11,15 106:14,18	206:2 217:10 218:3 222:6	155:9 169:16 172:10 174:5 179:7 190:20	feel 11:22 74:11 99:11, 13
facilities 48:17,24 71:22 124:18	108:13 110:19,22 111:22	fairly 12:2 58:10 65:11 83:21 131:13	217:3 faster 135:3	felt 128:1
fact 9:9 20:3	112:24 114:16 115:5 118:18,19	189:16 192:16 202:15 231:8	157:23 favor 10:21	FERC 25:19, 24 36:24
32:2 43:25 44:1 45:5,19	135:7,9,12 136:8,10	fairness	156:15,17 183:3	38:22,24 40:20,23
	-	-	•	

Index: few..flourish

41:4,5,13	17:1 20:9	financial	101:17 103:1	116:24 123:6
· · ·				
127:15	29:7,8,10,11	110:21	104:7 105:16	157:14
129:12,24	53:3 54:24	124:20 125:5	106:20	
212:17	67:1,9 112:10		107:17 109:1	five-year
230:24	134:25 168:2	find 7:18 26:2	114:17	201:15
	205:6	39:8 89:8	120:14	
few 11:6 25:3		103:1 149:22	126:25 127:7,	
33:22 74:12	files 225:16	213:12	8,19,20 129:7	fixed-cost
75:16 86:10	11103 220.10	210.12	133:1 134:14	205:13
96:7 104:14			163:11 173:6	
114:14 119:6	filing 20:6	finding 88:2	177:23	flat 148:2
	52:8 76:23	107:2 127:7	180:17	11at 140.2
127:4 146:2	83:25 84:20,	176:9	181:13	
155:25 172:3	22 91:5,6		187:23	Flats 102:21
207:6,9	165:22	fin din m	190:17	204:24
		findings	193:25 198:9,	
fifth 48:14	4 11 5 0 40	104:4,14,24	15 204:25	fl (405 47
110:18	filings 52:10	206:16	209:12	fleet 135:17
	91:5 115:2		212:13,24	142:22
		fine 7:25 75:8	213:12,13	
fifty 183:13	fill 183:16	97:5,8 99:15	214:11 215:4,	flexibility
	211:6	100:19	6 216:11	111:3 127:14,
figuratively	211.0	133:14 175:2	225:2 227:20	18 129:24
70:22		100.14 170.2	232:22	188:5
10.22	final 11:9		232.22	100.0
	13:4 17:22	finish 100:17		
figure 35:2	37:6 75:16		first-come	flexible
58:18,25 59:5	90:22 104:20	finished	212:15	219:13
62:14 63:10,	128:15,25			
14,17,22	140:7 173:25	80:22	("	flovibly
66:6,14 69:3	193:16,17		first-in 212:24	flexibly
70:15 71:3,6	194:21 205:2	fires 20:24		222:12
73:21 74:2	206:7 207:14		first-selected	
	208:8 214:6	fi 107.10	212:25	flight 99:2
	228:16,18	firm 127:16		101:1
figured 73:2	- 2,12		<u>.</u> .	
		first 15:24	first-served	di. 040070
figures 72:16	finally 36:13	32:13 35:22	212:15	flip 64:2 87:2
	124:7 130:1	46:13 48:4		92:14 93:20
	173:24	57:18,21	fits 152:9	
file 131:21	225:14	58:1,3 67:12,	102.0	floor 75:11
203:9	230:20	13 77:2,22		
		79:3 99:15	five 97:6,19	
filed 15:22		70.0 00.10		flourish 40:12
11100 10.22				

Index: flow..frame

flow 132:11 175:3 190:10	14:24 28:11 142:15 217:24	65:17,23	153:11	forward- prices 79:16
fluctuating 124:1	foot 213:14	forecasting 34:22 55:24 154:19	form 93:4 207:23 forma 207:20,	forwards 77:1,15,19,23 78:1
focus 136:9 159:19	footing 201:10	forecasts 19:3 20:8,9 61:1 63:6	22 forms 13:17	fossil 120:17 143:4 148:1
focused 134:21	force 23:3	79:6 108:20 120:22 159:6 205:13,22 230:19	fortuitously 128:8	FOTS 143:10 183:19,20
focuses 74:14 folks 112:7	186:24 208:2 force-run 148:7	forego 162:20	forward 24:2 34:23 36:5 38:17 61:13,	found 25:12 65:22 104:15, 18,19 120:2
115:4 130:9 132:2 216:14, 15 217:6	forced 170:20	foregoes 124:8	75:25 76:5,24 77:2,22 78:4	121:6 147:6 183:12 187:3 229:22
219:23 follow	forecast 19:1 20:1,2,5 34:16 35:15	foregoing 109:6,8 119:11 124:7	79:4,5,8,10, 13,18,20 80:1,2 89:7 94:3 95:10	foundation 207:16
129:13,21 130:8 131:23	60:5 61:10, 11,18 63:13 64:10 65:7,17	foremost 181:13	105:16 109:7, 13,21 117:15, 23 118:1	foundational 208:24
follow-up 130:5 174:12	66:17 71:10 76:4,10 77:1 79:7,9,12 80:2,3 110:17	foresight 36:22,23	132:7 142:18 143:7 144:4 145:9,11 148:7,14,23	four 24:3 46:19 49:3,8 157:14
follow-ups 174:8	112:4 157:19 159:15,25 189:14	forest 20:23	149:3,16 151:10 153:18 157:3	192:14
following 17:1 24:20 97:19 105:21	208:21 229:7, 19	forever 219:17	186:5 203:10 205:17,21 220:1 226:8,	fourth 110:18 frame 50:22
145:23 follows 7:4	forecasted 77:3	forget 91:4 175:13 207:7	11 227:7 229:5,7,15, 20,22 230:3	54:16 82:17 100:15 196:3, 5 197:21
	forecaster	forgot 81:2		

Index: framework..generally

framework	fuels 143:4	21:21,25	205:14,21	15,16,25
31:21 95:4	148:1	24:11 27:20,	209:21	158:2,8,11,25
103:19		21 33:12 34:4	210:16	159:6,9,11,
		35:14,19 45:4	213:10	15,25 190:3
	fulfill 68:2	55:9 78:24	219:17	220:12 230:3
frankly		80:5 85:7	225:23	220.12 200.0
227:22	full 48:4	93:19 96:10	231:11	
	109:1 125:22	166:13 167:4,	201.11	gas/medium
free 141:12	131:15	18 179:10		90:17,25
1166 141.12	133:23 134:4,	213:18 214:2	futures	92:12 207:13
	5 151:9	213.10 214.2	157:19	
front 7:24				
33:7,9 46:2,	152:15	future 17:9,15		gas/zero
13 59:2	160:10	18:21,24	G	92:13
72:11,12	167:15,21	19:16,24		
96:22 112:22	169:17 201:1	20:14 24:6		Gateway
114:22 116:2	206:2 210:19	32:3 34:7	gain 142:6	45:1,6 47:12
119:23		35:14 38:12		133:24 134:4,
143:10,18	full-term	55:14,19,25		6 177:5,9,12
151:23	198:23	65:1 77:18	gained	179:1 184:13
166:16	100.20	86:15,25 93:2	162:17	208:20
202:24		113:22,24		200.20
220:18	fully 43:20	122:9,12	gap 82:25	
220.10	123:17	124:6 126:1,4	83:6	gave 188:15
	151:25 160:7	127:24 128:4	00.0	
fruition	168:9 185:20	135:22		general 46:13
23:13,24		138:12	garner 204:8,	55:1 64:5
	fund 177:3,5	142:20	9	131:12 137:2
frustration	Turiu 177.5,5	144:14		157:23
10:2 174:14		147:18	gas 35:25	165:22 166:9
175:18 176:8	fundamentall	_	36:1 58:20	188:1,4,19
175.16 170.6	y 34:15	148:21 149:6	60:5 61:18	189:6
	154:13	154:20,22	62:15 64:20,	109.0
fuel 17:9	158:22	155:14	22,23 65:3	
18:6,21,23,25		157:15	77:9 92:3,15	generalized
120:17	fundad 72.5	162:24	120:22 121:1,	158:8
135:20	funded 73:5, 16 74:20	164:13	6,8 123:12	
138:13	10 /4.20	169:10,11,13	124:1 142:23	gonorally
141:12		171:9 172:1,	143:12,17	generally
	funding 177:8	2,23 181:22	148:12,17	21:2 23:11
fuel free		182:10	146.12 155:10	25:22 63:20
fuel-free	further 0:40	185:14 188:1		93:4 95:17
18:20	further 9:19	189:7 190:1,2	156:23,24	135:14 139:7,
	14:3 18:9	202:11	157:2,4,9,14,	11 145:23
				I

Litigation Services | 800-330-1112 www.litigationservices.com

166:24 178:7 214:9	190:10 199:5 225:9	193:14	154:16	67:21
generate 108:24	gist 228:4	good 6:2 7:7, 8 15:3,4 16:24 24:18,	grateful 102:8	groups 30:14 35:3 43:1,18
146:23	give 7:22 9:11,20 28:19	19 26:15,16 28:4,14 30:20	great 7:25 176:11 213:15 226:7	grow 142:21
generating 68:25	30:8 39:18 59:10 71:17 99:19 104:4	44:16,17 75:4 93:8 102:4 118:5 123:13	greater 35:14	growing 19:11 143:14
generation 20:20 24:25	116:12 132:6 172:6 181:11 188:7 199:25	134:12 178:3 204:16 208:16	36:8 37:8,9 59:25 91:22 109:9 133:3	146:3 growth
34:3 43:8 53:16 68:4 93:25 94:4,9,	222:2 233:1	211:10,11,13 216:10 227:2	196:4 greatest	137:18 141:9
21 95:6 111:12 135:16	given 53:17 74:11 76:6 77:16 78:5	governing 207:16	105:14	guarantee 110:14 141:24
149:23 151:17,22	84:5 89:12 94:6 106:8 122:6 129:24	governor 137:3,16,24	greenfield 160:3	186:23 187:1
generator 94:11,12	155:16 157:7 158:10 159:16	139:6	Gregory 141:15	guaranteed 155:4 189:14 192:10
generators	161:15 162:20	graduated 30:15	grid 23:3	guarantees
25:21 generic	205:15 goal 101:23	grant 125:22	24:24 25:8, 11,14,15 26:3 149:9,15	182:23 207:18,25
207:19	goals 169:5	granted 16:17 30:2 41:6,23 80:17 98:4	ground 36:2 146:6	guaranty 125:1 188:16
geographic 149:13	goes 8:13	192:24 193:5 212:20	ground-level	guess 23:16 32:17 39:22
geothermal 141:7	40:18 65:12 95:18 197:23 200:17	granting 47:22	21:3	40:12,15 42:23 43:22 51:25 52:9
getting 59:21	216:11	grappled	grounds 209:3	53:1 60:22 76:19 77:24
129:20	gone 47:8		groundwork	78:13 79:9

Index: guidelines..here

83:11 87:12, 19 90:12 92:14 116:14	happy 99:14 135:4	223:5 HAYES	125:23 132:1 134:17 219:21	held 9:18 152:6 163:16
131:24 174:11,17,23 179:16,22 214:18	Harbor 28:21 116:6 168:4 173:9 186:4 190:19	180:15,17 181:2	hearing 6:11 33:21 36:18 88:21 102:7	help 13:3 24:23 39:3,7 130:10,13,17 136:4 141:18
216:17 226:10 229:8 231:2	hard 56:25 109:22 113:2, 6 125:22,24	Hayet 6:13, 17,18,22,24 7:1,7 12:11, 12,13 14:3, 10,11 89:2	105:24 130:22 133:15 142:18	187:8,20 208:18 212:21
guidelines 112:20 guides 17:17	150:3 172:22 187:23 188:6 189:23 202:8, 13 213:17	147:6 196:1 199:20 200:1, 20 207:2	157:13 168:18 180:24 205:1 208:12	helpful 10:16 101:6 175:1 179:12 202:19 232:8.
H	222:1,21 223:9,19	Hayet's 183:10 196:18 201:8	214:16 217:23 231:16 232:23 233:4	17 helping 18:1
	harder 148:25			
halfway 48:6	harm 95:7	HCR 19:18	hearings 119:6	helps 25:1
hand 10:2 68:1 119:10	123:10	head 83:16 216:6	heart 204:2	Henry 63:13 121:6
145:2 220:21 221:15	harmless 163:16	heading 55:8	heat 20:23	here 9:5 13:3 30:16,21
hands 126:1	harvest 198:19	health 21:2 119:3	hedge 18:4 36:1,4,6	52:2,13 53:13 54:10 57:7, 10,18 59:21
happen 61:8 111:5	having 7:2 12:25 40:7	hear 41:8,9	123:24 142:22,23	67:21 69:18 70:7,22 71:9 72:3 74:6
happened 129:4 152:2 172:17 197:5	61:6 68:23 72:11 127:18 132:3 168:5 193:14	heard 7:10,17 89:2 104:14 107:14	hedges 78:8 205:13	75:3 76:13,21 78:14 84:20 91:21 95:2 102:11
happens 94:4 171:25 219:25	195:17 200:18 206:2 207:22 213:6 222:4,16	108:25 109:21,25 112:15 118:11 120:4	hedging 35:25 78:7,10 123:15,19,22	116:17 117:18 128:14

Litigation Services | 800-330-1112 www.litigationservices.com

Index: Hickey..ignore

130:14	63:20,23	208:21	108:21	
131:19,25 132:10 133:8, 15 141:10	64:4,25 66:13,16 78:4 94:25 119:13	Hold 49:18	host 166:18	I-5 88:1
147:6 158:22, 25 159:16,17,	145:2,6 147:13 148:5,	holding	hour 67:16	
19,20 160:15 167:12	6,16 154:24 157:10,16,17	152:12	68:11,15 81:23 98:15	i.e. 184:23
169:10,20 175:7 179:16	158:3 160:15 161:1 162:20	holes 163:9	118:8 195:3,4	Idaho 43:11 45:14 47:10
200:23 202:19 215:2	177:22 213:2	holistically 140:19	house 137:3 169:20	idea 56:18
220:13 221:12,23,25 222:24	highest 189:11		however	83:20
226:12 227:19 229:24 230:1, 11	highlight 155:25	Holman 14:14,15 15:2 16:11,20 22:3 27:20,21,23 42:9,10	10:22 11:8 43:15,17 62:18 71:25 72:25 73:7	identified 34:22 90:18 105:22 124:16,22
Hickey 22:10, 12 42:7,8 141:3,4	highlights 161:20	134:11,12 138:19 139:3, 17,22 140:7, 25	120:13 165:16 168:25 181:24 187:5	126:11 128:23 135:24 168:6
150:8,10 151:2 153:22	highly 13:10 96:17 208:7	honestly	212:25 213:24	IE'S 7:15 9:16 104:24
high 33:11,15	historic 121:3	172:25	Hub 63:13 121:6	160:23 200:4, 7 216:25 217:6
35:11 65:18, 23 68:9 69:8, 10 92:15	historical 75:25	hope 61:5 179:12	huge 226:3	IES 8:15,19
93:22 122:11 127:17 157:2, 6 161:11	historically 215:17	hoped 179:9	hundred 183:13	10:2,11 11:18 147:7 151:22 200:10,17 201:2
high-priced 123:23	history 121:9 148:4 158:4, 17 163:8	100:25 horizon 53:8,	hundreds 124:10 142:7 183:6 223:11	IES' 162:8
higher 11:4,7 19:1 20:22 39:25 53:21	205:15 208:22	9,10 54:6,7, 11 56:8		ignore 64:14 122:8 124:7 204:6 215:12
	hit 153:13	horizons		

Index: ignores..including

ignores	108:20 109:2,	150:16 151:2	imprudent	incidence
•	•		122:8 188:10	
121:2,5,9	3 124:4	215:10	122:8 188:10	20:23
122:25	135:12	216:18 221:3		
156:10	136:19,22		impute 138:8	inclined
164:17	209:5	importantly	156:21	41:12 187:6
		32:22 185:12	100.21	195:2
ignoring	implementati	32.22 103.12		190.2
209:21	on 225:18		inability	
209:21	on 225:18	impose 187:8	208:17	include 21:3
		202:9,14,16		44:25 46:18
II 204:24	implemented	, , , , , ,		66:22 84:16
1 201.21	24:6 25:23		inaccuracies	107:17 108:6
	24.0 25.25	imposed	161:18	124:16,23
illustrative		167:8 177:17		′
81:24	implementing	178:13,15	!	135:9 145:14,
	19:13 25:24	180:5	inaccurate	19 148:10
	113:13		160:17	160:2 184:4
immediate	165:21			186:22 193:2,
18:16 112:4	100.21	imposing	inaccurately	3,9,12 201:19
144:14		180:11	229:15	
	implicated		229.15	
	38:22			included 8:21
imminent		imposition	inaction	11:17 31:8
25:15		124:2	122:1	40:11,12,21
	implication		122.1	53:14 67:3
impact 20:19	78:6	impossible		89:3,4 183:5
<u> </u>		_	inadequate	184:21,23
21:1,10 60:16		161:7	198:1 213:11	186:21 193:6,
65:13 74:24	implications			15 194:21
93:5 108:16,	164:4	impression		197:5
18 110:21		39:16,17	inappropriate	107.0
113:20 178:5,	importance	00.10,17	223:20 226:5,	
6,8 209:17,25	8:8 19:21		14	includes 21:8
213:8	0.0 13.21	improve		109:15
		143:23	inconting	146:17
.	important	147:15	incentive	
impacted	13:21 17:20		138:1	
73:9,11	18:4 21:5			including
	24:7 32:2	improved	incentives	17:21 19:12
impacts 11:2	36:20 39:10	102:17	137:8,18	84:9,12
16:6 17:21		147:17	138:6	102:15
	65:5 102:7		130.0	104:24 113:2
19:5,11 21:3	103:12	!		141:10
26:2 54:18	111:17	improvement	inception	142:13 143:8
74:25 93:17	122:22 147:2	96:15	47:12	146:21 147:4,
			I	170.21 171.4,
			I	

Index: inclusion..instead

	I	1	I	1
19 169:2	14,16,21,25	indicating	156:11	10:22 52:8
	72:14,19	45:15	164:21	82:22 84:22
1	73:1,4,9,19		195:20	91:6 128:15
inclusion	74:1,13,14,			135:15
21:18 135:25	15,17,21,25	indication		184:18
	192:9	85:12 162:2	inflation	104.10
incomplete	192.9	164:5	157:23 158:5,	
67:12 206:15,			8	initially 152:2
18	incurred	individual		
10	113:9 170:24		: f = = 1 ! =	::::::::::::::::::::::::::::::::::::::
	173:8,11	86:8	information	initiate 228:6
incorporated			6:15 20:5	
108:10		individuals	40:20 55:18	innovation
100.10	independent	137:16	78:22 128:12	137:13
	7:13 86:6	137.10	133:5 134:7	107.10
increase	108:3 175:25		136:17	
19:15 20:20	192:18	Industrial	150:13	inputs 155:2
21:24 69:4	193:24 194:4,	29:2 204:18	177:21,23,24	156:1,4,7,13
86:15 108:8	16 197:19		179:4 217:20	200:8 230:4
	199:16 207:3		230:7	
	100110 20110	industrials	200	
increased		43:18		inquiry
18:6 21:4	indicate 14:7		informed	166:13
93:3	16:15 18:12	industry	56:4	
	19:15 29:25	121:10		insisted
increases	41:5 55:10	122:13 124:5	informing	199:8
	85:10 98:3	142:15		199.0
17:8 78:17	203:4	_	180:25	
109:10,14		145:23 148:6		install 195:13
135:20		165:4	infrastructure	
192:10	indicated		109:17	l
	23:14 41:3	ineffective		installation
increasing	67:1 81:16	208:7		196:7
65:9 86:17	132:13		inherent	
89:13 138:13	197:12		119:24	installed
163:17	199:16,21,22,	inefficiency	146:11	86:13 109:25
103.17	24 201:15	149:5	161:21 190:9	00.10 108.20
	203:23		205:12 217:8	
incredibly	209:20	in alicibie	218:1,13	instances
176:24	218:12 219:9	ineligible		214:1
		127:9,10		
.	l	172:6	inherently	
incremental	indicates		55:25	instead 62:10
37:22 69:24	48:2 58:25	inflated		73:13 105:12
70:4 71:10,			initial 7:11	120:5 169:12

Index: integrate..IRP

				integrateikp
integrate	178:18,22,23	24:24	25 64:23 65:1	50:2
143:23	179:7,21		77:11 79:19	
	203:18,24	intormountoin	84:7 86:15,24	invootmant
intogration		intermountain	88:7 94:20	investment
integration	:	141:9	97:2,3,11,14,	18:8,15 32:7
207:11	interconnecti		20 98:17	33:1,16 34:13
	ons 144:3	interpretation	103:5 106:13	36:12 37:25
intend 44:13		115:9	109:12	46:22 47:7
	interest		115:25	73:4 88:20
Part and India	17:10,25		126:10 128:5	89:1 124:25
intended	21:13 103:5,	interpreted	130:10	132:8 185:14
66:1,3 126:20	13,17,22	108:18 188:9	131:16 182:6	
	104:20 105:1		186:14,17	investments
intending	106:13	interrupt 31:6	193:17	17:7 88:10
51:20	112:24	227:9	198:20	143:5 148:24,
	113:17		216:14	25 149:5,7
	118:13,17		217:12 219:5,	20 1 10.0,7
intends 169:1	129:10 135:2,	interrupting	16 222:17	
208:2	9 136:8	218:9	225:10	invites
	138:4,15		223.10	206:22
intensity	140:16 146:3	interstate		
109:14	151:5 152:19	207:6	introduce	involve
100.17	154:16 155:6	207.0	30:10 97:13	154:23
	154.16 155.6		140:13	107.20
intention	15 182:6	interveners		
117:23	206:23	99:25	introducing	involved 27:6
131:11	200.23		140:10	33:2,8 43:12
		Interwest	140.10	49:14 82:18
interconnect	interested	141:5,6,11,14		106:8 159:4
175:19	7:16,23	142:9,20	inure 146:21	
176:20,23,24	145:16	142.9,20		involves
170.20,23,24		143.6,20 144:11,22	invoct 47:40	159:25
	interests 40:4	144:11,22 145:14,19	invest 17:13	109.25
interconnecti	interests 43:4	145:14,19 146:4 147:21	158:24	
on 9:13,22		148:15		involving
10:12 36:19	interfere		invested	47:3 207:25
38:23 127:16	128:9	149:22,25	118:25	
128:9,23				ironic 226:5
133:20,21,25	intonio st	into 9:14	investigate	110111C 226:5
174:19	interject	12:25 13:2,19	investigate	
175:21 176:2,	31:14	16:13 33:7	50:4	irony 226:1
3,10,13,19		35:14 42:25		
177:1,2,15	intermittent	43:12 55:19,	investigating	IDD 47:44
		·]	IRP 47:11

Index: IRP'S..kind

			1	
50:16 52:5	76:19 83:8	ITCS 198:19	judgment	26:16,20,23
53:9 54:6	87:20 93:24		117:24	27:1,6,19
55:2,10,11	96:13 111:23			143:16
56:8,10 69:12	116:8 126:3,6	item 70:13		147:25
84:20 105:25	128:3,9		jump 31:10	111.20
112:3,9,13,19	129:6,11	J	157:18	
130:22,24	136:25		175:12	keenly 145:16
143:21	141:17 151:8			192:9
1			luna 20.0	
145:10,16	160:11	January 8:15	June 20:8	I
148:5 167:12,	179:14	15:14 20:9	148:18	keep 10:10
13 186:2	185:24 191:8	29:10 52:15,		23:5 152:23
195:19 197:6	192:16,17	18 55:1 76:23	jurisdiction	214:18
200:10	200:11 201:1	184:17	131:5 170:25	
216:22	203:20 204:1	208:10	101.0 170.20	keeping
220:16	213:9 214:25	200.10		145:17
226:24 227:1,	215:18		jurisdictional	145.17
13,16,19,20,	217:13	Jenner	125:4,7	
24 228:1	220:11,14	141:15 142:9		Kelly 118:11
	227:21			120:8 122:10
			jurisdictions	123:16
IRP'S 162:4		jeopardized	42:21	142:13 143:4
	issued 35:1,9	167:24		148:3 180:21
irrocpostivo	41:6 117:1		justification	140.3 100.21
irrespective		Jim 158:20,23	42:18	
223:18		159:7 230:17	42.10	Kelly's 121:5
	issues 34:22	139.7 230.17		124:23
irrigators	36:14,19		justifications	
43:18	43:14 46:4	job 21:4	205:5	
10.10	47:9 49:15,21	224:13		key 110:8
	75:10 93:13			123:19
isolated	110:8 111:5,6		justified	156:10
122:5	115:4,12	jobs 43:8	31:25 36:1	164:17,20
	127:23			
	133:12	Johnston	i	
isolation	150:17		justify 156:22	kind 23:24
91:14,15	151:10	111:11,14	164:25 168:9	24:1 31:14
	191:25 202:4	222:13	193:9	36:20 49:20
issue 8:16	214:21,24			56:13 62:20
9:17,22 10:6,	· ·	jointly 28:1	K	63:23 79:25
1 ' '	222:9 232:18	,5, 20		87:13,18,20
8,9,13 12:1,5				125:24 139:1,
37:1,18 39:11	ITC 142:14	judge 218:22		25 140:3
43:17 54:12	145:2,6		Kate 14:19,21	194:8 220:12
56:14,25 68:1	- ,-	indaed 156:7	15:7,12	231:3
		judged 156:7		
			1	1

Index: kinds..letting

kinds 129:18 216:14 229:23	landowners 110:9	90:14 105:17 113:9 154:25 166:2 175:11	148:13 151:9 159:1 162:5 171:6 178:1	legislative 137:2
knew 178:23 179:3 194:2	language 40:17 203:7	180:19 190:25 193:7 215:1,24	205:8 225:11 least-cost 112:19	legislature 19:18 137:2, 16,23 139:6
knowing 25:2 177:22 207:21	large 30:14 31:3 32:6 34:13 65:13 93:11 95:17	latest 108:9 208:12	112:19 119:17 166:15 167:5 168:8 194:21	163:21 legitimately 124:15 152:7
knowledge 133:21 136:22	156:2 164:2 184:12 221:10	103:22 law 151:19	least-risk 166:15 168:8 194:21	length 170:13 209:23
known 133:4 149:11 172:9, 13 186:10	largely 11:23 134:21 139:10 170:2	213:19 227:8 lay 69:18	leave 12:16 40:2 96:3 99:3 107:16	lengths 198:1
195:12 Knudsen 53:3,4,7,19	larger 36:12 60:21 108:11 162:21 185:5	lead 36:16 127:6 158:18 189:8 194:5 223:22	130:5,16 173:1 180:18 217:16	less 33:10 37:17 95:2 166:16
54:4	largest 110:9	leading	leaves 188:4	182:20
kv 46:7 102:22	last 6:14 8:6, 17 25:18 28:16 64:23	145:14	leaving 163:1 199:13 206:9	let 31:8 39:4 70:6 81:3 96:5 102:4
L	96:7 102:6 104:14 111:15 127:4	learn 9:12 133:3	led 8:24 158:18	104:7 106:11 117:13 127:19
laborious 232:9	136:10 146:1 199:14 208:13	least 23:2 37:23 38:14 47:1 49:12 53:18 57:6	left 14:5 132:23 219:6	130:19 133:7 187:14 214:7 221:25 224:18
lack 151:18 184:24	last-minute 208:14	87:23 89:7,12 94:17 95:9 117:11	legality 222:21,23	228:21
Lake 15:8	later 10:25	133:23 140:13	legally 48:19	211:16 letting 134:14

Index: Levar..line

				· LevalIIIle
Levar 6:2,20	150:6,11	123:1 198:21	96:3 98:20	limitation
12:12,14,15,	153:22 154:3,	199:8 200:9,	106:9,25	12:1
22 13:5,8,12,	8,10 170:6,10	20,25 201:4	111:18 115:4	14.1
15,22 14:1,6,	171:17 172:3,	20,23 201.4	116:14	
12,17,20	15,20 173:2,		121:15	limitations
16:14,24	4,15 174:7	levels 142:14	125:25	120:13
22:5,10,13,17	180:13,16,25	145:6 165:3	130:13 136:9	
24:12 26:7,	181:3,6,9		138:1 156:23	limited 10:3
11,14 27:11,	187:11	leverage	174:14	17:11 36:17
16,20,22,24	189:20	138:6 162:17,	181:18	55:11 86:5,13
28:4,7 29:21,	190:15 191:2,	20 193:22	190:15	106:8 182:22
24 31:6,13	16,21 201:22	20 100.22	212:13,17	208:5
39:1,6,10,18,	202:1,3,20		219:16 227:3,	200.0
21 40:5 41:8	203:12,16	leveraging	19 229:20,21	
42:2,5,7,9,11	204:11,15,17	18:2	231:4,7	limiting 9:15
44:9 58:13	212:2,6,9		201.7,7	10:13
59:10 62:9	214:3,22	lieu 117:3		
75:4,9,14	228:25 229:3	125:22	liked 145:22	limits 185:25
80:8,13,17,	231:17 232:4,	173:16 191:4		111111111111111111111111111111111111111
20,25 81:3	11	202:23	likelihood	
85:9 87:5	11	202.20	32:8 122:9	line 39:19
89:18 92:22			143:11	45:7,10 46:1,
95:21,25	Levar's 133:1	life 108:22	149:11	7,13,22 47:2,
96:5,10,13		200:16 201:1,	143.11	18,19,23
97:10 98:2,9,	level 122:2	7,11 221:6		48:14 49:1,5,
14,19,23	145:3 148:16		likely 17:18	10 50:9,15
99:8,17,21	183:1 190:8	lifetimes	20:20 41:17,	51:13 53:1,
100:2,11,17,	222:25 223:4	138:9	20 106:21	13,15,17,20,
1 ' ' '	222.25 225.4	100.0	107:2 113:19	22 60:23 62:8
20 101:4,7,			114:18 119:9,	70:13 71:5
11,20,25	levelization	lifting 178:4	12,20 120:2	76:24 87:17,
102:3 114:3, 11,14 115:24	52:9 56:15		124:2 143:18	22 88:22,24
1 '	82:23 83:18	light 98:15	146:24 148:1,	102:23
116:16,18,22		163:24	13 157:6	107:19,20
117:8 118:2,6	levelize 57:2	100.27	161:12	108:4 109:19
121:17	ICVCIIZE 31.2		165:14	110:24 111:9,
125:13,18,20		like 14:3	181:15	12 116:23
126:16,19	levelized 9:5	15:21 16:11	182:19	142:4 144:9,
130:4 132:15,	54:13 56:18,	32:3,18 38:2		13,18,20
18,21 134:10,	23 67:16	49:21 51:18	limit 125:2,5	152:15
12 138:17	83:1,7,14,20,	52:6 54:1	186:7 208:3	159:22 160:1,
139:14,18,24	22 84:3,8,16,	60:4 67:7,18	100.1 200.3	3,18 161:8
140:21 141:1	19,21 85:4	74:11 95:3		178:8,12,15
	<u>'</u>			

Index: lines..low

				ex. IIIIesIow
	l		l	
180:2,7,10,12	215:7	112:3,12	110:25	220:23
182:21 184:6,			112:18	221:13
8,11,15,20	listed 92:9	loads 34:1	113:20	222:24
185:6,8,10,	iisteu 32.3	89:12 94:6,	118:23	
13,15,19		· ·	135:11 136:5	looko 40:24
208:20 210:9	listened	10,13 95:11,	142:24	looks 49:21
219:5,8,9,20,	127:20	12,15	148:24 149:5,	104:5 115:11,
25 220:6	194:25		7,8 169:9,23	12 216:10
222:4,5,7,18		located 18:12	177:2,3,13	
	1141 (1	43:3 89:14	192:12 222:4	losers 145:15
	litigated	138:23,24		
lines 15:25	43:16,20			
39:20 45:8			long-winded	losses 21:4
52:25 54:2	little 10:11	location 44:1	95:16	36:8 53:14,
62:21 87:25	33:1 39:11			15,21,22
219:13	45:4 47:17	locational	longer 55:16	78:10 144:22
	48:3 57:17	94:18 139:1	78:18,23,25	
Link 68:20	59:20 75:21	34.10 133.1	98:21 145:3	lot 25:6 33:23
	76:19 93:1			34:2,3 35:4
76:8,21 77:14		lock 79:22	183:20 229:2	· ·
105:19	99:19 119:15			47:14 62:25
107:15	135:3 169:24	la alsimar 20.40	longer-term	64:20 68:6
133:11,16,17,	189:22	locking 33:10	36:12 78:15	69:9 78:6
18 175:14,17,	193:21	78:10 169:23		86:5,6,7
21 177:12	197:18		 -	87:10,24 89:2
178:3 179:18,	213:13	logically 97:8	looked 76:3	90:19 94:2
23 185:1	230:14,15		108:13 115:7,	95:10,19
			21 123:9	112:7 127:3
Link's 12:20	live 30:9	long 54:17	129:24	132:3 150:17
13:4,17,23	192:14	55:9,12 79:23	178:16	151:13
50:23 58:23	194:11 195:4,	86:24 87:1	215:13,18,19	153:16,17
59:12 66:25	11	97:7 100:17	220:11	197:12 202:3
67:7 69:3	''	146:5 191:23	221:20	
70:13 77:5				lots 43:7
90:17 91:3	lives 57:1,22	long-range	looking 6:18	1013 40.7
	58:4 157:24	184:8	9:25 63:16	
183:4 184:22		107.0		loud 132:1
	I NG 150:0		70:17 74:13	
Lisa 141:4	LNG 158:9	long-term	87:19 88:10	low 20:2
		17:14,21	93:12 109:13	low 20:2
	load 53:18	18:5,10,19	115:2,8	33:22 35:18
list 10:15	89:15 94:23,	21:13 36:1	128:12	36:22 61:14
96:18,22	24 95:5	108:17,21	140:22 196:6,	65:18,24
97:3,9 135:7	-		14 198:14,22	68:23 85:22

02:2.42		James 404:0		makaa 04:4
92:2,13	lowering	lows 121:3	maintaining	makes 24:4
94:19,22	149:12		151:5	68:17 95:10
114:23 121:8		lunch 98:21		146:24 153:8
123:11	lowers	99:16 101:9	maintenance	214:10
148:12 153:8				
154:22	145:17	118:8	110:16	
161:14				making 8:11
	lowest 17:19	М	majeure	30:23 34:12
	106:23		186:24 208:2	56:2 72:9
low-carbon	114:20,24		100.2 1 200.2	113:13
21:6	118:21			115:21 128:1
	122:11 127:1	M-u-l-l-i-n-s	major 149:10	139:10
		28:17	160:24	159:22 161:8
low-case	128:14		225:25	176:11 186:3
161:13	181:17 182:7	made 40:4		191:4 214:20
		made 12:1		230:5
low-cost	lowest-cost	31:7 35:15	make 13:10,	200.0
115:8,15	105:18 167:6	49:25 57:17	17 14:3 15:21	
141:13 215:6	194:5 210:23	68:16 80:23	17:5 29:18	man 188:15
	194.5 210.25	81:13 106:2	38:8 41:24	
221:18 225:2		113:4 115:4	51:8 52:4	
226:13	lowest-	149:6 158:23	56:4 60:15,25	manage
	reasonable	166:6 181:19	61:8 83:5	109:22
low-gas	135:10 192:5	191:5,6	84:16 96:14	222:12
37:13,15	100.10 102.0	195:14	112:1 128:22	
07.10,10		201:19 215:4	132:12	managed
	lowest-	219:12 221:5	145:13	128:3
lower 18:17	reasonable-	224:19,20		120.3
19:2 21:16	cost 194:14	•	164:11	
35:20 37:10		225:5,21	170:25	manages
95:7 113:19,	l	226:12	171:22	133:12
21 120:2,23	lowest-risk	229:14	174:23	I
146:20	210:23	230:21,24	175:16,20	
154:23 155:7		231:18	189:24	managing
157:7,20	Lowney		195:16	102:5
159:10	22:14,15	magnitude	205:24,25	
	· ·	159:2,4	206:16	mandate
160:14 213:4	31:13,19	109.2,4	210:24	
224:12	38:19 40:17		216:17	222:18
230:14	41:1 44:10,	main-stem	222:22	
	11,15 58:13,	149:15	224:15	manner 36:15
lower-cost	16 59:12,22		228:22	
17:13 18:9	62:11 75:8,		232:23	
	15,16 80:4,12	maintain	232.23	manufacturer
182:20	97:5,13 98:5	25:21 149:19		s 145:15
	-	-	_	-

Index: many..mechanism

				anymechanisi
many 10:14 25:13 86:1,23 88:2 136:8	123:25 145:17 151:6	10:16,20 15:16,23 23:1,18 31:7	100:3,12 101:19,23 102:1,4	169:24 178:1 232:18
155:14 156:5 160:13 219:21	marking 94:21	32:2 40:17 53:4 55:17 62:24 78:12	114:8,13 115:1 116:7, 17,20 117:5,	meaningless 214:1
March 15:15	masks 156:9	81:5 87:9 90:9 113:9 116:23 124:5	13 126:20 127:19 130:19	means 64:24 79:19 119:17
Marginal 211:14	matched 103:8	125:2 132:17 135:21 136:11	132:20,23 133:7,10 154:7 174:11	198:25 199:10
market 33:24 35:6,13,20 60:17 65:2,8 68:22 72:12	material 16:5 31:8 61:5 62:5 207:24	141:17,18 150:13 161:1, 22 162:9 164:14 172:10,13	175:12 212:19 214:5, 7 217:17,22 218:10 227:11,16	meant 62:9 177:25 178:21 179:24
76:9 77:1,15, 23 78:1 79:6, 22 82:6 85:23	materialize 33:14	176:7 182:11 185:6 186:19 195:2 197:14	228:7,9,21 229:2,4 232:2	meanwhile 144:4
94:1,4,10 102:16 109:11 110:3, 14 112:22	materially 54:20	204:4 208:11 211:11 212:14 214:10	Mcdowell's 125:24	measure 122:16
113:22 124:2 128:10,12 146:8,18,24 150:14,21,23,	math 69:7 matrix 165:6,	maybe 13:3 22:25 32:19 37:19 41:1	mean 47:6 52:16 69:10 77:6 84:4 89:5 90:16 117:20 132:8	measured 90:4 107:4 108:19
25 152:19 153:19 162:4 166:23 167:15	matter 6:11 38:12 64:7 138:23 152:4	75:4 76:14 91:8 99:19 126:24 150:24	148:9 150:12 165:13 174:10,23 176:25	measures 207:17
168:10 204:7, 8,9 224:9 230:4	156:5 191:24 192:19 233:1	171:17 176:8 187:16 223:5 229:3	184:12 188:20 218:19 226:5	mechanical 110:14
marketing 68:24	matters 6:8 132:9 142:3 166:8 180:23	Mcdowell 13:3,6,9,13 22:14 44:10,	229:25 meaning 79:5	mechanics 72:2
markets 33:4 64:21 122:7	may 7:11	12 88:18 99:19,22	120:10 198:8 meaningful	mechanism 124:24 131:8

165:20 213:11	67:16 68:11, 15 81:23	209:20	101:6 118:4,5 121:20 122:1	25 70:5,15 72:6,7 73:21,
mechanisms 19:14 23:12	megawatts 90:4 112:5,6,	merger 170:23	125:13,17 126:7,18 136:2 180:17	25 74:1 88:19 90:18,20,23 107:11,12,18, 23 159:21
131:3,7 medium	17 119:18 129:3 143:15 183:19	mergers 163:11	Michel's 99:11	185:5 219:7 220:5 222:19 223:9,12,13
32:11 34:16 58:20 61:14	185:15,17,19	merit 226:14	mid 157:6	million-plus
63:21 90:17, 24 92:12,18	melding 151:20	merits 123:15	161:11	91:25 208:21
122:10 157:25 207:12 229:19	members 145:14	mess 175:3	might 6:16 25:17 31:13 32:3,4,17	millions 124:11 142:7 183:6
meet 110:11	memories 41:16	met 162:4 203:22	38:12 39:23 41:19,20 54:10 64:8 75:4 83:9	mind 10:10 65:4 139:7
113:17 116:6 117:19 118:14 160:4	memorized 83:15 86:20	method 186:13,16 189:1	87:2 92:25 100:22 114:22	205:3
162:4 166:10, 12,24 169:2 173:8 181:14	memory 181:20	methodology 10:20 156:20	116:11 129:9 130:18 139:20	mine 81:7
190:19 208:18 212:21	mention 89:2	171:9 200:10	145:22 152:15 161:16	48:18 123:12 minor 91:7
meeting	154:4 mentioned	methods 156:13	164:11 174:4, 10 175:5 195:14 220:1	155:16 207:10
147:17 151:11 168:20	16:13 30:21 57:13 66:16	Mexico's 212:22	231:4	minutes 75:10,11
208:16 meetings	81:25 82:20 152:18 184:16 199:5	Michel 22:6,8 42:11,12,15	million 16:1,2 20:10 34:20 37:23,25	99:24 100:6,9 101:21 114:7 154:5 181:4
152:25	mere 47:5	44:7 85:11, 13,15,17	50:11 58:21 59:6,7,15,16, 22,23 60:19	195:4 228:24
megawatt	merely	87:3,5 98:25 99:13 100:19	67:5 69:3,6,	misapplicatio n 76:25

Index: mismatching..most

				laccillingllosc
mismatching 85:4	134:23 140:19	moderate 230:15	152:23	164:5 165:12, 14 172:3 175:8 177:20
mispronounci ng 53:4	207:17 209:1, 25	modern 143:5	month 76:17 78:5 139:23	175.8 177.20 180:9 182:25 183:6,13 184:4 185:20
misrepresent s 183:15	model 11:6 32:11,12 34:8,18 37:4, 5,20 105:8,9,	modest 211:16	monthly 76:13,14 77:11	191:10 194:22 209:18
missed 81:3,	10 106:2 156:1 193:17, 18 196:23	modification 105:3 193:1,6	months 43:22 77:2,22 79:3	211:18 222:12 223:6 224:16 228:24 229:3
missing 207:14 225:6	197:3,15 198:23 199:22 216:2, 3,4,5,22	modified 98:3 156:19	Moore 181:8, 9 187:11,13, 23 190:11,21	230:15 Moreover
misstate 187:18	221:14 modeled	modify 231:25	191:7	183:11 morning 6:2
misstep 151:8	198:4,6 205:22	moment 39:6, 18 66:19,20 116:24	moot 9:23 10:8 12:2	7:7,8 15:3,4 16:24 24:18, 19 26:10,15,
misunderstoo d 41:2	modeling 7:14 9:6 52:16,18 55:18 56:24	136:10 181:18 212:14 222:1, 2	more 9:7,8 18:3 19:25 20:22 35:17 61:1 65:24 68:8,16 82:1	16 27:17 28:4,14 30:20 44:16,17 75:23 139:20 147:7 148:16
mitigate 39:24 88:3 124:4 127:25 136:19	60:12 90:21 92:25 106:1 107:1,17 140:3,23 147:21,22,23	money 32:13 119:22 132:3 206:14	83:3,10 92:23 93:1 112:21 115:24 116:22	147:7 148:16 199:21 200:1 most 6:16 10:17 11:21
155:22 187:9 mitigated 135:25 151:9	148:5 156:14 165:9 166:20 167:16 207:8 217:25	monitor 104:13 147:15	120:11,17,21 121:4 125:6 126:19 135:17 142:18 143:6	17:18 27:1 30:25 31:22 38:15 63:4 64:18 65:4
mitigating 18:10 20:15	models 8:20 50:16 52:5 156:3 198:5	monitored 153:1	145:25 146:11,23,24 148:1 152:20 153:20	100:13 106:2, 21 107:2 112:3,9 113:19 114:18
mitigation		monitoring	159:23 161:2	119:12 121:6

Index: mostly..nature

123:14 128:7,	38:19 50:5	171:9,19,20,	196:1 206:25	N
25 147:10	60:4 66:20	24 186:12		
153:2 159:12,	80:6 94:20	214:12,16,24	Mullins's	
18 163:12	97:13 98:11		29:22 38:21	name 15:5,7
165:7 166:3	104:7 106:11	much 19:1,25	196:19	28:15,16 53:4
176:25	109:12	26:6 33:10	205:16 207:8	61:10 62:19
181:15 186:2	117:15 118:1	37:17 55:13	203.10 207.0	207:6
191:10,14	129:19	58:2 68:8		207.0
193:23	132:16	82:1 89:14	multi-year	
203:24	134:11		46:15	namely
214:13 215:2	145:11	96:2 119:22		230:13
218:5 224:9	153:18,23	121:4 122:3		
	174:1 176:9	139:16	multiple	
	180:14	148:16 150:2	192:13	nameplate
mostly 210:8	203:10 213:5	152:4 153:18		90:4
	226:8	160:4,15	multiplied	
motion 12:25	220.0	166:6 185:11	66:6	names 91:4
16:15,17		190:11 207:4	00.0	
29:25 30:2	moved 12:18	210:24		
38:20 39:3	122:3 134:1	211:18	multiplying	naming
40:6 41:23		214:16	73:22 74:3	179:21
80:9,15,17	moving 24:3	224:16 229:2		
1 ' '	97:20 105:16,		multistate	narrow
97:2,10 98:3,	· ·	Mulling 20.2	162:11	192:16 210:7
4	17 108:15	Mullins 28:3,	163:17,23	231:17
	122:4 132:7	4,6,8,14,16	164:4 170:12	201.17
Mountain 6:5	145:4,9 213:1	30:3,5 31:18,	186:13,15	
48:16 101:13,	215:3	20 39:1,4,8,	•	natural
18 141:21		14,20,22 40:8	188:17,18	100:13
142:6,15,21	MPV 107:24	41:3,24 42:3,		120:22 121:1,
144:7 146:16		16 44:8,16	must 103:1	8 124:1
147:22	l <u>.</u>	47:16 52:1	104:3 144:13,	142:23
163:13 170:4	Mr.chairman	54:21 58:20	14 145:4	143:12,17
	42:12	66:20 75:18	156:7 163:18	156:24 157:1,
_		79:1 80:4	169:8 183:21,	4 158:2 190:3
mounting	Mr.chairman.	81:10 85:18	23 184:1	230:2
19:7	22:9	87:4,7,14,18	185:12 186:7	
] <u>`</u>	88:19,25	204:21	
mouth 81:19		89:20,24	206:15,24	naturally
	MSP 34:5	90:2,6,9 91:2,	208:15	148:23
	94:2 148:20	11 92:4,7	210:15	
move 16:11	161:19,22	93:8 95:24	211:17,18,19	nature 10:20
29:22 34:7	163:8 164:7,9	96:2,4,8,9	215:8	121:10
			210.0	•
	I			

Index: near..none

88:24 96:14, 20 99:2,10 107:20	negative 93:5 94:14	network 102:23	no-action 158:25 159:17
111:20 112:3, 8,18 114:15, 17,21 115:22	negotiate 110:13	never 12:24 167:2 213:8 220:8,13	nobody 112:8 177:7 178:22
116:7 119:7 133:22 143:14 146:7 152:23,24	negotiated 225:14	229:12,16 230:18	nominal 8:21 11:10,20
165:25 166:1, 5,7,13,24 183:15,16	negotiating 164:12	new 68:12 71:22 72:1 82:2 86:11	37:5,7,20 50:20,25 51:3 54:17 56:22
185:23 205:9 211:7 218:20	negotiation 186:19 208:4	112:16 144:23 149:2	57:6,8,11 67:16 68:10 70:17,21 83:1,2,7,13,
220:20 221:22 222:5, 8,17 226:25	negotiations 142:20 164:10 171:25 172:1	165:20 182:21 185:8, 17,18 189:6 207:15	21,23 84:17 85:2,4 90:15, 22 91:20 94:5 123:1 147:9
needed 87:17 88:22 89:1 109:17 131:1	188:21,25		183:2 198:8 218:25
134:3,5 144:13 155:5	110:21 154:16	9:2,24 14:13 24:3 43:22	nominally 84:9
14,21 180:2 184:20 185:10	net 11:4,7	77:15 91:24 118:4 121:8, 14,23 123:12	non-waive- able 129:14
needing 131:21	56:10 57:23 58:5,20 59:6, 25 69:4 70:5 91:22 102:14	152:22 156:23	non-wired 88:11
needs 111:20 113:24 168:16	107:3,9,11, 15,18,25 108:10,24 115:11 18	173:4 181:7 191:19 205:9 225:1	nonconfidenti al 13:7 31:17
170:16 170:18 184:7, 16 185:14 187:25 211:2	155:9,17 165:7,12,14 219:8 221:21	nine 107:5 162:6 195:3 196:11,12	none 13:22 23:12,23 32:10 160:6 211:20
	107:20 111:20 112:3, 8,18 114:15, 17,21 115:22 116:7 119:7 133:22 143:14 146:7 152:23,24 165:25 166:1, 5,7,13,24 183:15,16 184:3,13 185:23 205:9 211:7 218:20 219:10,15 220:20 221:22 222:5, 8,17 226:25 needed 87:17 88:22 89:1 109:17 131:1 134:3,5 144:13 155:5 160:9 168:12, 14,21 180:2 184:20 185:10 needing 131:21 needs 111:20 113:24 168:16 170:18 184:7, 16 185:14	107:20 111:20 112:3, 8,18 114:15, 17,21 115:22 116:7 119:7 133:22 143:14 146:7 152:23,24 165:25 166:1, 5,7,13,24 183:15,16 184:3,13 185:23 205:9 211:7 218:20 219:10,15 220:20 221:22 222:5, 8,17 226:25 negotiated 225:14 negotiating 164:12 negotiating 164:12 negotiating 164:12 negotiation 186:19 208:4 negotiating 164:12 negotiation 186:19 208:4 negotiation 186:19 208:4 negotiation 186:19 208:4 171:25 172:1 188:21,25 neither 110:13	107:20 111:20 112:3, 8,18 114:15, 17,21 115:22 116:7 119:7 133:22 143:14 146:7 152:23,24 165:25 166:1, 5,7,13,24 183:15,16 184:3,13 185:23 205:9 211:7 218:20 219:10,15 220:20 221:22 222:5, 8,17 226:25 negotiation 186:19 208:4 142:20 165:20 164:10 171:25 172:1 188:21,25 negotiation 186:19 208:4 142:20 165:20 182:21 185:8, 17,18 189:6 207:15 21:22 184:20 185:10 neither 110:21 14:31 155:5 160:9 168:12, 14,21 180:2 184:20 185:10 net 11:4,7 56:10 57:23 58:5,20 59:6, 25 69:4 70:5 91:22 102:14 107:3,9,11, 15,18,25 108:10,24 113:24 167:2 213:8 220:8,13 229:12,16 230:18 new 68:12 71:22 72:1 82:2 86:11 89:9 111:9,11 112:16 112:16 112:16 12:21 112:1 112:16 112:16 12:20 189:9 111:9,11 112:16 207:15 212:22 189:9 207:15 212:22 189:9 207:15 212:22 189:9 21:22 102:14 107:3,9,11, 15,18,25 108:10,24 167:2 213:8 220:8,13 229:12,16 230:18 new 68:12 71:22 72:1 82:2 86:11 89:9 111:9,11 112:16 112:16 112:16 12:24 144:23 149:2 159:21 160:5 165:20 182:21 185:8, 17,18 189:6 207:15 212:22 184:13 229:12,16 230:18 new 68:12 71:22 72:1 82:2 86:11 89:9 111:9,11 112:16 112:16 12:16 12:24 144:23 149:2 159:21 160:5 165:20 182:21 185:8, 17,18 189:6 207:15 212:22 184:13 220:8,13 229:12,16 230:18 new 68:12 71:22 72:1 82:2 86:11 89:9 111:9,11 112:16 1

Index: nongovernmental..office

nongovernme ntal 141:8	noting 232:21	numbering 8:3	98:23 101:4	188:19 198:9
normal 98:21 131:23	notion 121:7	numbers 13:20 15:25	objections 16:16	occurred 52:18 76:16 117:10 133:6
225:10 227:7	notwithstandi ng 223:10	39:19 50:14 51:22 59:5,24	objectives 162:4	228:19 231:12
normally 92:17	now-stalled 122:20	62:21 63:17, 19 66:14,16 82:18 83:15	objects 16:14 29:24	occurrence 211:15 223:7
northwest 87:24	nowhere 40:21	112:8,9,10,11 183:8,9 196:2,10,15	obligation	occurring
not-	NPV 220:5	198:8	196:24	155:21 164:10
insignificant 232:13	222:19	109:13	observe 38:3 47:5 57:7	off 50:18 51:23 68:12
notably 104:24 186:2	NPVRR 34:20	0	observed 60:2 77:3	77:23 78:9 79:7 83:16 90:12 95:1
note 8:6 43:2	NTTG 88:7	O&m 108:10	79:5	153:18 165:22
49:17 97:5 103:12 146:9	nuclear 23:5	124:25	obtaining 110:12	169:19 221:8
147:2 163:18 170:23 180:17 185:4	number 9:15 10:13 19:12 23:10,11	Oasis 133:21	obvious	offer 18:13,19 177:20 183:19
noted 25:25	34:17 58:12 63:18,24 70:6	oath 6:23	10:18	210:22 224:9
160:22	72:20 74:9 82:13 88:16 90:8,12 91:1,	OATT 73:6,16 155:12 174:20 175:8	obviously 37:1 40:1 41:15 42:24	offered 98:17 105:7 158:6
notes 49:4 148:15 221:25 222:1	25 92:6 136:24 156:2	object 82:21	61:6 90:11 225:18	207:20 211:6
nothing 27:21	159:2,4 168:5 199:19	objection	231:11	offering 210:11
96:10 159:3 214:2 228:22	numbered 97:21	6:20 30:1 41:11 75:6 80:15 96:4	occur 46:23 78:5 84:9 182:12,14	offers 167:5,6
				office 7:2

				oppor currey
31:3 33:7,9	164:20	154:21	53:9 54:6	operating
72:11,12		155:16	71:25 73:1,4	23:5 106:15
112:22		162:23 164:5	74:14 80:10	146:3
114:22	omit 156:20	166:2 168:13	92:11 97:6	1 1010
119:23 123:2		169:10 172:8,	100:23 117:3	
136:1 143:10,	omits 156:10	21 173:4,5	126:16 135:3	operation
1	Office 130.10	*		109:1 124:18
19 166:17		174:12 175:5,	146:4 150:14,	
172:22 187:7,	once 19:25	14 184:4	24 155:6	omerational
22 202:8	49:14 56:13	187:15	159:25	operational
217:14	82:23 131:13	190:17	166:12,16	111:3
220:18,21	178:24 191:5	194:22	173:16	
221:15	205:3 213:12,	195:15 202:7,	174:11	operative
	13 221:6,7	9 203:4,14	176:17	103:10
Office's 21:18		208:15	179:11 185:9	
123:4 125:21		211:15	191:3 196:12	
181:12	one 10:19	215:11	198:25 199:2,	operators
101.12	12:4 24:23	217:11 218:2,	13 200:12	23:4
	25:7,13 31:11	22 220:21,22	202:23	
official 61:15	33:22 39:1	221:15 222:2	207:19 211:3	opinion 38:12
77:2 79:4	42:12 46:20	225:5 226:25	220:14,17	64:7 109:7
205:17	57:16 60:15,	227:22	,	64.7 109.7
	21 61:7 64:2,	231:17,18		
	3 65:1 66:19		open 26:1	opinions
offset 140:9	72:17,19	_	182:15	38:14 207:2
	78:12 79:8,19	One-third		
offsets	80:8 87:8	160:5	opened 180:1	
185:14	92:23 93:13		opened 100.1	opponents
100.14	94:8 95:8	ones 23:17		120:25
	97:5 99:3	60:21 96:20	opening	
often 169:7	106:9 115:23	231:12	57:14 100:5,	opportune
		231.12	22 178:7	34:12
Oil 103:25	116:22		179:15,20	J 4 .12
OII 103:25	122:25	ongoing	181:20	
	123:11 124:7	186:17		opportunities
old 221:7	125:20 127:1		, ,,,,	21:23 89:14
	128:19,23		operate 139:5	105:21 124:8
011 10 00	138:20	online 33:24		162:4 166:7
Oliver 12:22	139:18	72:2 131:14	operated	195:10
194:7 195:6	141:25	198:14	227:15	
199:21	149:10		227.10	
203:20 204:4	150:12,24	only 10:4		opportunity
	151:22	16:8 36:4,16	operates	9:20 17:12,13
omission	153:10	37:9,22 45:13	103:19	18:8,16 30:21
		31.9,22 45.13		

Index: oppose..overall

				poseoverarr
67:20 102:9 106:8 118:9, 25 119:19 125:11 134:16 138:6 149:23 150:3	option 42:17 98:2 114:24 116:25 117:2, 6 163:2,5 173:17,19 191:4,5,8	193:14 197:11 201:9 207:3 210:4, 14 214:9 220:25 221:16	original 207:23 others 155:24 166:21 167:2 186:2 193:4	223:7 outstanding 43:14
152:16 154:11 168:13 173:12	201:12,14,15, 16 202:25	226:18,20,22 227:5,17 228:4 230:25	213:18 215:12	outweigh 123:20 136:15
183:25 185:24 186:8 191:22 204:19 206:2 208:5,25	options 8:8, 23,24 9:15 11:6,15 12:6 88:12 97:1 100:24 116:2,	orders 50:2 115:10 209:21	otherwise 96:6 103:15 210:14 outcome	over 10:19 12:10 23:9 32:13 33:3 34:20 35:1 36:7 54:14
209:24 211:25	19 129:19 132:12 166:9 167:1 200:12, 25 201:6	Oregon 8:24 28:22 54:25 86:20 130:11, 19 131:2,18	148:13 227:6 outcomes	56:7 57:10,13 76:17 78:23, 24 79:23
oppose 31:2, 4,23 49:4	209:18 orally 97:7	132:11 160:22 161:19,22,25	38:4,11 50:11 99:18 165:7, 13	86:17 102:7 104:14 105:11 108:22 110:4
opposed 20:8 43:19	order 23:3 38:7 43:21,23	162:7,9,15, 16,17,19,25 167:4 168:19 185:11	outline 17:3	112:6,17 115:2 119:6 121:8,13,23
opposes 192:1	45:24 46:11, 18,20 47:21, 22 48:1,5,7 49:24 50:4	188:14 200:18,23 207:2,3	outlined 33:21 34:17 136:1	127:3 138:8 142:23 143:14,15 146:1,2 150:1
opposing 31:24 191:15	57:17 79:19, 22 99:10 100:24	210:2,14,20, 21 226:18,22, 23 227:3,8, 13,14 228:10	outlines 136:21	156:16,18 160:19 163:25
opposite 197:2	104:12 105:2 129:13,21 130:2,21 137:13	Oregon's 163:6,24	output 43:8	185:19 198:21 200:25 201:6 205:22 218:2
optimistic 116:17 121:7	153:24,25 154:2 161:4, 22 163:18	169:3	outside 40:24 131:6 139:5 142:3 160:20	231:15,16 overall 94:15
optimizer 105:9	176:19 182:13 183:12 191:8	141:8	161:2 180:4 182:13 188:19 220:8	103:19 122:23 144:1

Index: overly..particular

161:9 218:11	162:7 171:20	15 34:7 35:1,	125:10 128:1	61:22 77:23
	178:6 186:1	11,12 36:3,21	135:16 139:8	97:22 102:20,
	196:2,10	40:13 42:20	141:24 142:3	22 112:13
overly 121:7,	198:18	52:8 53:14	148:4 155:12	116:24
12,21	209:22 211:3	54:13 56:15	161:23	122:22
	214:17	63:25 73:8	162:11	124:22
overrun	214.17	76:18 78:19,	184:25	127:11
208:19		20 79:12 94:8		
200.19	owned		194:18	137:10 138:9
	147:12 152:6	104:18	195:19 196:2,	152:8 163:9
overruns	156:15 210:8	119:13 123:6	10,22	164:24
124:17		133:18		166:14 168:8
186:22		139:10	package	174:22 175:2
187:20 188:1,	owner 11:16	143:10,22	210:8	176:24
14 202:11		145:21 146:1	210.0	177:13
207:5	ownership	147:7,16		206:23
207.5	•	148:17	pages 194:15	207:20 209:7
	145:20 146:5,	151:16 152:8,	196:17,18	213:4 215:22
overstate	23 152:18	11,23 163:13	200:2	221:4 228:13,
35:6 157:6	201:6 218:14	169:4 181:19		16 231:11
161:12		182:16		.020
	owning 146:3	186:23 195:9,	papers 91:2,	
	5	12,20 197:6,	12,13 183:5	partial 210:20
overstated		13 198:4		
79:12,13	ozone 21:3	199:7 200:18	paradigm	participants
185:23			186:18	participants 76:9 93:15
		201:18 205:3	100.10	
overstatemen	P			150:14,23
		Pacificorp's	paragraph	151:1
t 35:13		18:1 19:23	8:18 9:12	
	P- 12:7	30:23 31:1,4	10:1,17 40:4	participated
overstates		32:12 33:3	46:20 48:4,22	232:7
164:17		34:16,23	67:12,13	
'``''	p.m. 233:5	35:3,9,18	57.1.2,10	
		36:11 37:4,20		participation
overstating	P61155	· ·	parameters	128:21
35:12,13	212:18	43:1,19 50:19	217:9	139:16
	212.10	54:20 57:12,		
overwholmine		15 73:1 74:12	norden	neuticule:
overwhelming	Pacific 104:1	77:21,25 79:7	pardon	particular
ly 78:3		82:24 83:3	132:20	40:4,18 43:17
	Pacificara	109:15 119:8,	180:15	52:3,13 61:10
own 32:3 37:4	Pacificorp	16 120:18,22		63:18 65:16,
145:25 149:1	8:25 11:16,18	122:3,10,14	part 13:4	23 99:10
	32:2,11 33:6,	123:10,17	1-2	104:5 116:11
		<u> </u>		

			<u> </u>	
131:5 170:14	party 6:20	196:16	8	15 109:13
225:12	14:6 16:14			143:16 145:3
	29:24 85:10	pejorative	perfect	198:21 200:9,
particularly	96:5 106:5	232:15	153:15	15,16
62:4 64:21	110:23 208:5	202.10	100.10	
107:14	220:10 226:6,			
· -	14 231:24	pending	perform	permit 144:20
109:23 122:6		231:21	110:17	165:21
154:25				211:22
161:10	Paso 212:19		_	
171:13 176:4		people 115:9,	performance	permitting
191:13 221:3	pass-along	13 129:18	55:18 113:13	142:3
	174:10	176:5,9 217:2		142.5
nartice 0:0	1 / 4.10	223:16 231:9	performed	
parties 8:9 18:11 31:2,23			34:24 54:13,	perpetually
· ·	passed 19:18	nomeont 10.7	,	123:11
46:21 47:9,	=	percent 18:7	14 57:8	
14,15 73:3		69:19,23 70:2	133:20,25	
99:23 100:7	past 35:3	71:2,3,6,11,		persist 111:9
111:19,23,24	37:1 119:6	19,24 72:5,	performing	
113:4 118:20	146:2	15,16,24	78:21 81:21	personally
124:15		73:5,12,14,	7 0.2 1 0 1.2 1	27:6 88:25
135:24	pattern 78:9	17,21,23		224:2,5
141:19	pattern 70.5	74:4,7,8,16,	perhaps 6:17	224.2,0
142:13 143:8		20,23 86:22	11:22 59:3	
150:5 153:23	pause 121:15	108:7 109:2	81:19 98:22	perspective
154:6 163:15	132:7 181:18	110:9,15	101:2 123:14	30:25 31:22
168:6 171:24		125:1,4	128:2 133:10	33:9,17 34:9
175:5,7		142:14 145:1,	169:1 176:11	36:21 37:16,
191:15 193:2	pay 95:5	6 158:3	184:5 208:17	24 54:12 [°]
197:11 202:4,	144:24 169:6,	189:14	217:5	79:16 82:4
21 203:15	19 174:18	198:10 199:1,		85:5 86:14
206:1 208:15,	176:18	2,6,14 205:18		87:20 88:14
24 212:10		208:18	period 32:14,	89:8 95:9
27212.10	paying 220:4	200.10	16 33:23	138:22
	Paying 220.4		34:4,21 35:1	171:11
parties' 113:1		percentage	51:14 52:2	204:12
115:2	Peaco 120:1	35:11 72:1,9	54:14 55:8,	
	143:17 157:1,	73:7 74:23	12,17 56:4,14	219:25
manta 45:5	5,13 169:1	76:3	57:9,10,13,	
parts 45:5	195:25 207:1		19,25 64:19,	pertaining
102:25 135:6			21 78:19,24,	160:21
136:9 151:16	Dana - I-	percentages	25 80:1 82:20	
165:16	Peaco's	65:21 66:1,6,	84:10,11,13,	
			= ::: 0, : :, : 0,	pertinent

Index: Peterson..position

174:6	176:22 186:13,16,19	143:16,22 144:1 145:10	point 8:4,10, 13 10:25	policy 17:3 56:11 162:9
Peterson 127:21 129:1	201:10 222:15,17 231:6,7	149:15 151:24 156:3 159:8 219:11	29:21 31:17 36:20 37:11 39:2 43:24 51:8,9 58:2	169:5 190:2 political 24:2,
Peterson's 104:23 128:8	placed 193:15 197:16	plans 23:15, 24 24:22,23 25:3,4,5,10,	60:3 64:5 72:8 79:25 81:25 82:8	9 poor 158:10
PGE 67:9 68:1 82:1	places 199:19	14 plant 111:11	84:1,24 94:6 134:1 139:1 154:20 162:3 174:15	Populus 45:8 47:18,23
PGE'S 55:10, 11 56:10 67:14	placing 196:22	158:25 159:11 220:12	177:10 178:22,25 179:2,21	49:12 portfolio
PHILIP 6:24 7:1 12:11,13 14:11	plagued 184:25	222:14 plants 23:5 77:9 109:14	187:19 195:5 196:15 214:24 215:1 216:15,17	11:11 21:6 55:18 67:14 104:20 105:9 106:1 166:15
physical 68:3,16	plain 203:7 plan 23:1	146:4 221:7, 10	219:22 225:8, 14 229:16 230:21,23 231:18	168:8 194:22 205:4 210:10 212:22 218:15
picked 65:6	25:2,19,25 89:4 110:25 122:20 177:2,	play 9:14 pleased	pointed 35:24 162:13	portion 38:21 74:17 200:13
picking 65:4 93:22	4,13 184:9, 10,13 189:7, 11 219:10 222:4,7	30:16	pointing 220:24	portions 13:23 208:19
piece 73:2 74:25 177:2,3	planned	12:11	221:16	Portland
pitfalls 126:11	87:25 88:2 144:10	pledged 208:9	points 12:7 228:23	28:22 55:1 portrays
pivoted 152:12	planning 23:2 55:8,12 56:3, 8 78:7 95:10	plug 163:9 pockets	policies 19:14 24:6 136:25 169:2,	120:21 posed 6:12
place 153:2	99:3 123:23 142:15	206:15	3	position 10:8

Index: positions..prejudiced

				isprejuarcea
44.000.00	40.404.00			
11:9 36:23	12 194:20	77:9 86:6	210:13	predicts
38:24 39:25	209:25	101:13,18	211:17	20:22
40:24 48:2,8,	219:13,14	122:20	226:20,21	
23 125:12		123:25 142:6,	227:3	prefer 97:4
129:20	possibly	21 143:11,13		99:18
131:21 133:1,	41:17 220:17	144:7 146:16	preapprove	33.10
3,22 134:2	71.17 220.17	156:16	206:12	
135:1,14,19		163:13	200.12	preferable
139:25	post-filing			99:5
140:22,24	167:14	Devicerle	preapproving	
158:20		Power's	210:22	nuofauanaa
164:12 166:9		141:21		preference
172:18,19,20	posted 13:1	142:15	. 05.40	9:11 97:9
174:16		147:22 170:4	precise 95:18	99:17
175:19,22	potential			
176:2,3,14,16	18:25 19:2,25	PPA 8:7,23	precisely	preferences
177:15,21	41:18 50:11	9:9,15,18,21	200:20	32:5
178:22	95:13,19	11:3,5,6,21	200.20	02.0
186:19	113:22	12:5,6 128:24		
188:13	122:18	147:5,10	preclude	preferred
189:15	123:25	152:9 197:23	113:8	151:21
	130:15			207:12
195:12 202:5,	140:23	198:13,15,24,	predated	
6,22 212:1		25 201:14	52:17	prefiled 16:18
215:25 219:6	141:17 149:4,	218:5	52.17	•
223:10,15,19	9 185:3			29:4 30:3
225:24	186:18	PPAS 10:14,	predict 24:5	98:6 192:13
230:23 231:6	192:12	21,24 12:7	161:7	196:16
	202:17	128:20		
positions		145:19 147:4	and that the	prejudge
10:5 129:22	potentially	182:22	predictable	214:19
136:3 146:15	37:25 88:23	197:22	151:7 189:17	
152:6,14	93:17 129:23	201:10		
175:23	176:17	201.10	predicted	prejudging
113.23	194:22		32:20 158:10	227:6
	223:11	practical	229:6,14	
positive 93:5	۷۷.۱۱	213:1	220.0, 1 4	prejudice
94:14 135:15				208:14
137:14	poured	pro 167:44	predicting	214:19
	213:14	pre- 167:14	24:1	۲۱ ۷ .۱۵
noscible.				
possible	power 6:5	pre-approval	predictions	prejudiced
19:17 38:11	•	132:4,6,9	158:17	99:11,13
162:23 171:5,	18:20 48:16		130.17	

			i Preminar,	···problematic
n no lineiro e m	munnents d	20.5 0.0		
preliminary	presented	20:5,8,9	prices 18:6,	prior 188:4
6:8,10	50:21 51:4	33:11 34:16,	22,24,25 20:1	192:19
	52:20 107:8	23,25 35:3,	24:5 33:22,25	
premature	118:20	18,21 36:4,5,	35:7,13,20	prioritize
214:20	156:25	11 37:13,15	60:17 61:18	137:11
214.20	184:18	56:11 60:5	62:15 64:8,	107.11
	185:25 187:7	61:13,15	22,23 65:3,8	
premise	189:11 192:4	64:24,25	68:6,21,23	private 34:3
218:19		65:13 67:16,	76:14,15,25	
		22,24 68:14,	77:7 78:2,4	nra 207:20 22
	presents	18 69:3 75:25	79:5,8,10,13,	pro 207:20,22
premiums	165:6 199:23	76:4,5,9,20	18 80:2 81:13	
79:18		77:3,16,22,25	85:21 94:18	Proactive
	presiding	79:4,22,23	121:1,3,6,8	17:7
preparations	102:7 231:15	81:18 85:19	123:12 124:1	
186:4	10211 201110	94:5,7,9,12,	143:12,18	
		22,25 95:5,6,	146:8 148:9	proactively
	pressure	7,13 120:22	155:10,11	111:6 135:19
prepare 29:3,	86:19	122:9 141:13	<i>'</i>	
6			157:3,15,16,	probable
	proceimod	143:13 148:5	18,20,22	19:17
propored	pressured	153:5,8	158:2,11	19.17
prepared	211:22	156:25 157:5,	159:9 205:14	
16:21 17:1		9,14 158:8	229:7 230:19	probably
30:5 228:15	presumably	190:3 197:21,		32:20 58:7,8
	111:23 221:9	25 198:2,17,	pricing 11:1	94:2 96:3,14
preparing		20 199:18	19:13 25:20	100:15
6:14	====	205:17 229:5,	37:6 77:16	101:24
	pretty 58:8	15,20,22	81:13 140:2	117:18
	62:23 94:22	230:3	158:2	138:21
present 35:2	127:16		100.2	150:23
57:24 59:8,9	223:21	price-policy		151:11 203:2
70:5 83:22,23	230:11		primarily	101.11 200.2
91:18,25 99:4	232:15	92:2 107:5,6	32:25 83:18	
107:18		123:7 165:6,		problem
118:10	provious	11 186:9	m wi ma a wa	25:16 98:10
125:12	previous	196:6,11	primary	127:25 172:9
154:12	185:2	207:13	181:14 215:7,	185:22
160:15 165:9			11 216:8	
182:13 190:1	previously	priced 85:22		nrahlamatia
191:22 192:5,	7:3 33:21	94:5 169:11	principles	problematic
7 212:1 219:8	130:9	197:6,14	112:19	33:18 55:19
227:7		107.0,11	144:16	109:12
				213:13 225:7
	price 18:24			I

Index: problems..projects

229:8	process 10:3, 18 88:4 93:12 103:3 110:7	228:10,12,13, 17	professes 208:17	187:7 189:5,9 190:5 199:15 201:1,7,11
problems 68:24	117:21 130:11,20 131:11,13,18,	produce 69:9 95:1 151:25 164:21	profiles 120:10	206:3,12 207:5 208:21 210:24 213:2,
procedurally 102:6	24 132:4 133:6 145:11, 16 150:15 153:14	165:14 195:21	profound 187:3	4 projected
procedures 113:11 188:3	162:11 164:4, 7 173:21,22 174:2 175:9	produced 37:7 90:22 91:22 156:14	profoundly 185:4	107:15 112:18 155:17 157:22
proceed 16:23 30:18 36:4 131:10 169:8 173:21	176:10 178:9, 16 179:16,20, 24 180:8	160:7 200:24 222:13	prohibit 163:19	223:17,18
191:12 213:21 226:7	192:21,25 193:15 194:2, 3,5,12,13 195:7 204:8	producers 86:7	project 11:9, 16 31:5,25	projection 158:7
proceeding 6:21 88:15 102:13	206:9,13 208:15 209:12	produces 183:6	33:11 44:1,3, 6 45:1,6 57:22 58:4 74:3 84:6	projections 121:11 155:2, 11,12,14,17 157:14,19
134:21 135:25 140:18	211:21 213:22,23 214:1,12,17 216:4 217:9,	product 162:14	88:1 109:6,8, 9,22 110:11 117:23	158:5,13 159:9,10 160:18,23
141:18 162:24 173:14 185:11 187:4	19 218:20,21 220:10,16,24 225:15	production 17:12,19 84:22 102:15	120:14,20,25 121:21 122:15 128:19 146:9,	161:17 167:25 169:9
191:1,12 193:7,8 194:7,25	228:10,13,14, 19	106:22 114:19 119:12	128.19 146.9, 10 156:13 157:17 159:20 160:8	projects 10:4 11:21 17:11 18:4,12,14,19
195:2 197:12 205:10 206:14 211:9 225:22	processes 216:20 230:10	120:10 124:12 135:18 181:16 182:6,	161:9,11 163:17 164:1 168:21 169:17	19:3 20:17 21:5,12,18 22:1 30:24 32:9,12,23,24
proceedings 188:12	procurement 155:3 164:3 168:17 206:6,	23 186:22 198:11	170:16 171:8 174:23 176:15	34:9,19 37:8, 10,13,21 42:19,22 44:20,25
191:14	18 209:9,11	productive 153:19	181:22 183:16,24	45:15 53:17

Index: projects'..provided

110:1,2,3,10, 186:14,16 189:12 193:15,16 200:15 207:4 209:18,19 211:10,23 216:7 218:6, 24 123:5,10, 13,15,20,24 125:6,9 128:10,13 130:12 136:6,15 136:6,15 136:6,15 136:6,15 136:5,11,14 140:12,15,20 141:11 142:8 144:6 24					- PIOVIACO
20,21 68:19					1
69:20 73:22 88:15,17 89:10 90:16 164:23,25 165:10,14 168:17,12 166:4,12,14 168:17,12 23,24 169:2, 11 170:2 111 170:2 132:9,25 55:1 155:9 155:9 155:9 178:20 102:9, 11 106:12,21 106:12,22,23 110:1,2,3,10 179:19 113:13 164:11,13 164:21,13 164:21,13 164:21,13 164:21,13 164:21,13 164:21,13 164:21,13 164:21,13 164:21,13 164:21,13 166:4,15 166:4,15 166:4,15 166:4,15 166:4,15 166:4,15 166:4,15 166:4,15 166:4,15 166:4,15 166:4,15 170:2 173:25 180:3 170:2,9,11 183:19 185:16 185:16 185:16 185:16 185:16 185:16 185:16 185:16 185:16 185:16 185:16 185:16 185:16 185:16 185:16 185:16 185:16 185:16 185:15 193:15,16 226:16 178:20 102:9, 141:13:11 114:24 118:23,24 119:10,15,18 120:11 133:5 135:10 133:5,16 164:24 179:23 31:1,4 166:4,15 164:24 178:23 31:1,4 166:4,15 170:25 178:24 179:23 31:1,4 179:23 31:1,4 179:23 31:1,4 179:23 31:1,4 179:24 179:23 31:1,4 179:24 179:23 31:1,4 179:24 179:23 31:1,4 179:24 179:24 179:23 31:1,4 179:24 179:24 179:23 31:1,4 179:24 17	54:8 56:10,	18,21 157:11	145:19	165:19	proven
88:15,17 89:10 90:16 91:14,15,16, 19,21 92:8,10 93:1,7,19 95:20 102:13, 21 103:2,4 104:8,21 106:12,21 107:2,9,11 108:12,22,23 110:1,2,3,10, 17,19 112:16, 21,23 113:13, 16,18 117:14, 25 118:12,13, 16,20 119:2, 7,11,15,17,20 125:6,9 128:10,13 130:12 131:13 130:12 133:15,10, 13,15,20,24 124:8,14,20 125:6,9 128:10,13 130:12 138:5,11,14 140:12,15,20 141:11 142:8 144:6,24 140:12,15,20 141:11 142:8 170:25 163:1 164:23,25 165:10,14 166:4,12,14 168:1,7,12, 166:4,12,14 168:1,7,12, 168:1,7,12, 168:1,7,12, 168:1,7,12, 169:16 187:22 173:25 180:3, 6,9 181:15 188:11 170:2 188:11 188:11 189:12 173:25 180:3, 6,9 181:15 188:11 113:7 113:7 114:24 118:23,24 119:3 14:18 113:7 113:7 114:24 118:23,24 119:0,15,18 226:16 119:3 14:18 120:16 189:12 175:29 178:20 102:9, 14 113:7 113:7 113:7 114:24 118:23,24 119:10,15,16 226:16 122:12 123:5 16,21 124:7 138:11 209:19 141:13:11 142:24 118:23,24 119:10,15,16 226:16 189:12 26:16 189:12 11:13 11:6,8 35:22 11:13 130:12 11:13 130:12 11:13 130:12 11:13 130:12 13:13,3 16:124 188:21 189:3,4 169:16 187:22 173:25:15 32:9,25 55:1 56:10 59:3 61:22 67:18, 24 75:21 11:13:7 11:4:24 118:23,24 119:0,15,16 189:12 11:13:7 11:4:24 118:23,24 119:10:10,15,16 189:12 11:13:7 11:4:24 118:23,24 119:23 11:14 120:16 189:12 17:22 173:25 180:3, 6,9 181:15 188:11 11:5:9 prospect 155:9 prospect 155:9 prospect 155:9 prospect 155:9 14:13:17 11:4:24 118:23,24 119:24:7 11:10:10,15,18 21:10:10,15,18 21:10:10,15,18 21:12:12:12:12:12:12:12:12:12:12:12:12:1	20,21 68:19	159:5 160:13,			186:25
88:15,17, 7 89:10 90:16 91:14,15,16, 166:4,12,14 166:4,12,14 168:1,7,12, 95:20 102:13, 21 103:2,4 104:8,21 107:2,9,11 108:12,22,23 110:1,2,3,10, 17,19 112:16, 21,23 113:13, 16,18 117:14, 200:15 207:4, 25 118:12,13, 16,20 119:2, 7,11,15,17,20 120:2,12,16, 24 123:5,10, 13,15,20,24 123:5,69 128:10,13 130:12 133:15,16 24 128:10,13 130:12 133:15,16 24 128:10,13 130:12 133:15,16 24 128:10,13 130:12 133:15,16 21 133:15,16 21 133:15,16 22 133:15,16 24 123:5,10, 13,15,20,24 123:5,10, 13,15,20,24 123:5,19 136:6,15 138:5,1,14 140:12,15,20 141:11 142:8 144:6,24 144:6,24 144:8,14,20 141:11 142:8 144:6,24 144:8,14,20 141:11 142:8 144:6,24 144:6,24 144:8,14,20 141:11 142:8 144:6,24 144:8,14,20 141:11 142:8 144:6,24 144:8,14,20 141:11 142:8 144:6,24 144:8,14,20 144:11,14:12 143:14 143:14 144:14 143	69:20 73:22	19,22 161:16,	prompt 05:0	proposing	
89:10 90:16 91:14,15,16, 192:18,10 166:4,12,14 166:4,12,14 166:4,12,14 168:1,7,12, 23,24 169:2, 11 170:2 173:25 180:3, 6,9 181:15 183:19 185:16 186:14,16 17,19 112:16, 21,23 113:13, 16,20 119:2, 7,11,15,17,20 122:16,6,9 128:10,13 130:12 133:15,20,24 124:8,14,20 125:6,9 128:10,13 130:12 133:15,16 130:12 133:15,16 24 123:5,10, 13,15,20,24 123:5,10, 13,15,20,24 123:5,10, 13,15,20,24 123:5,10, 13,15,20,24 123:5,10, 13,15,20,24 123:5,10, 13,15,20,24 123:5,10, 13,15,20,24 123:5,10, 13,15,20,24 123:5,10, 13,15,20,24 123:5,10, 13,15,20,24 123:5,10, 13,15,20,24 123:5,10, 13,15,20,24 123:5,10, 13,15,20,24 123:5,10, 13,15,20,24 123:5,10, 13,15,20,24 123:5,10, 13,15,20,24 124:8,14,20 125:6,9 128:10,13 130:12 133:15,10 130:12 133:15,10 130:12 133:15,10 130:12 133:15,10 130:12 133:15,10 130:12 133:15,10 130:12 133:15,10 130:12 133:15,10 130:12 133:15,10 130:12 133:15,10 130:12 133:15,10 130:12 133:15,10 130:12 133:15,10 130:12 133:15,10 130:12 133:15,10 130:12 133:15,10 130:12 133:15,10 130:12 133:15,10 130:12 133:15,10 130:12 133:13,13 130:12 133:13,13 130:12 133:13,13 130:12 133:13,13 130:12 133:13,13 130:12 133:13,13 161:24 130:12 130:12 130:12 130:13 130:12 133:13,13 161:24 130:12 130:13 130:12 133:13,13 161:24 130:12 130:13 130:12 130:13 130:12 130:13 130:12 130:13 130:12 130:13 130:12 130:13 130:12 130:13 130:12 130:13 130:12 130:13 130:12 130:13 130:13 130:12 130:13 130:12 130:13 130:13 130:12 130:13 130	88:15,17	20,25 163:1	prompt 85:9		
91:14,15,16, 19,21 92:8,10 93:1,7,19 95:20 102:13, 21 103:2,4 104:8,21 106:12,21 107:2,9,11 108:12,22,23 110:1,2,3,10, 17,19 112:16, 21,123 113:13, 16,18 117:14, 25 118:12,13, 16,20 119:2, 7,11,15,17,20 120:2,12,16, 24 123:5,10, 13,15,20,24 124:8,14,20 125:6,9 128:10,13 130:12 133:15,16 24 123:5,10, 13,15,20,24 124:8,14,20 125:6,9 128:10,13 130:12 133:15,16 24 123:5,10, 13,15,20,24 124:8,14,20 125:6,9 128:10,13 130:12 133:15,16 24 123:5,10, 13,15,20,24 124:8,14,20 125:6,9 128:10,13 130:12 134:19,22 135:15,19 136:6,15 138:5,11,14 140:12,15,20 141:11 142:8 144:6 24 promote 119:3 141:8	89:10 90:16	· ·			
19,21 92:8,10 93:1,7,19 95:20 102:13, 21 103:2,4 168:1,7,12, 23,24 169:2, 11 170:2 173:25 180:3, 6,9 181:15 107:2,9,11 108:12,22,23 110:1,2,3,10, 17,19 112:16, 21,23 113:13, 16,18 117:14, 25 118:12,13, 16,20 119:2, 7,11,15,17,20 120:2,12,16, 24 123:5,10, 13,15,20,24 128:10,13 130:12 136:6,15 138:5,11,14 140:12,15,20 141:11 142:8 19:3 141:8 19:3 141:8 19:3 141:8 19:3 141:8 100:10,213 10:10,213 10:10,213 10:10,23	91:14.15.16.	165:10.14	prompt-	187:22	
93:1,7,19 95:20 102:13, 21 103:2,4 104:8,21 106:12,21 107:2,9,11 108:12,22,23 110:1,2,3,10, 17,19 112:16, 21,23 113:13, 16,18 117:14, 25 118:12,13, 16,20 119:2, 7,11,15,17,20 120:2,12,16, 24 123:5,10, 13,15,20,24 124:8,14,20 125:6,9 128:10,13 130:12 136:6,15 138:5,11,14 140:12,15,20 141:11 142:8 144:6 24 188:11 proper 188:11 proper 188:11 properly 188:11 properly 113:7 properly 113:7 propectively 113:7 propect 17:8 19:4 24:7 138:11 205:11 205:11 205:11 205:11 209:19 114:112:18:11 205:11 209:19 114:12:12:35:10 133:5 135:10 150:25 150:29 propect 118:23 11 113:7 propect 17:8 19:4 24:7 138:11 205:11 205:11 205:11 205:11 205:11 209:19 114:11 205:11 209:19 114:12:23 1150:25 116;24 115:24 proposals 11:6,8 35:22 11:13 proposals 11:6,8 35:22 11:13 11:6,8 35:22 11:13 11:6,8 35:22 11:13 11:6,8 35:22 11:13 11:6,8 35:22 11:11 188:21 protections 124:22 136:1 148:11 187:21 113:1,25 229:11 protects 189:3,4 provided 11: 15:13 63:6 65:17 76:17 78:20 102:9, 14 113:17 114:24 118:23,24 119:10,15,18 21 120:16 122:12:12:15 138:11 209:19 14 113:7 114:24 118:23,24 119:10,15,18 21 120:16 122:12:12:15 138:11 205:11 205:11 205:11 205:11 205:11 213:11 209:19 14:11:124:21 133:51 16,21 124:21 133:51 16,22 18:2 22:24 protections 124:22 136:1 148:11 187:21 113:1,3 161:24 protects 189:3,4 provided 11: 15:13 63:6 65:17 76:17 78:20 102:9, 14 113:7 114:24 118:23,24 119:10,15,18 21:120:16 122:12:123:5 110:13:7 114:24:27 133:11 209:19 14:11:24:21 133:11 209:19 14:11:24:21 133:11 209:19 14:11:24:21 13:11 205:11 209:19 14:12:23:5 11:24:22 13:11 209:19 14:11:13:7 114:24 118:23,24 119:10,15,18 21:120:16 122:12:123:5 110:13:7 138:11 209:19 14:11:124:21 133:11 209:19 14:12:23:11 120:16 122:12:123:5 11:10,13 130:12 133:13:14 120:16 122:12:123:5 11:10,13 130:12 133:13:14 120:16 122:12:123:5 11:10,23 13:11 120:16 122:12:123:5 11:13:7 13:11 120:16 122:12:123:5 11:13:7 13:11:12 13:11:12 13:11 13:7 114:24 119:10,15,18 11:13:7 114:24 119:10,15,18 11:13:7 114:24 119:10,15,18 11:13:7 114:24 119:10,15,18 11:13:7 114:24 119:10,15 11:10,23 11:10,23	' ' '				•
95:20 102:13, 21 103:2,4 104:8,21 104:8,21 106:12,21 108:12,9,11 108:12,22,23 113:13, 16,18 117:14, 25 118:12,13, 16,20 119:2, 7,11,15,17,20 120:2,12,16, 24 123:5,10, 13,15,20,24 124:8,14,20 125:6,9 128:10,13 13:0:12 136:6,15 138:5,11,14 140:12,15,20 141:11 142:8 144:6 24 149:24:7 12:13 14:18 14:8 144:6 24 14:6 24 14:8 144:8 144:6 24 14:8 144:8 144:6 24 14:8 144:8	, ,	, , ,		prospect	
21 103:2,4	' '				
104:8,21	· ·	· · ·			
106:12,21	· ·		188:11		· · · · · · · · · · · · · · · · · · ·
107:2,9,11	Y .	· ·			
108:12,22,23 110:1,2,3,10, 17,19 112:16, 21,23 113:13, 16,18 117:14, 25 118:12,13, 16,20 119:2, 7,11,15,17,20 120:2,12,16, 24 123:5,10, 13,15,20,24 124:8,14,20 125:6,9 128:10,13 130:12 134:19,22 135:15,19 136:6,15 138:5,11,14 140:12,15,20 141:11 142:8 144:6 24 185:16 186:14,16 189:12 193:15,16 200:15 207:4 209:18,19 201:10,23 209:18,19 211:10,23 216:7 218:6, 24 proposal 19:23 31:1,4 36:2 43:2,20 47:12 135:8, 10 186:5 222:24 protection 21:19 188:7 protections 124:22 136:1 185:23,24 119:10,15,18 21 120:16 122:12 123:5 16,21 124:21 133:5 135:10 141:12 143:1 150:25 167:21 169:24 174:25 182:22 188:2 20,23 196:4, 13 204:20 211:11 187:21 188:21 protections 124:22 136:1 188:23,24 119:10,15,18 21 120:16 122:12 123:5 16,21 124:21 133:5 135:10 141:12 143:1 150:25 167:21 169:24 174:25 182:22 188:2 20,23 196:4, 13 204:20 211:11 209:19 protections 124:22 136:1 188:21 protections 124:22 136:1 188:21 protections 124:22 136:1 188:21 protections 124:22 136:1 188:21 protections 124:22 136:1 189:3,4 protection 21:19 188:7 protections 124:22 136:1 189:3,4 protection 21:19 188:7 protection 22:29:11 protection 24:29:19 188:7 protection 24:29:29:11 protection 24:29:21 p	′	· '	nronerly	113:7	
110:1,2,3,10, 17,19 112:16, 21,23 113:13, 16,18 117:14, 25 118:12,13, 16,20 119:2, 7,11,15,17,20 120:2,12,16, 24 123:5,10, 13,15,20,24 124:8,14,20 125:6,9 128:10,13 130:12 136:6,15 138:5,11,14 140:12,15,20 141:11 142:8 144:6 24 141:11 142:8 144:6 24 141:11 142:8 144:6 24 141:11 142:8 144:6 24 141:11 142:8 144:6 24 141:11 142:8 144:6 24 141:11 142:8 144:6 24 141:11 142:8 144:6 24 141:11 142:8 144:6 24 141:11 142:8 144:6 24 141:11 142:8 144:6 24 141:11 142:8 144:6 24 141:11 142:8 144:6 24 141:11 142:8 144:6 24 141:11 142:8 144:6 24 141:11 142:8 144:6 24 141:11 142:8 145:14 141:11 142:8 144:6 24 141:11 142:8 144:6 24 141:11 142:8 145:14 141:11 142:8 144:6 24 141:11 142:8 144:6 24 141:11 142:8 145:14 141:11 142:8 144:6 24 145:14 143:14 15:13 63:6 165:17 76:17 78:28 14:22 14:22 136:1 15:13 63:6 165:17 76:17 78:28 14:22 14					118:23,24
17,19 112:16, 21,23 113:13, 16,18 117:14, 25 118:12,13, 16,20 119:2, 7,11,15,17,20 120:2,12,16, 24 123:5,10, 13,15,20,24 124:8,14,20 125:6,9 128:10,13 130:12 136:6,15 138:5,11,14 140:12,15,20 141:11 142:8 144:6 24 property 43:9 19:4 24:7 138:11 20:16 122:12 123:5 16,21 124:21 133:5 135:10 122:12 123:5 16,21 124:21 133:5 135:10 141:12 143:1 120:19 188:7 17,19 112:16, 21,23 113:13, 16,18 117,14 14:14,28 144:6 24 19:3 141:8 property 43:9 19:4 24:7 138:11 20:16 122:12 123:5 16,21 124:21 133:5 135:10 141:12 143:1 120:19 188:7 19:4 24:7 138:11 205:11 20:16 14:22:12 133:5 135:10 141:24 133:5 135:10 141:12 143:1 120:19 188:7 19:4 24:7 138:11 20:16 122:12 123:5 16,21 124:21 133:5 135:10 141:12 143:1 120:19 188:7 19:4 24:7 138:11 205:11 20:19 183:1 1 205:11 20:19 183:1 120:19 183:1 120:19 188:7 19:4 24:7 138:11 205:11 20:19 183:1 1 205:11 20:19 183:1 1 209:19 19:4 24:7 138:11 205:11 20:19 183:1 1 205:11 20:19 183:1 1 209:19 19:4 24:7 138:11 205:11 20:19 183:1 1 205:11 20:19 183:1 1 209:19 19:4 24:7 138:11 205:11 20:19 183:1 1 205:11 20:19 183:1 1 209:19 19:4 24:7 138:11 205:11 20:19 183:1 1 205:11 20:19 183:1 1 209:19 19:4 24:7 138:11 205:11 20:19 183:1 1 205:11 20:19 183:1 1 209:19 19:4 24:7 13:19:3:14:21 13:15 205:11 20:19 183:1 1 209:19 19:4 24:7 13:19:3:14:21 13:15 205:11 20:19 183:1 1 209:19 19:4 24:7 13:19:19 183:11 209:19 19:4 24:7 13:19 183:11 209:19 19:4 24:7 13:19 183:11 209:19 19:4 24:7 13:19 183:11 209:19 19:4 24:7 13:19 183:11 209:19 19:4 24:7 13:19 183:11 209:19 19:4 24:7 13:19 183:11 209:19 19:4 24:7 13:19 183:11 1 209:19 19:4 24:7 13:19 183:11 209:19 19:4 24:	' '		220.10	nrotect 17:8	119:10,15,18,
21,23 113:13, 16,18 117:14, 200:15 207:4 209:18,19 211:10,23 216:7 218:6, 24 123:5,10, 13,15,20,24 128:10,13 130:12 136:6,15 138:5,11,14 140:12,15,20 141:11 142:8 144:6 24 19:3 141:8 119:3 141:4 121:11111111111111111111111111111		· ·		•	21 120:16
16,18 117:14, 25 118:12,13, 16,20 119:2, 7,11,15,17,20 120:2,12,16, 24 123:5,10, 13,15,20,24 128:10,13 130:12 136:6,15 138:5,11,14 140:12,15,20 141:11 142:8 144:6 24 119:3 141:8 1209:19 16,21 124:21 133:5 135:10 141:12 143:1 150:25 167:21 133:5 135:10 141:12 143:1 150:25 167:21 150:25 167:21 169:24 174:25 169:24 174:25 182:22 188:2 174:25 182:22 188:2 174:25 182:22 188:2 174:25 182:22 188:2 174:25 182:21 131:1,3 161:24 174:25 182:21 131:1,25 182:21 131:1,25 189:3,4 176:24 176:24 176:24 176:24 176:24 176:24 176:25 182:22 188:2 176:24 176:25 182:22 188:2 176:24 176:25 182:22 188:2 176:24 176:26 176:27 176:17 176:17 176:17 176:17 176:17 176:17 176:17 176:17 176:17 176:17 176:17 176:17 176:17 176:17 176:17 176:25 182:28 11:22	'		property 43:9		122:12 123:5,
25 118:12,13, 16,20 119:2, 7,11,15,17,20 120:2,12,16, 24 123:5,10, 13,15,20,24 124:8,14,20 125:6,9 128:10,13 130:12 136:6,15 136:6,15 136:6,15 136:5,11,14 140:12,15,20 141:11 142:8 144:6 24 14:6 24 12:3 141:8 12:3 141:8 12:3 141:8 12:3 141:8 12:3 141:8 125:13 141:8 12:3 141:8 13:1 13:5 135:10 141:12 143:1 15:25 16:25 167:21 15:24 16:24 174:25 182:22 188:2 16:24 174:25 182:22 188:2 16:24 174:25 182:22 188:2 16:24 174:25 182:22 186:2 16:24 174:25 182:22 186:2 16:24 174:25 182:22 186:2 16:24 174:25 182:22 186:2 16:24 174:25 182:22 186:2 16:24 174:25 182:22 186:2 16:24 174:25 182:22 186:2 174	'				16,21 124:21
16,20 119:2, 7,11,15,17,20 120:2,12,16, 24 123:5,10, 13,15,20,24 124:8,14,20 125:6,9 128:10,13 130:12 135:15,19 136:6,15 138:5,11,14 140:12,15,20 141:11 142:8 146:6,24 143:8 144:6,24 143:8 144:6,24 143:8 144:6,24 143:8 144:6,24 143:8 144:6,24 143:8 144:6,24 143:8 144:6,24 143:8 143:8 143:8 143:8 143:8 143:8 143:8 143:14 150:25 167:21 150:25 167:21 169:24 174:25 182:22 188:2 122:24 174:25 182:22 188:2 174:25 182:22 183:2 174:25 182:22 183:2 174:25 183:14:8 174:14 174:	,		proposal		133:5 135:10
7,11,15,17,20 120:2,12,16, 24 123:5,10, 13,15,20,24 124:8,14,20 125:6,9 128:10,13 130:12 134:19,22 135:15,19 136:6,15 138:5,11,14 140:12,15,20 141:11 142:8 144:6 24 216:7 218:6, 24 216:7 218:6, 24 47:12 135:8, 10 186:5 222:24 projects' 122:23 157:24 211:13 proposals 11:6,8 35:22 113:1,3 161:24 propose 70:25 189:6 protection 21:19 188:7 protections 124:22 136:1 148:11 187:21 188:21 protects 132:422 136:1 188:21 protects 189:3,4 provided 11: 15:13 63:6 65:17 76:17 78:22 81:22	' '	· ·		209:19	141:12 143:1
120:2,12,16, 24 123:5,10, 13,15,20,24 124:8,14,20 125:6,9 128:10,13 130:12 136:6,15 136:6,15 138:5,11,14 140:12,15,20 141:11 142:8 144:6,24 14:6,24 14:11 142:8 14:6,24 174:28 12:28 14:28 14:18 14:6,24 174:28 167:21 169:24 174:25 182:22 188:2 174:25 182:22 188:2 174:25 182:22 188:2 182:22 182:2 182:22 182	' '	· ·	· ·		150:25
120:2,12,16, 24 123:5,10, 13,15,20,24 124:8,14,20 125:6,9 128:10,13 130:12 134:19,22 135:15,19 136:6,15 138:5,11,14 140:12,15,20 141:11 142:8 146:6,24 124:135:8, 10 186:5 222:24 projects' 122:23 157:24 211:19 188:7 169:24 174:25 182:22 188:2 20,23 196:4, 13 204:20 211:11 187:21 188:21 promote 119:3 141:8 propose 70:25 189:6 169:24 174:25 182:22 188:2 20,23 196:4, 13 204:20 211:11 213:11,25 229:11 protects 189:3,4 provided 11: 15:13 63:6 65:17 76:17 78:22 81:22			· ·	protection	167:21
24 123:5,10, 13,15,20,24 124:8,14,20 125:6,9 128:10,13 130:12 134:19,22 135:15,19 136:6,15 138:5,11,14 140:12,15,20 141:11 142:8 144:6 24 projects' 122:23 157:24 211:13 proposals 11:6,8 35:22 113:1,3 161:24 propose 70:25 189:6 174:25 182:22 188:2 20,23 196:4, 13 204:20 211:11 213:11,25 229:11 protects 189:3,4 provided 11: 15:13 63:6 65:17 76:17 78:22 81:22		24	· ·	21:19 188:7	
13,15,20,24 projects' 122:23 proposals 124:22 136:1 13 204:20 13 204:20 211:11 211:13 13 204:20 211:11 182:22 188:2 20,23 196:4, 13 204:20 211:11 13 204:20 211:11 211:11 213:11,25 229:11 211:11 213:11,25 229:11 229:11 215:13 63:6 65:17 76:17 65:17 76:17 78:22 81:22 13 204:20 13 204:20 211:11 213:11,25 229:11 229:11 222:11 223:11 23:11:11 213:11,25 229:11 229:11 23:11:11 23:11:12 23:11:13 </td <td>' '</td> <td></td> <td></td> <td></td> <td></td>	' '				
124:8,14,20 125:6,9 128:10,13 130:12 134:19,22 135:15,19 136:6,15 138:5,11,14 140:12,15,20 141:11 142:8 144:6 24 122:23 157:24 211:13 proposals 11:6,8 35:22 113:1,3 161:24 propose 70:25 189:6 protections 124:22 136:1 148:11 187:21 188:21 protections 124:22 136:1 148:11 187:21 188:21 protects 189:3,4 provided 11: 15:13 63:6 65:17 76:17 78:22 81:22		projects'	222:24		
125:6,9 128:10,13 130:12 134:19,22 135:15,19 136:6,15 138:5,11,14 140:12,15,20 141:11 142:8 119:3 141:8 157:24 211:13 proposals 11:6,8 35:22 11:13 proposals 11:6,8 35:22 11:13 13 204:20 211:11 187:21 188:21 protects 189:3,4 provided 11: 15:13 63:6 65:17 76:17 78:22 81:22				•	•
128:10,13 130:12 134:19,22 135:15,19 136:6,15 138:5,11,14 140:12,15,20 141:11 142:8 144:6 24 211:13 11:6,8 35:22 113:1,3 161:24 promise 215:24 propose 70:25 189:6 148:11 187:21 188:21 protects 189:3,4 provided 11: 15:13 63:6 65:17 76:17 78:22 81:22	· ·		proposals		•
130:12 134:19,22 135:15,19 136:6,15 138:5,11,14 140:12,15,20 141:11 142:8 144:6 24 promote 119:3 141:8 113:1,3 161:24 propose 70:25 189:6 187:21 188:21 213:11,25 229:11 provided 11: 15:13 63:6 65:17 76:17 78:22 81:22	128:10,13		• •		
134:19,22 135:15,19 136:6,15 138:5,11,14 140:12,15,20 141:11 142:8 144:6 24 119:3 141:8 161:24 promote 119:3 141:8 161:24 propose 70:25 189:6 188:21 protects 189:3,4 protects 189:3,4 protects 189:3,4 protects 15:13 63:6 65:17 76:17 78:22 81:22	130:12	211.10		_	
135:15,19 136:6,15 138:5,11,14 140:12,15,20 141:11 142:8 144:6 24 promise 215:24 propose 70:25 189:6 protects 189:3,4 provided 11: 15:13 63:6 65:17 76:17 78:22 81:22	134:19,22		· ·	188:21	•
138:5,11,14 140:12,15,20 141:11 142:8 144:6 24 promote 119:3 141:8 propose 70:25 189:6 protects 189:3,4 provided 11: 15:13 63:6 65:17 76:17 78:22 81:22	135:15,19	promise	101.21		229.11
138:5,11,14 140:12,15,20 141:11 142:8 144:6 24 119:3 141:8 189:3,4 189:3,4 189:3,4 15:13 63:6 65:17 76:17 78:22 81:22	136:6,15	215:24		protects	
140:12,15,20 141:11 142:8 144:6 24 promote 119:3 141:8 70:25 189:6 65:17 76:17 78:22 81:22	138:5,11,14		• •	-	provided 11:1
141:11 142:8 119:3 141:8 protocol 55:17 76:17	140:12,15,20	promoto	70:25 189:6	100.0,4	15:13 63:6
1 1/1/6 2/1	141:11 142:8	I .			65:17 76:17
1 · · · · · · · · · · · · · · · · · · ·	144:6,24		proposed	protocol	78:22 81:22
1 148.75 I DIODOSEU I I	<i>'</i>	148.25		125:7 164:8	91:3,12 106:5
146:12 25.19.54.18 188:18 113:15	· ·			188:18	I
1 42.10 00.11		promotes			116:18 135:1
140:22.25	′	I •		prove 10:00	142:23 224:7,
157:25 prove 10:22	· ·			•	16,23 227:24
24 22 455:4	· .		187:15 189:8		•
5 19 156:16					
promoting proposes 173:11	3,13,103,10,	promoting	proposes	1/3:11	
		1			

Index: provides..question

			1	1
provides	PTC 7:14 8:20	133:21 135:9	120:5	quantification
40:20 59:25	11:20 21:15	136:8 138:1,		140:3,8
111:2 182:2	82:23 84:12	4,15 140:15		
187:25	109:24	154:16 155:6	pursuit	
	119:19	159:18	227:14	quantifying
	120:13 123:2	161:22 169:4		140:5
providing		171:15 182:5	push 100:22	
18:20 31:25	125:1 141:17,		l •	
118:9 142:22	24 144:25	206:23	219:16	quantitative
222:10	147:9 160:4			140:14,17
	168:24	publicly	put 62:19	
	200:19,24	134:6 179:4	81:19 88:7	quasi-
provision	208:3	134.0 179.4	152:22	levelized
116:8 181:21,			_	
23 203:10		published	157:24	70:18 85:6
20 200110	PTC-	152:3	165:22	
	ELIGIBLE	102.0	167:10 174:1	question 7:9,
provisions	109:18		175:22	15 11:10,12
21:19 116:11		pulling 196:1	213:17	•
172:23			222:16	12:10 13:15
	PTCS 11:3,		223:10	23:16 25:4
	11,24 52:11	purchases	220.10	41:16 42:13
proxy 110:2	56:17 84:16	112:22 186:4		51:8 57:16
	85:2 138:1		puts 55:13	68:17 83:9
	141:16 142:8,		131:20	87:8 93:9
prudence	17 149:25	purported	223:15	116:12,22
126:2,5	183:1,2 184:1	206:4		117:7,11
131:17	195:11 198:8,			125:20
172:24 188:1	· ·	purpose 17:2	putting	126:17
191:1 202:11	19 211:22		174:13	
213:10		24:22 25:4,6,	175:17 198:6	127:13,20
225:19	public 6:3	10 81:21		129:7,8 130:8
	17:10,25	182:16 204:7		139:19 151:2
	21:9,12 45:24		Q	157:12
prudent 19:5	·	nurnococ		170:11
38:1 46:22	46:5 48:9,18	purposes		171:17,18
145:24	54:25 80:13	24:23 41:22	06 405:47	172:14 173:6
163:20	101:12 103:4,	56:2 67:14	QS 185:17	174:8,17
196:25	13,17,21	68:7 69:13		175:2 178:4
205:15	104:1,20,25	128:6 218:14,	qualification	187:15
	106:13	15	109:24 208:3	
223:14,24	112:24		103.24 200.3	189:23
	113:17			202:20
prudently	118:13,17	Pursuant	qualify 145:5	203:17
113:9 170:24	119:4 125:11	48:7		209:13
173:11 223:8				212:14
113.11 223.0	129:17	pursued	quality 156:7	
		Pursueu		I

Index: questioning..read

213:19 217:15 219:19,20 220:20 230:21 231:18 questioning	190:16 201:24,25 202:2 203:14 212:4,7,10 222:20 227:25 228:25 229:4 232:5	57:16 quickly 39:9 83:10 173:22 174:1 191:13 198:2 211:14	ran 11:18 22:23 147:8 183:3 range 34:5 38:10 50:11 70:24 108:20 113:22 198:2	12 139:9,11 141:14 144:21 145:18 146:21 155:23 158:15,19 162:10 163:3,
100:20,21 168:25 191:17	queue 9:13, 18 10:5,8,12	quite 46:18 83:14,24 94:19 197:1	ranges 38:4	6,16 164:13 165:18,21 167:22 169:5,
questions 6:12,15 7:10	11:9 12:1 36:19,22,25 38:24 39:25 127:10,16,23	quo 20:18 184:21	rate 11:17 31:3,24 38:5 46:13,23 47:3	14,20 171:2, 23 188:21 192:8 196:8 205:11
14:3 15:18 22:4,6,8,11, 15,18 23:20 24:11,13 26:8,10,13 27:10,13,14 29:15 38:17 42:1,3,4,6,10 44:19 47:15	128:23 129:14,20,21, 25 130:2 133:1,2,8,22 134:2 146:15 150:18 151:8 152:2,6,7,14 172:10 174:16	quote 55:12, 17 58:12 77:17 119:2 137:10,14,15, 21 147:6 194:17 210:5	93:21 109:2,3 131:6,12,21, 23 158:3 165:22 166:2 169:22 188:2, 4,19 189:6 192:10 210:16	209:19 211:5 ratepayers' 206:14 rates 32:10 124:10 131:16
61:8 63:24 75:17 80:5 81:11,17 82:14 85:8 87:7 89:17,19	175:15,19,21 176:2,3,6,10, 13,15,16,18 177:16,21	R	ratepayer 38:13,14 136:1 205:19	189:10 rather 38:10 68:12 82:2
92:20 95:22 114:6,9,12 115:25 116:1	178:22 179:1, 3,8,12 203:18,24	race 210:21	ratepayers 17:8,15 18:3,	93:10 148:2 155:23 167:6 179:20
118:3 125:15, 16,19 126:19, 23 130:5,8 132:25 135:4,	212:16 213:1, 2,3,4,5,7 219:18 230:23,24	raised 8:15 10:25 47:9,15 49:16,22 63:24 200:11	10,13,20 19:23 20:11, 21 21:16,20 24:8 32:13 33:5,12,18	192:16,17 ratio 104:17
5 138:19 139:15 150:8, 9 170:8 172:3 173:5 178:2	231:4,6,9,10 queues 129:17	201:2 220:10, 14 221:23 222:9	36:7,10 37:2 43:17 54:18 91:23 93:6	ratios 160:12 re-call 6:16
173:5 178:2 187:13 189:19	quick 45:22	raises 157:15	134:22 135:18,23 136:4 138:8,	read 10:16
	=	-	-	_

Index: reading..record

				adingrecord
			l	l
16:1,4 46:2	135:17	169:16	197:7 203:19	149:21
76:21 96:19	174:16	181:17 182:7		
97:2 115:25			receive 95:6	recollection
130:9 147:6	really 10:7,14	reasonablene	172:8	38:24 58:14
153:16 179:4	32:17 34:12	ss 171:10		67:5 77:4
200:6 217:11,	36:16 38:4,11	229:24		07.07711
22 222:1	56:24 64:6	223.2 -	received	
225:12	78:1 79:24		16:19 30:4	recommend
	81:24 83:20	reasonably	61:1,10 80:19	60:12 127:24
reading 40:20	88:9 108:18	115:15 137:7	98:7 129:4	138:15
reading 49:20		169:11 174:4		205:24
70:21 96:20	110:22 115:6,		**************************************	
	10,16 128:11	**************************************	recent 27:2	recementalet
reads 10:17	133:11	reasons 86:2	61:1 63:4	recommendat
	176:12,14	95:8 138:14	64:18 65:4	ion 195:7,15
	191:23 204:2	199:15,24	112:3,9 121:6	
ready 6:19	214:20	201:17	158:4,18	recommendat
116:23 129:9	217:20		163:12	ions 17:6
134:10	219:19	rebuttal 15:14		128:5
173:24	221:13,18,20	29:8,9,11	recently	120.0
232:23	225:9,13	32:15 34:17	121:1	
	228:2 231:14	37:12 39:15	121.1	recommende
real 109:15		60:6 69:15		d 21:19 143:9,
151:5 158:7	reask 6:18	76:22 89:21	recess 39:7	21 151:11
169:12	Teask 0.10	90:7 97:16	75:5,9,11	184:3 202:8
		100:9 101:22	101:8 181:3	
186:12,25	reason 14:7			recommends
199:8 200:9	18:17 24:7	154:4 183:11	roogni-o	
201:4 206:14	56:23 85:21,	231:13,18	recognize	142:21
	25 87:15 96:6		64:4 164:2	144:22
realigning	99:8,9 131:25	REC 67:22,24	232:12,16	
162:18	214:15	68:6,9,14,18		reconvene
		69:3,8,10	recognized	75:12
	<u>.</u> _	74:13 85:19,	103:20	
realistic	reasonable	21 108:12	163:21	
121:14,24	17:20 21:10	122:18	165:25	record 6:3
	35:17 82:5,11			12:18 13:1,
realize 21:16	89:15 106:10,		_	13,19 16:13
23:19 136:4	23 114:20	recall 12:22,	recognizes	28:15 41:14
137:14	118:21	24 51:2 70:6	164:2	47:8 51:9
'3''	124:21 127:1	76:11 81:10		75:14 84:2
	136:3 148:10	85:19 90:9	recognizing	96:15,17,23,
realized	154:21 159:1	152:5 168:17	124:19	24 97:2,3,12,
			121.10	
				I

Index: recording..Regardless

				igkegaruress
14,20 116:2	46:23 47:4	119:8,9	170:23	214:13 215:5
117:18 133:2,	116:9 131:22	124:10 137:8,	230:13	
16,18 158:11	166:3 190:22,	17 143:6,10		nofication
174:11,13,25	23 200:16	,	l , .	reflection
175:2 177:20	210:16		referenced	82:14
181:6 182:18,		reduced	16:6 38:21	
19 187:4		21:24 32:10	42:16 200:21	reflects 148:4
191:10	recross	53:13,16	212:19	163:8 184:24
206:15,18	85:10,14	102:16		189:15 201:5
207:14		149:11,13	references	230:3
208:23	RECROSS-		7:19,25 41:12	230.3
	EXAMINATIO	reduces 71:9	7.19,25 41.12	
211:19,21	_	reduces 71:9		reform
214:14,15	N 85:16		referencing	184:17
216:1 224:15,		reducing	41:5 50:15	
22 225:6	RECS 66:23	137:25		
230:18	67:2,3,15	138:10		refresh 77:4
	68:2,9,11,12,	146:19	referred	
recording	22,24 82:2,6,	140.10	40:10 82:19	refusal 210:2
101:10	9 85:23		89:25 96:17	Torusur 210.2
121:18	9 03.23	reduction	226:19	
121.10		72:6,13		refuse 170:15
	Red 45:8	137:25 138:2	referring 0.17	
recover 131:8	46:1,21 47:2		referring 8:17	refused
165:20 189:9			23:9,17 25:3	
223:13,24		reductions	26:19 40:1,8	210:18
	redacted 8:1	136:18	50:9 57:19	
	12:17,21,25	146:11	62:7 83:6	refuses 187:1
recoverability	13:7,9 200:5		89:22 215:6	
131:4		redundant		
	redirect 80:21	228:2	refers 53:3	regard 10:17
recoverable	81:5,6,8 85:8,	220.2	202:10	47:1 118:19
124:25	9		202.10	120:15,18
124.23		refer 31:15,16		140:13
		45:5,7 57:18	reflect 11:1	
recovered	redlines	61:9 210:3	77:15,16	regarding
69:20 70:3	207:23	212:17	174:25	
200:14				25:20 81:13,
	1. 07 4 46			17 136:22
_	redo 97:1,10	reference 8:5,	reflected	192:20
recovering		13 40:19,22	62:15,21	212:15
189:5	reduce 19:20	51:14 60:25	63:6,21 64:10	
	21:14,25	61:21 65:18,	80:10 112:11	Regardless
recovery	53:20 118:22	23 66:17	177:11	161:16
ICCOVERY	00.20 110.22			
	I			I

Index: regards..reminded

,	•		-	•
regards 86:2	regulators 140:6 169:8	114:21 132:25	25:1,8,11,14, 15,16 26:2	182:21 230:5
region 93:22	170:17	134:23	32:23 102:18 107:21	relying 35:21
141:10 152:3		1	110:20,23	36:11 78:11
185:14,17	regulatory	related 7:9	111:4 118:24	159:14
	116:5 135:21	19:4 104:3	135:12 143:1,	
region's	143:6 147:25	126:23	23 144:14,19	remain 121:8
185:21	148:7,22 173:7 225:15	127:13 138:12	149:19	148:2 165:2
	229:23	141:16	222:17	170:2,3 208:4
regional	230:10	161:24 190:3		231:10
93:13 122:6	230.10	218:11	reliable	
00.10 122.0		210.11	141:25	remainder
	reimburse		111.20	100:9
regionalizatio	177:6	relates	.	
n 93:3 94:21		114:17	reliance	
149:9,10	reimbursing	203:17	52:16 102:16	remaining
153:21	177:4		109:11	221:8
		relating 81:12	119:23 121:12,22	
regionalized	reinforce		137:9 143:10	remains
93:20	162:8 225:7	relative 33:1	164:19	74:16 158:14
	102.0 220.7	61:13 63:17	104.13	202:25
regions	l	160:14		230:24
143:25	reinforces	224:12	relied 52:13,	
	19:21 219:19		14 180:9	remarks
re audete d		and a Conneller	188:14	57:14
regulated 137:1	reiterate	relatively	216:13	
137.1	134:16	33:15 154:21		remember
			relied-upon	13:12 84:23
regulating	reject 112:20	released	230:12	13.12 04.23
103:21 122:4	113:1 162:25	22:24		
	110.1 102.20		relies 164:24	remembering
regulation	l	relevant 17:4,	101103 107.24	92:10
17:10 19:24	rejecting	23 78:21	l	
20:14 122:2	42:18	111:17	relieving	remind 58:14
123:12 124:2		135:13	222:10	179:16 201:8
148:11 149:2	rejection	136:11,13		227:12
	130:14	137:10 138:2	rely 35:17	229:10,18
			52:21,23	
regulations			52.21,23	
regulations 206:6	relate 94:2	reliability	53:25 121:18	reminded

Index: reminding..requires

	1		1	1
8:20	197:10	repowering	request 6:6	228:16
	212:11	9:10 106:25	11:18 17:24	
		107:7 108:13	30:23 101:15	
reminding		115:3 160:6,	102:10,19	requirement
134:9	repeatedly	13 183:12	114:1 147:7	38:6 51:1,4
	156:19	199:10	159:13,19	59:1 71:14,
remote		215:19	161:24	15,17,20,21
143:24	repeats	220:25 221:3,	179:17 187:5	72:4,14,22,
140.24	208:22	5,16,19,23	204:21	24,25 73:10,
	200.22	229:21		13,15,16
remove		229.21	211:25 228:8	74:11,15,18,
162:22	repetitive			21 75:2 86:11
	232:12	represent	requested	90:23 104:7
		30:13 47:13	9:17 46:1	106:11
removes		59:4 66:2,3,4	104:17	111:20,21
123:3	replaced	70:11,20 90:3	200:23	127:15
	183:21	137:23 138:5	200.23 212:20	127.15
render 209:3			Z 1Z.ZU	·
		148:6 150:14,		131:20
214:1	replacing	23,25 151:4	requesting	152:25 160:5
	143:4 162:21	180:22	180:20	178:4 181:14
rendered			.00.20	188:3 212:22,
9:23 10:7	report 7:15,	representatio		25 216:19
12:1	21,24 12:17,	n 156:12	requests	228:7,9,12
12.1	25 23:7,8	164:22	113:25	
	46:11 63:9		211:24	
renewable	90:10 136:21	168:19		requirements
66:23 81:13,				36:25 50:20
18 131:4,8,16	194:11,16	representatio	require 105:3	68:3 86:2,17
135:22 141:9	199:20 200:4,	ns 225:21	117:16,24	91:13,18
143:1 167:17	7,22		131:12	92:8,11
210:10			135:21	102:25
212:22	reported	representativ	190:23 206:7	104:18
220:16	62:14 66:14	es 31:2	219:24 231:2,	113:18 116:6
220.10	76:13,16		5	117:19
	92:11	roprocented		118:14
renewables	₹2.11	represented	الم مين السم عا	127:17
24:25 33:23		67:4 205:8	required	147:19
86:1,5,7,23	reporter		86:12 104:4	149:12,13
143:24	121:16	representing	112:25	173:9 191:11
145:20,22		12:23 141:5	117:10,22	201:5 217:20
			151:19 161:6	201.0217.20
	reports 23:1,		176:22 177:3,	
repeat 59:19	17,20 153:16	represents	8 178:17	requires 19:6
70:1 192:15	176:5,6	210:10	184:2 206:21	158:21
	=		_	_

Index: research..result

	•		•	•
173:22	110:8	32:25 36:17,	respect 34:5,	152:20
204:22 209:8	110.0	23 37:7,15	14,23 37:3	157:12 172:5
230:24		39:25 43:3	92:15,25	193:13 204:7,
230.24	resource 6:6,		,	•
	7 9:18 10:7	56:3,25 57:3,	103:13	9
research	17:5,17,24	4 72:2,10	110:23	
20:22 116:8	31:4 56:4	73:8 89:14	127:15 129:8	responses
20.22	57:5 68:4,13,	94:22,24	130:12	6:14 7:10
	16 82:2 84:8	95:5,11,12,	150:21 213:9,	81:16 172:4
resembled	101:14,16	14,15 105:4,7	16,19 214:11	214:10
207:23	101:14,10	106:5,20	215:15 218:2	214.10
		108:2 109:18	219:20 220:7,	
	105:18 106:3,	116:10 120:7,	20 223:25	responsibility
reserve	6,16,17	9 123:21	225:4,24	103:21,23
101:21	108:16 112:4,	131:4,9,14,	226:17	162:10
117:24	12 113:10,21	17,20,22	230:20,23]
149:12	114:1 115:14,	138:7,23,24	200.20,20	
227:25	19 117:15,16	139:4,8 140:9		responsible
	120:5 124:3,	148:9,12	respectfully	119:2
reserved	24 125:10	· ·	113:25	
	135:22 148:3	149:20,24	138:15	reet 100:0
154:4 214:5	168:16 170:4	160:19		rest 122:2
	182:2,3,5,10,	162:18		
residential	11,20 187:24	166:18	respectively	restating
86:12	189:1 190:8,	167:10,17	16:2	171:18
	24 191:11	183:23 184:5		
	192:2 197:24	185:9,10,17,	respond 6:19	
resilience	199:7 204:22,	18 192:5,6,7	39:5 40:6,16	restrict
25:1	<i>'</i>	193:2,4,10,	105:5 133:12	103:15 126:3
	23 205:4,9	12,19 194:6,		
reciptores	206:6,7,10,17	14,19,20,23	135:20	
resistance	209:8,9,10	195:8,13,19	212:14	restrictions
168:9	210:10,23	196:2,4,8,9,		167:9 172:11
	213:1 215:20	11,13 197:23	responded	
resisted	220:12 224:3	198:12,13	19:13 29:15	rests 209:13
167:13,15,18,	225:8,19	199:9,24	10.10 20.10	
20,23		,		
20,20	rocourco	203:25	responds	restudies
	resource-	204:10	223:8	133:20 134:1,
resolution	sufficient	209:11 210:9		3,5 178:23
19:18 137:4,	86:24	211:4 218:16	rooncree	
6,22 138:21,		220:15,17	response	roctudy
25 139:3	resources	222:12 224:6,	6:14,15 61:24	restudy
	12:4 17:8,13	7,24	127:3,6,12	128:16 133:3
	18:9,16 26:3		128:11 129:2	
resolved	10.0,10 20.0			result 16:5
				<u> </u>

Index: resulted..risk

17:18 20:10	201:20 217:4	18,21 75:2	revisions	rights 130:2
36:7 53:16,21	218:4,5,12	90:23 91:13,	207:24	
71:2,18 72:1,	219:1	18 92:8,11		rights-of-way
10 73:4 78:10		201:4	RFP 8:11	110:8,12
79:10 83:17	results-based		18:11,18	110.0,12
104:12,21	194:9	***************************************	,	
106:21 107:3,	194.9	revenues	21:22 26:18,	rise 19:1
24 118:21		69:21 73:3	19,22,24	20:1,23
119:12 138:9	resume 98:21	74:14 122:17	27:5,7 36:15	143:12,18,19
149:13		165:2 207:11	53:5 89:22,23	157:23 158:2
159:13			90:22 92:1	
165:12,17	retail 106:23	revert 148:17	104:9,11,15	
181:15	114:20,24	101011	105:2,4,6,7,	rising 112:6
182:25	177:7		22,25 127:3	
196:11		reverting	128:6 142:19	risk 17:21
197:14,15	retained	20:7	145:13	24:8 32:5,23
197.14,15	141:15		152:22	37:10 79:18
	141.10	review 45:22	153:14	93:11 95:17
resulted			160:21,25	
155:7 194:13	retirement	113:9 126:2,5	166:20 167:8,	109:5,6,7,16,
	109:13	131:17	10,15 172:4,	20,24 110:6
		145:16	5,12,14	113:21
resulting		153:14	183:24 184:2,	118:22 119:8
108:11	retires	173:13	4,5 193:3,16,	120:19 122:8
156:11	111:11,14	181:25 186:8	17 195:7,18	134:23
206:20		202:11	197:16	135:12
	return 118:25	206:21,23	201:20	136:13
results 9:4,7	10.20	208:5,25		138:12
10:21 11:12,		213:10	207:21 209:6,	146:11
· .	returns 33:16	225:17,20,23	11 210:3,7	154:20
15,20 12:2		228:17	213:4 216:3,	155:18,20
18:12,18	rovool 167:15		4,20,23	156:24 [°]
20:19 21:22	reveal 167:15		218:20	158:19 159:1
26:18 60:13		reviewed	220:24	160:15
61:12 63:9	revenue 38:5	45:20 63:24	221:14 224:3	161:19 162:5
69:23 70:4,21	50:20 51:1	83:12 130:21	226:1,18,24	163:10,12,23
83:22 128:16,	58:25 69:24	220:8 221:18	227:14,17,19,	164:18
18 147:9	70:5 71:10,	224:4,17	20,25 228:14	169:13
148:23 156:4,	13,14,17,20,			170:12
7,14,17	21 72:3,14,	reviewing	DEDC 407:04	170.12
161:13,15	20,21,24	215:1	RFPS 127:24	
172:14 183:2	73:10,13,15	Z 10.1	152:25	186:12,17
186:9 195:18			197:17	187:9 198:17,
196:8 200:12	74:2,11,15,	revised 11:1		18 205:13

Index: risk-weighted..sake

				reigneedbake
206:24 209:1, 15,17,20,22, 24 210:11	210:2 211:18	142:6,14,21 144:7 146:16 147:22	rule 23:15 86:11 216:19	S
24 210.11 211:15 225:25 226:3, 6,7,9,15,16	risky 32:8 33:10 37:17 120:17	163:13 170:3	rules 104:19 129:16 153:2	S&p 64:17
231:21,25	166:16 182:20	roll 169:19	209:9	saddling 163:4
risk-weighted 157:10	River 103:25	rolls 102:2	ruling 17:23 41:6	Safe 116:6
risk/benefit	RMP 45:23 53:24 54:22	rooftop 86:8, 12	run 8:25 23:18 126:10	168:3 173:9 186:4 190:19
159:22	67:10 70:12 80:18 205:15	room 80:24 98:24 175:7	143:4 198:3,6 200:18	safeguard 21:20
risks 17:15 18:5,10,21,23 19:4,22 20:12	RMP'S 48:25	214:8	running	safeguards
21:14,25 32:4 33:19,20	road 129:16	rough 232:15	196:23	136:4
34:11 109:8, 9,20,22,23 119:13,24	roadblocks 142:1	roughly 90:20 117:11 154:5	runs 156:5 202:17	safely 231:8
120:3 122:24 124:14,16,19 135:23,24	robust 33:3	round 84:23 140:7 185:2	rush 206:8	safety 119:3
143:13 148:20,24	104:15 123:21 127:6	205:5	Russell 12:14,16	said 41:10 57:9 112:7 127:22 128:6
149:6 154:13, 17 155:22,24, 25 156:11,23	128:11 129:2 150:15 152:20 172:5	rounds 192:13	13:16,25 22:18,20,22 24:10,21	132:21 141:24 142:5 145:7 151:5
158:12,15 159:3,4 160:2 161:21 164:15,18,21	robustness 127:2,11 172:14	RPS 68:2 86:2,16,22 210:15	27:25 28:2,13 29:21 39:4,13 40:6,7 41:1, 24 59:19 80:16,20,22	163:15 186:23 189:24,25 190:11
167:21 169:15 170:1 186:11,20,21, 24 187:2	203:18,22 204:3	RTL-3SS 70:12	81:2,5,9 85:7 96:1,12 191:20	193:13 194:4 214:22 216:2, 10,15 220:21 224:6,19
188:7 192:8, 12 206:3 207:4,18	Rocky 6:5 48:16 101:13, 18 141:21	RTM 165:20, 21,25 166:1	201:22 202:13 203:1, 14,17 204:14	sake 210:25

[
sale 122:19	162:2 181:21 215:16	131:24 147:14	35:18 37:14 69:5 70:14	175:5
sales 122:18	satisfies	148:19 153:10 159:2 176:6 182:9	92:15 107:5, 6,8,10 123:7 156:2,25	science 136:20 137:9,
Salt 15:8	181:23 193:20 196:24	194:12 196:10	157:2,9 160:13,14	11
same 12:5	100.24	213:20,24	165:11 190:1,	scientific
15:12,18,20		214:12 216:9	3,4 196:12	19:9 20:21
29:14,16	satisfy 13:15	217:3 218:25		136:16
40:10 51:3	169:4 188:3	219:15,23	schedule	
53:8,25 55:9	191:10	220:10,21	110:11	scope 40:18,
70:22 78:23	215:25	223:9 224:2,	110.11	25 134:19
79:9,10 82:3		6,11,14,19		224:20
90:24 92:6	save 100:8	226:6 231:14	scheduled	224.20
94:9 95:1,3,	3ave 100.0	232:25	145:1	
13 103:8				SCR 225:12
106:18 107:6	saving	saying 65:2	schedules	
108:12	119:21	74:22 76:11	208:18	SCRS 158:24
116:23		88:22 117:5	200.10	100.21
119:21 124:9	savings	197:13		
127:22 128:6	104:21	223:16,17	Scheduling	scrutinize
130:17	108:11	223.10,17	48:5,7	113:12
146:10	119:10			115:17
158:15	120:15	says 46:3,14,	scheme	
177:19	147:24	20 48:14 49:3	118:15	seasonal
197:16	147.24	55:8 194:17	132:10,11	20:24
205:10		202:9 217:4	227:3	20.21
215:17 222:2	saw 83:24	218:4	227.0	
229:25	105:12			second 8:17
		scenario	schemes	9:12 13:14,16
	say 12:3	35:19 37:16	148:22	15:8,15,22
Sarah 133:17,	23:22 39:15	56:11 90:17		16:2 49:5,8
18 175:21	41:8 44:21	92:2,12,13,19	Schmid	51:4 58:23
177:12 178:3	45:10 49:23	116:14	26:12,13	59:13 66:25
179:18,23	56:2 59:7	121:13,22	42:5,6 98:13,	97:16 106:11
	61:11 62:7,9	123:11,18	14,15,20	108:15
satisfaction	66:2 88:8	148:13 165:6	101:2 154:1,	121:16
225:2 226:12	91:3,21 93:4	196:6 207:13	8,9,11 170:6,	127:13 129:8
	102:4 106:15	100.0 207.110	22 171:12,21	139:22
	117:13	_	172:7,18,25	180:18 201:1
satisfied	128:14 129:1	scenarios	173:3,10,19	213:25
I				

Litigation Services | 800-330-1112 www.litigationservices.com

Index: secretly..severe

227:10	seen 22:25	selects 63:25	separate 94:7	services
	23:7,9 25:3	197:3	105:5 151:10	48:10 118:21
4.	35:22 68:21		197:17	137:19
secretly	86:19 87:24		214:17	
152:11	94:16 145:25	self-build	21	
		146:10		serving
	152:21		separately	170:18
section 17:16	173:17		144:15	
21:7 40:8	195:17,25	self-employed		
75:23 103:6		28:20		session 61:6
182:1 217:11			separation	137:2
	segment		151:14,16	
	133:23	sellers 77:17	101.11,10	
Sections	160:24			set 15:19
118:15			September	36:15,17
		semi 85:5	104:11	118:18 155:1
	segments		101.11	171:13
secured	89:3 184:12	sense 30:11		
175:23			sequentially	188:13
		68:16,17	105:16	189:10
	select 27:4	84:16 95:10	145:11	221:12
seek 36:24	64:2,3 92:17	117:17	143.11	
41:4 210:15	105:10,11	145:23		
	161:2	174:23	serial 36:25	sets 8:9
	101.2	175:16,20	129:13,21	106:19
seeking			•	193:19
41:10 163:9	selected 11:8	183:17	130:2 230:25	
	64:18 92:16	214:10 221:5		
	128:8,16		serious	setting 204:8
seeks 23:3	· ·	sensitive		
159:7,20	155:5 161:17		188:24 233:1	
,	167:5,10	182:22		settle 38:7
	193:18 213:4		serve 48:17	
seem 173:25		0000!!!!!!!		004416-4 04:4.4
213:24		sensitivities	94:23,25	settled 31:14
	selecting	107:25	144:2	
	218:15	216:24 217:1		settlement
seemed			0011100	
115:4		1,1 1,	serves	46:4,15,19
	selection	sensitivity	188:22	
	10:3,4 36:16	8:25 9:4,8		seven 196:12
seemingly	105:8 160:19,	37:4 200:19,	convice 6:2	36V611 130.12
154:18	25 161:11 ·	24 211:4	service 6:3	
			18:4 45:24	several 18:11
			101:12 104:1	113:3 142:24
seems 111:18	selections	sentence	122:3 171:11	110.0172.27
141:21	137:22	48:6 49:9	186:14,17	
148:13 226:5			188:17 [°]	severe 20:23
			I	I

Index: Shale..since

179:11	shortening 118:7	170:5 172:5, 7,16 173:23 187:3,5,8	148:16 181:21 197:1	120:20 154:24 157:16,20
Shale 103:25	shorter 50:22 54:16 57:9	189:13 190:7, 25 197:4	shrug 153:18	158:13 186:18
share 125:7 162:25 163:6	218:14	204:6 210:21 213:21,22 219:1 220:9,	side 25:7 92:15 93:20	Sigurd 45:8 46:1,21 47:2
shareholders 163:4 170:19	shortfall 112:5 119:8	11	109:20 175:7 198:7	,
shares 161:5	shortlist 9:19 10:7,22,23	shouldn't 147:14	sides 109:6	Sigurd-red 46:6
sheet 59:4 63:4	11:9 90:22 128:15,25 130:23	show 65:13 91:10 121:6	signed 137:3	similar 18:8 35:22 36:2,23 66:18 115:4
shift 155:24	160:21 193:16,17 210:3,7	147:10 178:23,24 182:19	significant 6:5 17:5,14, 24 20:12	122:19 226:11
shifting 205:7	218:23 226:18,24 227:17,21,25	187:25 216:16 222:5, 8	30:25 31:23 32:7 101:14 102:14	similarly 121:11,20
shock 123:23	228:16,18	showed	104:21 106:16	210:1
shoot 102:1	should 11:4 16:1,3 38:15	11:20 32:14 37:6 68:10 107:9 180:8	107:16 117:14 123:14 132:7	simple 157:8
shore 26:2	39:8 48:3 57:10 59:7 68:1,3 80:10,	218:5 220:16	136:17 156:11 157:8 161:15 164:3,	simply 66:5 121:14,24 165:12
short 140:8 166:9 167:22 204:25	13 83:21,22 88:9 89:8 103:14	showing 34:19 171:10	161.13 164.3, 21 170:4 172:8 182:1, 3,4,9 186:20	184:10 210:6 220:15 222:3
short- 108:17, 21 118:23	105:24 106:14 113:1 120:3,8 127:8,10	shown 9:7 63:17 65:7 119:7 146:3	187:2,24 189:16 192:8 204:22	since 10:23 11:2 12:22 13:19 47:12
short-term 17:21 135:11	137:10 138:3 140:1,23 145:13	shows 19:9 70:15 78:3,16	207:22 223:5, 23 232:1,16	84:9 106:18 132:10 182:20 185:23
136:5	153:25 157:7 161:15 169:5	96:25 106:20 112:4 147:23	significantly 37:10 110:2	191:13 194:17

Index: single..source

200:15 202:8 228:1	154:23	120:5,9 141:6 142:10,11,16,	197:7 204:8 217:9	41:7 177:11
single 38:5	slim 32:10	19 143:3 144:2 145:3,7 146:4 147:20	solicitations	soon 171:24
56:11 93:21 105:7 210:9	slope 78:17	152:20 181:23	146:7 147:15, 19,20 151:7	sooner 166:2
sir 22:12 141:4	slower 145:21	182:19,25 183:3,5 193:2,4,10, 12,16 195:18,	solution 161:1	sophisticated 146:13 176:1
site 146:14	small 11:23 161:18 166:9 185:3 217:5	19,21,22 196:2,4,7,13, 22 197:1,3,6,	solutions 88:11 137:14	sorry 9:19 26:24 31:18 39:16 49:7 55:21 59:12
223:3,22	smaller 159:3	9,12,15,23 198:7,13,24 201:20 211:3	solves 185:21	64:17 71:4 77:19 98:9
situations 94:10	snag 153:13	215:24 216:5, 9,10,16 219:3,4,6,24	somebody 176:18 231:2, 4	162:12 sort 10:9
six 58:18 103:5,8,10 106:14 123:6 215:7	Snarr 6:10 14:1,2,9 26:8, 10 42:2,4	220:1,8,14 224:3,5,12,24 225:1	somehow 38:23 152:12 177:11	35:22 54:11 68:18 91:6 93:21 94:20 129:18
skeptical	soft 188:20 213:9	solar-rich 143:25	someone	140:13 178:8 225:14
210:17	solar 12:4,7 18:9,11,12,	solely 194:18	31:10 170:19 174:18 231:5	sorts 151:4
skepticism 164:5	16,18 21:22, 24 26:18,24	solicit 166:23	something 40:12 75:22	sought 41:9 195:9,13
skewed 157:2	27:7 37:3,7, 14,19,21 86:8,13	solicitation 103:3,9 104:13,19,25	91:8 148:19 152:13 188:18 211:1,	sound 137:11
skews 157:10	89:14,22 90:10,22 91:15,16,19,	105:4 106:9 114:18 147:1,	2 228:5,11	sounds 67:7 70:9
skimmed 40:8	21 92:1,9,16 105:4,6,7,11, 13,17,21,22	3 163:22 187:17 192:20,25	somewhat 145:21	source 90:8,
slightly 98:21	106:4 108:2	194:2,3,18,19	somewhere	25 92:6

Index: sources..statement

sources 122:13	139:1	spike 148:9	stages 23:3	starting 8:5 195:3
South 133:24 134:4,6 177:12 179:1	specifics 23:21 26:4 specified	spot 64:24 76:5,9,15,20, 25 77:7 130:17	stakeholders 143:21 162:1 stance	state 15:5 19:20 21:10 28:14 43:1,5
Southwest 28:21	103:6,10,15, 17 106:14 111:21 113:17	spread 93:14, 18 94:14 199:11	162:15 stand 6:17,22 14:16 28:3	45:16,19 47:20 50:9 73:24 86:16 90:21 104:4 137:7,17
speak 32:5 44:4 49:15 53:11 65:25 88:6	speculate 209:15	spreading 146:19	58:8 205:25 232:2	138:25 139:9 149:1 163:10 210:14
speaking 95:17	speculation 35:4	Springs 102:21 204:24	standard 103:13,17 110:15 127:17	state's 169:2 stated 25:11
special 136:20	speculative 55:13,25 122:21	sprinkled 211:12	183:17 210:15	77:13 181:20 194:11 201:9
168:19 specific 23:8	156:21 164:19,24 185:3 211:14	squishy 207:17	standards 41:19 112:20	statement 7:12,16 16:21 22:2 31:7
25:2,25 45:20 53:12 76:12 120:15 130:7 131:7 179:21	speechless 132:24	stabilize 24:24	standpoint 99:6	41:2 45:13 48:5 50:1 53:2 54:3 57:17 81:17
specifically 20:21 29:6	spell 28:15	stable 141:12	stands 130:12	98:16 99:12 100:14,22 101:17 114:4
40:14 43:15 44:4 45:7 47:19 49:4	spelled 28:17 spend 132:3	stable-price 149:20	start 6:3 44:20 101:10 124:17 154:9	134:18 135:1 141:2 181:19, 20 191:18
59:10 124:16 134:24 139:4 150:17	spending 96:7	staff 43:12,16 150:4	156:1 179:7 189:6 205:1	193:13 196:22 200:23 204:13
163:12 specificity	spent 6:13	stage 8:9 164:7	started 44:11 96:19 215:5	205:23 214:4, 6 215:22

Index: statements..study

				-cilicitesseaay
			1	1
216:1 217:19,	182:9,17	step-by-step	story 163:9	structure
22 218:4	187:17,25	149:17	,	198:15
231:19	189:3 190:22	151:20		100.10
231.19			straightforwar	
	191:3,12	152:24	d 131:13	structures
statements	202:9,10,15,			197:22,25
7:9 48:2,8	22 203:4,7	steps 117:10		199:18
1	213:11	•	strains 184:7	199.10
55:23 98:12	215:16 225:9	127:24		
99:9 101:12				struggling
193:23		stewardship	stranded	23:4 93:10
197:19	statutes	•	154:24	20.4 90.10
229:14	103:10	19:19 137:5,		
231:21	106:15	13		studied 70:14
232:13	112:25		strategy	
202.10	113:11	still 6:23	105:16	
	113.11		109:10	studies 37:4,
states 19:12		43:14 57:11	113:21	5,20 50:16
48:23 109:5	statutorily	68:11,12		51:24 52:4,7,
136:24	125:25 131:3	72:10 111:12		13,14,17,21
1	123.23 131.3	117:2 153:19	strengthen	56:24 57:7
137:10,15		160:9 161:9,	124:9	
163:3 164:6	statutory	17 177:6		70:18 83:2
169:5 200:7	110:18	180:1 191:5,7		85:6 88:7
	113:18	202:25 206:1	stressing	133:22 160:9
-1-1I 100-1			218:18	161:6 172:12
states' 169:4	116:11	208:4 211:7		176:22 178:5,
	118:14,15	222:15 231:2,		24 212:21
stating	126:4 132:10,	5	stricken	
218:11	11 172:22		41:15 96:18,	
218:11	173:19	4. 1.4.	21 97:6	study 26:1
	181:25 202:7,	stipulation		32:14 34:20
status 20:18	16	36:3 42:25		50:24 51:4,14
26:21 27:2,7		43:12,16,19	strictly 130:2	54:11 55:17
		46:4,16,19		
110:21 116:5	stayed 152:7	47:6 163:14,	otriko 20.00	56:14 57:13,
184:21		18 210:14	strike 38:20	24 58:4 82:22
		.0 2.0	41:12,14,23	83:13,14,20,
statute 103:9,	stemming		64:17	24 84:3,10,
1	18:5	stochastic		11,12,15
13 106:14,16,		123:17	atuan al	129:25
17 113:7			strongly	169:17
116:9 117:9,	step 21:5		21:21 145:7	177:24 178:6
20 131:5	46:23 131:2	storage 141:7	192:1	212:18,21,23
132:1 163:22	135:15			· · ·
164:2 171:13	209:12	-1	otmusik 40:00	213:5,6
174:3 181:14		stories 205:7	struck 13:23	230:22 231:1,
				4
	<u> </u>	<u> </u>		

Index: studying..supported

			THACK BEAGY	
studying 54:8	45:1	182:15 207:10 208:1, 14,23 212:20	suggestions 167:14	superior 196:3
stuff 230:5	subsidize 109:18	213:7 221:4 226:21	suggests 123:3 158:21	supplement 39:15 100:7
subject 13:22 25:6 51:5 70:9 214:15	substance 7:12	231:12	165:7	101:10 121:25
225:19,23		suffer 161:18 210:19	Suite 28:22	supplemental
submission 8:11	substantial 107:25 108:1 109:16 123:21	suffering 144:22	summaries 40:15	29:11 32:15 34:17 37:12 52:10 56:16 58:24 59:13
submit 173:23 201:17 204:1	149:24 186:25 224:8	sufficient 48:19 56:4 117:19	summarize 12:24 135:4 192:15	60:6 67:1 69:14 76:22 82:25 83:3,
208:23 213:18	substantially 83:25 110:4	153:13 160:10 184:10 209:2	summarized 77:11 136:2	12,25 89:21 90:7 97:15,17
submits 170:3	substantiated 144:15	sufficiently 127:6	summarizes 60:11	supplied 55:24
submitted 13:4,6 48:3,8 177:22 206:8	substantive 61:24	suggest 40:23 98:20	summary 7:11 17:1	supply 25:21 146:20 161:2
207:19 Subparagrap	subtract 59:25	suggested	21:17 26:18 30:5,19 31:12 38:2,16,21	support 44:2 48:15,19 53:2 54:15 97:23,
h 209:7	successful 41:10	50:10 96:20 105:3 111:19 115:13 129:9	40:9,11,12,23 41:2,22 42:16 75:23 87:9	25 102:10 111:2 134:19 137:12,18
subscribed 95:4 185:20	such 32:7 33:11 34:13	169:1 172:21 182:15 193:1, 3,5	113:15 207:9	158:5,7,21 160:7 184:9 211:17,22
subscription 34:8 95:3	38:10 41:18 69:8,10 113:14 124:3	suggesting	summation 175:4 232:8	222:11
155:12 165:2 167:20	132:7 138:2 158:5 164:25	111:24 115:5 139:25 140:4 172:15	sunk 116:5 213:15	supported 42:21 44:5 104:24
Subsegment	171:14	208:13		

Litigation Services | 800-330-1112 www.litigationservices.com

125:21 168:16 206:25	208:11 surrounding 47:7	10 142:12 143:2,4 162:23 178:5, 6 194:19,22	198:16,17 219:12 225:13	84:4,5,20,22 102:15 119:12 124:12
supporters 210:24	survive 181:24	systems 155:13	taking 39:11 76:19 103:5 106:13 116:13	135:18 138:6 141:15,21 184:17 198:11 199:1,
supporting 40:24 supports	suspicion 203:6	Т	124:10 155:19 163:23 169:15 182:6	3,6 206:9 taxes 43:8,9
21:17 48:25 107:1 118:12 124:13,21	swear 14:18 28:5	table 50:23 51:19,22 60:8 62:21	195:12 198:18 206:14 219:4	TB 102:21 204:24
136:3 142:10 145:20 159:13 225:1	switched 84:24	tail 25:18 64:23	talk 47:17 60:4 130:19	team 151:17
suppose 28:1 115:1 193:7	sworn 7:3 14:23 28:10	take 6:22 17:11 21:22	151:17 153:6 156:23 161:19	techniques 56:15
198:19 surely 163:5 165:16	55:23 synopsis 46:2,14	30:10 88:9 94:20 97:7 99:9,24,25 111:24 128:4	171:19 193:20,25 197:18 200:17 222:1	technologies 137:19 143:5 144:5
surplus 85:22,25	synthesize 230:6	130:24 135:4 169:13 180:13 190:16 195:9	talked 153:16 199:9,20	temperatures 20:22
surprise 208:14	system 18:2 32:23 33:3 34:10 88:13,	198:1 199:11 217:11 229:2 232:25 233:1	talking 23:15 53:12 83:6 84:3 198:6,12	temptation 213:14
surprised 153:17	20 94:8 102:17 105:9 109:15 110:20 111:4,	taken 51:23 58:2 60:3 75:13 101:9	231:20 targeted 106:9	ten 32:13,18 57:18,21 58:1,3 101:21 144:10 146:1
surrebuttal 15:14,15,22 97:17 196:17,	7,9 113:22 118:24 119:9, 16 120:11	181:5 188:12 takes 74:7	tax 11:2 17:12 18:2,3,8,15	181:4 198:9 210:4
18,19 205:2	124:9 139:8,	144:20	10.2,0,0,10	ten-minute

Litigation Services | 800-330-1112 www.litigationservices.com

Index: ten-year..thereafter

ten-year	test 146:7 189:7 tested 106:4 110:3 testified 7:4 14:23 28:10 30:9 53:7,12 54:6,9 55:16 67:11 76:8, 21,24 77:14 79:2 105:19 120:1,9 122:10 123:16 133:19 141:20 142:13,24 143:3,15 144:7 147:25 157:13 184:2 194:7 195:6, 11 201:12 203:21 224:14 testify 30:22 testifying 15:9 28:23,25	13:4,18,24 15:13,14,15, 19,22,25 16:6,12,18 17:1,3 23:18 27:17 29:3,6, 7,8,9,11,16, 19,23 30:3,6 32:15 34:17, 24 35:24 37:12 38:25 39:3,15 40:9, 14,19,21,22, 25 44:18 48:7 49:19 50:6, 19,21,24 51:11,18 52:25 53:3,25 54:2 55:20 56:9,16 58:11,15,17, 24 59:11,13, 21 60:5,7 61:25 62:5,20 64:13 66:25 67:1,6,7 69:4, 15 70:13,19 71:5 72:16 75:19,24 76:23 77:5 82:16,19,23, 25 83:3,12 84:24 89:21 90:18 95:23 96:16 97:11, 14,15,16,17, 18,23 98:1,6 104:23	136:7,12,21 140:8 148:4, 15 151:13,15 178:10 182:18 183:5, 11 184:17,19 185:2,6 192:13,14 194:12 195:4, 25 196:16,17, 18,20 201:9 205:2,6,16 206:25 207:9 214:13 219:21 221:2 232:19 testing 128:10 than 8:4 19:1, 2 20:2 33:10 34:10 36:5 37:8 43:4 52:9 59:25 63:20 64:25 65:24 66:13 68:12 71:18 78:4 82:2 93:2 94:11,13 98:21 109:9 112:21 113:21 119:23 120:11,21,23 121:4 125:6 133:3 145:22	165:14 166:16 177:22 179:10,21 180:9 182:25 183:7,14 190:11 191:10 195:15 197:13 213:18 223:6 224:12,17 their 8:22 9:11 12:3 21:13 32:5 34:18 35:5 84:22 119:24 120:10,11 138:9 146:4 151:16 162:10 176:21 177:25 178:6, 21 184:8,21, 24 189:7,10 193:17 197:15 207:17,23 themselves 129:19 152:12 then-current 157:3
	·	18,23 98:1,6	121:4 125:6	

Index: therefore..top

therefore 8:3	31:20 32:19	155:12	101:1 106:8	21:7 102:20
147:12	62:17 132:18,	161:25	108:21,23	135:6 209:7
148:12,25	21 141:18	162:10	114:6 119:21	
149:14 151:6,	152:16	176:10 180:7	124:9 142:5	to 2026 0:0
19	203:23	193:14,18	143:14 150:1	to-2036 9:8
	217:23	195:3 196:12,	151:12 154:2,	
		13,17,19	4 162:3	to-2050 9:9
thermal 24:25		201:3	170:17	
26:3	thousands		182:21	
	129:3		185:25 196:3,	to-36 183:1
thing 31:1,23		throughout	5 197:20	
53:12 87:13	three 13:6	30:14 33:4	205:19 210:6	today 15:10,
89:15 127:22	48:13 58:1	36:17 133:15	214:5 222:2	18 16:21
128:6 153:10	99:25 100:2,7	134:20	228:25	28:24,25
176:17	103:9 156:24	136:11 185:1	232:21	29:15 30:17,
226:21,23	157:1,9 205:4	188:11	202.21	22 40:23 56:3
232:16	137.1,3 200.4	216:18		95:23 102:10
232.10			time-limited	103:11
	through 21:2	thwarted	21:23 138:6	134:18 135:1
things 32:18	32:10 33:20		168:13	
112:7 127:2	35:2 38:7	128:21	183:25	192:3 205:19
152:24	39:22 47:8		185:24	207:9 232:10,
230:23	49:21 50:16	tie 126:1	195:10	24
	53:1 57:20			
4	58:4,19 67:2	41 1 07 40		today's 121:3
thinking	69:5,20 70:21	tied 87:12	timed 174:4	122:6 158:2
87:22 231:3	81:7 88:4			165:3
	93:12 97:7	tightening	timeline	
thinks 65:3	100:25	123:25	160:4 227:15	
203:21	102:12	.20.20	100.1227.10	together 66:7
200.21	103:11			103:1 105:14
	106:19 107:5,	tighter 160:4	times 37:8	106:19
third 10:1	12,13 108:20		74:12 91:21,	126:24
73:3 109:4	110:7 114:22	time 6:14	22 169:10	163:24 165:5
	117:20 123:7	16:11 17:11	205:4	174:2 181:22
third-party	128:2 129:18	34:12 35:22		182:10
61:1,18 63:6	130:20	36:7 39:11	timing 120:13	
65:17 69:21		50:22 52:2	216:12	told 209:2
70:3 110:15	131:10,16 135:18	54:11,14,16	227:13	1014 200.2
230:6		64:19 75:4	232:24	
250.0	136:25 137:8,	82:17 86:17,	232.24	took 34:25
	18,25 143:2	24 87:1 96:2		178:7
thought 7:10	144:2,15		Title 17:16	
	146:20 154:5	99:23 100:9		top 44:24
	 	<u> </u>	<u> </u>	10p 44.24

Litigation Services | 800-330-1112 www.litigationservices.com

Index: topic..trolling

				pretrorring
49:5,8 50:8 55:7 60:8	207:15	transcripts 80:11	133:8 142:4 143:22 144:1,	travel 118:8
64:11 65:22 67:11,13 76:2 83:16	track 124:24 158:10	transfer	9,12,23 147:17 149:15,18	tread 61:4
topic 12:16	tracking 27:7	108:6,8 185:15	150:18 151:10,17,23,	treated 52:11 94:1
40:10	114:6 124:24 189:1	transition 86:21	24 155:11 159:20,21,25 160:2,6,10,18	treatment
total 34:10 73:15,18 101:20	trade 141:6	transitionary	161:6,8 165:2 167:7,19	30:23 84:4 173:7 201:4
156:18	traditional 24:25	34:4	168:12,20,23 172:12 174:18 175:8,	trend 78:16, 23 86:15
totality 71:13, 18,20 72:13	traditionally	transitions 157:19	15 176:4 177:24 178:8, 12,14 182:21	121:7 122:5 148:22,23
73:10 74:10, 18,19,20 75:1 106:25	64:22 transact 65:1	transmission 30:24 44:20,	184:6,9,11, 13,20 185:5, 15,21 207:10	trending 121:1
147:23 touch 33:21	76:9 77:7	25 46:7,22 48:17 49:1,5 53:17 69:20,	208:20 210:9 212:16 219:5, 11,18,25	trends 142:15 145:4,23
touched	transacting 77:18	21,24 70:3,4 71:10,13,14, 16,22 72:11,	220:3,4,6 222:5,7 231:7	148:6
78:13 87:9	transactions 33:7,8,9	20,21,25 73:22 74:2,3	transmission-	tried 116:14 216:17
touches 40:9, 10	72:12 76:16 77:10 79:6 112:22	87:11,17,22, 25 88:3,5,10, 13,17,20	queue 129:6, 11	tries 219:12
toward 11:15	114:23 119:23	89:3,9,10 93:14,19,21, 23,25 102:23	transparency 147:18	trigger 134:1
towards 21:6 64:22 122:4 135:15	143:11,19 166:17 220:18	107:19 108:3 109:17 110:25 111:9, 13 124:9	transparent 151:6	triggered 133:22 179:1, 3
199:23 200:12	transcript 80:14 97:12 194:24	125:3 127:10, 23 128:16 129:14,17	transpired 32:21 150:22	trolling 153:12
towers		130:2 131:9		
		I		I

Index: troubles..under

turn 8:13 44:18 45:23 46:10,17 48:1 50:5 51:10,17 52:24 53:23 55:4 58:11 60:6,22 62:3 67:8 69:14 75:18 153:14 161:1 203:9	type 10:19 165:17 218:2 types 120:7 184:4 199:17 typically 153:25 183:17	UIEC 28:2,9 30:22 95:25 96:11 206:1 208:24 211:1, 24 226:1,18 230:21 231:20,24 UIEC'S 212:1	unaffected 134:3 unassigned 163:4
50:5 51:10,17 52:24 53:23 55:4 58:11 60:6,22 62:3 67:8 69:14 75:18 153:14 161:1 203:9	184:4 199:17 typically 153:25	208:24 211:1, 24 226:1,18 230:21 231:20,24 UIEC'S 212:1	134:3 unassigned
67:8 69:14 75:18 153:14 161:1 203:9	153:25	UIEC'S 212:1	_
161:1 203:9			
		225:4,24 226:17	unbundled 68:2,9
turned 36:5	U		,0
152:4		Uinta 178:14, 15	uncertain 154:23
turning 33:8 36:13 37:18	U.s 136:24	ultimate 76:5	158:14 161:9 172:2 186:10
109:4 164:16	U.S. 19:12 25:12	79:22 217:6	uncertainties
twenty-year 56:3	UAE 28:2,9	ultimately 9:15,21 32:21	159:16 205:12
twice 205:3	30:22 54:5 61:23 95:25 96:10 192:1,	108:8 128:7, 24 129:11,21, 25 130:25	uncertainty 34:6 68:6
two 13:19 15:21 43:22 48:1,4 52:20 59:24 62:4	8,18 193:2 216:15 223:25 231:22	147:5 152:8 159:9 174:15 177:7 217:1 220:5	118:23 138:12 149:7, 8 206:13 207:7
65:1 97:1 103:4 120:12 126:22	UAE'S 223:25	un-modeled 108:6	unconditional 188:16
158:22 170:12 183:13	UCE 15:23 138:22 143:15	unable 223:23	unconsidered 170:3
204:25	UCE'S 140:24	unacceptable	uncontested
	147:25 148:15	158:19	46:4,15
98:16	UIE'S 225:5	unaddressed	under 6:23
t	36:13 37:18 109:4 164:16 wenty-year 56:3 wice 205:3 wo 13:19 15:21 43:22 48:1,4 52:20 59:24 62:4 65:1 97:1 103:4 120:12 126:22 158:22 170:12 183:13 199:17 204:25 208:13 229:3	U.s. 136:24 U.s. 19:12 25:12 Wenty-year 56:3 UAE 28:2,9 30:22 54:5 61:23 95:25 96:10 192:1, 8,18 193:2 216:15 223:25 231:22 UAE'S 223:25 170:12 183:13 199:17 204:25 208:13 229:3 U.s. 136:24 U.s. 19:12 25:12 UAE 28:2,9 30:22 54:5 61:23 95:25 96:10 192:1, 8,18 193:2 216:15 223:25 231:22 UAE'S 223:25 UCE 15:23 138:22 143:15 UCE'S 140:24 147:25 148:15	U.s. 136:24 U.s. 19:12 25:12 UAE 28:2,9 30:22 54:5 61:23 95:25 96:10 192:1, 8,18 193:2 216:15 223:25 48:1,4 52:20 59:24 62:4 65:1 97:1 103:4 120:12 158:22 170:12 183:13 199:17 204:25 208:13 229:3 U.s. 136:24 Ultimate 76:5 79:22 217:6 Ultimately 9:15,21 32:21 108:8 128:7, 24 129:11,21, 25 130:25 147:5 152:8 159:9 174:15 177:7 217:1 220:5 UCE 15:23 138:22 143:15 UCE 15:23 138:22 143:15 UCE'S 140:24 147:25 148:15 Unaddressed

Index: under-earning..urges

			ilidex: ullder-e	earningurges	
26:23 27:5 31:20 39:15,	understandab ly 36:10	unfair 152:13 213:25	unnecessary 113:14	158:12	
16 90:16 102:20,22 105:7 106:1,	116:16 understandin	223:21 unforeseen	unneeded 112:21	unwillingness 155:20	
15 107:4 111:18 112:25 114:15 115:5	g 30:8 53:19 63:3 64:15,16 90:12 126:14	142:1 unfortunate	unpalatable 163:2,5	up-sloping 64:22	
147:13 167:6 182:14 187:24	129:10 137:9, 11 139:24 195:9 231:22	127:23 unfortunately	unproven 165:1	update 112:9, 13	
203:10 209:12 213:10 227:8 232:25	understands 158:11 166:8	180:18	unqualified 186:11	updated 20:9 61:17 112:14 157:4	
under-earning	understated 108:14	40:19	unrealistic	upfront 177:3,5,8	
undergone	understates 120:24	123:1	unreasonable	upgrades	
207:22 underlying	understood 149:23		170:18 unredacted	25:15 102:24 144:9,13,18, 23 149:16	
33:13 underproduct	189:24 undertake	units 148:8 University	8:4 13:10 unrelated	upside 107:16	
ion 124:18 207:5	206:20	30:15	72:17,23	upward 121:7	
understand 19:6 49:17	undertaking 37:24	unjustly 164:13	unspecified 182:11	upwards 78:17	
77:6 130:10, 13,17 164:14 177:25 178:1	undone 129:5	unknown 18:25 19:24 182:14	until 100:21 101:5,7,8 111:5 142:16	urge 144:17 145:7,10	
187:21 190:13 212:23 217:18	undue 217:8 unexpected	unlike 37:12 38:5	144:13,18 175:4 184:16 185:6 194:8,9	149:4,17 214:18	
217.10	123:22	30.0	unwilling	urges 164:1,	

Index: urging..vendors

11 urging 171:21	uses 123:1 221:14 using 8:1	138:25 139:5, 6,7,9,11 141:10,14 144:2,4,21 146:21,22	6 201:6 218:13 utility's 69:12	147:11 155:15 157:7 161:12 165:1 167:19 169:25 176:3
use 11:10 17:12 44:13 54:12 56:9,15 68:8,12 77:11 82:14,17	11:6,19 12:20 34:16 35:8 50:16 51:22 52:2,4 54:15 57:15 82:16	147:5,24 162:10,15 163:2,6,16,21 164:13 167:8	78:6 92:24 117:3 utmost 8:8	218:6 219:8 221:8 value-adder
83:20 84:19, 21 85:19	84:25 92:1 107:10 125:7	170:14,17,18 171:1,11,23 184:1 186:19	V	140:1
108:11 122:16 131:2, 6 137:11 159:8 193:6 199:8 208:3	147:9 156:3 162:20 169:17 183:1 198:8 199:22 229:25	200:22 204:18 207:2 209:14 210:18,21,23 227:4 229:24	Vail 133:19 144:8,9	values 8:20 11:7,10 77:11 108:12 142:22 200:19
218:20,22,24 221:16 229:22 232:14	usually 31:6 56:24 145:12	Utah's 95:5 125:5 164:12	valid 141:22 validity 156:3	vanish 211:15
used 20:4 51:15 52:5,7 53:9 56:8,16,	Utah 7:15 9:16 12:17 14:12,22 15:11 17:2,	Utahns 20:16 21:2,15	valuable 141:25 231:6, 10	variables 168:10
24 62:17 63:14 76:13 77:2 81:24 83:19 94:23,	15,16 18:12 19:17,22 20:21 21:7, 11,17 27:22	utilities 36:25 41:8,10 48:9 54:25 68:23 78:15 86:1,4,	value 11:2,22, 23 20:15	variation 155:16
24 107:6 114:7 148:17 156:13	29:1 30:15 34:9 45:15, 19,21 47:4,20	6,14,22 88:2 103:21 145:25 146:2	52:12 56:19 57:24 59:8,9 65:19 66:5, 13,23 68:9	variations 25:13 155:21
216:22,23 219:2 220:24 230:9	49:12 50:3 95:5,7 102:14 103:6 106:23	148:22 169:8 utility 21:9	69:8,10,11 70:5 81:24 82:9,24	variety 115:21 190:4
useful 55:17 138:9	113:24 118:14,16 119:4 122:4 125:3 134:18,	38:8 118:21 145:20 146:5, 10,22,25	83:22,23 84:5 91:18 95:14, 15,19 107:18	Vastag 207:1 vastly 196:3
Users 29:1	20,22 136:2, 7,12,20 137:1,2	147:12 152:18 171:6 187:20 191:5,	108:1 119:15 123:15,19,22 140:10,11,22	vendors

Index: venues..weight

120:23	180:7 183:10	waits 225:14	145:25 173:5	93:4 95:18
155:24			174:24 175:3	110:10 123:9
	viewing 79:15	waive 129:12	187:18	129:15
venues 148:5	viewing 75.16	212:24	189:22,23	137:20 166:3
1011400	_	212.21	192:21	171:18 176:9,
	violate		193:25	12,14,16,18
verified	172:22	waive-ability	196:21	177:16 198:4,
173:23		127:14	197:18 200:6	5 199:17
	virtually		212:9,11	203:11
verify 128:13	155:4,20	waive-able	217:3 220:10,	207:21
209:1	,	129:23 130:3	21 222:22	214:19
			224:13 225:7	215:17,18
version 0:4.4	volatile 121:9	ei.red	226:20 229:8,	232:19
version 8:1,4	124:1	waived	10 231:14	
149:2 200:4,5		131:19	232:6,11	ways 26:2
	volatility			62:25 88:3
versions	23:25 24:4	waiver 36:24	wanted 9:20	89:8 129:25
13:20	142:23	38:23 40:2	10:7 13:17	215:14 228:3
	143:14	41:4,6,9,11,	51:8 148:19	
versus		13,18 116:25	153:10,24	website 13:1
103:25 127:9	voltage 111:2	117:2,7,9,16,		website 13.1
187:21	222:11	19,25 130:15	warn 171:6	
197:22	222.11	173:3,15,21,	waiii 171.0	Wednesday
107.22		22 191:3,7,12		194:25
	volume 156:8	202:22 203:9	warning	
viable 167:6		212:18,23	193:7	week 14:5
	voluminous	213:19,21		102:8 191:23
view 32:3,6,8	46:18		warranted	232:15
33:18 56:20		walk 97:7	149:21	
57:6 78:23	voluntem: 0:0		158:16	
80:1 82:5	voluntary 6:6	ant 40:0	-	weeks 86:10
85:5 93:10	101:15	want 40:6		204:25
95:17 108:17	106:16	50:25 51:21	water 20:24	227:18
116:4 117:2		52:1,3 67:20		
120:18 126:6,	W	74:6 79:2	way 6:21	weigh 103:14
8 171:5 173:7		81:19 83:5,8 84:1 91:3	28:21 31:16,	202:4
190:18 191:3		102:5,8	17 52:11	
202:12	wait 39:6	102.5,6	56:17,22 63:2	weight 38:15
	111:5 144:17	116:1 118:7	79:14 80:24	55:13 104:5
viewed 37:16	175:4	130:8,9 132:2	82:5 84:7	157:8 161:15
91:14,15		134:14	87:18,22 90:5	172:5 204:6
		10 1		1, 2.0 20 1.0
				I

Index: weighted..wind

weighted 25:5 27:4 143:12 207:10 121:2,8 66:23 157:9 40:3 41:9,18 144:23 129:12 66:8 68:1,3,17 70:17 79:9 162:11,12,15 whom 28:18 135:19 weighting 80:1 87:11 169:14 176:7 whom 28:18 137:19 138:1, 8,11 141:12 93:5 94:13 103:16 104:8 188:22 wide 38:4,10 143:5,12,19 well-being 105:24 189:25 204:4 widely 149:11 25 148:9 21:2,10 106:12 110:19,20 widely 149:11 230:12 144:1,21 124:4 17:21 123:7 126:2,3 127:6 87:6,8,15 wider 21:6 152:19,22 went 64:23 136:14 135:8,9 widesyread 160:10 160:10 227:19 161:16 172:4, 21 174:19 180:2 181:14 136:16 136:16 136:16 136:16 180:17 18:3 93:3 149:1 196:6,14 132:14 132:14 180:17 18:3 180:17 18:3 177:5 120:16,22,24 207:21 150:11,12 20:13 180:19 18:3 180:19 18					
Western 202:16,22,24 150:11,12 21:1 23:18,22 196:9,21 148:3 21:5 224:2, 151:3 170:7,9 24:6 25:5 28:2 32:9 203:19 148:3 221:5 224:2, 16 177:10,18 33:14,15 210:19 211:7 whatever 181:10 9,23 46:23 230:16 78:20 94:5 97:3 187:12,14 9,23 46:23 230:16 97:9 99:6 97:3 189:18 68:7 70:11 23:23 77:8 23:25 whereas while 18:24 23:23 36:21 204:18 212:3,5 87:1,17 89:5 94:14 95:5,6, 7 97:5 101:23 97:5 101:23 102:13 102:13 102:13 30:24 32:24 37:19,22 43:3 53:16 72:1,10 53:16 72:1,10 87:12 88:15 53:16 72:1,10 87:12 88:15 90:10 90:16 87:12 88:15 90:10 90:16 90:10 90:16 90:10 90:16	65:23 157:9 weighting 66:8 well-being 21:2,10 well-suited 124:4 went 64:23 130:20 227:19 West 30:14 33:4 86:18 93:3 149:1	40:3 41:9,18 68:1,3,17 70:17 79:9 80:1 87:11 93:5 94:13 103:16 104:8 105:24 106:12 110:19,20 114:17,18 117:21 123:7 126:2,3 127:6 135:8,9 136:14 140:14 161:16 172:4, 21 174:19 180:2 181:14 182:4 194:5 196:6,14 197:23 201:2	144:23 145:20 162:11,12,15 169:14 176:7 183:18 188:22 189:25 204:4 219:23 White 16:25 27:12,14 87:6,8,15 88:21 89:16 103:25 114:5, 9 118:6 125:18,19 130:6,7 132:14 134:13 138:18,20	whom 28:18 wide 38:4,10 widely 149:11 230:12 wider 21:6 widespread 136:16 wildly 195:20 will 6:22 17:14,18 18:4	129:12 135:19 137:19 138:1, 8,11 141:12 143:5,12,19 144:1,21 145:9 146:21, 25 148:9 149:14,18 152:19,22 153:20 154:3 160:10 162:17,21 165:2 166:12 169:9,19,21 180:17 181:3 182:12,13 183:19 186:14,16,23 187:8 188:8, 13,23 194:5
whether 122:20 10:18 12:19 124:13 136:7 17:17.23 21:8 142:4 9 wholesale 110.17, 19,20 111:9 114:18, 102:21 103:2 10:18 21 104:8 21	Western 148:3 whatever 78:20 94:5 97:9 99:6 whereas 160:6 whereupon 233:4 whether 10:18 12:19	202:16,22,24 207:21 213:10,16 221:5 224:2, 11 whichever 97:3 while 18:24 23:23 36:21 40:11 48:18 56:18 57:8 104:2 105:23 115:13 119:14,21 122:20	150:11,12 151:3 170:7,9 174:9 175:10, 16 177:10,18 179:14,19 181:10 187:12,14 189:18 191:21 202:1, 2 204:18 212:3,5 whole 10:16 34:5 93:12,21 140:15 215:21	21:1 23:18,22 24:6 25:5 28:2 32:9 33:14,15 41:24 43:7,8, 9,23 46:23 48:17 67:20 68:7 70:11 72:3 77:8 87:1,17 89:5 94:14 95:5,6, 7 97:5 101:23 102:13 104:21 106:21 107:2 109:16 110:17,19,20 111:9 114:18,	196:9,21 198:17 203:19 210:19 211:7 213:8,24 230:16 232:25 win 169:21 wind 12:6 30:24 32:24 37:19,22 43:3 53:16 72:1,10 87:12 88:15 89:10 90:16 91:16,19 92:8

	_	_	_	- Willaycars
105.6 10 11	winners	witness 6:40	working	wrote 64:13
105:6,10,11,		witness 6:13 7:2 14:22	working 31:20 141:7	wrote 64:13
13,17 106:2	145:15		31:20 141:7	
108:2,22		28:1,9 54:5		Wyoming
109:18 110:1,	winning	120:1 123:4	works 84:6	32:24 42:24
3,16 111:10	175:23	125:21	129:15 176:2	43:3,6 44:1,5
112:16		139:20		89:13 94:16,
117:14,25		143:15 144:8		19 95:6 110:7
120:9,14,16	wins 169:20	157:1 168:25	world 32:17	138:24
128:10 141:6		229:11,16	122:3	160:19 161:3
142:8,12,16,	wise 196:25			178:7 179:15,
22 143:3		witnesses 6:9	worries	20 180:1,6
144:5,24		78:12 142:25	218:10	210:8 231:7
145:4,14	wish 202:19	219:22	210.10	210.0201.1
146:1,13		213.22		
152:20	wishes 169:4		worse 160:12	Y
156:15,16	WISHUS 100.4	wonder		
157:24 160:8,		208:15	worth 39:11	
10,19 168:24	wishful 231:3		41:21 155:18	year 19:17
178:7 182:24		wondering	169:22	23:10 25:17,
183:7 185:9	withholds	wondering 14:2	103.22	18 57:2,4
186:23	162:16	14.∠		64:23 84:5
193:17	102.10		WRA 48:10	102:6 109:1
194:19,23		word 7:14	49:3 99:9	
195:23 196:9,	within 43:21		118:11,19	158:3,4 189:7
10,23 197:4,	47:11 70:23		124:13,21	199:12
16,24 198:24	84:12 109:23	words 11:13	136:2 180:22	
207:11 210:8	217:8	76:12 81:19		years 24:3
215:23 216:6,		104:2 105:12		32:13,18 33:3
7,12 219:3,4		126:12	wrap 134:15	55:11 [°] 57:18,
220:25 221:9	without 11:19	138:24	135:2	21 58:1,3
222:14 224:6,	25:2 33:5	174:21 211:3		59:1 65:1
7,10,25	62:24 63:18	229:13	wrap-up 10:9	86:20 88:2
7,10,20	79:25 84:14			108:25 121:9,
	86:2 88:4	work 91:2,11,		14,23 123:13
wind- 143:24	109:17 111:9,	12 99:16	written 9:5	144:10,20
	11 116:13	111:6 150:4	51:3 203:2	146:1,2
wind-only	118:1 132:3	159:9 183:5		154:25
195:7	147:8 154:20	224:5,21	wrong 23:2	155:14
130.1	157:18	227.U,21	158:13,17	157:15
	168:23		166:14 169:9	158:18 198:3,
window 98:16	169:10 171:9	worked	195:20	9,15,22,25
	180:4,10,11	109:22 134:9	205:16	199:12,14
winds 144:2	185:8		200.10	133.12,14
winds 144:3				
	•	-	•	-

HEARING, DAY 4 DOCKET NO. 17-035-40 - 06/01/2018 Index: yesterday..zero-fuel-cost

201:3,13,14 205:22 221:8	92:2,17 121:13,22 123:3 148:12			
yesterday 6:11,23 22:24 118:11 178:10	zero-fuel-cost 102:17			
yesterday's 157:12				
yet 23:21 130:15 159:7 167:12 180:1 194:24 226:10				
yield 157:16				
yielding 197:15				
yours 100:21, 23 174:12				
yourself 30:10				
yourselves 150:4				
z				
Zenger 207:1				
zero 20:3				