

BEFORE THE UTILITY FACILITY REVIEW BOARD

---

In the Matter of the Petition	}	Docket No.
For Review Between Rocky		10-035-39
Mountain Power and Tooele County		
for Consideration By the Utility		
Facility Review Board.	)	Volume I of II

---

TRANSCRIPT OF HEARING PROCEEDINGS

---

TAKEN AT: Public Service Commission  
160 East 300 South  
Salt Lake City, Utah

DATE: May 10, 2010

TIME: 9:12 a.m.

REPORTED BY: Kelly L. Wilburn, CSR, RPR

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

APPEARANCES

Utility Facility Review Board:

Ted Boyer (Chairman)  
Ric Campbell (Commissioner)  
Ron Allen (Commissioner)  
Monette Hurtado  
Mayor Joe Johnson

-o0o-

For Rocky Mountain Power:

D. MATTHEW MOSCON, ESQ.  
RICHARD R. HALL, ESQ.  
STOEL RIVES, LLP  
201 South Main Street, Suite 1100  
Salt Lake City, Utah 84111  
(801) 328-3131  
(801) 578-6999 (fax)

R. JEFF RICHARDS, ESQ.  
ROCKY MOUNTAIN POWER  
201 South Main Street, Suite 2200  
Salt Lake City, Utah 84111  
(801) 220-4734  
(801) 220-3299 (fax)

MARK C. MOENCH, ESQ.  
PACIFICORP  
201 South Main Street, Suite 2400  
Salt Lake City, Utah 84111  
(801) 220-4459  
(801) 220-4058 (fax)

For Tooele County:

DOUGLAS HOGAN, ESQ.  
SCOTT A. BROADHEAD, ESQ.  
TOOELE COUNTY ATTORNEY  
Gordon R. Hall Courthouse  
74 South 100 East, Suite 26  
Tooele, Utah 84074  
(435) 843-3120  
(435) 843-3127 (fax)

-o0o-

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

WITNESSES

<u>DARRELL GERRARD</u>	<u>Page</u>
Direct by Mr. Moscon	28
Cross by Mr. Hogan	71
Redirect by Mr. Moscon	104
<u>BRANDON SMITH</u>	
Direct by Mr. Moscon	111
Cross by Mr. Hogan	159
198Redirect by Mr. Moscon	198
Further Redirect by Mr. Moscon	204

-o0o-

EXHIBITS

<u>No.</u>	<u>Description</u>	<u>Page</u>
	Prefiled Testimony of Darrell Gerrard	70
	Prefiled Testimony of Brandon Smith	159

-o0o-

(The previous exhibits and related testimony were prefiled and are part of the Utility Facility Review Board record and filed at the Public Service Commission.)

-o0o-

1 MAY 10, 2010

9:12 A.M.

2 P R O C E E D I N G S

3 CHAIRMAN BOYER: I'd like to first of all  
4 this morning welcome you all here this morning. This  
5 is the time and place duly noticed for a hearing  
6 before the Utah -- Utility Facility Review Board.

7 We five are the members of that. My name is  
8 Ted Boyer, and I'm the Chairman of the Utah Public  
9 Service Commission and also serve as Chair of this  
10 Board.

11 This is the hearing to talk about the  
12 proposed -- or at least a portion of the proposed  
13 transmission route through portions of Tooele County.

14 Before we begin -- I'm gonna take appearances  
15 of the lawyers present, but before we begin are there  
16 any preliminary matters? I understand that there's  
17 been some discussion about how to proceed  
18 schedule-wise, and maybe we can hear that first on the  
19 record.

20 MR. MOSCON: Sure. Thank you, Mr. Chairman.  
21 Two things. First, as far as the process for the  
22 hearing goes, Counsel have had a chance to speak. And  
23 the process that we think would make the most sense is  
24 today each side will take about 10 or 15 minutes to  
25 make a very brief kind of opening statement remarks,

1 just let you know how the parties plan to proceed.

2 Then Rocky Mountain Power will call its two  
3 witnesses to the stand today. And they will, of  
4 course, be subject to cross examination by Tooele  
5 County. And I think that's all that we intend for  
6 today.

7 I believe that we will finish that today, so  
8 that tomorrow we will simply have the public comment  
9 portion of the proceeding. And then on Wednesday the  
10 parties would come back. And if there was a need,  
11 either based on testimony that came in today or any of  
12 the comments in the public hearing portion, if the  
13 parties felt the need for any rebuttal, they would do  
14 it at that time.

15 And barring that the parties would then argue  
16 the case, so to speak, on Wednesday to the Board.  
17 Kind of summing up the evidence that's been presented.  
18 Making their, you know, case or argument as to what  
19 the law provides or what options they believe -- each  
20 party believes that this Board does or does not have.

21 So that is the process I think we both talked  
22 about. I also would like to raise a question or get  
23 some guidance from the Board that, again, we've both  
24 talked about. We've been made aware that the Board  
25 has retained a consultant. And we completely

1 understand the need for the Board to do so.

2 I think both sides would like to have an  
3 opportunity -- if the consultant ever provides data,  
4 information, answers, or evidence, or opinions,  
5 recommendations -- that each side have a chance to see  
6 that, perhaps in writing, and have some time frame to  
7 respond to it.

8 If the consultant merely is with you in case  
9 questions arise and really nothing comes up, obviously  
10 we don't need a report saying nothing came up. We  
11 just don't want to not know or have -- not have a  
12 chance to respond to any opinions offered by the  
13 consultant.

14 Doug, is that --

15 MR. HOGAN: That's correct.

16 MR. MOSCON: -- a fair statement?

17 CHAIRMAN BOYER: Okay. Thank you,  
18 Mr. Moscon. The schedule is acceptable to us, and I  
19 think that makes great sense. We'll follow the  
20 Administrative Procedures Act. Most of you -- I know  
21 at least Mr. Richards has appeared before, and  
22 Mr. Moench.

23 We'll take appearances. But in terms of  
24 process what we would anticipate hearing is we'll hear  
25 the opening statements first. And then we'll hear

1 from the first witness from Rocky Mountain Power  
2 Company.

3 We will then provide an opportunity for cross  
4 examination by the opponents of the proposed site.  
5 The Board members may have a question or two as well,  
6 we'll ask those questions, and then we'll provide an  
7 opportunity for redirect.

8 And we'll follow through the witnesses that  
9 way. And then we'll move to the opponents. And if  
10 you have witnesses, we'll hear from them in the same  
11 fashion. With an opportunity for cross examination,  
12 Board member questioning, and so on.

13 With respect to the consultant that has been  
14 hired, the consultant was actually hired by the  
15 Division of Public Utilities, which is a sister agency  
16 in the Department of Commerce.

17 And we envision -- we, at least speaking for  
18 the three Commissioners, we are not electrical  
19 engineers, nor do we have any experience in land use  
20 planning. And so he has been retained to help us with  
21 any technical questions we might have.

22 He may, in fact, formulate questions for us  
23 that we can ask your witnesses. It's not our  
24 intention to use his testimony or his expertise on  
25 which to base our decision. That is to say, he's not

1 going to be a witness in the case.

2 If it turns out that we do need a written  
3 report from him, we'll certainly provide you an  
4 opportunity to review it and respond to it in an  
5 appropriate fashion. We don't -- at this point don't  
6 contemplate doing that.

7 Is there anything further we need to talk  
8 about? Oh, we will, we will take a break about every  
9 hour and-a-half to give our good reporter an  
10 opportunity to rest, and the attorneys to collect  
11 their thoughts, and the Board members as well.

12 If there's nothing further, then let's take  
13 appearances for the record. Let's begin with the  
14 proponents of the transmission siting.

15 MR. MOSCON: Yes, thank you. Matt Moscon,  
16 from the law firm of Stoel Rives, here on behalf of  
17 Rocky Mountain Power.

18 MR. RICHARDS: Jeff Richards with Rocky  
19 Mountain Power.

20 MR. MOENCH: Mark Moench on behalf of  
21 Pacifi Corp and Rocky Mountain Power.

22 MR. HALL: Richard Hall, from the law firm of  
23 Stoel Rives, on behalf of Rocky Mountain Power.

24 MR. HOGAN: Mr. Chairman, Doug Hogan, Tooele  
25 County Attorney, on behalf of Tooele County.



1 CHAIRMAN BOYER: Welcome Mr. Hogan.

2 MR. BROADHEAD: And Scott Broadhead, Tooele  
3 County Attorney's Office.

4 CHAIRMAN BOYER: Would you spell your name  
5 for the record, Mr. Broadhead?

6 MR. BROADHEAD: Yes. B-r-o-a-d-h-e-a-d.

7 CHAIRMAN BOYER: Okay. Well, let's begin by  
8 hearing opening statements. We'll start with Rocky  
9 Mountain Power first, and then we'll move to the  
10 County.

11 MR. MOSCON: Thank you, Mr. Chairman. And  
12 I'm happy to come to the podium to sit, if there's a  
13 preference of the Board.

14 CHAIRMAN BOYER: You're fine at counsel  
15 table. If you're comfortable there, that's fine.

16 MR. MOSCON: However it's easiest for the  
17 Board. Let me simply begin by thanking the Board, on  
18 behalf of my client, for their time and attention in  
19 helping us get this critical project complete. We  
20 recognize that each of you has a day job, so to speak,  
21 and that it's been not without effort on your part to  
22 be here.

23 We're very aware of the vast amount of data  
24 that's been provided to this Board to review, and the  
25 further information that is still being presented to

1 the Board. So let us begin by thanking you for your  
2 time. We realize this is not an easy task that's been  
3 given to you.

4 On the one hand you have my client, the power  
5 company, telling this Board that there is a particular  
6 route that is absolutely critical for it to provide  
7 power to a critical load area. And on the other hand  
8 you have Tooele County saying that it cannot live with  
9 this route.

10 And we recognize the difficult position that  
11 the Board is in. I'd like to chat with you for just a  
12 minute, if I can, to describe very briefly the project  
13 and the testimony that the Board will hear from Rocky  
14 Mountain Power today.

15 The study for this project began some five  
16 years ago. My client has spent approximately  
17 \$14 million to date doing its very, very best to try  
18 and study all alternatives to plan for and site this  
19 project.

20 Tooele County would have this Board believe  
21 that my client simply chose the fastest, cheapest  
22 route, ignoring all other alternatives. Just looking  
23 at the bottom line and what the quickest thing to do  
24 would be. But the testimony that you'll hear today  
25 will demonstrate that these assertions or implications

1 are simply not true.

2 The project that is before the Board consists  
3 of 141 miles of line. And of those 141 miles, Rocky  
4 Mountain Power has already agreed to move or modify  
5 approximately 80 miles of that line.

6 So this is far from a case of a power company  
7 being unwilling to compromise, being unwilling to look  
8 at and consider alternatives. There are more miles  
9 that it has compromised on than there are remaining  
10 miles that it has not moved.

11 And of those approximate 60 miles that it  
12 hasn't moved, for the vast majority of those remaining  
13 miles the Company simply hasn't been asked to make any  
14 adjustment. In fact, really we are here today  
15 focussing on only a few short miles immediately behind  
16 Tooele City.

17 By statute, both Federal, State, industry  
18 standards, my client cannot willingly jeopardize the  
19 reliability and efficiency by which it delivers power  
20 to the many citizens who need it in order to appease  
21 some few citizens that are opposed to the route.

22 So we're here this week before the Board to  
23 discuss my client's need for the route, and  
24 specifically its need for the particular alignment  
25 that it sought a Conditional Use Permit from Tooele

1 County for.

2 I'd like to talk to the Board about the  
3 testimony that it will hear today. First, my client  
4 will call two live witnesses today. The first is  
5 Mr. Darrell Gerrard. Mr. Gerrard is an electrical  
6 engineer and is vice president for transmission and  
7 system planning for my client.

8 He personally has more than 30 years of  
9 experience in the utility business. He will speak to  
10 the Board to generally describe the needs my client  
11 has for the project. His testimony will be based on,  
12 though highly summarized, from the written testimony  
13 that he filed in this docket.

14 Importantly, in its response to my client's  
15 petition, Tooele County has agreed that there is a  
16 need for this project as a whole. And has even agreed  
17 that the project, including a new substation, should  
18 be located in the Tooele Valley.

19 Therefore, the issue of need is not before  
20 the Board at this time. That has been stipulated, if  
21 I may. Nevertheless, Mr. Gerrard's testimony, though  
22 brief, is highly important for the Board. There's  
23 really three reasons.

24 First, Mr. Gerrard's testimony will clarify  
25 for the Board that the specific needs of this project

1 drive its design. That is, by modifying any certain  
2 aspect of the design of the project you can actually  
3 undercut the very benefit that this project is  
4 designed to produce for the ratepayers across this  
5 state and across my client's entire system.

6 My client will also show that providing a  
7 backup path for energy delivery into the critical load  
8 area is of utmost importance as far as the design of  
9 this project goes. And that will be a critical fact  
10 that the Board will see as it deliberates this matter  
11 further.

12 And finally, Mr. Gerrard's testimony is  
13 critical for the Board to hear as he describes the  
14 immediacy with which the Company needs a permit to  
15 begin this project, and the consequences that would  
16 await the Company and its ratepayers across the state  
17 if the project is delayed further.

18 He has prepared some visuals that we will put  
19 on the screen for the Board. We also have hard copies  
20 that we can produce for the -- to have in the record.  
21 And we think that these will be important to  
22 demonstrate some of the more critical engineering  
23 aspects that go into the specific need for this  
24 project.

25 The other live witness that Rocky Mountain

1 Power will call today is Mr. Brandon Smith. Mr. Smith  
2 is an engineer, with a background in both civil and  
3 environmental engineering. And he is a project  
4 manager in the Transmission Delivery Department for  
5 Rocky Mountain Power.

6 Again, in summary form, Mr. Smith will  
7 describe for the Board the detailed process the  
8 Company went through in siting this project, and how  
9 the Company interacted with the Bureau of Land  
10 Management as the BLM independently analyzed this  
11 project.

12 He will describe not only the routes that the  
13 Company and the BLM identified as the most likely  
14 potential corridors, but how the Company met with  
15 citizen groups and community leaders and analyzed  
16 routes suggested by these groups in the efforts the  
17 Company went to try and build consensus for the  
18 project.

19 He will take the Board through a discussion  
20 of each of the routes in the Tooele Valley and  
21 describe the pros and cons of each route. And I think  
22 that will be extremely important for the Board to  
23 understand.

24 Both Mr. Smith and Gerrard are  
25 highly-qualified individuals, but it's important to

1 realize that they are each only a part of a much  
2 larger team. Again, five years and \$14 million have  
3 gone into the study and preparation of this route by  
4 my client, and that does not count for the work that  
5 the BLM has done independently.

6 I'd also like to point out to the Board that,  
7 though there won't be a live witness, that one form of  
8 testimony that the Board has received and that it  
9 should consider throughout this matter is the Final  
10 Environmental Impact Statement that was prepared by  
11 the Bureau of Land Management.

12 I, I think the Board is fortunate in this  
13 case to have the testimony and report of a neutral  
14 third party. And it's a party with vast resources and  
15 expertise. It has conducted a detailed analysis, not  
16 only of my client's proposal but also of the  
17 alternatives that it determined should be considered.

18 I realize that some may be skeptical of the  
19 BLM or its motives, so I would like the Board to  
20 consider a couple of the directives given to the BLM  
21 in preparing this report. Federal -- the Federal code  
22 directing the BLM in how it was to approach this and  
23 other similar projects states that it is to, and I  
24 quote:

25 "Study, develop, and describe all

1 appropriate alternatives to recommended  
2 courses of action in any proposal that  
3 involves unresolved conflicts."

4 It further directs the BLM to place its  
5 emphasis on, and again I quote:

6 "What is reasonable rather than  
7 what -- rather than on whether the  
8 proponent or applicant" -- that in this  
9 case would be Rocky Mountain Power --  
10 "likes or is itself capable of  
11 implementing an alternative."

12 And it finally goes on to direct the BLM to  
13 focus on, and again I'm quoting:

14 "What is practical and feasible,  
15 rather than on what is simply desirable  
16 from the standpoint of the applicant."

17 The reason I emphasize the statute that  
18 directed the BLM in how it was to go about in adopting  
19 the Final Environmental Impact Statement is as I read  
20 it, it reminded me of the charge given to this Board.

21 In essence the BLM was told by Congress,  
22 Look, people and companies are going to ask you to do  
23 things on public lands. And when you are reviewing  
24 those requests we want your decision to be measured  
25 and reasoned.



1           The applicant will have all kinds of reasons  
2 why its project is desirable. But we, Congress, want  
3 you, the BLM, to stop and focus on practical  
4 realities. We don't want your decision based on  
5 emotion, on hyperbole, but we want it based on  
6 practicality, feasibility, and reason.

7           I assure you, as a Board, that tomorrow the  
8 Board will see and hear a lot of emotion and a lot of  
9 hyperbole. I do not doubt the sincerity of the people  
10 that will -- members of the public that will address  
11 the Board tomorrow.

12           But as it is hearing the evidence in this  
13 case, like the BLM, this Board must stop and check  
14 itself to make sure that it is acting not simply on  
15 what is desirable or undesirable. But rather that it  
16 is focused on reason, on feasibility, and on  
17 practicality.

18           The BLM answered the charge that it was given  
19 by the Federal Government with this Final  
20 Environmental Impact Statement. And in this document  
21 it describes analyzing not 1 but 14 separate possible  
22 corridors for this project.

23           The BLM is not a respecter of persons or  
24 companies. It is charged with stewardship of the  
25 federal lands. And in a project of this magnitude it

1 is charged with determining the route that is the  
2 environmentally-preferred route over private lands.

3 The BLM started its project in 2007 and  
4 finished only two weeks ago. And unlike the BLM,  
5 which had three years and a team of contractors and  
6 experts at its disposal, this Board is given only  
7 45 days to make its decision.

8 Tooele would ask you to ignore the five years  
9 of study by my client, and the three years of study by  
10 the Bureau of Land Management, and to superimpose  
11 other implied or suggested ideas as to what is better  
12 for the environment.

13 I would urge the Board to be cautious in  
14 doing so. And as it hears the evidence in this case  
15 to again focus on is that something that is merely  
16 desired, or is that something that is reasonable, and  
17 practical, and feasible for the state as a whole.

18 Furthermore, some of the witness -- or the  
19 evidence this Board will hear will again come from the  
20 concerned citizen group. I would suggest to the Board  
21 that each and every suggestion or complaint that the  
22 Board will hear from that group has been analyzed and  
23 addressed in the Environmental Impact Statement.

24 Concerns about water, view, wildlife, the  
25 environment, electromagnetic fields. Any number of

1 things that the citizens, again with deep sincerity,  
2 will put forth to the Board as being a concern for  
3 them is something that has already undergone great and  
4 detailed analysis.

5           Again, as this Board hears the calls from  
6 Tooele over the next few days to ignore the years of  
7 study that the BLM independently did, that my client  
8 independently did, we would simply ask the Board to  
9 consider: Is this what is merely desirable for a few,  
10 or is this what is practically and reasonably the best  
11 solution for the state as a whole and what is feasible  
12 for all? Thank you.

13           CHAIRMAN BOYER: Thank you.

14           Let's hear now from those opposing the  
15 proposed siting. Mr. Hogan?

16           MR. HOGAN: Mr. Chairman, thank you very  
17 much. On behalf of the residents of Tooele County and  
18 on behalf of Tooele County proper we'd like to thank  
19 the Board for taking the time to -- and the assistance  
20 you'll provide in deciding the Mona-Oquirrh project.

21           Having read the notice -- the amended notice  
22 of this procedure and this hearing I would like to  
23 thank you for the time you've already spent in  
24 preparation to consider this issue.

25           I understand that many members have already

1 had site visits. Have already went out and looked to  
2 see the lay of the land firsthand, and we thank you  
3 for that. We think that's critical in determining  
4 this issue and in reaching the decision that you'll be  
5 asked to make.

6 This Board, although the Chairman mentioned  
7 at the start is not composed of electrical engineers,  
8 it is unique in its composition. And I think that you  
9 would acknowledge that when it comes to dealing with  
10 electrical issues, transmission issues, and the big  
11 picture for a power system, this Board certainly has  
12 more information, expertise, and knowledge than a  
13 Local Planning and Zoning Board.

14 That's not to diminish the capabilities of  
15 the people that serve on the Tooele County Planning  
16 and Zoning. It's just an acknowledgment that this is  
17 the issue that's on the forefront of your minds every  
18 day.

19 As I'm sure you've already read in the  
20 response that Tooele County filed, Tooele County does  
21 not dispute the need for this project. In fact, to my  
22 knowledge, no one officially has spoken against the  
23 project based on need alone. Tooele County certainly  
24 wants to have an electrical delivery system that's  
25 safe, that's reliable, that's adequate, and efficient.

1 Tooele County's objection to this project is  
2 based entirely upon the route applied for by Rocky  
3 Mountain Power. I understand that most of you have  
4 made site visits to the county. And I'm sure that  
5 interesting -- in touring the southeast bench area and  
6 looking at the route that's been proposed that they've  
7 applied for, you've noticed and now have a better  
8 appreciation for the objections that the residents in  
9 the county have raised.

10 I think for most Tooele County residences  
11 it's as simple as this: On one hand consider the  
12 pristine beauty of the southeast bench area, the  
13 wildlife, the vegetation. Its proximity to Tooele  
14 City, which contains the bulk of the county's  
15 residents.

16 The high recreational value of the mountain  
17 lands that exists, and the importance of the  
18 watershed. The cultural significance of the  
19 uninterrupted mountain view and the open space that's  
20 provided to the residents that live there. You have  
21 that on one hand.

22 On the other hand consider the I-80 Corridor  
23 from Lake Point to the Stansbury Mountains. View in  
24 your mind that area as you get just past the  
25 westernmost Grantsville exit. You'll notice major

1 linear facilities that have already been constructed.  
2 There's Interstate 80, the railroad.

3 There are right-of-ways that presently exist  
4 that vary between 300 and 500 feet all the way along  
5 from Lake Point to the Stansbury Mountains. The area  
6 lacks residences in close proximity to it. There is a  
7 lack of wildlife and vegetation.

8 In terms of safety and fire hazard, there's  
9 no fuel. There's nothing to burn out there. The area  
10 already has the look and feel of an industrial area  
11 where you would site a high-voltage transmission line.  
12 For county residents, it's just that simple.

13 You've got these two extreme views. And both  
14 of these routes and everything in between is contained  
15 within Rocky Mountain's petition and the BLM has  
16 analyzed. County -- the County and its residents just  
17 cannot understand how Rocky Mountain Power, with these  
18 two disparate positions, selected the southeast bench  
19 route as the preferred route and applied for a permit  
20 for that route.

21 There are other alternative routes discussed  
22 in Rocky Mountain's petition. And there were numerous  
23 routes and variations of those routes that were  
24 discussed with the County informally. Which route is  
25 actually the best route? That really depends on how

1 you evaluate and weigh the relevant criteria.

2 In this case I mentioned the four factors:  
3 Safety, reliability, adequacy, and efficiency. That  
4 is where Tooele County is deficient in our ability to  
5 do that. And that's where all the controversy lies.  
6 Rocky Mountain Power has evaluated these factors, and  
7 now they claim the BLM has also evaluated these  
8 factors and agrees with the Company.

9 You can understand that there's a healthy  
10 amount of skepticism, when it comes to local  
11 residents, saying trust the Federal Government. You  
12 witnessed that in this last legislative session with  
13 the numerous bills that ran through our state  
14 legislature.

15 I don't think anyone that was elected to  
16 represent citizens in the State of Utah feels that  
17 Trust the Federal Government is the maxim they should  
18 abide by.

19 The local jurisdictions in this case --  
20 Tooele County, Tooele City, and Grantsville City --  
21 unanimously support a route that utilizes the I-80  
22 Corridor for this project. However, as local  
23 jurisdictions, neither Tooele County, Tooele City, nor  
24 Grantsville City is in the power business. It's not  
25 what we do.

1           We readily acknowledge that siting  
2 high-voltage transmission lines is an area that we  
3 have no expertise.

4           Rocky Mountain Power has indicated they've  
5 spent several years and over \$14 million in siting  
6 this particular route. And they've agreed that the  
7 BLM now, through their Final Environmental Impact  
8 Statement has agreed with their route choice.

9           Let me tell you -- and I don't think I'll be  
10 the first one to tell you this -- an Environmental  
11 Impact Statement is not the multi-million-dollar  
12 document that tells you you can't do the project. An  
13 EIS is the multi-million-dollar document that tells  
14 you, and tells the project proponent, exactly how to  
15 do the project they want to do from day one. That's  
16 what that document is.

17           Tooele County disagrees with how Rocky  
18 Mountain Power, and in this case how BLM, evaluated  
19 the safety, reliability, adequacy, and efficiency of  
20 the routes considered. And Tooele County lacks the  
21 funds and the expertise, and therefore the ability, to  
22 effectively negotiate with, persuade, or otherwise  
23 convince Rocky Mountain Power to change course.

24           This Board has everything that Tooele County  
25 lacks, including most importantly the statutory



1 authority to determine the siting for this route.

2           Again, I want to emphasize that Tooele County  
3 is not opposed to the project. In fact, based upon  
4 the comments made by the Tooele County Planning and  
5 Zoning Commission, we would not be appearing before  
6 you today had Rocky Mountain Power applied for either  
7 of the Grantsville routes that they detail in their  
8 petition because the County would have approved the  
9 permit for either of those routes.

10           I feel it important to point out that even if  
11 the Board members -- even if this Board orders Tooele  
12 County to approve the route that's been applied for by  
13 Rocky Mountain Power for the southeast bench, Rocky  
14 Mountain Power will be choosing to pursue a course  
15 that still leaves two major questions unanswered.

16           That is, true actual cost. And this Board is  
17 charged with determining what the standard cost is.  
18 And I'm telling you that if you order that route to be  
19 approved we don't know what that cost is gonna be.  
20 And we don't know when it will be built.

21           This is because, in addition to the added  
22 cost and delay associated with the challenge to the  
23 condemnation proceeding that Tooele City has indicated  
24 will come -- and you have a letter that details that  
25 from Tooele City -- Tooele City has spent millions of

1 dollars acquiring property for open space, viewshed,  
2 and watershed protection. They intend to challenge  
3 that condemnation proceeding.

4 In addition to that, there will likely be  
5 challenges to the federal document, to the federal EIS  
6 that was completed by the BLM. And we all know, are  
7 all aware of the sort of delays, and challenges, and  
8 legal costs that accrue when there is a challenge to a  
9 federal Environmental Impact Statement.

10 So the true cost of this route is not simply  
11 going to be construction costs plus the right-of-way  
12 acquisition. You're gonna have to add those other  
13 costs in. We don't know what they are, and we don't  
14 know when they'll end.

15 The challenge in getting power from a rural  
16 remote location like Mona, where it's readily  
17 available, to an urbanized populated area like  
18 Oquirrh, where it's needed, is always in those last  
19 few miles because that's where the people are.

20 There's no problem maintaining a remote route  
21 for the majority of this line. And I don't know the  
22 percentage. We're probably talking about less than  
23 five percent of the length of the route when we're  
24 talking about the part that's in controversy.

25 But that part necessarily always comes at the

1 end, because you're finally getting the power to where  
2 the people are. And you're gonna have conflict. And  
3 it's gonna be a tough choice. And those four factors  
4 that you're required to evaluate, there's gonna be  
5 give and take on all those in determining which route  
6 is the best route.

7 Tooele County needs the assistance of this  
8 Board to decide this route, and that's what we're  
9 asking for. And we appreciate your time and  
10 consideration. Thank you.

11 CHAIRMAN BOYER: Thank you, Mr. Hogan.

12 All right, let's proceed now with the first  
13 witness.

14 MR. MOSCON: Thank you. We will call first  
15 Mr. Darrell Gerrard.

16 CHAIRMAN BOYER: Mr. Gerrard, would you  
17 please remain standing and raise your right hand?  
18 We'll swear you in.

19 (Mr. Gerrard was sworn.)

20 CHAIRMAN BOYER: Thank you, please be seated.

21 MR. MOSCON: It will be a moment as the  
22 projector warms up. If it's the Board's pleasure I'm  
23 happy to dim one or more lights. If the Board can see  
24 the screen, I'll leave it as is. It's your  
25 discretion, Mr. Chairman.

1 CHAIRMAN BOYER: I think it's fine with the  
2 existing lighting, thank you.

3 MR. MOSCON: The document that I've handed to  
4 the Board and to Counsel is simply a hard copy of the  
5 slides that Mr. Gerrard will be going through. Some  
6 of the slides are actually animated on the screen.  
7 And we can't do the animation on hard print, but as  
8 far as the record goes that's the final point of each  
9 of the slides.

10 With the Board's permission, we'll proceed.

11 CHAIRMAN BOYER: Please do.

12 DARRELL GERRARD,

13 called as a witness, having been duly sworn,

14 was examined and testified as follows:

15 DIRECT EXAMINATION

16 BY MR. MOSCON:

17 Q. Mr. Gerrard, would you please state your name  
18 and address for the record?

19 A. Yes. Good morning. My name is Darrell  
20 Gerrard. And I work at 925 Northeast Multnomah  
21 Boulevard, Portland, Oregon. And I also have an  
22 office here in Salt Lake at our North Temple office,  
23 1407 West North Temple. I've had that office for --  
24 approximately 1992.

25 Q. And would you please briefly describe your

1 education and professional background for the Board?

2 A. Certainly. Can you hear that okay? I have a  
3 Bachelor's, Bachelor's Degree in Electrical  
4 Engineering from the University of Utah, right here in  
5 Salt Lake. My specialty is electric power system  
6 engineering and design.

7 I have more than 30 years experience in  
8 the -- primarily in the utility industry. I've had a  
9 number of jobs at PacifiCorp here. All around  
10 transmission, distribution, substation design,  
11 including electronic communications and generation  
12 engineering.

13 The last ten years I've held executive  
14 positions for PacifiCorp and Rocky Mountain Power in  
15 various aspects: Vice president of engineering, asset  
16 management, construction. And from 2000 to 2006 I was  
17 vice president of transmission systems. Responsible  
18 for all the assets -- transmission assets that  
19 PacifiCorp owns and operates, including our grid  
20 operation center.

21 Since 2006 I've been -- I was kind of hand  
22 selected, with my background, to work on the planning  
23 for the next two decades of our transmission system  
24 expansion for our company. So I've been doing that  
25 since about 2006. And I'm the architect of our

1 Gateway project, which we'll talk about a little more.

2 Q. Mr. Gerrard could you please describe for the  
3 Board, as a point to begin, Rocky Mountain Power's  
4 current transmission system in Utah?

5 A. Certainly. I've prepared a number of  
6 exhibits today. In my experience over the years I've  
7 found that a picture is worth a lot of words, so I'd  
8 like to use a couple of these if I may. And these --  
9 you have these in your handouts as well.

10 This first exhibit I thought was instructive  
11 to help the Board understand the current transmission  
12 system serving the state. And I depicted all the  
13 major transmission paths, or transmission freeways  
14 some people call them, that serve the state.

15 Those blue lines that you see there? There  
16 are seven transmission paths that allow import and  
17 export of energy into the, into the state. Let me use  
18 my other pointer here, I think it's a little stronger.  
19 So I'm talking about these lines here, which are the  
20 major transmission paths.

21 The total customer demand for the state, just  
22 to size this for the Board a little bit, 2007 was  
23 about 5,500 megawatts, 5.5 gigawatts in the state. By  
24 2013 our forecasts are expected to be around  
25 6,400 megawatts, about 6.4 gigawatts.

1           And I also wanted to point out that the major  
2 resources that serve the State of Utah are located  
3 down around in this area. Carbon -- or in the  
4 Emery-Hunter area, as you well know. Most of you.  
5 Also out here in Wyoming, where we have our Bridger,  
6 Wyodak, and DJ system are brought into the state for  
7 these major transmission paths.

8           So that will be important a little bit later  
9 on to make sure it's understood where the resources  
10 are coming from. I have also listed on here what I've  
11 called the "critical load area," which we'll talk  
12 about I think quite a bit this morning.

13           And I've coined the phrase "critical load"  
14 because there's some critical things going on here.  
15 One, it's of course the largest urban metropolitan  
16 area in the state. It's also one of our highest  
17 growth areas in the state. Southwest Utah, at times,  
18 might be a little higher.

19           And the other part that's critical is our  
20 ability to import into that bubble, if you will, that  
21 red perimeter that I've driven -- that I've shown  
22 there, is limited. And it's significantly limited.

23           The other thing I wanted to point is not only  
24 our existing resources to serve the state as it sits  
25 today, but through our integrated resource -- our

1 Integrated Resource Plan which we look -- a  
2 forward-looking plan to deliver resources into the  
3 future, all of our new resources to serve the growing  
4 loads in the critical area and in the state are  
5 scheduled to be located down in this area.

6 One other last point I'd like to make here,  
7 and then I'll move on. The critical load area is  
8 approximately 80 percent of the entire load in the  
9 State of Utah, depending on which year you pick. I  
10 calculated in 2007 it was 80 percent.

11 Q. Thank you, Mr. Gerrard. Could you describe  
12 for the Company why -- or excuse me, describe for the  
13 Board why the Company is so concerned with  
14 transmission planning. And if you can, do you have a  
15 future transmission development plan that the Company  
16 is working on? Describe that for the Board as well.

17 A. Yes, certainly I will. As an essential  
18 service provider -- which Rocky Mountain Power is  
19 one -- it's key that we have a short-term and a  
20 long-term plan. And when I talk about short term and  
21 long term today, in my planning view short term is  
22 less than ten years and long term is more than ten  
23 years. Ten to 20-plus years. I want to say that just  
24 to qualify that.

25 So it's prudent that we have a plan, being a



1 essential service provider. The other reason we need  
2 a long-range plan, core plan, is our customers want to  
3 know. Our wholesale customers, our residential  
4 customers, and our third-party customers that use our  
5 system on an open-access basis, they want to know if  
6 we'll have an adequate supply of energy. So we need  
7 that plan for that.

8 We also need to make sure we have a plan that  
9 ensures we can access our lowest-cost resources  
10 looking forward. And our transmission plan that Rocky  
11 Mountain Power has is key to our Integrated Resource  
12 Plan and formative to that.

13 The other reason we need a plan is that our  
14 obligation to serve, as I call it, in our six states  
15 where we are the energy supplier, under regulation  
16 requires us to plan ahead to meet the needs of our  
17 customers. You've heard the words safe, reliable,  
18 adequate, and efficient service?

19 And also under our Open Access Tariff, where  
20 we are licensed by FERC to provide transmission  
21 services, requires us to plan accordingly. Also the  
22 Open Access Tariff requires us to provide transmission  
23 services to others that ask, other than our own  
24 customers. It's open access. If people want  
25 transmission, we are obligated to deliver it at their

1 cost.

2 The other reason that I think our plan is so  
3 important is we deal with State agencies, whether it's  
4 our governor's offices or our commissions. Our  
5 officers and presidents of our business units have to  
6 have ability to cover a plan how we're going to serve  
7 our citizens in the state.

8 Another reason is -- for a plan is our  
9 dealings with agencies like BLM, Forest Service,  
10 Department of Fish and Wildlife, all want to know what  
11 our long-range plans are for land use planning our  
12 precious resources.

13 And the last one I would say is that our plan  
14 is required by the Department of Energy, Department of  
15 Interior, and NERC, and FERC, who regulate. That's  
16 the North American Electric Reliability Council, and  
17 the Federal Energy Reg -- Regulatory Commission. And  
18 even Homeland Security wants to see our transmission  
19 plans. And we do file those with NERC annually.

20 Q. Thanks, Mr. Gerrard. You've given us a lot  
21 of detail on why it's so critical for the Company to  
22 plan in the future for these systems. Could you  
23 describe for the Board how the project that we're here  
24 to discuss today, how it ties into that, that larger  
25 plan?

1           A.     Yes, certainly. I'd like to use another  
2 exhibit as I do that. And you should have that in  
3 front of you to look at. This is our Energy Gateway  
4 project that I mentioned prior. I'd like to talk just  
5 a little bit about this project and how the segment or  
6 the transmission project that this proceeding fits in.

7           This is a long, a long-range transmission  
8 project that we've developed. It's expected to be  
9 about 6.2, or around 6 billion dollars over 10 to  
10 12 years. We started this project -- actually I  
11 started this project for our company back in 2005.

12           We announced it in May of 2007. We started  
13 construction in 2009. And we're just finishing  
14 placing in service a Segment B up here, which I'll  
15 show you. Segment B is right there between our  
16 Downey, Idaho and our Terminal Substation in Salt Lake  
17 City. Is going into service.

18           So we've executed on our plan, and the  
19 segment we're talking about today is the next step in  
20 that. Quickly -- and I'll speed up here a little  
21 bit -- is to talk about the attributes. Because as  
22 someone mentioned earlier, I think, on an electric  
23 grid system the, the security, reliability, and  
24 performance of the grid is only as good as the sum of  
25 its parts. And this segment is one of those parts.

1 I've designed -- our company has designed the  
2 Energy Gateway concept to provide certain attributes,  
3 which I'd like to cover. It's a concept of large  
4 loads and resource hubs. By that I mean big load  
5 centers, like Salt Lake. Big resource areas, like  
6 Mona, like Hemingway, and Idaho.

7 And all those resource -- excuse me, loads  
8 and resource hubs connected by spokes. And by  
9 "spokes" what I mean is large-scale high-capacity  
10 transmission systems, at least three lines, connected  
11 to a hub.

12 As you see on your handouts or you can see on  
13 the screen, all the yellow dots constitute new hubs  
14 that we're proposing where large amounts of energy  
15 either come onto the grid or come off of the grid.  
16 And again, they're connected by large, high-capacity,  
17 highly-reliable transmission connections.

18 Second, Gateway was designed for options for  
19 IRP. And I mentioned that earlier. That this, this  
20 Energy Gateway project is key and is formative to our  
21 Integrated Resource Plan. In fact, it's required  
22 for -- it's required to be built for our company to  
23 deliver the Integrated Resource Plan that we have  
24 published currently, and those that will be done in  
25 the future.

1           The other attribute is it connects to  
2 markets. I think you can see down here, Gateway ties  
3 to Nevada, Arizona, it ties over here to the west, it  
4 ties to Populus, and it ties to Wyoming. That gives  
5 us options to purchase energy in favorable conditions  
6 and sell energy in favorable conditions, all for the  
7 benefits of our customers.

8           The other attribute that we had to accomplish  
9 or wanted to accomplish with Gateway is it ties our  
10 two control areas together. I won't get deep in the  
11 control areas, but our company owns and operates two  
12 balancing, balancing areas, one in the northwest, one  
13 in the east, where we balance our customers' demand  
14 with the generation instantaneously.

15           This project ties those two balancing areas  
16 together. And our customers enjoy benefits of using  
17 capacity or energy in both of those at lowest cost.  
18 There are eight segments to Gateway. There's -- I  
19 won't go through them all, but there's Gateway South  
20 there's Gateway West, and there's Gateway Central,  
21 which is the piece that we're talking about today.

22           And the project that we're talking about here  
23 is Segment C, which connects Mona up to Limber, to  
24 Terminal -- or excuse me, to Oquirrh, and to Terminal.  
25 The project I talked about before, project -- or

1 Segment B is our Populus to Terminal project, which is  
2 nearing completion.

3 The other requirement -- I talked about high  
4 capacity, high reliability. I won't go into that any  
5 further. The other requirement here is this project  
6 has to meet the North American Electric Reliability  
7 Council's standards for reliability of bulk  
8 transmission systems.

9 In May of 2007 there were over 100 new  
10 reliability standards that were passed into Federal  
11 law. And those dictate how we build, construct, own,  
12 and operate our transmission system. And this project  
13 meets those.

14 The other thing I would like to point out to  
15 the Board, and it's key in our discussion today, is  
16 what I've coined the term "reliability triangle." And  
17 this is very important. We'll cover it just a little  
18 bit more. Where we have a triangle built with  
19 basically a 500 kV ring around Salt Lake City and into  
20 Wyoming. This will be the first 500 kV facility built  
21 in the States of Wyoming and in Utah.

22 This reliability triangle is very important,  
23 as it provides the reliability aspects of the project.  
24 So each, each of these legs can back each other up in  
25 the event of an outage or an emergency.

1           The other thing I would like to point out in  
2 the triangle is the requirement for diverse -- that  
3 means geographically diverse -- line routing. This  
4 minimizes the exposure of our power lines to  
5 common-mode outages. Or outages that would cause both  
6 lines, or both -- any two lengths of these to go out  
7 simultaneously.

8           And I'll show you in a moment. We applied  
9 that same concept to the project we're talking about  
10 here in Utah on a smaller scale, with the same  
11 concept.

12           And again, in closure, Segment C is key to  
13 this, as -- if Gateway Central is not contiguous  
14 between Populus and Mona, the project is compromised,  
15 as we don't get the capacity out of Gateway West and  
16 Gateway South.

17           Gateway Central in the center provides a  
18 backup by tying those two legs together. With those  
19 two legs tied together we can operate our system at a  
20 higher capacity than if it wasn't there.

21           Q.    Thanks, Darrell. Could you -- whoops. Thank  
22 you, Mr. Gerrard. Could you briefly, and at a high  
23 level, describe for the Board then how the Energy  
24 Gateway concept functions, the reliability that's it's  
25 designed to introduce into this system, and how this

1 segment that we're here to discuss today ties into  
2 that overall system reliability?

3 A. Yes, certainly. Let me use another exhibit  
4 for that. And you have this in front of you. I want  
5 to talk a little bit about the reliability triangle,  
6 because it, it talks about separation and it talks  
7 about redundancy.

8 And the transmission system reliability  
9 standards are all about redundancy. That's how the  
10 system stays robust and stays in service. Before I do  
11 that, though, I wanted to show you in this first  
12 slide, I wanted to scale this Gateway project just in  
13 size to give this Board an idea of the size and  
14 capacity of these projects.

15 Now, when I say "size" I'm not really talking  
16 about physical size, although they are large. I'm  
17 talking about the ability of this project to move  
18 energy. Because it's larger than anything that's been  
19 built before in our service area.

20 These arrows that you see here are the  
21 existing transmission paths that exist today in  
22 Wyoming, Utah, Colorado, Idaho, and Nevada. And our  
23 Energy Gateway -- if you look at the connection over  
24 here, this connection that goes into Dakotas? Our  
25 Energy Gateway Project is 19 times the capacity of



1 that existing route. That's the scale going west.

2 If you look at our current com -- our current  
3 transmission capacity into Montana? Where we have  
4 electrical lines between Wyoming and Man -- Montana?  
5 The Energy Gateway Project is 15 times larger than  
6 that existing transmission path.

7 And our -- this arrow in the middle here that  
8 comes out of the southwest corner of Wyoming and into  
9 Ben Lomond area near Ogden, Utah? Our Gateway project  
10 is seven times bigger than that current transmission  
11 path.

12 Our Bridger West system, which ties our  
13 Bridger power plant into Idaho -- into Downy, Idaho,  
14 is our largest transmission path that we have in our  
15 company. It's a 2,200-megawatt path by itself. And  
16 Energy Gateway is 3 times larger than that path when  
17 it's complete.

18 The last one that I'll talk about is the tie  
19 down to the Desert Southwest. Our Gateway is 20 times  
20 bigger than that electrical connection today. The  
21 reason I share that with the Board is what we're  
22 building here has a lot of benefits to our customers  
23 for that capacity and for that ability to move energy.

24 It also can have a huge impact on how it  
25 integrates with the wider electric grid that connects

1 all these states. So if it's not constructed,  
2 designed, and operated properly, we can expose the  
3 western interconnection to significant disturbances.  
4 So this is, this is not a small transmission project.  
5 This is very large. I just wanted to scale that for  
6 you.

7 In the next slide what I'd like to  
8 demonstrate is under normal operations our Gateway  
9 project moves energy around that triangle. With all  
10 the elements in service, all the lines in service,  
11 we'll be able to move thousands of megawatts across  
12 those lines, through diverse routes, to load centers  
13 and hubs connected to those load centers.

14 There are standards out there that exist.  
15 The Transmission Planning Standards I quote on page 15  
16 of my testimony tell me as a system planner, tell our  
17 company as a system operator, the limits and the  
18 performance requirements that are required when all  
19 the elements are in service.

20 That's how it looks. Large amounts of power  
21 flowing in a triangle.

22 The next slide, if you would turn to that  
23 one. I've dashed out part of Gateway West. So if you  
24 see the dashed line up on the screen here, I've  
25 depicted that to show a line either taken out of

1 service for maintenance, forced out of service due to  
2 some external cause, mother nature, an outage of that.

3 So the power that was flowing on that dashed  
4 line prior to it going out of service now has to  
5 redistribute. So in this example I've used  
6 3,000 megawatts. That 3,000 megawatts has to  
7 redistribute around the network.

8 And it does, it does so by flowing down  
9 Gateway West and flowing on top of or through the  
10 existing system that's there today that it's  
11 interconnected with.

12 The reliability standards that I talked about  
13 a moment ago, Transmission Standard 2 tells me as a  
14 utility planner that I have to, I have to build a  
15 system that can operate with one of those legs out, or  
16 one of those transmission lines out of service, and  
17 have no disruption of customer load or no disruption  
18 of connected generation.

19 So that's the contingency that -- that's one  
20 of the contingencies that I have to plan for. This  
21 accomplishes just that.

22 I'd like to turn to the next slide, which is  
23 a little bit redundant, but illustrative of why we  
24 need the triangle. Again, I've shown a dashed line,  
25 this is our Gateway South project now.

1           Should that line be forced out of service the  
2 energy that was flowing on that line can now  
3 redistribute, flow down Gateway West, flow in our  
4 interconnected system, and we still have hubs and  
5 resource -- loads and resource hubs still connected.  
6 And our customers remain in service, and probably  
7 wouldn't notice anything different.

8           The next slide is the scenario we're trying  
9 to avoid with Gateway and with our Mona-Oquirrh  
10 project, where we would have both of these lines in  
11 proximity where a common-mode outage or failure could  
12 take both lines out of service simultaneously.

13           In this event, all the energy that's flowing  
14 on those lines can't go anywhere, other than on the  
15 existing system, which is already limited and already  
16 is out of capacity.

17           So in this event, should both of those lines  
18 be co-located and we have a common-mode failure, in  
19 this event we would have about 6,000 gen --  
20 6,000 megawatts of generation curtailed. And we would  
21 be deficit to serve customers by about  
22 2,000 megawatts.

23           So that would be curtailment of about half  
24 the load in the critical load area, just to size that  
25 up for you. So as a utility planner, geographically-

1 dispersed line routes and line separation is key for  
2 me to maintain reliability.

3 I would also point out while we're on this  
4 slide that the lines we're talking about between  
5 Limber and Oquirrh and Limber and Terminal have the  
6 same capacity of these large Gateway lines. They're  
7 equivalent in their ability to move energy.

8 Q. Thanks, Darrell. Could you describe for the  
9 Board -- and you've set up and described this triangle  
10 of reliability, and you talked about diverse line  
11 routing. Could I have you focus in specifically on  
12 the area that is in dispute in Tooele Valley and talk  
13 about how that triangle of reliability ties in to the  
14 portion of the project in Tooele Valley?

15 A. Certainly. Let me use one of our exhibits  
16 out of -- I believe Mr. Smith has this in his  
17 testimony somewhere, but I've used that for today.  
18 The triangle of reliability concept has also been  
19 applied to this project between our Mona Substation  
20 down here, our Limber Substation here, our Oquirrh  
21 Substation here, and back down Mona.

22 Although not as elegantly drawn, there is  
23 still a triangle of reliability here, with large  
24 resource hubs. Mona is a large resource hub, probably  
25 the largest in the state. A large future-load hub,

1 which is at Limber. And existing hubs here at Oquirrh  
2 and at Camp Williams.

3 So again we have a triangle of reliability,  
4 which provides me this benefit. Remember, the  
5 standards tell me as a utility planner that if I lose  
6 this new segment over here, this segment is forced out  
7 of service either for maintenance or for external  
8 cause, I have to still be able to serve my customers  
9 and keep my generation online without interruption.

10 It also -- this segment -- so when this  
11 segment is complete, it backs up this existing segment  
12 here that exists today -- my pointer is not working  
13 exactly -- between Camp Williams and Oquirrh. Should  
14 that segment go out, I still have a continuous path  
15 between these load centers and resource centers.

16 The purpose -- this Segment 1 here also --  
17 Mona-Oquirrh -- provides backup to this existing  
18 segment right here between Mona and Camp Williams. So  
19 the reliability triangle exists here.

20 Further, the reliability triangle up north  
21 here between Limber and Oquirrh, up to Terminal, and  
22 back to Limber, again is a reliability triangle. In  
23 any event where I lose -- have an outage of Segment 2  
24 or Segment 3, I have to be able to serve my customers  
25 without interruption. Keep my generation online.

1 That's the standard I'm held to.

2 So should these two lines -- that's the  
3 reason for the geographic separation that we've  
4 requested. Should these two lines be co-located and  
5 subject to common-mode, common-mode failures, common  
6 outages, I no longer have the ability of this line  
7 between Limber and Mona to back up these existing  
8 facilities that are there today.

9 When that happens I do not get the full  
10 capacity out of Gateway because I can't have my  
11 triangle contiguous through the project.

12 So basically what I've done is supplied the  
13 same reliability triangle. Again, large-capacity  
14 lines connecting hubs and resources both in the  
15 triangle here, the triangle down here between Mona.

16 What's not shown in the map, but I'll explain  
17 it very quickly, we also have a triangle over here.  
18 Where our lines from Camp Williams near the Point of  
19 the Mountain go over to our 90th South Substation, up  
20 to Mid Valley, and back to Terminal. There's a  
21 triangle over here as well.

22 Q. Darrell, I'm sure you understand that the  
23 part of the project that is really in dispute is this  
24 part up here. We have this triangle within a  
25 triangle?

1           Is that really necessary? Is it redundant to  
2 the Company to have that triangle? Is that -- can you  
3 describe to the Board whether that is critical to the  
4 project as a whole? You've described this larger  
5 Gateway project, is that necessary to the larger  
6 project?

7           A. Yes, absolutely. From the -- from two  
8 standpoints. It's necessary -- this redundancy that  
9 these two lines provide is necessary for the Energy  
10 Gateway Project because it ties Gateway South, which  
11 terminates at Mona -- if you can recall the drawing I  
12 had a moment ago -- and it terminates it at Terminal,  
13 excuse me. Gateway West terminates at Terminal.

14           So this, this path right here provides a  
15 redundant high-capacity path along Gateway Central for  
16 Gateway West -- it ties together Gateway West and  
17 Gateway South.

18           The other reason it's required is it also  
19 provides a backup to Limber Substation in Tooele  
20 County. So in the event that these lines are out of  
21 service, 2 or 3, Limber Substation still stays in  
22 service, and our loads are still served, and our  
23 generation is still online.

24           So it not only provides local redundancy to  
25 this -- to the critical load area, but it also



1 provides redundancy to the Gateway project.

2 Q. Thank you. I'd like to turn your attention,  
3 Mr. Gerrard, and your testimony for the Board now to  
4 the need for this project, and specifically the needs  
5 within what you call the "critical load area."

6 Before we begin, can you kind of encapsulate  
7 for the Board what you mean by the "critical load  
8 area"? Exactly, geographically, what is or is not  
9 included in that?

10 A. Yes, certainly. There's an exhibit in my  
11 testimony that was submitted -- and I believe there's  
12 one in your handout as well -- where I've got this  
13 picture of the critical load area. And again,  
14 80 percent of the load in the state is located here.

15 I'd also want to point out that there are  
16 major transmission lines -- import lines from the  
17 south that serve this critical load area. And there  
18 are actually six high-voltage -- EHV we call them --  
19 high-capacity lines that bring the resources from down  
20 here in our Emery-Huntington plants, Carbon plants,  
21 and into this critical load area.

22 Also, any purchases that would come from  
23 Nevada or the Four Corners would come into the  
24 critical load area.

25 The critical load area load in 2007 was, I

1 mentioned 4,400 megawatts. It's expected to be  
2 5,500 megawatts in 2013. The criticality comes from  
3 the point that, as this load grows in the critical  
4 load area, our ability to import on these lines is  
5 decreased.

6 That's an artifact of large air conditioning  
7 loads, rotating equipment, electric loads, a large  
8 distance and remote from generation. So again, as  
9 this load increases, our ability to import on this --  
10 these lines -- these existing lines decreases.

11 In fact, if Mona-Oquirrh is not constructed  
12 and this load continues to grow, our ability to use  
13 the existing Hunter and Huntington plants as they sit  
14 today is diminished over time because we can't import  
15 across these lines reliably.

16 And I'll show you a little bit more of why  
17 that's the case.

18 Q. Mr. Gerrard, could I have you describe for  
19 the Board the Company's current ability to sustain the  
20 electrical demand in this critical load area?

21 A. Certainly. And again, I would just make the  
22 point before I switch slides here that the future  
23 resources that have -- low-cost resources that have  
24 been identified by our company to serve this area are  
25 located in this region right here through 2014.

1           So our ability to import into this critical  
2 load area from the south is predicated, or is limited  
3 I should say, by two things. By two factors. And  
4 they're interrelated factors.

5           So I'd like to show some actual operating  
6 history and some actual infor -- some actual forecasts  
7 that show the urgency of this project. And so I'll  
8 build these for you today. They may not be animated  
9 in your slides there, so bear with me for a moment.

10           So what I'd like to show you today is a  
11 two-dimensional, two-dimensional view of why we're  
12 limited in our capability to import into the critical  
13 load area.

14           So first of all, along the bottom here I've  
15 put a scale. This scale is the demand -- customer  
16 demand in that critical load bubble in megawatts. So  
17 from 5,800 megawatts down. So that -- on the  
18 horizontal axis, that's our customer demand.

19           On the vertical axis on the left, this is the  
20 import capability of those six high-voltage  
21 transmission lines that come up from Mona and into  
22 that critical load area. So again, those are in  
23 megawatts over here.

24           And these two are interrelated. You can't  
25 really have one without the other. So let me show

1 you -- what I'd like to do next is show you some  
2 actual operating history. This is actual data out of  
3 our company energy control system.

4 This scatter diagram is the customer demand  
5 in that critical load area and the flow into that  
6 critical load area for every hour in 2007. So  
7 8,760 hours. There's a corresponding load/customer  
8 demand, and there's a corresponding generation  
9 delivery into that bubble.

10 Q. So Darrell, before you move on, just so it's  
11 clear for everyone. I assume then down here, one of  
12 these dots at the bottom, that might be at 3:00 in the  
13 morning on, you know, January 10th, when there's very  
14 little power being used. And one of these dots up  
15 here might be at four in the afternoon on August 5th?

16 A. Yes, that would be correct. As you move to  
17 the right, that's increasing customer demand. And for  
18 us, that's summertime. Down here would be an off-peak  
19 and off -- evening time.

20 Q. Thanks.

21 A. So I'll show one more slide on this. So to  
22 further the understanding here, I've picked the  
23 highest demand we had in the critical load area, which  
24 was 2007. And our demand was around 4,400 megawatts.

25 And at that point the corresponding flow on

1 those lines, those six transmission lines coming in  
2 from Mona was about 20 -- well, 3,328 I guess is the  
3 number there. So that's the last peak we had.

4 Now what I'd like to do is put another line  
5 up here which shows the limit. And that limit is the,  
6 is the maximum amount of transfer capability or the  
7 maximum amount of power we can bring in to that bubble  
8 from the south, based on the customer demand.

9 So for every customer demand number there's a  
10 corresponding value of import. That line is the  
11 limit. And that line is limited by the reliability of  
12 those six lines coming in. So by example then, I just  
13 picked a number here of about 4,900 megawatts. And I  
14 put it up against the limit line. And in that case  
15 our ability to import from the south reliably would be  
16 3,250. Just to show you how the limit line has  
17 been -- would be used.

18 Now, fortunately in 2007 we didn't have that  
19 high of demand. But I wanted to show the Board these  
20 series of dots that are shown here above that limit  
21 line are areas where we're operate -- we would be  
22 operating in unreliable state.

23 In other words, another disturbance, or  
24 another line outage, or a generation outage could  
25 cause a disruption of transmission service in the

1 valley. So that's an area where we cannot operate.  
2 That limit line tells our operators how hard they can  
3 stress the system.

4 So now what I'd like to show you, now that we  
5 kind of understand the graph, is I mentioned earlier  
6 that our ability to serve the critical load area  
7 decreases with load increase, and I'll show you why  
8 that's the case.

9 In 2010 we're projecting or forecasting the  
10 load, again the demand in the critical load area to be  
11 around 4,900 megawatts, approximately. The limit on  
12 the system today limits us to an import of  
13 3,120 megawatts.

14 So all of these -- this area above the line  
15 here, should we hit that demand level, would require  
16 us -- with all generation online, would require us to  
17 reduce customer demand. In other words, to turn  
18 customers off to stay below that limit and operate  
19 reliably. So that's an area where we cannot operate.

20 The next graph I'd like to show is our 2011  
21 forecast, which is around 5,051 megawatts. And as you  
22 can see, now the demand's gone up. Our ability to  
23 import from the south has decreased, as I said it  
24 would, down to 2,750. And again we have a large  
25 number of hours where we would be over the limit of

1 the system.

2 And again, taking the forecast, by 2013,  
3 2012, we have that many dots above the line. That  
4 many hours where we have exposure to customer outages.  
5 And in 2013 you can see we're down to an import level  
6 where we've got nearly 50 percent of the time we could  
7 not serve our load under the existing system  
8 conditions.

9 We have -- I have three projects underway  
10 right now that will move this limit line from where it  
11 is here out to about that region. That allows our  
12 existing system, with three projects added, to be able  
13 to serve our customers through 2013.

14 After 2013 I'm out of options. I don't have  
15 any other system augmentation I can do, without  
16 Mona-Oquirrh, to make sure we can serve our customers.  
17 So this line will be moved out by 2013. After that I  
18 have no options to move it except with this  
19 transmission line being constructed.

20 Q. Could you describe for the Board the  
21 limitations that you would have if one of your current  
22 lines went out of service? I assume all of these  
23 lines that you've shown are with everything  
24 operational. What would happen if one of your lines  
25 went out of service prior to Mona-Oquirrh?

1           A.     Yeah, that is correct. And I'd like to  
2 emphasize, what I have just shown is the transmission  
3 capacity with all of our lines in service that are  
4 there today. No outages, planned or otherwise.

5                     Similar to the chart that you just saw -- I  
6 won't go through the chart in detail because you saw  
7 how I built it before -- again, across the bottom I've  
8 put customer demand in the critical load area. Up the  
9 left side I've put the transmission import capability  
10 north of our Camp Williams Substation. So this is our  
11 large station there by the prison, by Point of the  
12 Mountain. And this is the transmission flow into that  
13 critical load area on those transmission lines.

14                    Again, there's the dots from 2007. That's  
15 our operating history. And the next line that I put  
16 in here is our existing system limit for import into  
17 the critical load area if we have one line out of  
18 service for maintenance.

19                    So should we remove one of the lines north of  
20 Camp Williams for insulator replacement, or it gets  
21 damaged or goes out of service, we have that many  
22 dots -- about 22 percent I think I calculated -- of  
23 time where we can't serve our customers at peak load  
24 with one line out.

25                    That risk grows to an unacceptable level by



1 2013. So we have that risk today, but it just  
2 continues to grow through 2013. Again, the  
3 standards -- Transmission Planning Standards require  
4 that the Company have the ability to take lines out of  
5 service for maintenance. And in this case, we do not.

6 The last line I'll put up here -- apologize  
7 for all the graphs -- but the last line I'll put up  
8 here is that limit line now moves to that position  
9 approximately when we build our Mona-Oquirrh project  
10 and we have the capability that we need to serve  
11 customers with lines out. And the reliability  
12 triangle provides that capability.

13 Q. Thank you. Darrell, could I have you  
14 describe to the Board very succinctly, in  
15 non-engineering terms, when does the Mona-to-Oquirrh  
16 line need to be operational, and why?

17 A. Well, for just the reasons that I stated a  
18 moment ago with this graph up here. By 2013 we will  
19 not be able to serve the expected demand we have in  
20 the critical load area -- including Tooele County, who  
21 is served out of the critical load area -- with all of  
22 our lines in service.

23 Second, with one line out -- I just went  
24 through that -- we have significant unacceptable  
25 exposure at that point, I believe, in being able to

1 serve our customers with lines out for maintenance or  
2 for, for outages.

3 And I would comment to the Board, too, we  
4 actually had requests to take lines out of service  
5 here in the critical load area. They wanted to work  
6 on the railroad and replace some crossings. And we  
7 would not allow those to be taken out of service. And  
8 we delayed their work, because we can't take our lines  
9 out of service as requested by others.

10 The last, the last thing I would make, the  
11 reason 2013 is urgent is as this load grows, our  
12 ability to use our existing Hunter and Huntington  
13 Power Plants from the south is decreased. Those  
14 assets will be impaired, we won't be able to use the  
15 generation.

16 Q. Thanks.

17 A. I think that's significant.

18 Q. You've mentioned the importance of line  
19 separation. Again, in non-engineering terms so that  
20 even lawyers or other non-engineers can understand,  
21 could you describe for us why is line separation so  
22 important to the plan of this project?

23 A. Yeah. I guess I would go back to -- yes, I  
24 can. I'd go back to this chart here. We absolutely  
25 have to have redundancy in the system. We have

1 experience that lines in close proximity can be forced  
2 out of service by a whole host of reasons.

3 And the geographic separation reduces the  
4 exposure to the system for common-mode outages. In  
5 other words, taking two lines out or multiple lines  
6 out at once. That's very key to the reliability  
7 requirements of this project.

8 Q. How far apart do the lines need to be? So in  
9 other words, you've indicated you need these lines to  
10 be separated, how far apart do they need to be?

11 A. The separation of lines is really left to the  
12 utility to determine. There are some planning  
13 criteria that talk about the rules I have to take into  
14 account if lines are in close proximity. But that, in  
15 itself, is not a performance standard.

16 We -- on these high-voltage lines for  
17 Gateway, I mentioned our Gateway South and Gateway  
18 West lines. As I spec'd the project and handed it to  
19 Mr. Brandon Smith, my colleague here, to site and  
20 permit, we required at least a mile separation between  
21 these EHV lines. And again, I scaled how big those  
22 were for the Board. They're very large lines, with a  
23 lot of risk. And up to, up to five miles of  
24 separation, if we can obtain it in some areas.

25 So we're working with corridors for Gateway

1 separation from a mile to five miles where we can get  
2 it. Again, there's no, there's no requirements  
3 precisely that dictate that. That's left to our  
4 utility and our experience.

5 Q. Darrell, one of the things that the Board  
6 will be left to consider if they're asked to reroute  
7 this is moving the line and rerouting it. Can you  
8 describe for the Board the impact, if any, that the  
9 length of the lines -- how line lengths impacts the  
10 system?

11 A. Yes, certainly. Although there's quite a bit  
12 of discussion about locating lines close together,  
13 there's also a significant factor about line length.  
14 And let me demonstrate that a little bit.

15 I think, hopefully everyone here on the Board  
16 has heard the term that water follows the path of  
17 least resistance. That's a pretty commonly-used term.  
18 So does electricity, by the way. So the longer the  
19 line, the less the power like to flow over the line.  
20 It has more resistance in it.

21 So one of the things, when I handed this  
22 project to Mr. Smith, is if we look at the segment  
23 right here that goes between Limber and Oquirrh -- and  
24 remember, what I'm trying to do is backup these  
25 segments here.

1           Segment 2, if it's routed around the north  
2 end of mountains by the lake, and over to Terminal,  
3 and then back down to Oquirrh, is approximately  
4 18 miles longer than the current route that the  
5 Company's preferred and that our final EIS -- or  
6 proposed in the final EIS is preferred.

7           That's a 60-percent increase in line length.  
8 So what that does for me, as a utility planner, is put  
9 60 percent more resistance in those lines. And that  
10 line will not, will not transmit electricity to  
11 Oquirrh as efficiently as a shorter line.

12           The consequence of that longer line is that  
13 the power will tend to flow up this line and over here  
14 to Oquirrh, rather than go 60-percent longer from  
15 Limber, to Terminal, and back down to Oquirrh. So in  
16 summary, what that does is forces me to -- forces  
17 higher utilization of this part of the system, and  
18 less utilization of this part of the system. So it's  
19 longer, it's less efficient.

20           The other thing that it does is, being as  
21 this line, this line length if it was placed -- 2 and  
22 3 were placed together, 60-percent longer, that's  
23 60 percent more line losses. When we transmit energy  
24 over these lines we have heat, it goes up in the air  
25 as losses, that's there forever. That increases line

1 losses by 60 percent.

2 So based on the fact that this longer line is  
3 less efficient, it doesn't, it doesn't let me, as a  
4 planner, optimize the existing assets that I have.  
5 It's 60 percent more lossy. And it's less reliable,  
6 from a line-length perspective and from a co-location  
7 perspective, if they're in close proximity.

8 Q. Thank you. One of the things that might be  
9 suggested to the Board is that, rather than having the  
10 Company connect to the Oquirrh Substation, that it  
11 connect first to Terminal and then come down. Does it  
12 matter whether the Company connects to Oquirrh or  
13 Terminal first?

14 A. Yes, it certainly does. It needs to connect  
15 to Oquirrh first, for two primary reasons. Oquirrh is  
16 our highest load growth hub. Our load growth there is  
17 in excess of seven percent forecasted. We need to get  
18 the energy there.

19 Second is it needs to backup. I need to have  
20 backup capability. This is -- these two lines right  
21 here between Camp Williams and Oquirrh is the weakest  
22 link, if you will, north of Camp Williams.

23 When I showed you the scatter diagram a  
24 moment it showed we couldn't serve our customers a  
25 good share of the time. That's because of the weak,

1 the weak, the weak link here. And again, the sum of  
2 the parts is only as -- excuse me. The system is only  
3 as strong, as strong as the sum of the parts.

4 I need this line length here to back up this  
5 line right here. By going up and around to Terminal  
6 and back down, I don't get the backup for this line  
7 right here because I have constraints up here. So we  
8 need to go to Oquirrh first for reliability reasons  
9 and for load growth reasons.

10 Q. Thank you. We talked this morning quite a  
11 bit about the need to have line separation to keep  
12 lines, if we can, out of the same corridor in order to  
13 avoid anything that may -- if it takes one out, it's  
14 gonna take both out.

15 Could you give the Board any kind of examples  
16 of occurrences that could realistically take out two  
17 lines if located in the same corridor?

18 A. Certainly. In my experience there's a number  
19 of situations that cause common, common corridor  
20 outages. And those can be anywhere from weather  
21 caused, whether it's storms, blizzard, ice storms. We  
22 have a lot of incidences of smoke, fire taking lines  
23 out of service.

24 And it may not just be that the line is  
25 damaged by the fire. Quite often these are taken out

1 for extended periods to protect fire fighters and  
2 other serve -- emergency services around the lines.  
3 They actually have to be de-energized, even though  
4 they're still functional potentially.

5 We have aircraft strikes, we have floods,  
6 we've had ice. Quite a number of events that have  
7 caused common -- common corridor outages, I would say.

8 Q. Could you share with the Board any specific  
9 examples of those kinds of occurrences actually taking  
10 multiple lines out when they've been located in the  
11 same corridor?

12 A. Certainly. I refer you to my testimony. I  
13 think it's -- I believe it's on page 19. I've  
14 provided eight or ten examples of -- well, actually  
15 there's eight examples that have happened to Rocky  
16 Mountain Power. And then there's a couple of examples  
17 that were -- have happened outside of our company.

18 I threw in a couple of pictures here just to  
19 illustrate that point. This one happens to be our --  
20 I mentioned our Bridger West system coming out of  
21 Wyoming and into Southeast Idaho, where we have  
22 three -- at the time they were constructed there were  
23 supposed to be four lines. They ended up constructing  
24 three. And they're very close together, some 125,  
25 160 feet apart.



1           This particular example, 2007 we had a fire  
2 go through there. You wouldn't think there's much to  
3 burn out there. I've heard people say there's nothing  
4 to burn. But believe me, it does. And we had all  
5 three lines out of service for quite some time.  
6 Either forced out of service, or they were  
7 de-energized for firefighting protection.

8           Also we had two or -- two of these lines  
9 cascaded clear to the ground, due to ice in an ice  
10 storm. The third one was significantly damaged. And  
11 we impacted significant customers in Idaho.

12           Another picture here, the reason I have this  
13 one here is we never seem to outguess Mother Nature.  
14 No one projected high water levels of the Great Salt  
15 Lake, or floods, or the ice that would, would follow.  
16 And we had transmission lines located -- co-located,  
17 with significant damage.

18           So not only is it detrimental to the grid,  
19 but trying to get out in these areas and repair  
20 them -- or reconstruct them in this case, they were  
21 rebuilt -- is very, very difficult. And again, Mother  
22 Nature often gives us things that we hadn't expected.

23           Also, in this case the existing line that was  
24 there, that you see still standing, was damaged but it  
25 was in service. And it could not be removed from

1 service so we could do demolition of the stuff that  
2 was on the ground there because it didn't have backup.

3 This next picture is some of the ice that no  
4 one had ever expected that actually sheared these  
5 towers off. And they were not designed to take that  
6 kind of, that kind of loading.

7 Again, looking south down the line, same type  
8 of damage. Again, we couldn't get in to repair those  
9 lines.

10 Another example. This happens to be Palo  
11 Alto, California, where this line was specifically  
12 designed around an airport. However, planes and  
13 pilots don't always follow rules and a rather wide  
14 outage happened in the Palo Alto community as these  
15 double circuit lines were sheared off by an aircraft.

16 This is our Emery-to-Sigurd route. Sorry,  
17 you can't see it exactly, I put some lines on there.  
18 In 1982 and '83, even though we did our geological  
19 homework or geotechnical homework, over a period of  
20 six months there were five different landslides that  
21 affected our transmission line. Some more than  
22 others.

23 And in this case -- I'll flip the page  
24 here -- both lines co-located. Both lines were  
25 completely taken down for, for several spans and had

1 to be rebuilt. You can see the damage that results.

2 Also I think you can appreciate there's a  
3 significant fire -- there's significant fuel around  
4 those lines, and the Company doesn't always have the  
5 rights to clear fuel to protect us from fire. It  
6 depends on our permitting and such. So very  
7 significant impact.

8 In this case -- some of you may remember this  
9 if you've lived in Salt Lake -- in 1983 we had seven  
10 transmission lines impacted by a windstorm that lasted  
11 from April 3rd to April 5th. Significant damage.

12 The, I guess the saving grace, if I can use  
13 that term here, is these lines at the time were not  
14 heavily loaded. They were relatively new. They  
15 weren't used to their full capacity, or there would  
16 have been widespread outages in Salt Lake.

17 Today these lines have had over 20 years of  
18 load growth, there's a lot more power flying on them,  
19 and they have a larger impact.

20 I've put a couple other outages in there on  
21 the 500 kV AC interties, but you've thread that in my  
22 testimony so I won't, I won't cover those.

23 Q. Thank you. Mr. Gerrard, could you please  
24 describe for the Board how this project is critical to  
25 Tooele County, and specifically how Tooele's citizens

1 will benefit from this project?

2 A. Yes, certainly. There's definite --  
3 definitely a benefit to Tooele County and to the  
4 critical load every -- overall, in addition to the  
5 benefits I stated for the west-wide grid. What I've  
6 put up here is a simple graph of the electric energy  
7 sales in Tooele, which have increased 44 percent since  
8 2002.

9 The bottom line is the rate in the State of  
10 Utah. So it's about twice the rate of the rest of the  
11 state. And it is a fact that Tooele County is served  
12 as a critical load area. We have two lines serving  
13 Tooele County. One -- two from Terminal Substation  
14 and one from Oquirrh Substation.

15 And those lines serving Tooele are expected  
16 to be out of capacity by 2013 to serve existing  
17 customers. In addition, without this project we'll be  
18 unable to serve any large economic development  
19 projects. There's been a couple proposed in Tooele.

20 Without, without this project we will be  
21 unable to accommodate the loads that are demanded by  
22 those. Also, this project brings a large reliability  
23 benefit to Tooele. With Limber Substation there,  
24 again my concept of hubs, we put a large-load hub  
25 resource -- connected to resource hubs in Tooele.

1           And the diverse line route that we get by  
2 connecting to Terminal and to Oquirrh on the route  
3 that we've shown as preferred improves the reliability  
4 to Tooele.

5           Q.     Thanks. Finally, Mr. Gerrard, could you  
6 please explain to the Board why the Company is  
7 approaching it now for a project that is not scheduled  
8 for completion until 2013?

9           A.     Yes, certainly. The, the time it takes to,  
10 to design, to permit, to construct these projects is  
11 extensive. The last major project our company did was  
12 a 500 kV project in Oregon, and it took seven years  
13 from concept to construction. So we need to be -- we  
14 need to have time to anticipate and do the  
15 construction.

16           This project was actually proposed to be in  
17 service in 2012. I mentioned when we, when we  
18 announced Gateway -- our Gateway concept in May of  
19 2007 its in-service date was 2012. And we've pushed  
20 that out actually a year, to 2013, based on the time  
21 to permit and on the time to -- and some of our load  
22 growth projections.

23           So it takes a long time. We've been at this  
24 five years, and we still have at least a year, maybe  
25 two years of construction before we can complete the

1 project. So these large infrastructure projects take  
2 a long time to accomplish, and we need that, we need  
3 that to start now.

4 Q. Thank you.

5 MR. MOSCON: Mr. Chairman, with that summary  
6 I would move to admit the testimony of Mr. Darrell  
7 Gerrard, and make the witness available for any  
8 questions of opposing counsel or of the Board.

9 CHAIRMAN BOYER: Very well. Are there any  
10 objections to the admission of Mr. Gerrard's prefiled  
11 testimony?

12 MR. HOGAN: None.

13 CHAIRMAN BOYER: Very well, it is admitted.

14 (The prefiled testimony of Darrell Gerrard was  
15 admitted.)

16 CHAIRMAN BOYER: We'll take short recess,  
17 10 minutes, 15 minutes, and resume back here with  
18 cross examination from Mr. Hogan.

19 THE WITNESS: Thanks for your patience, by  
20 the way.

21 CHAIRMAN BOYER: Thank you, Mr. Gerrard.

22 (A recess was taken from 10:39 to 10:57 a.m.)

23 CHAIRMAN BOYER: Back on the record.

24 Mr. Hogan, cross examination?

25 MR. HOGAN: Thank you Chairman.

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

CROSS EXAMINATION

BY MR. HOGAN:

Q. Mr. Gerrard, I've taken the presentation back to that slide labelled "Energy Gateway Stage One," when you talked about a reliability triangle from the big picture. I think you were talking about 500 kV -- a 500-kV triangle.

Am I correct to understand that the legs of the 500-kV triangle are what are labelled as Segment F and Segment D? Those provide two of the legs?

A. That is correct.

Q. And where is the other 500-kV leg in that triangle?

A. The gentleman was referring to F here, if you can't see that, and D here. Segment C is Mona-Oquirrh, which is a 500-kV segment.

Q. And is that 500 kV all the way?

A. It is 500 kV between our Mona Substation and our Limber Substation.

Q. What happens at Limber?

A. Limber is planned to have a transformation from 500 kV to 345 kV.

Q. So is it important to have a 500-kV triangle complete, or is it important to have 500 kV where you want 500 kV and it's okay to have something else in

1 another place?

2 A. It's okay to have different voltages of  
3 500 kV or 345. The issue here is its capability --  
4 its ability to move megawatts.

5 Q. Okay. So --

6 A. Not the voltage.

7 Q. So it's not essential that it be a 500-kV  
8 triangle?

9 A. That's correct.

10 Q. Okay. Is it -- you've got this labeled as  
11 "Long-Term Needs," and I think you characterized long  
12 term as greater than ten years; is that accurate?

13 A. Yes, more than ten years.

14 Q. Okay. I noticed that on this slide it does  
15 not show a designation for the Limber-to-Terminal  
16 link. Is that, is that intentional, or is that  
17 omitted, or have I missed it?

18 A. No. For Stage 1 that segment is not needed  
19 yet, so that was planned to be built later than 2013.

20 Q. Is that accurate as of today, May 10, 2010,  
21 it's not gonna be needed until at least May 10, 2020?

22 A. I'm not familiar with the May 10, 2020, date.

23 Q. That would be ten years from now. You said  
24 this is a ten-year -- this is a plan that lasts for  
25 longer than ten years.



1           A.     Yeah.  In my testimony -- well, there's --  
2     let me, let me give you two drivers for the need for  
3     that line.  I think your question is, when is that  
4     line needed?

5           Q.     Exactly.

6           A.     Was that your question?  The line from Limber  
7     to Terminal is needed for two reasons.  One is when we  
8     add more capability to the system in Stage 2 between  
9     Mona and Limber there's plans for Stage 2.

10           The second reason is back to my local  
11     reliability triangle, where I need a backup between  
12     Terminal and Oquirrh.

13           Q.     Okay.  I understand that.

14           A.     At that point I need, I need a backup for  
15     that segment that exists today.

16           Q.     Do you know when Stage 2 will be built?

17           A.     The plan -- my testimony states it will be  
18     somewhere around 2019 at our current plan.  That's  
19     Stage 2.

20           Q.     And that's the latest, greatest, best  
21     information that Rocky Mountain Power has available,  
22     it's not gonna be needed until the date you just  
23     specified?

24           A.     That's my -- that's, that's correct.

25           Q.     Okay.  Is it accurate to say that when the

1 Mona-to-Oquirrh line is constructed -- wherever it,  
2 wherever it ends up being, whatever route is  
3 selected -- will that route predetermine the location  
4 of the Limber Substation?

5 A. Well, we have shown our, our preferred  
6 location of Limber Substation, if that's what you  
7 mean.

8 Q. Well, what I mean is in every, in every  
9 alternative that's been considered at least in your  
10 petition, the various routes, it seems that wherever  
11 this line is placed will determine the location of the  
12 Limber Substation. Is that accurate?

13 A. I'm not sure I understand your question where  
14 the line is placed. I'm sorry, I'm not sure -- I'm --

15 Q. When, when -- on your -- well, let's go --

16 A. Maybe you can clarify for me a little bit  
17 before I answer, please.

18 Q. Let me find your slide.

19 Let's go to the one that's in Brandon's  
20 testimony where you've got the local leg. It's got  
21 the dashed lines.

22 A. Whoops, let me go the other way.

23 Q. It's right before the charts. All the  
24 critical load charts.

25 A. This one?

1 Q. Yes.

2 A. All right.

3 Q. Okay, the circle that you've identified as  
4 the future Limber Substation, with the dotted line  
5 No. 2 being the Mona -- or the Limber-to-Oquirrh leg  
6 of the project?

7 If, if the leg for No. 2 was moved for  
8 instance to the north, and we, we weren't talking  
9 about the southeast bench right now, we're talking  
10 about the Grantsville alternative that's in your  
11 petition.

12 It seems that the placement of this route,  
13 this segment, determines the location of the Limber  
14 Substation; isn't that accurate?

15 A. What is accurate is we placed Limber  
16 Substation to provide the shortest line length we  
17 could to get to Limber, the most reliable line length  
18 to get to Limber, and the lowest cost actually to get  
19 to Limber, because it is the shortest distance.

20 Q. Okay.

21 A. That's what dictates where Limber is. The  
22 other thing I mentioned earlier, is the shorter I can  
23 make the No. 2 line from Limber to Oquirrh, the better  
24 performance I get out of my system here. The longer I  
25 make this line, the more the energy wants to flow over

1 here and not on our new system.

2 Q. Right.

3 A. So as a utility planner, if I can make that  
4 line short, it looks like it's this route. And the  
5 optimum, the optimum configuration would have these  
6 two length -- lengths be equal.

7 Q. Okay.

8 A. So.

9 Q. For the sake of discussion, assume that  
10 Limber Substation is moved north of Grantsville to the  
11 I-80 Corridor. Can you draw a triangle from that  
12 location to Terminal and to Oquirrh?

13 A. No, I cannot.

14 Q. Why is that?

15 A. I don't have a, I don't have a line from here  
16 back to Oquirrh.

17 Q. You can, you can use the existing cross at  
18 Pass Canyon and, and run a triangle from I-80.  
19 Granted that the substation, it would appear that the  
20 lines are gonna be closer together. But you can draw  
21 a triangle from I-80 and get to Terminal and to  
22 Oquirrh? Those seem to be three distinct, different  
23 locations that aren't all on the same linear path.

24 A. Well, I, I'm not all -- I'm not that familiar  
25 with the line route that you just talked about. That

1 may be something Brandon can address. But my, my  
2 comment still stands.

3 I, I could not recommend to my management nor  
4 to this Board that we build the line route that  
5 goes -- that puts these two lines together and routes  
6 them up around the point -- the, the mountains along  
7 I-80 and then back down to Oquirrh.

8 Q. I can address the specifics of that with  
9 Mr. Smith.

10 As to the Limber Substation -- which I think  
11 is important to be considered at this point in time,  
12 because wherever this route gets sited it appears that  
13 the substation will come next.

14 Can you tell me, from the big picture  
15 architecture standpoint, is it more likely the lines  
16 are gonna tie into the Limber Substation coming from  
17 the north side of the substation or from the south end  
18 of the substation?

19 A. From the south side.

20 Q. And where would they come from, additional  
21 lines?

22 A. Our plans are to come from Mona.

23 Q. Okay. Other than Rocky Mountain Power, is it  
24 likely that this will tie into a regional grid from  
25 the west?

1           A.     I'm not aware of any ties to the west that  
2 are planned for Limber. If it came from the west I  
3 would expect it would go to Mona. It's a resource  
4 hub. It's the largest resource hub in Oregon. Or  
5 excuse me, in Utah.

6           Q.     If there were connections from the north,  
7 where would they be likely to come from?

8           A.     There are plans from the north. Idaho Power  
9 has a plan that connects to Populus, connects to  
10 Hemingway. There's lines from the north from Montana  
11 that connect to Midpoint.

12          Q.     Okay.

13          A.     They connect to Gateway, as it's designed up  
14 on the screen.

15          Q.     Okay.

16          A.     I can show that if you want to look.

17          Q.     I don't think we need to. But what I'm --  
18 the point I'm trying to make here is that substation,  
19 once it's located, if there are gonna be other lines  
20 that connect in -- whether they be from the north or  
21 from the west -- it would appear that if it were  
22 located north of Grantsville you have straight shots  
23 that tie in without the need to co-locate very high  
24 voltage lines that would be tied into these other  
25 regional systems because you're right on the I-80

1 Corridor.

2           You've got a straight shot to Nevada. You've  
3 got a straight shot north. But if you leave the  
4 substation south of Grantsville you're necessarily  
5 going to need to run parallel lines to get to Limber  
6 Substation to interconnect regionally; isn't that  
7 correct?

8           A. Well, I'm -- again, I can't answer that  
9 because I'm not aware of any regional connections to  
10 Limber. But what I am aware of is two things. Our  
11 resource plan that the Company refreshes every couple  
12 of years -- which most people are familiar with --  
13 have identified the resources to serve our customers.

14           And those are located in Wyoming and in  
15 Southwest Utah -- or Southern Utah, either from  
16 markets or from power plants. We have no resources  
17 planned to serve our customers coming from the west.

18           Q. Okay.

19           A. So I sited Limber Substation for efficiency  
20 of the new assets we're adding, and the efficiency of  
21 the existing assets that it interties with. By  
22 "efficiency" I mean loss savings and its capability to  
23 deliver energy over time.

24           Q. I --

25           A. And cost.

1 Q. I believe what Tooele County is asking,  
2 particularly the residents of Grantsville that will be  
3 very impacted by the location of that substation, what  
4 their concern is is that there will be tie in from the  
5 west and from the north.

6 And unless this substation is moved to the  
7 north to the I-80 Corridor there's gonna be a  
8 spiderweb of lines coming out of the north side of the  
9 substation. That is a, that is a great concern?

10 And I know you're telling me that you're not  
11 aware of Rocky Mountain Power's plans internally to  
12 connect that way. But is it conceivable that other  
13 providers would desire to connect to the system from  
14 the west and the north?

15 A. I think it would be more desirable for them  
16 to connect to Mona, if they connect anywhere. The  
17 other thing I would say is, if you were to pull out  
18 the Western Electric Coordinating Council, who is our  
19 reliability organization for the West, they have a  
20 planning, a planning process where projects are  
21 brought forward for regional planning.

22 So as planners we've considered just what  
23 you're talking about, regional projects. And I can  
24 personally tell you, if I look at the map, there are  
25 no projects planned to connect to Limber. There are,



1 there are projects planned to connect to Gateway,  
2 however.

3 Q. Let's go to a different area that you  
4 testified about. Let's talk about minimum separation  
5 and maximum separation. If I heard you correctly, I  
6 believe I heard you say that the minimum separation  
7 the Company looked at was determined by the Company  
8 and you set it at one mile; is that correct?

9 A. That's the criteria I set for the projects,  
10 yes.

11 Q. Okay. With respect to this project, are you,  
12 are you aware that the criteria that was used in the  
13 EIS they looked at a 1,500-foot separation? Are you  
14 aware of that?

15 A. I understand there was some, some reference  
16 to that in the EIS, yes.

17 Q. Okay. I can certainly appreciate, as a  
18 non-engineer, the idea of minimizing risk. Okay? And  
19 the further we get away from one another -- I, I can  
20 see that. I think that's intuitive to everyone. But  
21 I can also appreciate that there's a diminishing  
22 return that's achieved.

23 You're getting -- you're separating these two  
24 lines out. They go to a common point. And at that  
25 common point, which in this case would be the

1 substation, you're necessarily gonna be somewhat close  
2 to one another.

3 So if you have any one of the events you've  
4 talked about that can take out -- a common cause that  
5 takes out lines, if it happens at the substation,  
6 they're both down. Would that be correct?

7 A. That's correct.

8 Q. And then as you move away from the substation  
9 of course it's probably desirable to get them, to get  
10 them separated and to achieve the separation as  
11 quickly as possible?

12 A. That's correct.

13 Q. Okay.

14 A. The standard in that case is five spans.

15 Q. Okay. Are you aware of the width of the  
16 right-of-way that exists with Interstate 80 and the  
17 railroad as it heads west parallel to Interstate 80?

18 A. All I'm aware of is I've seen it on a map  
19 that, that was designated as a potential but not  
20 registered energy corridor. That's the only -- I've,  
21 I've seen a map, that's all.

22 Q. Okay. Would it, would it surprise you if I  
23 told you that that -- the width of that right-of-way  
24 is anywhere -- at its narrowest point 300 feet, not  
25 including the railroad, just the interstate. And at

1 it's widest part, not including the railroad, is  
2 500 feet. Would that be surprising to you?

3 A. No, it's not. As that process went forward  
4 there were a number of corridors that were identified.  
5 Most of them were around existing lines. And the  
6 width varied quite significantly across the U.S. when  
7 they did that study.

8 Q. As I have noted on many occasions, and as I  
9 came to this hearing today, I paused when I got to  
10 Lake Point and I looked back at the Interstate 80  
11 corridor. And I was, I was struck by the fact that in  
12 the EIS it was determined that you couldn't find  
13 1,500 feet to separate between Lake Point and  
14 Grantsville.

15 Do you believe it's impossible to co-locate  
16 and achieve a minimum separation of 1,500 feet between  
17 Lake Point and Grantsville?

18 A. Well, I'll let my colleague, Mr. Brandon  
19 Smith, cover that, because he's done extensive look at  
20 that.

21 Q. Okay. Can you tell me from the big picture,  
22 when the Company looks at minimum separation, how did  
23 you arrive at one mile in this case as being the, as  
24 being the number that was critical?

25 A. Yes, I can answer that. My basis was a --

1 let me refer to my notes here. I want to be accurate.

2 Q. And I'm not asking for specific numbers. If  
3 you can just explain the methodology, that will  
4 satisfy me.

5 A. Yeah, but I -- I will do that. I just wanted  
6 to make sure it was, it was clear to the Board where I  
7 was getting my information.

8 I based my performance requirements and the  
9 project requirements on a Western Regional Corridor  
10 Study that was done in 1992 by Western Utility Group.  
11 And that corridor study is one of the most extensive  
12 studies I've seen in my 30-year career.

13 It resulted from the outage of the AC  
14 intertie, which are the two -- at the time were the  
15 two 500-kV lines that connect basically Canada to  
16 California. But at least the Northwest to California.  
17 They had a significant outage on that line.

18 Forest fires took it down a couple times.  
19 They had a huge ice storm and blacked out 5.2-or-so  
20 million customers. As a result of all that, they  
21 commissioned -- the result of that outage was a new  
22 line had to be built, a new 500,000 -- 500-kV  
23 thousand-mile line, because the reliability of common  
24 corridor lines was not adequate.

25 So they commissioned a study. And in here it

1 was coauthored with the BLM and the Fish and Wildlife  
2 Service, I believe. Excuse me just a minute. No,  
3 U.S. Forest Service and the Bureau -- BLM. And out of  
4 that study in here they talk about the corridor  
5 separation.

6 And they say lines of this capacity should be  
7 separated by miles, not feet. They also say, for  
8 planning purposes, corridors of a mile or up to five  
9 miles should be adequate, when you're looking at  
10 routing new transmission lines, to ensure adequate  
11 separation for reliability.

12 So that's where I based my information, was  
13 on that study.

14 Q. In light of that, how did you get the  
15 five-span number that you just mentioned a minute ago?

16 A. Yeah, good question. That, that is a  
17 regional criteria from the Western Electric  
18 Coordinating Council, where they talk about adjacent  
19 corridors. That -- it's a planning criteria, not a  
20 standard. I misspoke, I said it was a standard. It's  
21 a planning criteria.

22 And it tells me, as a utility planner, that  
23 based on performance and history, about five spans or  
24 five towers out from a substation is reasonable to  
25 start bringing lines together. And the exposure is

1 not too high. That's, that's a guideline or criteria.

2 Q. On this project would that be roughly  
3 1,500 feet?

4 A. As far as a?

5 Q. Five spans.

6 A. No, that would be about one -- 1,500 feet is  
7 approximately one span.

8 Q. Okay. So I, I still don't know that I'm  
9 understanding, then, why it was that BLM took great  
10 length to look at 1,500 feet as being the critical  
11 point to achieve separation. Why is that?

12 Was that -- and I understand -- I also  
13 understand that the parameters that are given are  
14 given to them by the Company to a -- you know, the  
15 project has to meet its needs. So was the 1,500  
16 number, was that supplied by the Company to the BLM?

17 A. Yes, it was. Let me see if I can clarify it,  
18 please.

19 Q. Okay.

20 A. There's two, there's two criteria that I've  
21 been referencing up here. And the first criteria is  
22 two lines in common corridors. And the planning  
23 criteria -- again, it's not a standard -- talks about  
24 adjacent lines in common corridors.

25 And if they're separated by more than a span

1 length, or 500 feet, they're not considered adjacent.  
2 That's where that comes from. And a typical span for  
3 a 500-foot -- excuse me, a 500-kV line, for planning  
4 purposes is about 1,500 feet.

5 So that's used as a rule of thumb to talk  
6 about whether two lines are adjacent to each other or  
7 not for planning purposes at the WECC.

8 The second criteria, and the one that I'm  
9 most concerned about here, is loss of an entire  
10 corridor. Where you lose all the lines that you have  
11 in that corridor. That's, that's the reason I'm not  
12 recommending that those projects -- that those lines  
13 be co-located. There's more than one criteria, just  
14 to be clear.

15 Q. But the examples that you cited in your  
16 testimony of co-location being a problem and common  
17 causes causing lines to go down, what was the greatest  
18 number of feet separation in all the examples that you  
19 cited?

20 A. I don't know what those would be. I didn't,  
21 I didn't look at that.

22 Q. I mean, it looked awfully close in the  
23 pictures. I mean, I, I don't claim to have a  
24 surveyor's eye but, I mean, the Thistle, the Thistle  
25 example looked very close.

1           A.     I don't know the answer to your question, I  
2 didn't look at the separation. But obviously by the  
3 pictures I've shown you of the Bridger lines, those  
4 three lines together, I believe they're 150, in round  
5 numbers. Subject to check. They're very close  
6 together.

7                     I would also point out that the rule for line  
8 separation, we can locate lines closer together if we  
9 choose to as a company. The criteria, though, is I  
10 still have to provide redundancy.

11                    So should I choose, so should I choose to  
12 locate lines closer together than 1,500 feet in the --  
13 in your question, I can do that if I, if I had to, but  
14 I still have to provide redundancy. It doesn't take  
15 away that performance requirement.

16           Q.     Okay.

17           A.     That's why I'm trying to make the point that  
18 line separation in itself does not constitute a  
19 electric system performance. That's just one  
20 attribute.

21           Q.     Okay. And with the exception of the smoke  
22 and the mudslide, it appeared that even when the lines  
23 were co-located very closely to one another and there  
24 was a common-cause event, that only one line went  
25 down. Is that accurate?



1           A.    No, I think the examples I showed showed  
2 several lines. One was seven of them. One was two.  
3 No, they were -- most of them were, most of them are  
4 more than one line.

5           Q.    On the, on the lake, on the lake example you  
6 cited --

7           A.    In that --

8           Q.    -- one line went down?

9           A.    In that case, that's correct. There was one  
10 line was down, one was damaged.

11          Q.    Is --

12          A.    I didn't have a picture of where they were  
13 both down but one was damaged.

14          Q.    Okay.

15          A.    And I guess the other point I tried to make  
16 for the Board is that they don't have to go down to be  
17 a problem. If they're damaged, or you can't get to  
18 them to repair them or de-energize them, that's,  
19 that's an issue.

20          Q.    Is the system that's been designed, from the  
21 big picture, with all the reliability triangles, is it  
22 designed to create a system that 100 percent  
23 completely avoids outages in all circumstances?

24          A.    No, it is not. That's not possible.

25          Q.    Okay. Given that that's not possible, there

1 is a certain amount of risk with every plan that Rocky  
2 Mountain looks at from an architectural standpoint;  
3 isn't that correct?

4 A. That is correct.

5 Q. Okay. And wouldn't it also be correct to say  
6 that in this case, when we're talking about separation  
7 of lines, the Company, in its sole discretion, based  
8 upon the standards and guidelines you've brought up,  
9 is determining what that minimum threshold is going to  
10 be?

11 A. That is correct that the, the determination  
12 of system performance is left to me and my company --

13 Q. Okay.

14 A. -- and how that performs. As would be any  
15 mitigation -- should they not perform, we would also  
16 be asked to mitigate and correct that situation.

17 Q. So I'm gonna use a very, a very simple  
18 example to try to illustrate the point that I'm  
19 making. From a, from a risk standpoint what it sounds  
20 like to me is -- when I wake up in the morning there's  
21 a risk my pants are gonna fall down. I wear a belt.

22 I wear a leather belt. And I wear one. And  
23 I've determined that that's sufficient. I'm not  
24 nervous that my -- I'm not gonna have an event where I  
25 lose my drawers when I go in to work that day.

1           But I don't put on two belts and a pair of  
2 suspenders underneath my shirt, and then another pair  
3 of suspenders over top my shirt, which may be  
4 equivalent to maximum separation. I'm certainly never  
5 gonna have a problem losing my drawers if I've got two  
6 belts and two pairs of suspenders on. But I've  
7 accepted the risk with one belt.

8           Would you disagree that that's akin to what  
9 the Company is doing here? The Company is saying,  
10 Look, we can have minimum separation. And we can do  
11 that for a period of time. And there's a risk  
12 associated with that. But we're trying to achieve  
13 maximum separation.

14           And in this particular example you're looking  
15 for maximum separation, you're looking for two belts  
16 and two pairs of suspenders; isn't that correct?

17           A. I guess I don't have a strong opinion on your  
18 suspenders. But what I do know is that we're held to  
19 a prudence test that we're using our experience, both  
20 technical and operational experience, to make sure we  
21 design a system that's reliable. That's difficult to  
22 do. And that's my job.

23           I think the next part, though, is that our  
24 worst-case scenario isn't a belt and suspenders. It's  
25 that this line doesn't perform, for the reasons that

1 I've said, and then we're back in front of Tooele  
2 County or other constituents trying to build a new  
3 line to back it up. That's the worst-case scenario  
4 that I want to avoid.

5 Q. Well, I guess the best-case scenario that I'm  
6 trying to illustrate right now is, even if you  
7 constructed it as I've suggested co-locating that  
8 close together, isn't it correct to say that Tooele  
9 County's power situation will be vastly improved from  
10 what it is right now today?

11 A. I would say it's not as good as it could be.  
12 And it's not just about Tooele County, again. It's --

13 Q. No, no.

14 A. All right.

15 Q. My question is, we'll be in a better power  
16 situation. We'll have more reliable, more quantity,  
17 more efficient. All of that will be addressed if we  
18 do it just as I've stated.

19 Even though there will be a greater risk than  
20 what the Company's proposed, all those other factors  
21 will be achieved with co-locating those lines at a  
22 minimum acceptable separation; isn't that correct?

23 A. No, that's not correct. I don't agree with  
24 that.

25 Q. So --

1           A.     And let me, let me again say why I disagree  
2 with that. I think the project you're suggesting is  
3 less reliable from a proximity of lines being close  
4 together, which we've just talked about. It's longer  
5 by 60 percent, approximately.

6           Q.     Let me clarify and make sure you're talking  
7 about the right example I'm talking about. I'm  
8 talking about running parallel with achieving minimum  
9 separation from Grantsville, North of Grantsville, to  
10 Lake Point. And at Lake Point following and crossing  
11 the mountains exactly as you proposed in your  
12 Southeast Bench route. Is that, is that what you're  
13 describing right now?

14          A.     I'm talking about the lines that are close  
15 together by the lake.

16          Q.     So for four to five miles where we're closer  
17 than the Company would like we're gonna negate all the  
18 benefit of the proposed upgrade?

19          A.     Well, I guess what I'd like to do is have  
20 Brandon Smith talk about that route, because it's more  
21 than just separation. That's not the only issue.

22          Q.     Okay.

23          A.     I think we need to talk about the whole  
24 project. And I understand your question. I think  
25 Brandon can cover that in his discussion.

1 MR. HOGAN: No further questions, Chairman.

2 CHAIRMAN BOYER: Okay. Thank you, Mr. Hogan.

3 Let's see if the Board members have any  
4 questions. Let's begin with Mayor Johnson. Do you  
5 have any questions for this witness?

6 MAYOR JOHNSON: I don't.

7 CHAIRMAN BOYER: Commissioner Allen?

8 COMMISSIONER ALLEN: Thank you, Mr. Chair.

9 As you're doing your -- conducting your  
10 engineering studies and your analysis of sites and  
11 locations do you -- are you involved in calculating or  
12 determining the cost for projects and potential site  
13 moves, or do you have other people in the Company that  
14 are strictly dedicated to cost analysis?

15 THE WITNESS: We have cost-estimating folks  
16 that do the estimating for the projects. Both on a  
17 conceptual level and a detailed level.

18 COMMISSIONER ALLEN: Do they give you  
19 feedback if you're making suggestions that you're  
20 getting into areas where you might be creating an  
21 unnecessary -- or a high level of expense, or that you  
22 might be gold plating a system based on your cost need  
23 to keep a system reasonable in terms of price?

24 THE WITNESS: Um.

25 COMMISSIONER ALLEN: Do you interact with

1 those folks much?

2 THE WITNESS: Yes, we do. And let me briefly  
3 describe a couple levels. At the conceptual level --  
4 and I'll take that back to 2005 and '6, when we were  
5 putting the concept together. We used high-level  
6 block estimates. By "block estimates" I mean plus or  
7 minus 40 percent accuracy. Because you don't know  
8 line routes, and you don't know property rights, and  
9 things like that.

10 So we will do an estimate at that point. And  
11 then once we've moved our proof of concept to more of  
12 a technical state or we have more definition -- like a  
13 proposed route now, we know whether it's 100 miles or  
14 80 -- we will do a next-step estimate. Which gets us  
15 in around -- somewhere around plus or minus 20 percent  
16 kind of range for that.

17 And at that point I turn it over to the  
18 project team to start looking at siting and permitting  
19 before we do a very detailed estimate.

20 COMMISSIONER ALLEN: So it sounds like it's  
21 possible you have some rules of thumb you operate by?  
22 Such as if you're going to send a line down on an open  
23 rural area that you could have a rule of thumb of what  
24 it costs per mile, versus say in hostile terrain and  
25 what costs per mile might be?

1 THE WITNESS: Yes, we do. They're, they're  
2 pretty broad ranges, but we do have.

3 COMMISSIONER ALLEN: What do those ranges  
4 sound like, just if you were to describe to a  
5 layperson like myself what it costs?

6 THE WITNESS: Let me give you an example. On  
7 our 500-kV system it can run anywhere from 2 million  
8 to 5 million a mile. And I've seen estimates of  
9 10 million a mile in urban areas for 500 kV. But  
10 typically it would be 2 to 5 million for a 500-kV  
11 line, something like that.

12 COMMISSIONER ALLEN: Thank you.

13 CHAIRMAN BOYER: Ms. Hurtado, have you  
14 questions of this witness?

15 MS. HURTADO: I do not.

16 CHAIRMAN BOYER: Commissioner Campbell?

17 COMMISSIONER CAMPBELL: Could you just  
18 explain for us what some of those future low-cost  
19 resources from the south are?

20 THE WITNESS: Cert -- certainly. In my  
21 testimony, it's Exhibit -- let me check to make sure  
22 here real quickly. I think it's 6, but let me make  
23 sure I've got it here.

24 Actually, I've included in my original  
25 submittal with my prefilled testimony Exhibit No. 4,



1 which is a table out of our current -- excuse me, our  
2 last revision of our Integrated Resource Plan 2010.  
3 It was actually updated in March 2010.

4 And in that -- if you have that, I'll wait  
5 to -- do you have that?

6 MS. HURTADO: Five.

7 THE WITNESS: Oh, okay. Excuse me. There's  
8 a table there that shows resources for the east. And  
9 basically what that shows is purchases from Mona, and  
10 purchases from the Desert Southwest, and generation  
11 plants built in the southern part of the State.

12 So those are the resources that I was  
13 referring to.

14 COMMISSIONER CAMPBELL: Then explain for  
15 me -- I believe you said that as the load grows, that  
16 the transfer capability from the south decreases. Or  
17 that we'd have less access to resources in Hunter and  
18 Huntington. Would you please explain that?

19 THE WITNESS: That's correct. What I was --  
20 can I put my slide up here real quick here? Just a  
21 second. Yeah, I'd like to refer to this slide again.

22 It's a, it's an engineering fact, I guess, or  
23 physical laws of -- laws of physics. Basically the --  
24 as the load in the critical area grows, our  
25 transmission system has to transmit more power to that

1 critical load area. Which is maybe obvious.

2 The problem with it is, is it's rotating  
3 equipment, and it -- we have reactive power flows on  
4 our system. What that means is, is that as those  
5 lines load up we get into potential voltage collapse  
6 situations where our system can't transmit the  
7 reactive power needed for motors, air conditioners,  
8 and other rotating equipment.

9 That does not flow well on a transmission  
10 system. So we actually get into voltage, voltage  
11 conditions, and that degrades as the critical load  
12 area load increases. Again, it's large blocks of  
13 load, remote distances from generation, over long  
14 lines.

15 That's, that's what causes it. It's reactive  
16 power flow on the system. Poor power factors --  
17 someone may have heard that term -- that's what that  
18 is.

19 COMMISSIONER CAMPBELL: I understand the need  
20 for reactive power. Let me, let me ask you this. On  
21 your Gateway project you showed a 3,000-megawatt  
22 transfer capability. Is that still a plan of the  
23 Company? Because it --

24 THE WITNESS: That is, that is our current  
25 plan. I mentioned there was two stages to that

1 project: A single-circuit stage and a double-circuit  
2 stage. And what I showed up here was the  
3 double-circuit stage.

4 And that is still planned at this point.  
5 Later this year we'll be making a decision on that.  
6 About August of this year. About whether to continue  
7 with Stage 2.

8 COMMISSIONER CAMPBELL: The current corridors  
9 that you have outlined for what we're here talking  
10 about, the Mona to Oquirrh, that -- what is the  
11 megawatt capability of that project?

12 THE WITNESS: Right now that corridor is  
13 planned for 1,500 megawatts right now.

14 COMMISSIONER CAMPBELL: So if you were to go  
15 to your 3,000 long-range plan would you be able to use  
16 that same corridor? Are the towers built to handle  
17 that double circuit, or would you require a new  
18 corridor for that?

19 THE WITNESS: It would require a new corridor  
20 if we built a single-circuit tower.

21 COMMISSIONER CAMPBELL: Is that what you're  
22 planning to build right now?

23 THE WITNESS: That's correct. At this point,  
24 we are. That's what's in the EIS, and that's what's  
25 in our application.

1           COMMISSIONER CAMPBELL: You also talked about  
2 the minimum-mile separation. And I think you said you  
3 have one line currently serving Tooele Valley from  
4 Oquirrh Substation; is that right?

5           THE WITNESS: That's correct.

6           COMMISSIONER CAMPBELL: Would you -- as you  
7 run this new line to Oquirrh would you have a mile  
8 separation -- your minimum one-mile separation with  
9 the current facility?

10          THE WITNESS: That would, that would not be a  
11 requirement, because of the capability of that, that  
12 line that serves Tooele right now. It's a 138-kV  
13 line. It doesn't have a huge impact on the system, so  
14 that would not be a requirement for a mile.

15          CHAIRMAN BOYER: Thank you, Mr. Gerrard.  
16 Just a couple of questions. Rocky Mountain Power  
17 does -- as I recall, some of the lines coming out of  
18 Bridger are fairly close together, are they not?

19          THE WITNESS: That's accurate.

20          CHAIRMAN BOYER: That's wide-open spaces.  
21 Why did the Company not decide on a mile separation  
22 there?

23          THE WITNESS: I wasn't with the Company at  
24 that point, but I think the issue at that point was to  
25 minimize the footprint of the project. Those lines

1 were built with helicopter construction. And they  
2 were attempting to minimize the -- I think the, the  
3 right-of-way widths that they needed at the time.

4 CHAIRMAN BOYER: Have you had any sad  
5 experiences there in --

6 THE WITNESS: Absolutely.

7 CHAIRMAN BOYER: -- catastrophic causes?

8 THE WITNESS: We have. I mentioned a couple.  
9 The fires we've had. The longer-term ice storms.  
10 We've had vandalism. We've had people actually cut  
11 the wires a couple of towers over or so.

12 Actually it's part of the reason for Gateway,  
13 is -- the three lines out of Bridger, which I showed  
14 you the picture of, is the -- unfortunately the  
15 worst-performing 345-kV path in the Western  
16 interconnection.

17 So part of the Genesis of Gateway and the  
18 reason for Gateway, it can provide a backup to that  
19 path.

20 CHAIRMAN BOYER: Thank you. A more -- in a  
21 more recent example, the Ben Lomond-to-Terminal line  
22 is co-located for a portion of the route, isn't it,  
23 around Millard?

24 THE WITNESS: That's correct, it is.

25 CHAIRMAN BOYER: And why did you not separate

1 the lines at that point?

2 THE WITNESS: Well, two, two reasons for  
3 that. And the, the line between Terminal and Ben  
4 Lomond was built in an existing right-of-way. Or  
5 property rights that Utah Power was -- had enough  
6 foresight to purchase that and preserve it for just  
7 this use.

8 So I think that was a fact, we already had an  
9 asset that we had planned for and to use. And the  
10 other, the other fact is that there aren't viable  
11 alternatives to go through there. You either go  
12 through the, through the water, around the Bay, or you  
13 go through Bountiful, Woods Cross, right? So there  
14 really, and there really weren't viable options.

15 I would add one more point, though. Part of  
16 the reason I was able to get the performance out of  
17 the system by co-locating that is because I have  
18 Mona-Oquirrh and Mona-to-Terminal lines, because they  
19 help backup from the south.

20 So if I lose the corridor between -- if I  
21 have a problem between Ben Lomond and Terminal, now  
22 I've got this new project coming from the south with  
23 another 1,500 megawatts of capability to back that up.  
24 That's part of the wired -- that's the Gateway Central  
25 connection is what you asked.

1 CHAIRMAN BOYER: Thank you. And then one  
2 last question, kind of following up on a question that  
3 Commissioner Campbell asked. It looks as though the  
4 proposed route through the southeast portion of  
5 Tooele -- Tooele County will run fairly close to the  
6 existing 138-kV line.

7 And you've mentioned that it's not re --  
8 separation is not required because of the operating  
9 characteristics of those lines. But you would still  
10 run the risk, though, of a single disaster taking out  
11 those lines, would you not?

12 THE WITNESS: That's correct. But it  
13 wouldn't jeopardize Limber Substation if I -- because  
14 I have another line route. So the 138 outage, if it  
15 happens from a common corridor or common mode, would  
16 not jeopardize my substation. The big large  
17 substation at Limber.

18 CHAIRMAN BOYER: Okay, thank you. I said  
19 that was my last question, but I have one more --

20 THE WITNESS: Sure.

21 CHAIRMAN BOYER: -- that just occurred to me.  
22 You have been presenting the triangle that you talked  
23 about here, the small triangle in the Tooele area, as  
24 necessary to serve resources coming from the south.  
25 What about resources coming from the north?

1 THE WITNESS: In our Integrated Resource  
2 Plan, the one that's current, there are resources  
3 planned from the north, but those can't get into Utah  
4 until Gateway is built. If you go -- the map I showed  
5 you of the State of Utah with the paths in, those,  
6 those lines are, those lines are constrained.

7 There's no more transmission capacity  
8 available out of Wyoming. It's fully utilized. We  
9 operate at its maximum. The lines from Idaho down to  
10 Utah are operated at their maximum. There's no  
11 capability in them.

12 Once Gateway is built in around 2016 to '18,  
13 Gateway West, then our resource plan shows more  
14 resources coming in from the north. Primarily  
15 Wyoming, and then down in to Utah. By "north" I mean  
16 that direction.

17 So it's transmission limitation. And  
18 currently there's no resources -- we can't get  
19 resources there until some transmission is built.

20 CHAIRMAN BOYER: Okay, thank you.

21 Let's turn back to the Company for redirect.

22 MR. MOSCON: Thank you.

23 REDIRECT EXAMINATION

24 BY MR. MOSCON:

25 Q. Just a couple of questions, Darrell. I'm



1 wondering if you could click to the slide that is what  
2 we've called the "Brandon Slide" that shows the inner  
3 triangle here in the Tooele Valley.

4 While you're getting to that slide, though, I  
5 want to talk to you for a minute about a point that  
6 Tooele County raised, which is a fair point, which is  
7 to say is this really a belt-and-suspenders approach  
8 when the Company really only needs a belt?

9 It occurs to me that when you had the  
10 pictures of the other disasters that have previously  
11 taken out lines you had as an example wind, fire,  
12 flood, and a plane crash. Is it reasonably  
13 foreseeable to the Company that if there was a fire  
14 that would jeopardize lines that the, that the fire  
15 would impact an area of at least 1,500 feet or  
16 greater?

17 A. Yeah. I think most of the time these  
18 fires -- and we've had several between Camp Williams  
19 and Mona, and between Camp Williams and 90th South --  
20 have affected lines that were separated wider than  
21 1,500 feet. That's -- that happens frequently.

22 Q. Okay. And --

23 A. Especially in the open range.

24 Q. If there was a windstorm that -- you had  
25 pictures of wind that had taken out towers. Is it

1 reasonably foreseeable to the Company, or to you as a  
2 planner, that if there's going to be a large weather  
3 wind event that that event would be limited to an area  
4 narrower than 1,500 feet?

5 Or would it be more reasonable to assume it's  
6 going to expand beyond a 1,500-foot corridor of  
7 concern?

8 A. Most of the time I think in a, in a  
9 1,500-foot corridor, wind is gonna be wider than that.  
10 You're gonna have a wider swath that it would come  
11 down. Microbursts are an exception to that. They're  
12 usually very centralized. But the Wasatch Front  
13 sloping winds, like the disaster I showed you, were  
14 widespread.

15 Q. One of the other examples you had a  
16 photograph of was a plane crash. If you were supposed  
17 to, as a planner, take into consideration the  
18 possibility that there are airports in this vicinity,  
19 if you had a plane crash is it foreseeable that a  
20 plane crash could have an impact over an area that's  
21 at least 1,500 feet in width?

22 A. Yeah, it actually has. And the separation,  
23 what, what happens there is, unfortunately, usually  
24 the airplane will grab a wire and carry it to the next  
25 set of towers. It will, it will pick it up and drag

1 it as the event unfolds. So in close proximity,  
2 that's a real likelihood.

3 Q. Okay. I'm sure you and the Board can see  
4 where I'm going with these questions. I won't belabor  
5 it through the flood and everything else.

6 Let me just simply ask. Is it a suspenders  
7 and a suspenders and a second belt for the Company to  
8 ask for an area of at least -- or even wider than  
9 1,500 feet, or is that what, as a planner, you think  
10 is absolutely minimum and reasonable?

11 A. No. I think it's very prudent for us, with  
12 our experience and our planning, to ask for a wider  
13 separation for these types of lines that I'm talking  
14 about.

15 Q. Okay, thanks. The next thing I wanted to  
16 clarify from some of your testimony, Tooele properly  
17 and correctly pointed out, I think, that -- if I can  
18 get this to work.

19 Wherever you have a substation, whether it's  
20 up here, here, down here, you've got lines coming in.  
21 And there's going to be some few feet leaving the  
22 substation where the lines are close to each other.  
23 Right?

24 A. That's correct, yes.

25 Q. Did -- one thing I just wanted to clarify

1 from your testimony. We had some conversation about  
2 multiple -- you know, five spans or 1,500 feet.  
3 Fifteen hundred feet is one span, we need five spans.

4 Can you clarify for us then what you meant  
5 about this. Recog -- assuming again that the Limber  
6 Substation stays there, how far away from the  
7 substation do you prudently allow yourself to get that  
8 separation? Does it have to be instantaneous, or can  
9 you go 20, 30 miles before you separate?

10 A. No. Instantaneous is impossible, 30 miles is  
11 way too long. But about five ruling spans, or about  
12 five spans, is typically used in the industry in the  
13 West as an acceptable amount of exposure for  
14 co-locating lines.

15 Q. Okay, then. Just to clarify then. If you  
16 had a long corridor leading from a single substation  
17 with the lines co-located, that would not meet the  
18 standard. But as long as you've got the separation  
19 within about five span lengths, it would?

20 A. That is correct. That's, that is what I  
21 would recommend and advise.

22 Q. All right. Last point I wanted to clarify.  
23 You mentioned a couple of times -- and I don't mean to  
24 put words in your mouth -- but words to the effect  
25 that you can have lines closer together, but when you

1 do, it requires redundancy.

2 A. That is correct.

3 Q. Can you clarify what that means? In other  
4 words, if you had Lines 2 and 3 in the same path, what  
5 does that mean to say that's fine as long as we have  
6 redundancy? What is -- what would "redundancy" be?

7 A. Well, if they're in the same path, to gain  
8 redun -- redundancy I would have to build basically a  
9 third line. Another line in case that -- those lines  
10 are affected, I have another path. So that in a sense  
11 is another line. As is my concern if this line  
12 doesn't perform, then we'll be back looking for a fix.  
13 And we will have to fix it.

14 MR. MOSCON: Thank you.

15 Thank you, Mr. Chairman.

16 CHAIRMAN BOYER: Thank you.

17 Thank you, Mr. Gerrard. You are excused now,  
18 thank you.

19 THE WITNESS: Thank you. Appreciate your  
20 patience today and understanding.

21 CHAIRMAN BOYER: As they say, that's why we  
22 get the small bucks. For our patience.

23 Let's take -- I think this would be an  
24 appropriate time to recess for lunch, so let's take  
25 until quarter after one. And then we'll resume with

1 your second witness, Mr. Smith?

2 MR. MOSCON: Thank you.

3 CHAIRMAN BOYER: Okay, thank you. I'll see  
4 you back then.

5 (A luncheon recess was taken from  
6 11:42 to 1:19 p.m.)

7 CHAIRMAN BOYER: And we'll proceed to hear  
8 from the second Rocky Mountain Power witness,  
9 Mr. Smith.

10 MR. MOSCON: Yes, thank you. We'll call  
11 Mr. Brandon Smith.

12 While Brandon is sitting down, Mr. Chairman,  
13 my colleague will be handing out similar packets like  
14 we did for Darrell.

15 CHAIRMAN BOYER: Great, thank you. Why don't  
16 we swear Mr. Smith in before he does take a seat and  
17 get comfortable.

18 (Mr. Smith was sworn.)

19 CHAIRMAN BOYER: Thank you. Please be  
20 seated.

21 Mr. Moscon, the floor is yours.

22 \*\*\*

23 BRANDON SMITH,

24 called as a witness, having been duly sworn,  
25 was examined and testified as follows:

1 DIRECT EXAMINATION

2 BY MR. MOSCON:

3 Q. Brandon, could you please identify for the  
4 Board your name, business address, and present  
5 position?

6 A. My name is Brandon Smith. I work at 1407  
7 West North Temple here in Salt Lake City, where I am  
8 currently the project manager in the Transmission  
9 Delivery Department for Rocky Mountain Power.

10 THE REPORTER: I need you to --

11 CHAIRMAN BOYER: Yes, I'm not sure that the  
12 mike is on. Is the light --

13 THE WITNESS: Yeah.

14 CHAIRMAN BOYER: Is the light on?

15 THE WITNESS: Yeah, it's on.

16 CHAIRMAN BOYER: Okay. You just need to --

17 THE WITNESS: Okay. Speak up.

18 CHAIRMAN BOYER: -- draw it a little closer.  
19 There we go. Thank you, Mr. Smith.

20 Q. (By Mr. Moscon) Thanks. Brandon, could you  
21 describe for us briefly your education and business  
22 experience?

23 A. I have a Bachelor of Science degree in civil  
24 and environmental engineering from Utah State  
25 University. For the past 12 years I have been

1 involved in various field and project management, from  
2 civil engineering, to environmental, and now electric  
3 utility.

4 I was a field engineer for the Light Rail  
5 Project, Downtown Salt Lake City. And I went to Idaho  
6 Falls, Idaho, worked at the Idaho National Engineering  
7 Laboratory, where I managed the cleanup and  
8 reclamation of contaminated soils at the site.

9 I then came to the Company and managed  
10 environmental reclamation and cleanup projects for  
11 Pacifi Corp with all the power plants and other various  
12 locations. I then moved into the transmission  
13 delivery group, where I have managed distribution,  
14 substation, and transmission projects.

15 Q. Thanks. Brandon, as a project manager in the  
16 Transmission Delivery Department of the Company can  
17 you please describe for the Board the responsibilities  
18 that you've had with respect to this specific  
19 transmission project that is at issue here today?

20 A. Role of the project manager is to manage the  
21 overall scope, cost, and schedule for a project.

22 Mr. Gerrard came to us, to my department, for -- with  
23 a project to build a transmission line from the Mona  
24 Substation area to Oquirrh and Terminal Substations.

25 My responsibility is to make sure that that



1 project is, is sited, permitted, designed, and  
2 constructed to company standards to meet the needs of  
3 our -- the essential needs of our customers for the  
4 Company, and to make sure that we provide a safe,  
5 reliable, adequate, and efficient system.

6 Q. Okay. When you got this project from  
7 Mr. Gerrard, I'll say how did you -- I know it was  
8 more than you, it's a team -- but how did you begin  
9 locating this project? What -- after you got the  
10 project what was the first step that you did?

11 A. The Company initiated a regional  
12 environmental feasibility study, which helps determine  
13 the ability to locate, and permit, and construct a  
14 project of this kind.

15 Q. Okay. And can you describe for the Board  
16 that process when you go through a feasibility study?

17 A. The feasibility study starts by defining a  
18 project study area to narrow down your research area.  
19 You then review a wide range of alternate transmission  
20 corridors and substation sites.

21 And you go through a comparison analysis  
22 process to determine where you are able to site those,  
23 those transmission lines and substations. And which  
24 corridors or potential locations don't meet the  
25 criteria that have been established, and which ones

1 should be eliminated from further consideration.

2 Q. Okay. The first thing that you identified  
3 was a study area. Could you describe for the Board  
4 how the Company determined the study area for this  
5 project?

6 A. Right. I've got a map up here on the screen.  
7 The map -- study area is determined by a combination  
8 of things. Topography. We have other -- terrain,  
9 slope. We have environmental factors, access,  
10 existing substation sites and locations. Main water  
11 bodies.

12 So you can see up on the screen -- let me  
13 switch my pointer. On the right-hand side up here,  
14 the dark dashed line is actually the project study  
15 area. Down here is the existing Mona Substation. We  
16 have the Oquirrh Substation, which is up here in the  
17 Salt Lake Valley. And then we have Terminal up here.

18 These existing substation sites helped  
19 establish the eastern boundary. You can see we have  
20 Utah Lake here, a large water body. We have some  
21 mountain ranges in here. So this was the most  
22 feasible eastern boundary for the project, based on  
23 where we had to go and the constraints we were given.

24 The southern boundary is defined by -- Mona  
25 Substation's as far south as we have to go, which

1 pretty much established the southern boundary. Over  
2 on the west side we have the West Tintic Mountains.  
3 We have some existing linear features over here.  
4 Highway 130 -- or Highway 36. We have railroad  
5 corridor.

6 As we move north we have the Stansbury  
7 Mountain Range. And the Tooele Valley is right in  
8 here. Then we have the Great Salt Lake, which is  
9 providing a boundary up on the northern edge, with the  
10 Terminal Substation located in the northeast corner.

11 Q. Okay. How did the Company begin to define  
12 potential transmission corridors within the  
13 feasibility study area?

14 A. The process begins by obtaining a data  
15 inventory. So you start gathering information that's  
16 readily available to the public by federal, state, and  
17 local agencies that's already been documented. You go  
18 combine those -- that information together to  
19 determine possible corridors.

20 So if you look at the map I've got here up on  
21 the screen, we have several potential corridors going  
22 from the southern area out near Mona to the north, up  
23 to a potential substation site in this area. So you  
24 identify whatever available information there is.  
25 Review those alternative routes. And ultimately come

1 up with routes that would -- you would carry forward  
2 in the process.

3 Q. Okay. Can you provide examples for the Board  
4 of specific engineering or environmental constraints  
5 that were identified during the study that established  
6 where those potential corridors would go?

7 A. Siting transmission lines, as far as  
8 engineering goes we look for the ability to get, you  
9 know, a line from one point to other. We have issues  
10 such as mountain ranges we have to deal with. Like I  
11 pointed out, we have mountain ranges down here in the  
12 Mona area. Again up here with the Oquirrhos.

13 Steep terrain is an issue. Being able to  
14 maintain access to the facilities that we need to get  
15 to. We also look at geotechnical soils. And then  
16 there's also environmental factors, such as the  
17 existing transportation plans, utility plans, land use  
18 plans that we obtain from the local, local agencies  
19 and state agencies.

20 There's biological resources, wildlife  
21 habitat, vegetation. We have geotechnical  
22 information, existing linear features, and cultural  
23 sites. All that information that's readily available  
24 by these agencies we accumulate and compile.

25 Q. Okay. I notice on here, Brandon, from what I

1 can see there are several routes or corridors  
2 identified. Is it fair to say that the Company  
3 considered more than one corridor in this process?

4 A. Yes. The idea was to identify potential  
5 locations for substation sites and transmission  
6 corridors. So you can see we've got, depending on  
7 which route you take, there are four, four or five  
8 different ways to get from the Mona area up to the  
9 northern portion where we need to get to site Limber  
10 Substation. And then get over into Oquirrh over here,  
11 and Limber up here.

12 Q. Okay. So you do a feasibility study. You  
13 identify some potential corridor paths. What was the  
14 next step the Company took towards siting this  
15 project?

16 A. You compile all the data that you've  
17 obtained. Put it all together in some sort of a GIS  
18 or mapping form. Lay out your transmission corridors.

19 And determine what opportunities you have to  
20 get a line from one point to the other, or what  
21 constraints are out there that would not allow a line  
22 to be built. And what engineering factors are played  
23 in. And whether or not you can meet the project  
24 purpose and need based on those restrictions.

25 Q. And were any of the preliminary corridors

1 that were identified eliminated during the feasibility  
2 study process?

3 A. Yes. There, there were a couple. Up on the  
4 screen I've got a map. If you can see on the  
5 right-hand side there's some dark-shaded corridors  
6 over here along the west side of Utah Lake. That is  
7 our existing Mona-to-Camp Williams high-voltage  
8 transmission line corridor. We already have lines  
9 running through there.

10 During the feasibility process determined  
11 that there's, there's a large, fast-paced growth out  
12 there for population. And it was determined that we  
13 would more than likely have to take homes in order to  
14 get our new line inside the existing transmission  
15 corridors.

16 It also didn't meet the requirements from,  
17 from what Darrell -- or Mr. Gerrard discussed earlier  
18 as far as creating a common corridor with these  
19 high-voltage lines. We there -- we then determined to  
20 eliminate these corridors from further consideration.

21 Q. Okay. So you established a study area. You  
22 did a feasibility study. You initially eliminated  
23 some of the potential corridors. Describe for the  
24 Board, if you can, what the next step in the process  
25 was after that feasibility study.

1           A.     Once we determined what the feasible  
2 alternative corridors and substation sites were we  
3 approached the BLM, submitting a 299 application for  
4 the project.

5           Q.     And when the BLM receives that application  
6 what do they do with that? What -- how do they get  
7 involved in the project?

8           A.     The BLM reviews the project, the proponent's  
9 purpose and need, and the potential transmission  
10 corridor substation sites. Determines the impact on  
11 the environment and what level of analysis will be  
12 required to get the project sited and permitted.

13                   Quite a bit of the project is on BLM  
14 property. They decided that a full Environmental  
15 Impact Statement would be required for the project.  
16 Which is, which is the most stringent environmental  
17 permitting process you can go through in the NEPA  
18 process. It's very detailed.

19           Q.     And once the BLM determined that a full  
20 Environmental Impact Statement was necessary, how did  
21 they initiate that review?

22           A.     They officially noticed the project  
23 submitting a notice of intent, which is published in  
24 the Federal Register in October of 2007. That  
25 established the public scoping dates where the project

1 was presented to the public.

2 There were three locations -- Magna, Tooele,  
3 and Nephi -- where the public was able to go review  
4 the project and provide comment on that. And that one  
5 happened in November of 2007.

6 Q. Did the BLM engage state or local government  
7 agencies as part of this process?

8 A. Yes. They, they approached state agencies  
9 and local agencies to be cooperating agencies in the  
10 process. Which allows a cooperating agency to  
11 participate during the scoping process for a project  
12 in the EIS.

13 It allows them to review documents during the  
14 development, provide input to it, and provide review.  
15 For instance, in a Draft EIS a report actually gets  
16 released to the public. The four counties involved --  
17 Utah -- well, there's Utah, there's Juab, there's  
18 Tooele, and Salt Lake County were all invited to be  
19 cooperating agencies, but all declined.

20 Q. Okay. You know, we've made much about this  
21 Final Environmental Impact Statement and, you know,  
22 kind of how it's this standalone review. Maybe the  
23 best thing would be to ask you to describe for the  
24 Board the process that the BLM goes through to gather  
25 information and -- when they go through this EIS



1 process.

2 A. Base -- based on the input that the BLM gets  
3 during scoping and from the application from the  
4 proponent they go through a data inventory process.  
5 Where now they can go accumulate information from  
6 their own databases. Approach local agencies and  
7 jurisdictions to get information from them.

8 Up on the screen I've got a simple flowchart  
9 that kind of shows the Environmental Impact Statement  
10 process. Over on the left-hand side you can see this  
11 is the feasibility study time frame which the Company  
12 conducted.

13 Once we were done with the feasibility study  
14 we submitted our application to the BLM at this point  
15 on this dashed, dashed line up there. This is the  
16 point where the BLM takes the Company's application  
17 and determines, through the EIS, the impact that the  
18 project would have on the environment.

19 This is the point where the BLM performs  
20 their resource inventory based on scoping results.  
21 They go through an impact assessment based on the data  
22 inventory they've got and how the transmission  
23 corridors and substation sites would impact those.

24 Then they go through mitigation planning,  
25 where, if there is an impact to some resource, is

1 there mitigation possible before that? You go through  
2 that process, and then go through a comparison and  
3 ranking process where you evaluate alternatives and  
4 determine which ones are the least impactful.

5 You then go into a -- once you determine the  
6 route you go into the Draft Environmental Impact  
7 Statement, where this is the second time that the  
8 public is involved in providing comments into the  
9 project.

10 The resource inventory is detailed inventory  
11 along the transmission corridors. Mitigations are  
12 negotiated with the BLM and the Company. However, at  
13 this same time going through here the BLM is  
14 determining a preferred alternative for the BLM based  
15 on the impacts for the transmission line.

16 The Company at the same time is determining a  
17 proposed route -- a proposed alternative based on  
18 their requirements as far as the purpose and need.  
19 Those two are happening at the same time and parallel  
20 to this same process.

21 Then you get to a point where you will end up  
22 the Draft EIS with the BLM-preferred alternative,  
23 which with the final EIS now they've added a third,  
24 which is an environmentally-preferred alternative.  
25 Which is environmentally preferred on, on private

1 land.

2 And then the proponent will also come out  
3 with a proposed action of their preferred route.

4 Q. Okay. Before we move on I just want to maybe  
5 clarify a couple of things, Brandon. Is it fair to  
6 say that after this point in the process, after the  
7 Company submits its feasibility study, that the BLM is  
8 driving all of this? Is that a fair statement?

9 A. Yes, it is.

10 Q. And during this process does the Company get  
11 to direct the outcome? Are they able to influence the  
12 BLM's decision?

13 A. No. The BLM takes the proponent's  
14 application and drives the process to determine an  
15 environmentally-preferred route.

16 Q. Okay. Let's talk then specifically first  
17 about substation siting. One of the things that was  
18 discussed earlier was the location of the, of the  
19 substation. So following this process, can you help  
20 the Board understand what the BLM did to select a  
21 substation site?

22 A. The Company provided criteria as far as the  
23 substation requirements. The size of the substation  
24 that was needed, access, future use, and environmental  
25 impacts were incorporated into that.

1           The BLM goes and evaluates potential  
2 locations for these substation sites. And runs them  
3 through a comparison analysis to determine their  
4 impacts on the environment and to ultimately determine  
5 a proposed substation site.

6           Q.     Can you show us the specific location that  
7 the BLM considered?

8           A.     On the map up here on the screen, these are  
9 all the potential substation site locations that were  
10 evaluated. We have a new substation down in the Mona  
11 area which will be constructed approximately three  
12 miles south of the existing Mona Substation.

13                 We also have a -- the new Limber Substation  
14 located up in the Tooele Valley area. It's actually  
15 located in the, in the southwest corner near the  
16 Tooele Army Depot. Which was evaluated and ultimately  
17 determined the BLM-preferred site.

18           Q.     Okay. Brandon, one of the lines of questions  
19 that came up with Mr. Gerrard, and I'm wondering if  
20 you can help provide some light for the Board, is this  
21 concept of moving the substation around.

22                 You know, "substation" means different things  
23 to different people. Can you give the Board an idea  
24 of the size of the substation that we're talking about  
25 today, the Limber Substation? What that would be like

1 to move around?

2 A. Right. The substation sites that we, we are  
3 evaluating and as the process moves along determined  
4 that these substations would be 500 kV, 345 kV, and  
5 also 138 kV providing the lower-transmission service  
6 in these areas. When we evaluated that, that need, a  
7 150-acre site is going to be required for the ultimate  
8 build out of the substation.

9 The picture that I have up on the, on the  
10 screen is an example of the substation that the  
11 Company is currently constructing up in Downey, Idaho,  
12 as part of our -- the Populus-Terminal project that  
13 Mr. Gerrard discussed.

14 This area right here is solely a 345 yard,  
15 and what you can see being developed right there is  
16 just over 40 acres. So siting and permitting these  
17 substation sites is difficult to find a location that  
18 is suitable to meet our access and size requirements.

19 Q. Okay. Can you describe for the Board the  
20 BLM's process to screen and compare transmission line  
21 routes?

22 A. Yes. I -- on the map up here -- there were  
23 over 450 miles of transmission line -- potential  
24 corridors evaluated for this project. The.

25 Map up on the screen identifies two

1 different -- there's, there's some white lines that  
2 you can see. Those are transmission line corridors  
3 that were evaluated and eliminated from further  
4 consideration based on engineering and environmental  
5 requirements by the BLM.

6 The black lines are lines -- transmission  
7 corridors that were carried through the EIS process by  
8 the BLM for further analysis.

9 Q. Can you describe for us the BLM's process to  
10 ultimately select its preferred route and preferred  
11 substation site?

12 A. Once you identify which routes will be  
13 carried forward, the BLM takes that information. They  
14 analyze the data -- the remaining corridors, and  
15 determine the impact of the transmission line project  
16 on the environmental resources.

17 They go through a comparison and ranking  
18 process to determine which one is the least  
19 environmental impact and determines the BLM-preferred  
20 route and environmentally-preferred route.

21 Q. How did the BLM inform the Company of its  
22 preferred route and substation site at the time that  
23 the Draft Environmental Impact Statement was being  
24 prepared for release?

25 A. The Company was never made aware of what the

1 BLM-preferred route or substation site was going to be  
2 when it was published in the Draft EIS. Like, like I  
3 mentioned earlier, the Company's still moving forward  
4 determining what they believe would be the best route  
5 when it comes to the safety, adequacy, efficiency of  
6 the line.

7 The first time the Company was made aware of  
8 the BLM and the environmentally-preferred route was  
9 the release of the Draft EIS.

10 Q. Can you please describe how the preferred  
11 route selected by the BLM in the Draft EIS compares  
12 with the Company's proposed route?

13 A. When the Draft EIS was released there were a  
14 couple of areas of difference. However, the majority  
15 of the line the Company-proposed alternative and the  
16 BLM environmentally-preferred alternative were the  
17 same.

18 I've identified three areas on here where  
19 there were some differences. Area 1, located on the  
20 bottom of the map down near Mona, was an area where  
21 the Company's proposed alternative left the Mona  
22 Substation and went west over the Long Ridge  
23 Mountains.

24 The BLM's preferred route left Mona and  
25 paralleled the existing high-voltage transmission

1 corridor to the north for approximately 3 to 5 miles  
2 before heading to the west and joining up with the  
3 common alignment through this area, through the Goshen  
4 Valley.

5 The lines were similar from here up through  
6 the Goshen Valley, Rush Valley area, up towards  
7 Tooele. Area 2 here, when the Draft EIS was released  
8 the routes were identical, the Company's proposed  
9 alternative and the BLM's environmentally-preferred  
10 alternative.

11 The BLM approached us and asked that we make  
12 some minor adjustments through this area to  
13 accommodate some existing roads that would help  
14 minimize impact. We reviewed that with the BLM and  
15 ultimately came to an agreement through there.

16 The third area is up just east of the -- of  
17 Tooele near the North Oquirrh Management Area, which  
18 is this orange highlighted area up here, which is an  
19 area that's managed by the BLM.

20 We had proposed to run our new line up  
21 through this area paralleling the existing 138 line.  
22 The BLM's preferred alternative actually went south of  
23 this area, as they indicated that our proposed  
24 alignment did not meet the management plan for the  
25 NOMA. North Oquirrh Management Area.



1           And also a slight difference over here in  
2 West Jordan along the U-111 highway.

3           Q.     Okay. So I guess starting at the top and  
4 I'll go backwards. In Area 3 did the Company  
5 ultimately modify its proposed route to meet the  
6 concerns expressed by the BLM?

7           A.     Yes, the Company did. We, we found a route  
8 that actually went south around the North Ogden  
9 Management Area and adjoined our existing, you know,  
10 line as soon as possible to get down to the U-111  
11 highway.

12          Q.     And I believe you indicated in Area 2 that  
13 the Company was able to accommodate any  
14 recommendations the BLM had in that zone?

15          A.     Yes, we were.

16          Q.     And what happened in Area 1?

17          A.     Area 1 was a situation that Mr. Gerrard  
18 discussed earlier about siting another high-voltage  
19 transmission line in the existing high-voltage  
20 transmission line corridor.

21                 After discussions with the BLM, and  
22 explaining the risk associated with that and what the  
23 Company has to do to mitigate, if, if anything, if  
24 possible, the BLM recognized the importance of  
25 establishing a new line in that corridor.

1           Realized the risk that the Company is taking.  
2           And the possibility that, if mitigation was possible  
3           due to some sort of a problem with the lines, that we  
4           may be back again to try to get another line  
5           permitted.

6           So the BLM actually made an adjustment in  
7           this area and changed their preferred alternative to  
8           match that of the Company's proposed alternative.

9           Q.     And that was to allow for line separation?

10          A.     Correct.

11          Q.     Okay. You know, before we go on, Brandon,  
12          one thing. We talk about this term "environment,"  
13          what -- the BLM is looking at what's best for the  
14          environment. How broad is that term? What -- I mean,  
15          are we talking wildlife, or what is the BLM looking at  
16          or what do they include in the scope of the  
17          environment when they're doing their review?

18          A.     The environment is a broad range of things in  
19          the EIS. It affects humans themselves, population,  
20          socioeconomics, in addition to the wildlife,  
21          biological, cultural sites. All the issues in the  
22          environment. Not just specific to vegetation or, or  
23          topography.

24          Q.     Okay, thanks. So Brandon, at this stage we  
25          have the issuance of the Draft Environmental Impact

1 Statement. Does the BLM at that point inform the  
2 public of the Company's proposed route, of its  
3 preferred route, and any alternatives?

4 A. Yes. The release of the Draft EIS is the  
5 first release of those three alternatives. We have  
6 the BLM-preferred alternative, the Company's proposed  
7 alternative, and then in the final EIS we have a third  
8 environmentally preferred on the private property.

9 That's the first time that the Company had  
10 seen the environmentally preferred and BLM preferred,  
11 at the same time the general public was notified of  
12 it.

13 Q. Okay. And I know you've explained this, but  
14 just so we're clear. The environmentally-preferred  
15 route is the part that goes over private lands; is  
16 that right?

17 A. That's correct.

18 Q. And the preferred route is over federal  
19 lands?

20 A. The BLM preferred is over federal lands.

21 Q. Okay. So the BLM releases this to the  
22 public. Did the Company at that time provide any  
23 additional notification to the public regarding the  
24 potential routes?

25 A. Yes. In addition to the three public open

1 houses the BLM conducted, the Company also conducted  
2 three landowner meetings. We mailed out around  
3 10,000 letters to affected parties within a mile of  
4 the center line, so a two-mile-wide corridor, to  
5 notify them of the project.

6 We held three meetings in three different  
7 places -- West Jordan, Tooele, and Nephi -- where the  
8 public was again able to come, comment on the project  
9 directly to us, ask us questions for the project.

10 Q. Okay. In addition to meeting with the public  
11 along the corridor, did the Company hold any meetings  
12 with community leaders or other key stakeholders at  
13 that time?

14 A. Yes. The Company initiated another round of  
15 community leader briefings, which -- they also  
16 occurred earlier in the project. But the Company met  
17 with folks from Tooele County, Tooele City, South  
18 Jordan/West Jordan Cities, Utah County, Kennecott  
19 Copper, Kennecott Lands, some other entities that --  
20 just keeping them up to date on the project. That the  
21 Draft EIS had been released.

22 Trying to get any indication of concerns they  
23 have as far as what's in the document. And obtain  
24 that information. Move forward.

25 Q. What feedback was received from these, you

1 know, the community, specifically I'll refer to Tooele  
2 County since that's why we're here today, in response  
3 to the route that was released at this time?

4 A. Response for the overall project was, was  
5 very positive. Not many areas of concern. With  
6 Tooele County there was a handful of concerned  
7 citizens, along with some city representatives, that  
8 had a negative feedback regarding the alignment along  
9 the Southeast Bench of Tooele Valley.

10 Q. And what did the Company do to address the  
11 opposition expressed by these individuals?

12 A. The Company, the Company took, took this  
13 pretty seriously. They voluntarily initiated a  
14 resolution group to get together and discuss this  
15 concern, and try to come up with some sort of a  
16 consensus route through --

17 Although the route we had worked on for three  
18 years and run through the environmental process, we  
19 were confident that the BLM had chosen the right route  
20 through this, through this area. The least impact on  
21 the environment, and still meeting the purpose and  
22 need of the project.

23 However, we, we did meet with the folks to  
24 try to come sort -- determine some sort of reasonable  
25 alternative through this area that would be a

1 consensus amongst whoever we could get.

2 Q. Okay. And did these individuals or did the  
3 communities provide any specific routes to the Company  
4 that they would accept at that time?

5 A. Yeah. Initially there was a route that was  
6 proposed that we'll talk about later. The -- what we  
7 referred to as the Silcox Canyon route. It was an  
8 alignment up south of the Settlement Canyon area.

9 And eventually there was an alternative  
10 suggested to move Limber up north, near Grantsville.  
11 And there -- and those were the two main ones that  
12 were brought up. Just a general idea, not really  
13 anything official.

14 Q. Did the Company actually analyze the  
15 different routes that were proposed by the communities  
16 or the citizen groups?

17 A. Yes, we did.

18 Q. Can you describe for the Board all the  
19 various routes there within the Tooele Valley that you  
20 analyzed?

21 A. Yes, I can. Up on the screen we've got  
22 another map here that shows different routing through  
23 the Tooele Valley area. The green lines on the map  
24 are the BLM's preferred alternative and the Company's  
25 preferred route.

1           Here's Limber Substation, going from Limber  
2 up over to Oquirrh. And from Limber, up around  
3 Grantsville, over to Terminal. On the map you can  
4 also see some other colors. For instance, down here  
5 there's a blue route.

6           This is what I refer to as the "Silcox Canyon  
7 route." Where the line route would enter the Silcox  
8 Canyon, move over the mountain terrain here, back over  
9 into Middle Canyon, and eventually through Butterfield  
10 Canyon and into Salt Lake County.

11           The orange routes are what we refer to as the  
12 "Railroad routes." This, this was a group of  
13 alternatives that we looked at to try to follow the  
14 existing railroad corridor up through to Tooele City  
15 and find some way to get back over to the BLM's  
16 preferred alternative over here.

17           The yellow is what we refer to as the "Army  
18 Depot route," which was a route moving Limber up to  
19 the northwest corner of Tooele Army Depot. And going  
20 east through this area, again over to Tooele City area  
21 to try to find some way back over to Pass Canyon to  
22 the BLM's preferred route.

23           And we also looked at two options of moving  
24 Limber to the north, up around Grantsville. Running  
25 both lines up around Grantsville near the Great Salt

1 Lake. And then having the Limber-Terminal line  
2 proceed on its current alignment.

3 And having Limber-Oquirrh branch off here  
4 around Stansbury area, down through Erda area, and  
5 back over to the BLM's preferred route and the  
6 Company's preferred route.

7 Q. Okay. Can you highlight that other  
8 Grantsville route, that black route? I don't think we  
9 can see --

10 A. Right. Right here it's hard to see, I  
11 apologize. There's a black area right here. This is  
12 the actual -- another alternate substation for Limber  
13 we looked at. And then there's two lines coming out  
14 this way to the east where they join this green and  
15 blue line. And then eventually there's a black line  
16 that goes around here by Stansbury and down this way.

17 Q. Okay. Brandon, I'd like to have you describe  
18 for the Board, kind of route by route, the analysis  
19 that the Company went through or any concerns that  
20 were raised by the specific route. So if I could call  
21 your attention first to what we've described as the  
22 "Railroad routes." Could you please describe the  
23 Company's response to those routes?

24 A. Yes. Again, on the map we show the BLM and  
25 the Company's preferred routes through these areas.



1 The orange are the alternatives that were evaluated to  
2 go through Tooele City.

3 We met with Tooele Army Depot, the Utah  
4 Industrial Depot, Utah State, other, other folks along  
5 this alignment to try to find some way to get from  
6 here, up through the city limits, and back over.

7 There were, there were a number of issues  
8 with this, with this route. It's difficult to get  
9 through here. We have development up here, the  
10 Overlake Development, we met with those folks. We  
11 also have a junior high school in this area.

12 There's a helipad that's associated right in  
13 this area where the route would have to cross over  
14 Highway 36. And then we have -- we just have  
15 congestion through this area right here to try to get  
16 up to the Tooele City limits. And more impact over  
17 here for existing homes in this area.

18 Q. And ultimately were the railroad routes equal  
19 to the Company's preferred route as far as satisfying  
20 the criteria the Company had to build to?

21 A. No. There, there's much tighter constraints  
22 going through here. We were, we were literally on the  
23 doorstep of an Episcopalian Church going through this  
24 area. It would have been so confined. And then  
25 dealing with, with the schools and the development.

1 Overall impact, the Company and the BLM  
2 realized there's more impact going through there than  
3 there is actually following the BLM's proposed route.

4 Q. Okay. Can you describe for the Board the  
5 analysis that the Company did in looking at what you  
6 called the "Army Depot route"?

7 A. Army Depot route is similar to the Railroad  
8 route in that it -- the alternative ends up in the  
9 Tooele City area. Limber would be moved to the north,  
10 near the northwest corner of Tooele Army Depot.

11 We met with the Army Depot to see how far  
12 they would allow us to site the line within their  
13 property boundaries and still meet their operational  
14 criteria, because there's development right here in  
15 Grantsville City that's right up to the border. Right  
16 up to the property line.

17 So we were trying to look at feathering a  
18 line through here to try to get back over into the  
19 City limits, to eventually get back over to the  
20 proposed alternative. Again, we ran into issues with  
21 the, with the airport that is located right here.

22 The airport is a unique area. It's built in  
23 a hole. So when you, when you go to site your line  
24 through there they have height restrictions for the  
25 distance that you are away from the airport.

1           And if you move from the southern part of the  
2 airport towards Tooele City you actually gain  
3 elevation, so you're losing your ability to put taller  
4 structures in that area. So there's FAA restrictions  
5 right in here where we wouldn't be able to put a line.

6           The other alternatives are similar to the  
7 ones that were evaluated in the Railroad route, with  
8 the same restrictions and constraints.

9           Q.     So ultimately were the -- was the Army Depot  
10 route acceptable to the Company?

11          A.     No. This, this route is, is not any less  
12 impactful than the route that the BLM and the  
13 Company's proposed.

14          Q.     Let's see, let's move on. One of the other  
15 routes you described was the Silcox Canyon route. Can  
16 you describe for the Board the analysis that the  
17 Company went through on that route?

18          A.     Silcox Canyon was one of the first ones that  
19 was proposed. To enter Silcox Canyon, go up over the  
20 mountains back behind Settlement Canyon to a point  
21 about right here on the map that I'm pointing to.  
22 This, this point right here is approximately 9,500  
23 foot in elevation.

24                 And the steepness through this area right  
25 here, compared to what the steepness is on the BLM's

1 preferred and our preferred, is about twice as bad to  
2 get up through this area as far as access and access  
3 roads is concerned.

4 The route would then go down this hillside  
5 into Middle Canyon. It's kind of -- it's deceiving on  
6 here because this is made from a 3-D image, but right  
7 here, this is Tooele City. This is Middle Canyon Road  
8 as you're heading east.

9 And it's going through the canyon right here.  
10 It turns into Butterfield Canyon at the Salt Lake  
11 County boundary. And then continues around here up  
12 through north and to Oquirrh Substation.

13 This area right through here is actually  
14 within Kennecott Copper's permitted operations for  
15 mining and exploration. It's actually permitted on  
16 both sides of the road.

17 So issues -- issues with this route were over  
18 double the steepness of terrain for access and  
19 disturbance through this area. Which, when we  
20 reviewed the area, the BLM determined it would be more  
21 impactful on the environment up there.

22 And the idea of having to go through  
23 Kennecott operation's permitted sites and to have to  
24 compensate for the impact to the minerals in those  
25 locations created a huge cost increase through that

1 mine route.

2 Q. You know, you talk about this peak in the  
3 high, you know, peak. What, what's the concern the  
4 Company has? What's the problem with putting a tower  
5 at 9,500 feet?

6 A. Anytime you put a tower up there you have  
7 operation and maintenance issues. You're exposed to  
8 much, much more severe weather up top. On top of a  
9 mountain like that.

10 Access, getting to those points. If there is  
11 a problem on the line, if we have to make repairs on  
12 anything, being able to get up there, there's -- most  
13 of the months you would not have access to that area  
14 up there to make repairs.

15 Q. Okay. What if the Company, to avoid that,  
16 simply put this line either on -- I don't have a  
17 specific route. But you drop down in this area, so  
18 you kind of split the difference, and then picked up.  
19 Would that solve the problem by avoiding that peak  
20 right there -- or maybe that's the peak -- if you came  
21 down in this part?

22 A. It makes one of the situations better with  
23 the elevation. I mean, you -- we can get down a  
24 little further down into here. However, we still deal  
25 with the steepness of the terrain through here for

1 access roads.

2 And it also puts the line higher up in the  
3 watershed area, which would be more of an impact to  
4 the watershed than where the line is proposed right  
5 now.

6 Q. So ultimately, Brandon, was the Silcox Canyon  
7 route acceptable to the Company?

8 A. No, it was, it was not.

9 Q. Let me have you then describe for the  
10 Board -- you described two different Grantsville  
11 routes that the Company considered. Let's talk about  
12 the first option that the Company analyzed.

13 A. The first option was suggested during one of  
14 the resolution meetings to move Limber Substation up  
15 to the north around Grantsville. So you can see the,  
16 the red up here is where Limber would be sited in this  
17 area.

18 We would then run both lines -- Limber to  
19 Terminal and Limber to Oquirrh -- to the east in a  
20 common corridor up through here at this point, where  
21 we would then break. And the Limber-to-Oquirrh line  
22 would head south, right here near Stansbury area.

23 Go south, down through the Erda area, down  
24 through lower elevations of the NOMA, North Oquirrh  
25 Management Area, and back over to the BLM and

1 Company's preferred alternative.

2 This, this alternate was researched. You  
3 can, you can see by the, by the map the soils that are  
4 in the area. Highway 138 goes through this area right  
5 here and pretty much creates a point where anything  
6 north of there -- this is all lake-bottom soils  
7 through here.

8 You kind of see some areas where the, where  
9 the soil looks a little bit better? We -- "postage  
10 stamp areas," we refer to them. Those areas look,  
11 look better on the surface, but you go down a few feet  
12 and it's all the same type of soils in this area.

13 Unsuitable soils. Difficult soils to build  
14 in. Creates a lot of engineering hindrances and  
15 mitigation you have to do to build in such an area  
16 like that.

17 We also would have to have both of these  
18 lines in a common corridor to get out of here. This,  
19 this plant right here is the southernmost point of our  
20 transmission lines to meet the minimum guidelines for  
21 the FAA for the airport that is right here.

22 So a second line that would have to be  
23 permitted would have to be moved to the north, which  
24 puts us out into this area of the lake. The lower  
25 elevations, the high flood area. Areas where there's

1 more potential for if the lake got high. For instance  
2 like it did when, when Mr. Gerrard was, was talking.

3 We also had an existing 138 line out here  
4 years ago that we had to relocate due to the high  
5 water table.

6 Q. Ultimately then was the -- that Grantsville  
7 route acceptable to the Company?

8 A. No. The location of Limber Substation in  
9 that area, it creates too much of an engineering  
10 hindrance. And an inability to build it efficiently  
11 and be able to maintain it efficiently. Also it  
12 creates the common corridor where Mr. Gerrard stated  
13 that it puts the system at more risk than the Company  
14 is willing to accept. So the route was not acceptable  
15 to the Company.

16 Q. You know, we, we've talked about today, you  
17 know, these standards of reliability, efficiency,  
18 safety, and adequacy. Which of those prongs did this  
19 route offend? Was it less efficient, less reliable?  
20 Which prong troubled the Company here?

21 A. It's actually both. It's less efficient. If  
22 you look at moving Limber up to here rather than  
23 having it down here, you're creating an additional  
24 16 miles or so to get from here to Oquirrh compared  
25 getting from here up around and to Oquirrh.



1           Based on, based on Mr. Gerrard's testimony,  
2           that's a less efficient system when you're adding that  
3           much miles to a line. We want to get as short as  
4           possible in order to maximize our efficiency.

5           The second part, reliability, also creates a  
6           risk to the Company by having two lines in a common  
7           corridor.

8           We have other hindrances up here with the  
9           lake bed soils. The high water elevation of the lake.  
10          And we also have the airport in that area, which just  
11          adds to the risk of having them both in the same  
12          corridor.

13          Q.     And notwithstanding the concerns of this  
14          route, would this route cost the ratepayers more or  
15          less than the Company's proposed route?

16          A.     It would. Based on the soils and the line  
17          miles that would be added, it would cost more to build  
18          the substation. These, again, these substations are  
19          planned to be 150 acres, and you have over 200  
20          foundations in these substations. So foundations have  
21          to be deeper, they have to be bigger.

22          Compensate for the soils. Removal of the  
23          soils and -- to bring in more stable material to build  
24          a good base for the substation. We had estimated that  
25          it would be around 40 million, 43 million dollars more

1 just for the foundation work for Limber Substation in  
2 that location.

3 Q. Brandon, why don't you describe for the Board  
4 then the second Grantsville option that the Company  
5 considered?

6 A. Based on the soil types in the first option  
7 here, we also looked at Limber Substation up behind  
8 the Wal-Mart Distribution Center. This was a site  
9 that was also analyzed in the EIS as an alternate,  
10 based on having Limber-Terminal go this way and  
11 Limber-Oquirrh go back down this way to Oquirrh  
12 Substation.

13 This site's higher up on the bench behind  
14 Wal-Mart Distribution Center, however, it has some  
15 concerns with drainage in that area. I don't know if  
16 anybody's been up to see the Wal-Mart Distribution  
17 Center, but they have a huge moat built around their  
18 facility to capture drainage coming off of the  
19 hillside to divert the water away from their building.

20 So there's a huge amount of drainage issues  
21 that we would have to deal with with the substation  
22 right there. However, the soils are, are more  
23 suitable to build in in this location. We would have  
24 to do some site work. Maybe tier the substation.

25 But it also creates between 8 and -- 8 and

1 10, 17 miles, I think it's 17 miles on this one, to  
2 parallel these lines in the existing corridor again up  
3 around Grantsville, back to the same situation as  
4 Option 1.

5 So we're creating a situation where we have  
6 our lines in a common corridor again through the same  
7 hazardous areas as Option 1.

8 Q. And ultimately was this second Grantsville  
9 route acceptable to meet the Company's needs?

10 A. No. The risk to reliability and efficiency  
11 to get over to Oquirrh, this route was not acceptable  
12 to the Company.

13 Q. Brandon, during this process did the Company  
14 exhaust all of the proposed alternative routes that  
15 the communities and key stakeholders asked the Company  
16 to look at?

17 A. Yes, we believe we did. We, we believe that  
18 the BLM has chosen the best route. The Company has  
19 chosen the best route. And although the other ones  
20 were, were not preferred over ours, we still went  
21 through the process of evaluating these areas. And we  
22 believe from the information we've been given that  
23 we've evaluated all of them.

24 Q. Did the Company make any adjustments to its  
25 proposed route as a result of community input?

1           A.     Ye -- regarding through the Tooele area  
2 between Limber and Oquirrh, we did make some  
3 adjustments based on the feedback we got during the  
4 comment period of the Draft EIS from, from citizens,  
5 from concerned folks' representatives.

6                     You can see right here we made an adjustment  
7 right here. There's a gravel pit operation right  
8 here. We're dealing with gravel pits on another  
9 project and we're, we're avoiding the areas as much as  
10 possible to not impact future operations of the gravel  
11 pits.

12                    So we made an adjustment to the southern  
13 boundary of their operations. A slight adjustment  
14 here for another gravel operation. And then we also  
15 shifted our alignment from about here over to Middle  
16 Canyon area. We shifted the line approximately 1,000  
17 feet to the south.

18                    We are -- the route is no longer going over  
19 the top of Settlement Canyon. It goes along the  
20 southern edge of the reservoir -- not the reservoir, I  
21 misspoke. It's now on the southern edge of the  
22 reservoir and it is hidden behind the next ridge over  
23 through this area.

24                    We tried to minimize the visual impact as  
25 much as possible through this area. And then we

1 daylight again and come back over to Middle Canyon.

2 Q. And were these adjust -- adjustments the  
3 Company made acceptable to Tooele?

4 A. These adjustments were adjustments that were  
5 submitted in the conditional use application to Tooele  
6 County, which was denied, so I guess it's safe to say  
7 they -- it was not acceptable.

8 Q. Before we go on can you show the Board, using  
9 your laser pointer, the approximate area of the -- the  
10 part of the line that's in dispute. Where is the  
11 concern?

12 A. Right -- the concern starts here, near  
13 Settlement Canyon Reservoir, and goes east along the  
14 South Bench, and crosses Middle Canyon, and goes along  
15 the East Bench right here. So we've got a distance  
16 here of approximately three miles of the route that's  
17 really what's in contention.

18 Q. So I take it this part of the route is not  
19 opposed?

20 A. No. We've had no opposition for the  
21 Limber-to-Terminal route as we were trying to permit  
22 it through the EIS.

23 Q. And so the whole proceeding is really around  
24 that area right there?

25 A. Yes.

1 Q. What do you understand is the primary  
2 concern, as it's been expressed to you, that the  
3 citizens and communities have with the route? What's  
4 the primary concern as you've heard it expressed?

5 A. Based, based on the research, and the EIS,  
6 and impacts, the initial contention started with  
7 visual impacts going through the area. So I'd say  
8 visual.

9 Q. And are you aware of any study that anyone  
10 has done to determine what the actual visual impacts  
11 of this line will be in that specific area of  
12 contention?

13 A. As the, as the Company and the BLM were  
14 moving through this process of trying to find  
15 resolution through here the BLM actually had some  
16 visual simulations produced -- which is, which is  
17 common practice in an EIS -- to demonstrate what the,  
18 basically the before and after would be on a project  
19 of this sort.

20 On the top here we can see that this is, this  
21 is a viewpoint that's just north of Skyline Drive,  
22 looking to the south up on the south bench. This up  
23 here is the before. So this is current conditions.  
24 There's, there's no line constructed through this  
25 area.

1           Now, I believe the Board has these in their  
2 hands, and it is difficult to see on here. But on  
3 the, on the bottom drawing you can see two structures  
4 right here. Now, the adjustment that was made, the  
5 line as it heads to the west here, back here goes  
6 behind the hillside to minimize the visual impact to  
7 that area.

8           The next structure that comes up over the  
9 hill, there's actually one right here and there's one  
10 right here as they go through here. Now, I would like  
11 to ask to keep in mind this, this demonstrates the  
12 project after vegetation is allowed to regrow. Three  
13 to five years after the project. Reclamation's  
14 occurred, and everything is able to reestablish.

15         Q. Do you know what on this doc -- well, first  
16 of all is -- let me clarify. Is this -- whose  
17 representation is this? Is this the Company's or the  
18 BLM's representation?

19         A. This is a simulation put together by the BLM.

20         Q. Okay. And just to clarify for the Board how  
21 they go about doing that, can you identify kind of in  
22 this scale what information is provided to the BLM to  
23 allow them to determine what they think it's gonna  
24 look like after construction?

25         A. The Company provided the typical design

1 structure for the transmission towers. So the areas  
2 over on the right-hand side here are the typical  
3 structures that would be constructed through this  
4 area.

5 We gave them the dimensions and design  
6 parameters for those structures. We also provided an  
7 access road plan which was developed. And they  
8 applied the mitigations and the results of the EIS to  
9 that to determine what the outcome would be on the  
10 project.

11 Q. Another area that was -- had a lot of vocal  
12 resistance was the area of the impact around what's  
13 called the "T" out in Tooele. Can you describe what  
14 the visual impact would be at the "T" based on the BLM  
15 studies?

16 A. Right. That's, that's the map I have up here  
17 right now. This is another visual simulation that was  
18 produced by the BLM. A viewpoint looking to the east,  
19 up on the East Bench. You can see the "T" up here on  
20 the hill. This, again, up here is the, is the before  
21 picture.

22 You can see that we do have an existing  
23 138 line going through this area. There's a structure  
24 there. There's another one over here. There will be  
25 another one over there.



1           On the bottom is the after. And I, I  
2 apologize, this is difficult to see. But there is a  
3 structure right here on the proposed alignment. It  
4 comes over to a point about right here. You can kind  
5 of see an area right here where an access road was  
6 constructed to get to that structure.

7           That structure is over here. And then it  
8 drops down and falls through this existing foliage  
9 through here just below the "T."

10         Q.     Brandon, I just want to -- maybe I could call  
11 it playing devil's advocate for a minute. I think  
12 looking in the handout is probably the easiest for the  
13 Board. For the rest of the room, to the extent they  
14 can see on the screen.

15           Your before and after pictures there is a  
16 tower here kind of in the -- this grass area that's  
17 clearly visible. And in the after photo produced by  
18 the BLM for your towers again we can kind of see where  
19 they are.

20           Why are these towers so clear, but you can  
21 barely see what is supposed to be the proposed towers?  
22 That might lead us to believe these -- we can't rely  
23 on these pictures. Why are those existing poles so  
24 much more visible than what you're proposing to do?

25         A.     We sited the line higher up into the existing

1 foliage to hide the lines as much as possible. The  
2 access and restoration that would be done here would  
3 be less visible. And the poles themselves, the  
4 structure, the finish we have on these, the, the  
5 weathered steel blends in better with the background.

6 So we intentionally sited the line up here a  
7 little further to stay inside the foliage, rather than  
8 being down in this area where they would be more  
9 visible.

10 Q. And are these pictures that you provided  
11 contained in the BLM's filed Environmental Impact  
12 Statement?

13 A. Yes, they are.

14 Q. All right. Brandon, I want to shift your  
15 focus a little bit now to talk about the permits the  
16 Company is required to obtain. What specifically,  
17 what permits along the entire project will the Company  
18 be required to obtain before it can begin  
19 construction?

20 A. We have the record decision from the BLM.  
21 And we have four conditional use permits. We have  
22 conditional use permits required at Utah County, West  
23 Jordan City, South Jordan City, and Tooele County.

24 Q. And of those permits, which have already been  
25 obtained by the Company?

1           A.     Condi ti onal use permi ts from Utah County,  
2 West Jordan Ci ty, and South Jordan Ci ty have all been  
3 obtained.

4           Q.     So the only one that has not been issued of  
5 the condi ti onal use permi ts is Tooele' s?

6           A.     Correct.

7           Q.     What is the effect of Tooele County' s deni al  
8 of the Condi ti onal Use Permi t on the project?

9           A.     The, the effect impai rs our abi li ty to start  
10 construction on the project to meet the requirements  
11 that Darrell outlined in his testimony to meet a  
12 June 2' 13 date -- 2013 date before our system starts  
13 operating in a capaci ty that' s beyond what it' s  
14 designed for.

15          Q.     Brandon, you' ve descri be for the Board your  
16 background and experience in this. You' ve shown the  
17 Board the di fferent routes that the Company has  
18 examined that are not acceptable to the Company.

19                 If the Company was required to start a  
20 process over looking for a new route. In other words  
21 if the Board were to say, Hey, you don' t have to do  
22 the routes you rejected, but let' s send you -- go  
23 somewhere else and come back and report. How long do  
24 you estimate it would take to site, engineer, and  
25 permi t a new route?

1           A.     Based on what the Company's gone through the  
2 past three years -- the EIS is a very detailed,  
3 thorough process. It evaluates the impacts to the  
4 greatest extent possible. There's a lot of detail. A  
5 lot of involvement in the -- in choosing a preferred  
6 alternative by the BLM and the Company.

7                     In this case the Company's preferred  
8 alternative and the BLM's preferred -- or the  
9 environmentally preferred were the same through here.  
10 Which indicates that it's, to us, the best route  
11 possible.

12                     Based on all the input that we've gone  
13 through, and -- there's no reason for me to believe it  
14 would take less than a year to try to site a new line  
15 that would -- may or may not have less impact. But  
16 from what we can see, this is the least-impactful  
17 route possible.

18           Q.     And Brandon, based on the information  
19 provided to you and your team by Mr. Gerrard, what do  
20 you believe would result from that delay if you had to  
21 delay an additional year before you could begin this  
22 process?

23           A.     I think Darrell pointed it out pretty well.  
24 Outlined it in his testimony. That the system, if  
25 we're not able to meet our date, June 2013 the system

1 will stop operating beyond what it's designed for.  
2 Create damage to equipment trying to operate at those  
3 high levels.

4 Cause -- we won't be able to maintain our  
5 system. Can't take outages, as Darrell described.  
6 And wouldn't be able to meet the needs that we're  
7 required to meet as far as the Company's customers are  
8 concerned.

9 Q. So simply stated, Brandon, what relief are  
10 you seeking from the Utility Facility Review Board  
11 today?

12 A. We're asking, based on all the input and work  
13 that has gone into this project as far as permitting  
14 the most environmental -- least environmental -  
15 impactful route that meets the Company's purpose and  
16 needs, to have Tooele County issue a Conditional Use  
17 Permit for the alignment that will allow us to meet  
18 our customers' needs.

19 Q. You -- take us back two slides, if you can,  
20 to where you showed your route and the area that was  
21 in contention.

22 Is there anything further that the Company is  
23 willing to do in this area to accommodate the concerns  
24 of Tooele's citizens?

25 A. I, I think the Company's demonstrated their

1 ability to work with Tooele County when we accepted  
2 mitigations that were required by the Tooele County  
3 Planner during the Conditional Use Permit process.

4 There were 22 conditions that we were asked  
5 to abide by. We agreed. Plus an additional one, for  
6 23, was added that we also agreed.

7 Q. Okay. Just want to make sure in case the  
8 Board's not familiar with that process. What  
9 mitigation factors were proposed by who, when? Just  
10 in case the Board -- to clarify for them what you  
11 referred to.

12 A. The Tooele County Planner, as part of the  
13 Conditional Use Permit, had stated and asked the  
14 Planning Commission of Tooele County to approve the  
15 Conditional Use Permit based on 22 conditions that he  
16 had identified during his review.

17 There were no specific mitigations that were  
18 requested of the Company for specific things.  
19 However, we had acknowledged those conditions and  
20 agreed that we would mitigate to meet those conditions  
21 if the permit was approved.

22 MR. MOSCON: Thank you.

23 Mr. Chairman, I would move for the admission  
24 of Mr. Smith's testimony. And be willing to pass the  
25 witness for any further questions of the Board or

1 opposing counsel .

2 CHAIRMAN BOYER: Is there any objection to  
3 the admission of Mr. Smith's filed testimony?

4 MR. HOGAN: None, Mr. Chairman.

5 CHAIRMAN BOYER: Okay, it will be admitted.

6 (The prefilled testimony of Brandon Smith was  
7 admitted.)

8 CHAIRMAN BOYER: Mr. Hogan, how much  
9 redirect -- or cross examination do you anticipate?

10 MR. HOGAN: At least a half an hour.

11 CHAIRMAN BOYER: Perhaps this would be a good  
12 time to take a break to rest our reporter. We'll take  
13 a ten-minute break. We'll come back and you can  
14 commence your cross examination.

15 (A recess was taken from 2:22 to 2:43 p.m.)

16 CHAIRMAN BOYER: Okay, we're back on the  
17 record. Mr. Hogan, cross examination.

18 MR. HOGAN: Thank you, Chairman.

19 CROSS EXAMINATION

20 BY MR. HOGAN:

21 Q. Mr. Smith, I -- you can see from the slide  
22 that I've pulled up I've backed your presentation up  
23 to -- it's not the first slide. But I wanted to start  
24 here, and then we'll go back, and then we'll -- I'll  
25 follow the same linear approach that you had in your

1 initial direct testimony. Okay?

2 A. Okay.

3 Q. In talking about the feasibility study that  
4 was done -- well, actually before we talk about the  
5 feasibility study.

6 There was a, there was a step that you talked  
7 about that I don't see illustrated on this slide, on  
8 this flowchart. I believe the words you used were  
9 that the BLM reviewed the proponent's proposed purpose  
10 and need for the project. And that that was --  
11 information was provided to the BLM right at the  
12 outset. Is that correct?

13 A. Correct.

14 Q. Okay.

15 A. Correct.

16 Q. Would the purpose and need for the project  
17 include details like minimum separation for running  
18 lines parallel to one another?

19 A. They, they have.

20 Q. They have? So --

21 A. Yes.

22 Q. -- that was part of the information that was  
23 provided to the BLM?

24 A. I don't recall if actual 1,500 feet was put  
25 in the application to the BLM.



1 Q. Okay. And that would have happened before  
2 the very first element that's on this flowchart,  
3 correct?

4 A. Correct.

5 Q. Okay. So aside from all the specific  
6 expertise the BLM has in gathering data about the  
7 environment, and the terrain, and all their in-house  
8 experts, they really -- it sounds like they really  
9 rely upon the project proponent, in this case Rocky  
10 Mountain Power, for technical details about what can  
11 and cannot be done with respect to the project; is  
12 that correct?

13 A. They -- yeah. They, they do not have any  
14 engineering staff as part of their, their permitting  
15 process.

16 Q. There's not a single electrical transmission  
17 engineer working for the BLM?

18 A. Not that I'm aware of.

19 Q. Okay. All right, do you have your clicker?

20 A. Yes.

21 Q. Could you, could you back up one slide, I  
22 believe? And this will work.

23 What I'm curious about on this, on this  
24 particular slide is I believe that kind of the  
25 mustard-color looking spots are spots that are

1 identified as potential substation locations; is that  
2 correct?

3 A. Correct.

4 Q. And the -- in the upper left corner, the spot  
5 that's the farthest north and farthest west, is that a  
6 potential substation location that was identified by  
7 the BLM?

8 A. It was identified in the feasibility study.

9 Q. Okay. Was, was -- am I incorrect in stating  
10 that that was the BLM that did the feasibility study?

11 A. No, the Company did the feasibility study.

12 Q. Okay. So the Company identified that as a  
13 potential spot?

14 A. Correct.

15 Q. Which this is significant to me in that that  
16 is the location that local government, local  
17 jurisdictions, would like to see the substation built.  
18 Okay? Can we go now to, um.

19 Yeah, can -- while we're, while we're --  
20 before we leave this slide, can you use your pointer  
21 and show where Limber is in -- on this slide?

22 A. Limber, as we applied and in the EIS, is  
23 located in this area right here.

24 Q. Okay. And I notice -- I mean, I'm pointing  
25 out the obvious -- but there's no mustard color there,

1 correct?

2 A. Correct.

3 Q. Okay. All right, let's talk a little bit  
4 about the EIS. The Final Environmental Impact  
5 Statement that's come out now. I'm gonna refer to  
6 page 2-16 of that, of that document. There's a route  
7 that's talked about, it's described and labelled as  
8 the "Environmentally-Preferred Route." Okay?

9 And they call it "Alternative H." But I  
10 believe, and in looking at, in looking at that route  
11 and what's been discussed, that that most closely  
12 mirrors what you have contained in your testimony as  
13 one of the Grantsville alternatives. Would you say  
14 that's correct?

15 A. That is not correct. Alternative H I believe  
16 was for a line, one line going to Limber. To -- from  
17 Limber to Terminal.

18 Q. For a single line?

19 A. Right.

20 Q. Okay. So they've, they've labelled that as  
21 the environmentally-preferred route?

22 A. For Limber to Terminal.

23 Q. For Limber to Terminal?

24 A. Uh-huh.

25 Q. And did the Company voice objections about

1 how difficult the construction would be because of the  
2 soils?

3 A. From Limber to Terminal?

4 Q. Yes.

5 A. We identified those during the analysis.

6 Q. Okay. And do you still plan to build the  
7 Limber-to-Terminal section in that general area?

8 A. Yes, we do.

9 Q. Okay. Despite the fact that it's got this  
10 poor soil?

11 A. We realize it's got the soils that it has.  
12 However, you know, we realize that we will not have  
13 two lines in there, it will just be one line.

14 Q. Okay. But the Company has the ability to  
15 build towers that can withstand the poor soil  
16 conditions? And I understand that one of the  
17 geotechnical terms is "liquefaction." If we have an  
18 earthquake, an incident, those, those soils are loose,  
19 you -- the Company can design towers that can  
20 withstand that?

21 A. Yeah, it would be hard to deny it. We do  
22 have lines in those conditions.

23 Q. Okay. Can you flip forward to your slide  
24 that shows the three areas where the BLM had changes  
25 they requested?

1 A. I'm trying. Right there.

2 Q. Okay. You mentioned that in Area 1 the BLM  
3 had requested a change. And that once you explained  
4 the difficulty that came with co-locating, the BLM  
5 backed off that request and they went with the  
6 Company's proposed alternative; is that correct?

7 A. Correct.

8 Q. Can you tell me the population of the  
9 immediate area within that circle?

10 A. I do not know the exact population, but it is  
11 not very populated.

12 Q. Would it be greater than 75,000 people?

13 A. I, I, I don't know. I couldn't answer that.

14 Q. Okay. Would it, would it have affected the  
15 analysis of that decision if, for instance, the county  
16 seats for that county were right in that immediate  
17 area, and the county's -- or -- and that city's  
18 watershed was in that immediate area, and the other  
19 factors that seem to be present with the Southeast  
20 Bench were also factors that were present in that  
21 area?

22 A. It would have been included just in -- the  
23 EIS, just as it was for the area you're explaining.

24 Q. Right. So I guess the question I'm asking  
25 you is, do you think the BLM would have backed off the

1 co-location request if all those same factors had also  
2 been present in this area, which it appears they were  
3 not?

4 A. I, I can't speak to what the BLM would have,  
5 would have come -- what the result would have been.

6 Q. Okay. There's certainly a chance it would  
7 have been different?

8 A. Possibly.

9 Q. Okay. You, you've characterized the public  
10 opposition to the Southeast Bench route as a, as a  
11 handful of residents. Could you be more specific what  
12 you mean by a "handful"? I mean, that might be one  
13 thing for one person and something completely  
14 different for somebody else. And I'm, I'm not sure  
15 exactly what you're meaning by that.

16 A. When we started the conflict resolution  
17 meetings to discuss all of these routes there were  
18 only a handful of concerned citizens who were present  
19 at those meetings. So between five and ten people.

20 Q. Do you think that's atypical for the front  
21 end of a, of a project like this, that just a few  
22 people are concerned and show up to the meeting? Or  
23 do you think that's normally what happens?

24 And that, and that -- I guess let me follow  
25 it up. That opposition increases as people sense the

1 seriousness of what's proposed increases?

2 A. We saw the, we saw the folks' reaction on the  
3 release of the Draft EIS. That is when the public  
4 voiced most of their concern.

5 Q. At this point in time, as of May 10th, would  
6 you characterize it as still just a handful of people  
7 that are opposed to the Southeast Bench route?

8 A. When I referred to a handful, those were the  
9 folks that we dealt with on a, on a basis of meeting  
10 in meetings and discussing routes.

11 Q. Right. And I'm asking you now to compare the  
12 opposition -- the public opposition to the Southeast  
13 Bench route to what it was when you started the  
14 process. Is it greater or less?

15 A. It -- from what we -- from what I can tell,  
16 it's greater from when we initiated the project back  
17 in 2007.

18 Q. Would you say significantly greater?

19 A. I -- it, it's much greater.

20 Q. Okay, thank you. Will you go to the slide  
21 that illustrates the Silcox route?

22 I imagine with each route that's considered  
23 there's certain areas of the criteria evaluated where  
24 they were very strong and very much a contender, and  
25 then other areas where they were very weak and the

1 criteria would tend to eliminate those routes.

2 With respect to the Silcox route, besides the  
3 altitude and the access roads isn't it correct that  
4 the -- one of the primary, and in fact probably the  
5 primary reason this route's eliminated, is because of  
6 the mineral rights impact and the cost of right-of-way  
7 acquisition with Rio Tinto?

8 A. I would not say it's the primary reason.  
9 The -- these routes were balancing engineering, costs,  
10 environmental impacts, for each alternative.

11 Q. Okay.

12 A. And to say that one is a primary, I can't say  
13 that cost through -- due to Kennecott was a primary  
14 concern.

15 Q. Okay. Well, let me -- I guess let me  
16 rephrase it. We'll go through some of those criteria.  
17 Is wildfire a high potential on this route?

18 A. Wildfire is a potential on every route.

19 Q. Cert -- certainly most so -- more so in  
20 mountainous areas with vegetation that are difficult  
21 to access and fight fires?

22 A. In areas of high vegetation the fire impact  
23 is greater; however, we have mitigations for that.

24 Q. Okay. So altitude -- let's, let's, let's be  
25 real direct. Comparing this to the I-80 Corridor,



1 which one has a higher potential for wildfire; this  
2 route or I-80?

3 A. Based on the vegetation up from Silcox Canyon  
4 through there, I would say this route has a higher  
5 potential.

6 Q. Which one is easier to fight a fire in?  
7 Along I-80, where it's flat and there's easy access  
8 for any type or piece of equipment, or on this  
9 mountain route?

10 A. I'm not a firefighter. I would -- my  
11 opinion --

12 Q. I --

13 A. -- this possibly would be more difficult up  
14 here, due to terrain.

15 Q. Okay. Are those both common traits, the  
16 terrain and when it comes to firefighting potential,  
17 for the Southeast Bench route that's been requested as  
18 well as the Silcox route?

19 A. They have been evaluated in both routes.

20 Q. Okay. And is the fire hazard and danger  
21 greater with both those routes than the I-80 Corridor?

22 A. I, I would imagine that information is in the  
23 EIS. I don't know the exact ranking for the fire.

24 Q. Okay.

25 A. But.

1 Q. I mean, you're the project, you're the  
2 project engineer. I would think that you'd kind of  
3 know that -- if you don't know the exact score, you  
4 probably know that this one was higher or lower.

5 A. I do not know every single detail in the EIS.  
6 I mean, there's three years worth of data in there.  
7 And when we choose routes it's not based on one  
8 specific score, it's a compilation of scores. Based  
9 on the vegetation, this would more likely have a  
10 higher impact for fires based on I-80.

11 Q. Thank you. Based on terrain -- once again  
12 this seems obvious, but I want to make sure we're  
13 clear on this.

14 Based on terrain, are firemen going to have  
15 an easier time getting to the Southeast Bench route or  
16 the I-80 route to fight a fire?

17 A. Are you specific to fires during  
18 construction, or --

19 Q. Any, anytime.

20 A. -- fires anytime?

21 Q. Anytime.

22 A. We have mitigation measures for fires along  
23 the transmission lines as far as vegetation  
24 management. So fighting fires during those times  
25 would not be as difficult.

1 Q. Just, just from an access and repair  
2 standpoint, five years after the line's built where's  
3 it gonna be easier to fight a fire and make a repair;  
4 on the Southeast Bench route or the I-80 route?

5 A. If we have access roads still available that  
6 meet our company standards, then those, those folks  
7 can use our roads to fight the fires.

8 Q. Where are the access roads going to have a  
9 greater impact visually, on the Southeast Bench route  
10 or the I-80 Corridor?

11 A. Visual impacts, it depends on the level of  
12 vege -- revegetation that's required. There's --

13 Q. Well, we --

14 A. -- obviously not as much steep terrain to  
15 deal with on the I-80 Corridor. However, we do have  
16 significant wetlands we have to deal with.

17 Q. And we do live in a desert. The regrowth, I  
18 think you made the statement that it would regrow in  
19 three to -- was it three years? Three to five years?

20 A. Three to five years.

21 Q. Three to five years? Do you think that's an  
22 accurate estimate for our, for our climate and our,  
23 our conditions in this area?

24 A. That is the current revegetation plan  
25 according to the BLM.

1 Q. Okay. Let's take a look -- will you go to  
2 the slide that shows the Grantsville route?

3 Now, I remember the meeting, I recall the  
4 meeting where this was requested. In one of these  
5 problem solving meetings we requested a route where  
6 the Limber Station was moved to the north.

7 It appears, it appears that the location of  
8 the proposed Limber Substation has been -- it doesn't  
9 look like to me that it's in the same spot as it, as  
10 it was identified in the feasibility study. It looks  
11 like it's moved further east. Would you say that's  
12 accurate?

13 A. This is not a location that was identified in  
14 the feasibility study.

15 Q. No, it was not.

16 A. Right.

17 Q. This was requested by local people.

18 A. Right. This is not the same location.

19 Q. Okay. Why, why is it that when we requested  
20 that the substation location be analyzed from a more  
21 northern point, why is it you did not rely on the  
22 information that had already been gathered for a good  
23 substation location which showed further to the west,  
24 up out of the poor soils; why did you instead choose  
25 this location?

1           A.     The substation site you're talking about  
2 further to the north and the west did not meet our  
3 criteria or efficiencies for constructing the line.  
4 That site was eliminated early on. We did not want to  
5 have two lines in parallel conditions up north. And  
6 it did not meet the efficiencies by adding additional  
7 line miles.

8           Q.     So the Com -- the Company's own criteria that  
9 the Company set eliminated it from consideration?

10          A.     Correct.

11          Q.     Okay. And in looking at this route -- I  
12 don't have a pointer, but I'm gonna, I'm gonna stand  
13 and show you.

14                 If the substation were instead placed  
15 anywhere out in this area. I mean, obviously before  
16 you get to steep, steep inclines where there would be  
17 some excavation work. But if it were placed out in  
18 this area, isn't it possible to achieve much greater  
19 separation than what's currently depicted? Coming out  
20 of that substation?

21          A.     Separation --

22          Q.     Separation of the lines.

23          A.     -- at what point?

24          Q.     If we had two lines, just as you've got  
25 proposed there. Two lines leaving the substation. It

1 looks like, it looks like -- I'll be frank. This  
2 looks like what I would see if I asked a contractor to  
3 bid a job and he didn't want to get the job.

4 For instance, in the building that I'm  
5 presently located, when the State built the new  
6 Courthouse where my office is we asked them to include  
7 a bathroom after the project was already well  
8 underway.

9 Layton Construction was very eager to get to  
10 the, to the soccer stadium job. They didn't want that  
11 job. The price they gave for the bathroom was  
12 \$78,000. Okay? That was a bid that showed they  
13 clearly did not want to get the job.

14 It looks like to me that with the placement  
15 of the substation where it is, and then immediately  
16 going to minimum separation along the I-80 Corridor,  
17 this looks like an attempt to placate the locals by  
18 saying, We're seriously considering this alternative,  
19 but then turn around and drawing it such that it would  
20 never meet your criteria and you would quickly dismiss  
21 it. Am I, am I way off base on that assertion?

22 A. This was a, this was an option that was asked  
23 for us to analyze. That is the location that Limber  
24 Substation was asked for us to place.

25 Q. I don't believe that's the correct location.

1 I -- and for the sake of talking about it today,  
2 assume that it's up there where I pointed. If we, if  
3 we put the substation up in this area, and then the  
4 green line stayed exactly where it is right now.

5 A. Uh-huh.

6 Q. Wouldn't it be possible for that red line to  
7 come right down here where it presently is. We'd have  
8 well more than the, than the separation you've  
9 indicated right here. And the choke point would  
10 clearly be right here, where you've said there's an  
11 impact from the airport.

12 But instead of it being nine or ten miles of  
13 minimum separation it would maybe be a few hundred  
14 feet, a fraction of a mile, where we've got close  
15 separation. And then the lines could separate once  
16 again.

17 Wouldn't it be -- would it be possible to  
18 draw what I've just described? And, and to build the  
19 line in that fashion?

20 A. It would be possible to draw it. Possibly  
21 build it. But it will not meet the criteria which  
22 Darrell -- Mr. Gerrard went over in his testimony. We  
23 are not building two lines in a corridor up in that  
24 area.

25 It places a huge risk. And it also does not

1 enable to us operate our system efficiently. And  
2 you're adding miles onto the line to get to Oquirrh  
3 Substation.

4 Q. Who set that criteria for the minimum  
5 separation?

6 A. Which criteria are you talking about?

7 Q. Whatever the number is. Whether it's one  
8 tower span, whether it's 1,500 feet, whether it's one  
9 mile. Who set the criteria that the BLM looked at  
10 when it, when it analyzed routes?

11 A. It's not, it's not just the, it's not just a  
12 span length, the distance between the lines. It's  
13 having a common corridor. So to deal with the  
14 specific distance between the lines, it's not that,  
15 it's not that straightforward.

16 Q. Was that element of the plan dictated by  
17 Rocky Mountain Power or by the BLM?

18 A. The 1,500 feet was mentioned by the Company,  
19 as Darrell explained, as far as the criteria.

20 Q. Okay.

21 A. However, down by Mona the BLM understood the  
22 risk associated with that. And you can see that they  
23 changed their idea -- their opinion on that.

24 Q. Okay. So it appears that it's self-imposed  
25 criteria or limits that have eliminated this route.



1 The Company's decided that's a risk the Company  
2 doesn't want to take. Is that an accurate way to  
3 describe it?

4 A. It is not a route that the Company would  
5 build.

6 Q. Okay. With respect to the airport, is there  
7 something magical about property owned by the airport?  
8 I mean, we're not talking about Salt Lake Regional  
9 Airport here or Salt Lake International Airport. It's  
10 a very small airport. You've seen it firsthand,  
11 correct?

12 A. Correct.

13 Q. And you do have the ability to condemn  
14 property, correct? As a company, as a public utility?

15 A. To condemn property, yes. I am not familiar  
16 with property owned by the FAA. Or whoever owns the  
17 airport.

18 Q. By Salt Lake City Corporation?

19 A. I am not familiar with that.

20 Q. And with your present proposal you intend to  
21 condemn property owned by Tooele City. I would think  
22 that it's no different with Salt Lake City Corporation  
23 than it is with Tooele City. Yet the limitation of  
24 being able to impact the airport has seemed to become  
25 an insurmountable hurdle.

1           Now, I can understand why that would be. I  
2 think it's much like the mineral rights. It probably  
3 costs a lot more money than a regular residence to  
4 condemn, correct?

5           A. I'm not familiar with the condemnation rates  
6 or not. It's not our first option to --

7           Q. Do you think an airport, an airport is more  
8 valuable than a residence?

9           A. I can't speak to the value of the property.

10          Q. Okay. Would you mind going to the slide that  
11 shows the photos that were prepared? The --

12           Now, I know on your direct you took great  
13 care to point out to make sure that we could actually  
14 see that something had been superimposed there. Do  
15 you think I would be accurately describing the photo  
16 on the bottom if I said that these look as impressive  
17 as any ad for cosmetic surgery that I would ever see?

18           Are they, are they that impressive? I mean,  
19 if this was teeth whitening or if this was a tummy  
20 tuck, this is incredible. Would you agree?

21          A. It, it does look nice.

22          Q. Okay. And, and you believe that the  
23 vegetation will regrow to this state in three to  
24 five years, and at our latitude in this part of the  
25 desert?

1           A.     Like I discussed before, this is imagery  
2 produced by the BLM. They have experienced  
3 professionals who have done this for years, and years,  
4 and years, and years. And we -- it's the BLM's  
5 determination that that's what they expect that to  
6 look like.

7           Q.     Right.

8           A.     It's not our interpretation.

9           Q.     Do you think it's realistic that the  
10 138 poles that are down lower on the next slide --  
11 would you go to the next slide?

12                   The 138 poles that show up right down here in  
13 the photo. Now, I know there's not the same color of  
14 vegetation. But do you think it's realistic that  
15 those 138 poles down against the toe of the foothill  
16 are more visible than the poles that you indicated  
17 that would be on a ridge line?

18                   That -- do you, do you think that's a  
19 realistic representation?

20           A.     I'm just going off, off what I see. I mean,  
21 we intended to leave the proposed route up into the  
22 foliage to help blend the line in as much as possible.  
23 If we have it down below it is obviously gonna be more  
24 visible than what it is right now.

25           Q.     Towards the end of your testimony you

1 mentioned that one of the important factors that  
2 necessitated the Company's selection of the Southeast  
3 Bench route was timeline. Is that, is that accurate?

4 A. Timeline is one factor.

5 Q. Okay. If Tooele County were willing to give  
6 you a permit right now, today, I mean prior to this  
7 hearing, but the, but the -- from the Company's  
8 standpoint the cost would be needing to co-locate  
9 those lines for even a short portion. Less than a  
10 mile, or possibly for a few miles.

11 Would that consideration -- because I  
12 understand there's a weighing that goes on on all  
13 these route selections. If Tooele County immediately  
14 offered up a permit for that route that's the route  
15 that I've described today as we, as we've discussed,  
16 would that be more important to the Company than  
17 achieving maximum separation of the lines?

18 A. You were talking about the Limber Substation  
19 up north?

20 Q. Yes.

21 A. With both lines to the east?

22 Q. Yes. That's exact -- that's exactly what I'm  
23 talking about.

24 A. Based on the criteria I've been given to site  
25 this line and permit it, co-locating lines is an

1 unacceptable risk that the Company is willing to take.

2 Q. Okay. I'm a little bit troubled by that  
3 statement. And it's not from your testimony. But you  
4 were present for Mr. Gerrard's testimony, correct?

5 A. Correct.

6 Q. I believe he stated that if the Company had  
7 purchased in advance the right-of-way, the Company was  
8 okay with co-locating. When the Company had the  
9 foresight to acquire the right-of-way in advance they  
10 seemed to be just fine co-locating routes for a period  
11 of distance.

12 But, but in this instance the Company's  
13 completely unwilling. Even if, even if it was just  
14 the pinch point by the airport where we got really  
15 close together.

16 A. If I remember correctly, Mr. Gerrard's  
17 testimony stated that the reason for the  
18 Mona-to-Oquirrh project is because those lines are  
19 being co-located.

20 Q. Okay. Are you familiar with the type of  
21 delay that may come to this project if there's a  
22 challenge to that federal Environmental Impact  
23 Statement?

24 A. I am -- I'm familiar with it, yes.

25 Q. Are you familiar that oftentimes needful

1 litigation is not measured in days or months but in  
2 years?

3 A. Correct.

4 Q. Is that a concern to the Company that even if  
5 this Board, the relief that's been granted -- or  
6 that's been requested by the Company to grant this  
7 permit, is the Company at all concerned that even if  
8 Tooele County complied with an order of this Board  
9 issuing a permit for this route, that it still would  
10 not be constructible within your timeline?

11 A. The amount of work that's gone into the EIS  
12 and the feasibility study, five years, we are  
13 confident about our line. We have the EIS documenting  
14 the analysis. We are concerned about the delays in  
15 that.

16 However, any project, any line alignment, has  
17 the potential for that kind of dispute of an EIS.  
18 There is the potential there no matter what route you  
19 have.

20 Q. Is, is permissibility and the cost associated  
21 with obtaining permits, is that part of the costs that  
22 are calculated in the standard cost of a, of a  
23 high-voltage transmission line?

24 A. We, we are obligated to keep track of all of  
25 our costs. All of our costs are obligated to be

1 accounted for.

2 Q. Okay. Are litigation costs a part of the  
3 costs that are factored in and considered for the cost  
4 of constructing a line?

5 A. There are risks identified early on in the  
6 project, such as litigation.

7 Q. So the costs associated with litigation, do  
8 those factor into the standard cost?

9 A. I guess you -- are you referring to the  
10 standard cost of building the line --

11 Q. For instance --

12 A. -- from a point to a point?

13 Q. For instance, the part of the line that's in  
14 controversy that you've applied for crosses Tooele  
15 City property. They -- this Board has received a  
16 letter from Tooele City indicating that it intends to  
17 contest the condemnation of that property. Is that a  
18 cost that's factored in to building this route?

19 A. It is a risk that's identified. There are  
20 certain dollars assoc -- accounted for in that risk.  
21 I can't tell you what those dollars are right now.

22 Q. This route, the controversial portion  
23 thereof, crosses a Superfund site. If there were  
24 legal challenges mounted to your plan to cross that  
25 Superfund site and litigation and ensued, are those

1 costs that would be built in to the standard cost of  
2 constructing this route?

3 A. Possibly. However, we do not have any reason  
4 to believe that there's gonna be any issues going  
5 across the Superfund site.

6 Q. And additionally, if -- on the whole, if the  
7 Federal Environmental Impact Statement were  
8 challenged, the associated litigation costs, would  
9 those play in to the standard cost of building the  
10 Southeast Bench route?

11 A. I guess I'm confused on what -- you're asking  
12 if those costs are accounted for?

13 Q. I'm asking if those costs are part of the  
14 price -- part of the reason we're before this Board  
15 today is, one, to decide routing. Is to decide where  
16 the route should be sited. And the second is to  
17 determine what, if any, excess costs are the local  
18 jurisdictions' s responsibility.

19 And the reason I'm asking this question is, I  
20 think it's very important to Tooele County and to this  
21 Board to be able to differentiate between what is the  
22 true standard cost of the route that's been applied  
23 for.

24 From our filings you can see that the  
25 County's position is that that number is unknown. We



1 don't know what the standard cost is for this route,  
2 because there are at least three different  
3 possibilities of litigation that are going to happen  
4 with this route.

5 So that cost figure cannot be determined.  
6 That's the point I'm trying to make. And I'm trying  
7 to get you to answer the question about whether or not  
8 the litigation associated with the route you've  
9 applied for would become a part of the cost of  
10 building this route.

11 A. I'm not familiar how those costs are tied in  
12 to the project. Whether or not they are passed on to  
13 the ratepayers or not.

14 Q. Certainly, certainly you'd acknowledge that  
15 the time impact absolutely affects, from the Company's  
16 standpoint, whether or not this is a good route?

17 A. Time impact is considered.

18 MR. HOGAN: Okay.

19 I have no further questions for this witness,  
20 Mr. Chairman.

21 CHAIRMAN BOYER: Okay. Thank you, Mr. Hogan.

22 Let's see now if the Board members have  
23 questions. Mayor Johnson?

24 MAYOR JOHNSON: I just have a couple of  
25 questions, just for our own benefit. Coming from a

1 community of power lines, we have buried a few of our  
2 lines.

3 And we're dealing with a situation where we  
4 have a visual impact on, some said a handful, whatever  
5 a handful is. At least some citizens. At least a  
6 three-or-four-mile visual area. Have we given any  
7 consideration to burying those lines? And is it  
8 possible?

9 THE WITNESS: To my knowledge, we have not  
10 buried a line -- a double-circuit 345 line.

11 MAYOR JOHNSON: It's a big line, I know that.

12 THE WITNESS: It's a big line. There are,  
13 there are estimates we have put together. Other,  
14 other counties actually request those. This, this is  
15 something that's very expensive. On the magnitude of  
16 ten, ten times the dollar amount of what it is to  
17 normally build a line.

18 There are also risks associated with that  
19 that the lines do not dissipate the heat they need to  
20 to keep cool. Therefore, in a lot of instances on a  
21 line this size you have to implement some sort of a  
22 cooling system to keep these lines cool, which  
23 additionally adds on to the cost.

24 So we have not been asked to put together a  
25 cost estimate for undergrounding for this portion of

1 the line.

2 MAYOR JOHNSON: Okay, thank you. There's  
3 another -- when I, when I went out there and looked at  
4 the project one was to take it as you have all  
5 proposed, or the Power Company proposes, take it up  
6 over the top from where it currently is. The other is  
7 to go out to Grantsville and go around.

8 What's the estimated cost of doing what has  
9 been requested by Tooele County versus what the Power  
10 Company has asked? Do you have any idea what the cost  
11 difference would be? And if so, who's gonna pay it?

12 THE WITNESS: I, I can't answer the part on  
13 who's going to pay it.

14 MAYOR JOHNSON: Okay, I'll back that off.

15 THE WITNESS: That's beyond my --

16 MAYOR JOHNSON: Give me the estimated cost.

17 THE WITNESS: We've put esti -- high-level  
18 estimates together based on both alternatives. Having  
19 Limber up closer to I-80, and the other one over above  
20 the Wal-Mart Distribution Center.

21 The cost estimates up near the I-80 Corridor,  
22 the estimates we've obtained for the substation  
23 foundations alone was an additional 43 million, just  
24 based on the impacts that would have to go into the  
25 design of larger foundations.

1           And the cost estimate for moving Limber up  
2 near Wal-Mart adds additional line miles, which adds  
3 to the cost in the range of, I believe, 38 to  
4 40 million dollars for that route.

5           MAYOR JOHNSON: Thank you.

6           Thank you, Chairman. I have no other  
7 questions.

8           COMMISSIONER ALLEN: Thank you.

9           MR. HOGAN: Mr. Chairman? If I may, just for  
10 purposes of not jumping back and forth, may I clarify  
11 with the witness one thing that he stated? I know I  
12 didn't do this with the previous witness. But I think  
13 it's important, based on Commissioner Johnson's  
14 comment -- Mayor Johnson's question about looking at  
15 the different locations for the substation?

16           The location that I was trying to get  
17 Mr. Smith to talk about, that the County actually did  
18 request be considered, there never were numbers  
19 prepared for that substation. They -- the numbers  
20 that were prepared were for behind Wal-Mart, which is  
21 further south than what we requested. And for out in  
22 the flat, which is further east than what we  
23 requested.

24           So I, I think there is a location, and the  
25 location was identified in the feasibility study early

1 on as a potential substation location, never has been  
2 analyzed.

3 MAYOR JOHNSON: Chairman, can I just make?

4 MR. HOGAN: And if I'm incorrect, Mr. Smith,  
5 would you please indicate that, indicate -- so that's  
6 my understanding. I want to make sure I understand  
7 your testimony correctly.

8 THE WITNESS: Two things. The substation  
9 site which you're referring to, which is the very  
10 northwest corner, was eliminated early on due to these  
11 concerns with having both lines up north.

12 MR. HOGAN: Okay.

13 THE WITNESS: We were never given an official  
14 location for Limber to base our analysis on. We were  
15 not given a map, a drawing, or anything to base that  
16 on. We were given, in this general location.

17 And at our voluntary expense we analyzed the  
18 Wal-Mart route as a comparison, because we realized  
19 the conditions for the substation up north were  
20 unsuitable. So those were the two estimates we put  
21 together.

22 MAYOR JOHNSON: Just one further question,  
23 then, if you don't mind then. Is Grantsville okay  
24 with moving the line towards their city versus the  
25 visual impact we have on the southeast?

1 I don't -- and I don't need to go there, I  
2 don't think. I just -- I think I'm just asking it  
3 rhetorically, if you wish. But I think -- I haven't  
4 heard that, but maybe you could answer that just for  
5 me personally.

6 MR. HOGAN: Mayor Johnson, I can attempt to  
7 answer the question. And then the Mayor of  
8 Grantsville is present in the audience.

9 MAYOR JOHNSON: I'll turn that to the  
10 Chairman if we want to do that. We'll have that  
11 tomorrow night, I'm sure.

12 MR. HOGAN: My understanding from speaking  
13 with Grantsville, of course their first preference is  
14 that it not be there at all. I think that's  
15 everyone's first preference, is that it not be there  
16 at all.

17 We'd all like to have power and have no  
18 impacts. But they understand and are realistic that  
19 that's simply not the case. Their preference would be  
20 that it is on the other side of the Stansbury  
21 Mountains, in the Skull Valley.

22 Given that that's not realistic in this  
23 situation, their preference is certainly that the  
24 substation locate north of town rather than south of  
25 town, because of the concerns that I mentioned earlier

1 today about other lines connecting from the north,  
2 from the west, anything that would come off of the  
3 current location of Limber Substation would be  
4 spidering that would go adjacent to their city, and  
5 they strongly object to that. Is that correct?

6 MAYOR OF GRANTSVILLE: That is correct.

7 CHAIRMAN BOYER: Okay, thank you.

8 Anything to add to that, Mr. Smith?

9 THE WITNESS: No, thank you.

10 CHAIRMAN BOYER: Are you aware of that  
11 objection of Grantsville?

12 THE WITNESS: That --

13 CHAIRMAN BOYER: As represented by Mr. Hogan?

14 THE WITNESS: That they want -- I have never  
15 heard anything official from Grantsville that said  
16 they wanted it up north.

17 CHAIRMAN BOYER: Okay, thank you.

18 Commissioner Allen?

19 COMMISSIONER ALLEN: Thank you Mr. Chairman.

20 Mr. Smith, when I look at the EIS, the one  
21 that was the final or the latest one issued just a few  
22 weeks ago, April 20th, and look at the map,  
23 specifically Appendix C, there are a number of  
24 segments that are identified.

25 And I think you jumped to one that certainly

1 is one of the reasons everyone is probably here and  
2 we're hearing this case. And that is referred to on  
3 several maps as Segment 190 and 190A, as the proposed  
4 line and the BLM-preferred sites run just southeast of  
5 Settlement Canyon Reservoir. Are you familiar with  
6 that?

7 THE WITNESS: Yes.

8 COMMISSIONER ALLEN: You stated that the  
9 Company had taken -- accepted a mitigation request and  
10 moved the line about a thousand feet south. Which, if  
11 I look at these maps, that would potentially align  
12 with the BLM-proposed route originally. The green  
13 line on some of their maps. Does that sound familiar?

14 THE WITNESS: It sounds familiar.

15 COMMISSIONER ALLEN: The Company, according  
16 to the map that I've got -- and I guess really the  
17 nature of my question is, is this map old, is it  
18 wrong, or did something change quite recently?  
19 Because they show that you are taking still -- your  
20 route would be on the north side of the ridge.

21 When you stand up on 14th East and just south  
22 of Skyline Drive, you look up in that basin across  
23 that area, there is a separate ridge there. And it  
24 looks like they are putting the line in their  
25 preferred area behind the second ridge, and that you



1 are going to be in front of it.

2 So did I hear you correctly; have you decided  
3 to move it back that thousand feet? Does that put it  
4 behind that extra ridge?

5 THE WITNESS: Our initial adjustment was near  
6 the Settlement Canyon Reservoir our initial line was  
7 going over the top of it. We had shifted that about  
8 400 feet to the south and put it on the south boundary  
9 of the reservoir.

10 As you move east behind the foothills we  
11 shifted the line even more, up to a thousand feet  
12 further away from the homes that were down there on  
13 the bench. That's not as far as what the BLM is  
14 showing as far as the environmentally-preferred route.

15 We had discussions with the County on impacts  
16 and mitigation for moving that route. And brought to  
17 their attention that there are some other areas back  
18 there which may be impacted by moving the line as far  
19 as the BLM had suggested. So we haven't moved the  
20 line to the BLM's point as of yet.

21 COMMISSIONER ALLEN: You moved it. And was  
22 that recently that you made that mitigation step to  
23 agree to move it a thousand feet?

24 THE WITNESS: We moved it the thousand feet  
25 initially, before we actually submitted the

1 conditional use application. So that thousand foot  
2 adjustment is in the Conditional Use Permit.

3 COMMISSIONER ALLEN: Okay. That's helpful.  
4 Let's see. Question about the Superfund site. When  
5 I -- I'm assuming that it is most of the canyon that  
6 was formerly the International -- when you, when you  
7 live in Tooele County that canyon has about 17 names,  
8 so you'll have to forgive me.

9 But it was U.S. Steel at one time, and it was  
10 other -- it was another site. Is it the basin of the  
11 canyon where that is generally the Superfund site?  
12 Are you aware of what the definition of the outline of  
13 that area is?

14 THE WITNESS: Yeah, we're actually -- if I  
15 can go back. It's outlined on one of the maps that we  
16 had on there. It's hard to see, but it is actually  
17 this area right there. It's the darker-shaded area.

18 COMMISSIONER ALLEN: And I notice that there  
19 are some fences with warning signs. Is the, is the  
20 site generally identified and contained?

21 THE WITNESS: Yes.

22 COMMISSIONER ALLEN: Okay.

23 THE WITNESS: Yes.

24 COMMISSIONER ALLEN: It looks like you  
25 already have existing lines going cross that canyon?

1 THE WITNESS: Yes, we do.

2 COMMISSIONER ALLEN: And how far away from  
3 those lines will the new lines, the proposed lines be?

4 THE WITNESS: We're being as close as  
5 possible to those lines. Those are, those are  
6 lower-voltage lines, so we are gonna be roughly  
7 60 feet from those lines.

8 COMMISSIONER ALLEN: And is there anything  
9 that prohibits you from crossing over the top of a  
10 Superfund site, that you're aware of?

11 THE WITNESS: No. We're, we're working with  
12 the property owner, the Division of Wildlife  
13 Resources, and the EPA to -- they actually prefer our  
14 alignment to follow our existing lines. And we are in  
15 the process of developing the access road plan to go  
16 through that area.

17 COMMISSIONER ALLEN: So you're working on it.  
18 Okay, those are my questions. Thank you.

19 CHAIRMAN BOYER: Ms. Hurtado?

20 MS. HURTADO: I don't have any questions.

21 CHAIRMAN BOYER: Okay. I have just a  
22 question or two.

23 Just so that I'm clear, does the  
24 BLM-preferred environmental route transit across in  
25 front of the "T" (inaudible) behind the foliage?

1 THE REPORTER: I'm sorry, I can't hear you.

2 CHAIRMAN BOYER: I'm ask -- my question was,  
3 does the BLM-preferred -- environmentally-preferred  
4 route traverse in front of the "T" and in that same  
5 foliage that you've suggested?

6 THE WITNESS: Yes. It follows --

7 CHAIRMAN BOYER: Follows it?

8 THE WITNESS: The environmentally preferred  
9 is the same as our Company preferred.

10 CHAIRMAN BOYER: At that point with the "T"?

11 THE WITNESS: (Moves head up and down.)

12 CHAIRMAN BOYER: Okay. You talked about the  
13 costs -- or it was either you or your colleague talked  
14 about the costs of acquiring rights-of-way across the  
15 Kenne -- or paying reparations or whatever across the  
16 Kennecott property. Have you quantified that number?

17 THE WITNESS: No, I have not.

18 CHAIRMAN BOYER: Is it, is it in that same  
19 \$40-million range that the Grantsville route would  
20 cost?

21 THE WITNESS: I, I honestly don't know. But  
22 I have not figured out what it would be.

23 CHAIRMAN BOYER: Let me follow up with a  
24 question that Mayor Johnson asked on undergrounding.  
25 For context, how -- what does it cost to run a mile of

1 overhead 500-kV transmission line? A million bucks a  
2 mile, 10 million a mile, 20 million a mile? What is  
3 that?

4 THE WITNESS: I, I believe Mr. Gerrard  
5 rattled off a number. It depends on, it depends on  
6 where you run the line. I mean, it can be anywhere  
7 from 2 million a mile up to, up to 5 million a mile  
8 possibly.

9 CHAIRMAN BOYER: Okay. So if we were talking  
10 about undergrounding -- I'm assuming that it's  
11 technically feasible. The cooling issue is  
12 technically res -- capable of being resolved. So a  
13 three-mile run would cost between \$6 million and  
14 \$15 million, then, based on your rough numbers there?

15 THE WITNESS: Approximately.

16 CHAIRMAN BOYER: That would be considerably  
17 less than the costs of just the foundations alone on  
18 the Grantsville route, isn't it?

19 THE WITNESS: Correct.

20 CHAIRMAN BOYER: Was there any discussion of  
21 moving the Limber Substation further to the south?

22 THE WITNESS: South of where it's proposed  
23 right now?

24 CHAIRMAN BOYER: South of where it's proposed  
25 now and coming in, you know, up into the drainage, for

1 example. Farther south.

2 THE WITNESS: No. Discussions were, were  
3 taking place about that, but the location right now  
4 really maximizes the efficiency of both going to  
5 Oquirrh and to, and to Terminal.

6 CHAIRMAN BOYER: So if you went further south  
7 you would lose some of the efficiency by -- because of  
8 the additional length?

9 THE WITNESS: Right. You have additional  
10 length, and we would have to take another route to get  
11 over to our -- over to Highway 36, possibly.

12 CHAIRMAN BOYER: Again, I think you testified  
13 that you have no, no idea of what litigation costs of  
14 a condemnation dispute with Tooele City would be.  
15 Isn't that what you testified?

16 THE WITNESS: Correct. I don't have those  
17 numbers.

18 CHAIRMAN BOYER: Okay, that's all I have.  
19 Redirect?

20 MR. MOSCON: Thank you.

21 REDI RECT EXAMI NATION

22 BY MR. MOSCON:

23 Q. Brandon, I'd like to steal that clicker from  
24 you if I could. You've got a pointer.

25 I'm gonna try and generally follow, Brandon,

1 the course that the Tooele County Attorney's cross  
2 examination followed.

3 THE REPORTER: Sir, I don't think your  
4 microphone is on.

5 MR. MOSCON: How about that? Should I scoot  
6 closer?

7 THE REPORTER: Better.

8 MR. MOSCON: Are we okay? All right. Sorry  
9 about that.

10 Q. (By Mr. Moscon) Brandon, do you recall the  
11 line of questioning that you were asked about the fact  
12 that you testified that in this Area 1 at the  
13 bottom -- if I can get my pointer to work -- that  
14 after the Company explained to the BLM why line  
15 separation was so important to the Company, that the  
16 BLM actually backed off its proposed -- or its  
17 preferred route and adopted the Company's route. Do  
18 you remember that line of questioning?

19 A. Yes, I do.

20 Q. He basically asked you, he said, Gee, if  
21 they -- if there had been a county seat there, and if  
22 there's a huge population center there, and if it was  
23 all the citizens were in an uproar there, would they  
24 have still, you know, done what you wanted them to do?  
25 And of course your answer was, I don't know. Do you

1 recall that questioning?

2 A. Uh-huh.

3 Q. My question for you is, here in this disputed  
4 route, where you are in the county seat, and where you  
5 do have the population, and you are on the bench, and  
6 the citizens did write all their concerns to the BLM,  
7 did the BLM still accept that route as its preferred  
8 route as well?

9 A. Yes, they did.

10 Q. He then asked you to go to the slide showing  
11 the Silcox Canyon route, and asked you to compare this  
12 route to the Grantsville route as far as which route  
13 is better for firefighting, et cetera. If you recall?  
14 I take it it's fair to say neither this route nor the  
15 Grantsville route is the preferred route, right?

16 A. Correct.

17 Q. My question though is, does the firefighting  
18 issue really drive that? Is that really the driving  
19 issue for the Company?

20 A. No, it's not the driving issue.

21 Q. There was a lot of discussion about the  
22 photographs and whether they're believable or not  
23 believable. Again, I guess without the editorial --  
24 the editorializing, what information did the BLM ask  
25 the Company to provide so that it, the BLM, could do a



1 simulation?

2 A. They asked for the structure designs that I'm  
3 highlighting right here, and access road plans for  
4 that area.

5 Q. And do you know, were there photographs like  
6 this in the Draft EIS?

7 A. There were, there were visual simulations in  
8 there. This, this is an altered one showing the  
9 adjustment of our line further to the south.

10 Q. Right. Okay, but in the Draft EIS there were  
11 also some visual simulations?

12 A. Correct.

13 Q. And are you aware of whether anyone came  
14 forward to the BLM and said, Hey, there's a mistake,  
15 you guys have got it wrong, your engineering data is  
16 incorrect, you need to alter this, that's not what it  
17 will really look like?

18 A. No, I've had no comment about from -- that.

19 Q. So while there might be an attempt to  
20 insinuate that's the case, no one ever actually was  
21 able to call the BLM on it and say there's a problem  
22 there, I take it?

23 A. Not to my knowledge.

24 Q. You then were asked a series of questions  
25 about NEPA litigation, costs, delay to the project.

1 Let me go to -- well, we can use this slide here.  
2 This is what has been called the Grantsville route  
3 Option 2. Whether it's Option 1 or 2 doesn't matter,  
4 but. Here's the Grantsville City limits. There's one  
5 possible location for a substation.

6 I know you're not a lawyer, Brandon, but are  
7 you aware of anything that would stop someone that  
8 lives over here in Grantsville from filing NEPA  
9 lawsuits or challenging the EIS if this route were  
10 taken and they wanted to make that challenge? Are you  
11 aware of anything that would prevent that?

12 A. No, I'm not aware of anything.

13 Q. And in other words, whatever risk there is of  
14 terrible lawsuits and people being upset and trying to  
15 challenge the process, doesn't that risk exist no  
16 matter where this route is ultimately selected to go?

17 A. Yes, that risk is there.

18 Q. And although there was a very-thinly-veiled  
19 threat of your company will experience a lot of cost  
20 and delay if you go forward with your route, does the  
21 Company engineer around threatened litigation or  
22 claims that we're gonna hold you up, or does it  
23 engineer around the environment and the electrical  
24 needs of its customers?

25 A. We engineer around the environment and our --

1 what's best for our customers.

2 Q. Okay. There were some questions about  
3 undergrounding the line. Are you aware, Brandon, of  
4 whether the final EIS addresses underground  
5 transmission of the lines in case that is a concern of  
6 the Board?

7 A. I believe it does not.

8 MR. MOSCON: No further questions. Thank  
9 you.

10 CHAIRMAN BOYER: We're gonna take our option  
11 of playing through, and Commissioner Campbell has one  
12 more question for Mr. Smith.

13 COMMISSIONER CAMPBELL: Could you turn to the  
14 visual impact, the second-to-the-last visual impact  
15 slide? Yeah, that one.

16 I think Commissioner Allen's question was is  
17 that the BLM would take you behind that ridge? Have  
18 you considered that? Do you see, you see the -- you  
19 have the ridge that you have your two towers on. If  
20 you go over to the left, do you see that ridge right  
21 there?

22 THE WITNESS: Uh-huh.

23 COMMISSIONER CAMPBELL: Is there a way to go  
24 behind that and then come up through that?

25 THE WITNESS: Yeah, this -- sorry. This is

1 the location I believe the BLM or the environmentally-  
2 preferred route in the FEIS would come out. As it was  
3 discussed, they are over to the south one more ridge.  
4 I believe there's a scout camp over there and some  
5 other issues.

6 So we, we have looked at it as far as that,  
7 and it's just moving it back one more ridge. It, it  
8 has impact on, it has impact on other property owners  
9 than what it's impacting right now. And moves it a  
10 little higher up into the watershed area.

11 CHAIRMAN BOYER: Thank you, Mr. Smith.  
12 Anything further, Mr. Moscon?

13 MR. MOSCON: Actually, yes. Thank you.  
14 There are a couple of things. And by the way, as a  
15 side note -- I don't mean to convey testimony -- but I  
16 will offer to the Board that the visual simulations  
17 were only a couple of examples.

18 The Final Environmental Impact Statement has  
19 a series of them. And the question that Commissioner  
20 Campbell is asking about, there are actual photographs  
21 that you can look to to answer those questions that we  
22 don't have slides for.

23 FURTHER REDIRECT EXAMINATION

24 BY MR. MOSCON:

25 Q. Here, let's look at a slide. One last thing,

1 Brandon, I neglected to ask you about. There is --  
2 this is the question about the Limber Substation and  
3 is it better here, here, here, here, here.

4 First, does the location of the lines drive  
5 where the substation goes, or does the substation  
6 drive where the lines go? If that question makes  
7 sense?

8 A. Line -- the lines in this situation drive  
9 where the substation goes.

10 Q. Okay. In your direct testimony -- I just  
11 want to make sure I was correct. Did you look at  
12 all -- geological data for the soils in all of this  
13 area, rather than just that one location?

14 A. Yes. We used desktop information, which is  
15 the readily-available information that's already been  
16 compiled and collected for these areas. For this  
17 whole area right here. These are all generally the  
18 same. The same type of soils. They're lake-bottom  
19 soils.

20 MR. MOSCON: Okay, thank you.

21 CHAIRMAN BOYER: Okay. Thank you, Mr. Smith.  
22 You may be excused.

23 THE WITNESS: Thank you.

24 CHAIRMAN BOYER: Mr. Hogan, you have no  
25 witnesses as I understand it?

1 MR. HOGAN: That's correct.

2 CHAIRMAN BOYER: So the plan will be to  
3 recess now. Reconvene tomorrow at 4:00 in Tooele  
4 County, as that's going to be the location. And then  
5 we'll reconvene here again Wednesday morning at 9:00.  
6 At which time we'll hear rebuttal testimony, if any,  
7 and legal arguments, closing arguments. Is that  
8 correct and acceptable to everyone?

9 MR. HOGAN: Yes.

10 CHAIRMAN BOYER: Very well. Thank you all  
11 for your participation. And those who have come to  
12 observe, thank you as well. We will look forward to  
13 seeing you tomorrow evening. Thank you all.

14 (The hearing was recessed at 3:38 p.m.)

15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

C E R T I F I C A T E

STATE OF UTAH )  
COUNTY OF SALT LAKE ) ss.

This is to certify that the foregoing proceedings were taken before me, KELLY L. WILBURN, a Certified Shorthand Reporter and Registered Professional Reporter in and for the State of Utah.

That the proceedings were reported by me in stenotype and thereafter caused by me to be transcribed into typewriting. And that a full, true, and correct transcription of said proceedings so taken and transcribed is set forth in the foregoing pages, numbered 1 through 206, inclusive.

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

SIGNED ON THIS 17th DAY OF May, 2010.

Kelly L. Wilburn, CSR, RPR  
Utah CSR No. 109582-7801

<b>\$</b>	<p><b>150</b> [2] - 88:4, 145:19  <b>150-acre</b> [1] - 125:7  <b>16</b> [1] - 144:24  <b>160</b> [1] - 64:25  <b>17</b> [3] - 147:1, 194:7  <b>18</b> [1] - 61:4  <b>19</b> [2] - 40:25, 64:13  <b>190</b> [1] - 192:3  <b>190A</b> [1] - 192:3  <b>1982</b> [1] - 66:18  <b>1983</b> [1] - 67:9  <b>1992</b> [2] - 28:24, 84:10  <b>1:19</b> [1] - 110:6</p>	<p><b>2019</b> [1] - 73:18  <b>2020</b> [2] - 72:21, 72:22  <b>20th</b> [1] - 191:22  <b>22</b> [3] - 56:22, 158:4, 158:15  <b>23</b> [1] - 158:6  <b>299</b> [1] - 119:3  <b>2:22</b> [1] - 159:15  <b>2:43</b> [1] - 159:15</p>	<p>128:1, 197:7  <b>5,051</b> [1] - 54:21  <b>5,500</b> [2] - 30:23, 50:2  <b>5,800</b> [1] - 51:17  <b>5.2-or-so</b> [1] - 84:19  <b>5.5</b> [1] - 30:23  <b>50</b> [1] - 55:6  <b>500</b> [16] - 22:4, 38:19, 38:20, 67:21, 69:12, 71:6, 71:17, 71:18, 71:22, 71:24, 71:25, 72:3, 83:2, 87:1, 96:9, 125:4  <b>500,000</b> [1] - 84:22  <b>500-foot</b> [1] - 87:3  <b>500-kV</b> [12] - 71:7, 71:9, 71:12, 71:16, 71:23, 72:7, 84:15, 84:22, 87:3, 96:7, 96:10, 197:1  <b>5th</b> [2] - 52:15, 67:11</p>	<p><b>9:12</b> [1] - 4:1</p>
<b>'</b>		<b>3</b>		<b>A</b>
<p><b>'18</b> [1] - 104:12  <b>'83</b> [1] - 66:18</p>	<b>2</b>	<p><b>3</b> [7] - 41:16, 46:24, 48:21, 61:22, 109:4, 128:1, 129:4  <b>3,000</b> [3] - 43:6, 99:15  <b>3,000-megawatt</b> [1] - 98:21  <b>3,120</b> [1] - 54:13  <b>3,250</b> [1] - 53:16  <b>3,328</b> [1] - 53:2  <b>3-D</b> [1] - 140:6  <b>30</b> [4] - 12:8, 29:7, 108:9, 108:10  <b>30-year</b> [1] - 84:12  <b>300</b> [2] - 22:4, 82:24  <b>345</b> [5] - 71:22, 72:3, 125:4, 125:14, 186:10  <b>345-kV</b> [1] - 101:15  <b>36</b> [3] - 115:4, 137:14, 198:11  <b>38</b> [1] - 188:3  <b>3:00</b> [1] - 52:12  <b>3:38</b> [1] - 206:14  <b>3rd</b> [1] - 67:11</p>	<p><b>6</b></p> <p><b>6</b> [4] - 35:9, 95:4, 96:22, 197:13  <b>6,000</b> [2] - 44:19, 44:20  <b>6,400</b> [1] - 30:25  <b>6.2</b> [1] - 35:9  <b>6.4</b> [1] - 30:25  <b>60</b> [7] - 11:11, 61:9, 61:23, 62:1, 62:5, 93:5, 195:7  <b>60-percent</b> [3] - 61:7, 61:14, 61:22</p>	<p><b>a.m</b> [1] - 70:22  <b>A.M</b> [1] - 4:1  <b>abide</b> [2] - 23:18, 158:5  <b>ability</b> [26] - 23:4, 24:21, 31:20, 34:6, 40:17, 41:23, 45:7, 47:6, 50:4, 50:9, 50:12, 50:19, 51:1, 53:15, 54:6, 54:22, 57:4, 58:12, 72:4, 113:13, 116:8, 139:3, 155:9, 158:1, 164:14, 177:13  <b>able</b> [25] - 42:11, 46:8, 46:24, 55:12, 57:19, 57:25, 58:14, 99:15, 102:16, 113:22, 116:13, 120:3, 123:11, 129:13, 132:8, 139:5, 141:12, 144:11, 151:14, 156:25, 157:4, 157:6, 177:24, 184:21, 201:21  <b>Absolutely</b> [1] - 101:6  <b>absolutely</b> [5] - 10:6, 48:7, 58:24, 107:10, 185:15  <b>AC</b> [2] - 67:21, 84:13  <b>accept</b> [3] - 134:4, 144:14, 200:7  <b>acceptable</b> [13] - 6:18, 92:22, 108:13, 139:10, 142:7, 144:7, 144:14, 147:9, 147:11, 149:3, 149:7, 155:18, 206:8  <b>accepted</b> [3] - 91:7, 158:1, 192:9  <b>access</b> [24] - 33:5, 33:9, 33:24, 97:17, 114:9, 116:14, 123:24, 125:18, 140:2, 140:18, 141:13, 142:1, 152:7, 153:5, 154:2, 168:3, 168:21, 169:7, 171:1, 171:5, 171:8, 195:15, 201:3  <b>Access</b> [3] - 33:19, 33:22, 141:10  <b>accommodate</b> [4] - 68:21, 128:13, 129:13, 157:23  <b>accomplish</b> [3] -</p>
<b>1</b>		<b>4</b>	<b>7</b>	
<p><b>1</b> [11] - 17:21, 46:16, 72:18, 127:19, 129:16, 129:17, 147:4, 147:7, 165:2, 199:12, 202:3  <b>1,000</b> [1] - 148:16  <b>1,500</b> [19] - 83:13, 83:16, 86:3, 86:6, 86:10, 86:15, 87:4, 88:12, 99:13, 102:23, 105:15, 105:21, 106:4, 106:21, 107:9, 108:2, 160:24, 176:8, 176:18  <b>1,500-foot</b> [3] - 81:13, 106:6, 106:9  <b>10</b> [10] - 4:1, 4:24, 35:9, 70:17, 72:20, 72:21, 72:22, 96:9, 147:1, 197:2  <b>10,000</b> [1] - 132:3  <b>100</b> [3] - 38:9, 89:22, 95:13  <b>10:39</b> [1] - 70:22  <b>10:57</b> [1] - 70:22  <b>10th</b> [2] - 52:13, 167:5  <b>11:42</b> [1] - 110:6  <b>12</b> [2] - 35:10, 111:25  <b>125</b> [1] - 64:24  <b>130</b> [1] - 115:4  <b>138</b> [9] - 103:14, 125:5, 128:21, 143:4, 144:3, 152:23, 179:10, 179:12, 179:15  <b>138-kV</b> [2] - 100:12, 103:6  <b>14</b> [1] - 17:21  <b>1407</b> [2] - 28:23, 111:6  <b>141</b> [2] - 11:3  <b>14th</b> [1] - 192:21  <b>15</b> [4] - 4:24, 41:5, 42:15, 70:17</p>	<p><b>2</b> [18] - 43:13, 46:23, 48:21, 61:1, 61:21, 73:8, 73:9, 73:16, 73:19, 96:7, 96:10, 99:7, 109:4, 128:7, 129:12, 197:7, 202:3  <b>2'13</b> [1] - 155:12  <b>2,000</b> [1] - 44:22  <b>2,200-megawatt</b> [1] - 41:15  <b>2,750</b> [1] - 54:24  <b>2-16</b> [1] - 163:6  <b>20</b> [6] - 41:19, 53:2, 67:17, 95:15, 108:9, 197:2  <b>20-plus</b> [1] - 32:23  <b>200</b> [1] - 145:19  <b>2000</b> [1] - 29:16  <b>2002</b> [1] - 68:8  <b>2005</b> [2] - 35:11, 95:4  <b>2006</b> [3] - 29:16, 29:21, 29:25  <b>2007</b> [15] - 18:3, 30:22, 32:10, 35:12, 38:9, 49:25, 52:6, 52:24, 53:18, 56:14, 65:1, 69:19, 119:24, 120:5, 167:17  <b>2009</b> [1] - 35:13  <b>2010</b> [5] - 4:1, 54:9, 72:20, 97:2, 97:3  <b>2011</b> [1] - 54:20  <b>2012</b> [3] - 55:3, 69:17, 69:19  <b>2013</b> [17] - 30:24, 50:2, 55:2, 55:5, 55:13, 55:14, 55:17, 57:1, 57:2, 57:18, 58:11, 68:16, 69:8, 69:20, 72:19, 155:12, 156:25  <b>2014</b> [1] - 50:25  <b>2016</b> [1] - 104:12</p>	<p><b>4,400</b> [2] - 50:1, 52:24  <b>4,900</b> [2] - 53:13, 54:11  <b>40</b> [4] - 95:7, 125:16, 145:25, 188:4  <b>40-million</b> [1] - 196:19  <b>400</b> [1] - 193:8  <b>43</b> [2] - 145:25, 187:23  <b>44</b> [1] - 68:7  <b>45</b> [1] - 18:7  <b>450</b> [1] - 125:23  <b>4:00</b> [1] - 206:3</p>	<b>8</b>	
		<b>5</b>	<b>9</b>	
		<p><b>5</b> [4] - 96:8, 96:10,</p>	<p><b>75,000</b> [1] - 165:12</p> <p><b>8</b></p> <p><b>8</b> [2] - 146:25  <b>8,760</b> [1] - 52:7  <b>80</b> [9] - 11:5, 22:2, 32:8, 32:10, 49:14, 82:16, 82:17, 83:10, 95:14</p> <p><b>9</b></p> <p><b>9,500</b> [2] - 139:22, 141:5  <b>90th</b> [2] - 47:19, 105:19  <b>925</b> [1] - 28:20  <b>9:00</b> [1] - 206:5</p>	



<p>37:8, 37:9, 70:2  <b>accomplishes</b> [1] - 43:21  <b>according</b> [2] - 171:25, 192:15  <b>accordingly</b> [1] - 33:21  <b>account</b> [1] - 59:14  <b>accounted</b> [3] - 183:1, 183:20, 184:12  <b>accrue</b> [1] - 26:8  <b>accumulate</b> [2] - 116:24, 121:5  <b>accuracy</b> [1] - 95:7  <b>accurate</b> [13] - 72:12, 72:20, 73:25, 74:12, 75:14, 75:15, 84:1, 88:25, 100:19, 171:22, 172:12, 177:2, 180:3  <b>accurately</b> [1] - 178:15  <b>achieve</b> [5] - 82:10, 83:16, 86:11, 91:12, 173:18  <b>achieved</b> [2] - 81:22, 92:21  <b>achieving</b> [2] - 93:8, 180:17  <b>acknowledge</b> [3] - 20:9, 24:1, 185:14  <b>acknowledged</b> [1] - 158:19  <b>acknowledgment</b> [1] - 20:16  <b>acquire</b> [1] - 181:9  <b>acquiring</b> [2] - 26:1, 196:14  <b>acquisition</b> [2] - 26:12, 168:7  <b>acres</b> [2] - 125:16, 145:19  <b>Act</b> [1] - 6:20  <b>acting</b> [1] - 17:14  <b>action</b> [2] - 16:2, 123:3  <b>actual</b> [10] - 25:16, 51:5, 51:6, 52:2, 136:12, 150:10, 160:24, 204:20  <b>ad</b> [1] - 178:17  <b>add</b> [4] - 26:12, 73:8, 102:15, 191:8  <b>added</b> [5] - 25:21, 55:12, 122:23, 145:17, 158:6  <b>adding</b> [4] - 79:20, 145:2, 173:6, 176:2  <b>addition</b> [7] - 25:21, 26:4, 68:4, 68:17, 130:20, 131:25,</p>	<p>132:10  <b>additional</b> [10] - 77:20, 131:23, 144:23, 156:21, 158:5, 173:6, 187:23, 188:2, 198:8, 198:9  <b>additionally</b> [2] - 184:6, 186:23  <b>address</b> [6] - 17:10, 28:18, 77:1, 77:8, 111:4, 133:10  <b>addressed</b> [2] - 18:23, 92:17  <b>addresses</b> [1] - 203:4  <b>adds</b> [4] - 145:11, 186:23, 188:2  <b>adequacy</b> [4] - 23:3, 24:19, 127:5, 144:18  <b>adequate</b> [7] - 20:25, 33:6, 33:18, 84:24, 85:9, 85:10, 113:5  <b>adjacent</b> [5] - 85:18, 86:24, 87:1, 87:6, 191:4  <b>adjoined</b> [1] - 129:9  <b>adjust</b> [1] - 149:2  <b>adjustment</b> [9] - 11:14, 130:6, 148:6, 148:12, 148:13, 151:4, 193:5, 194:2, 201:9  <b>adjustments</b> [6] - 128:12, 147:24, 148:3, 149:2, 149:4  <b>Administrative</b> [1] - 6:20  <b>admission</b> [3] - 70:10, 158:23, 159:3  <b>admit</b> [1] - 70:6  <b>admitted</b> [4] - 70:13, 70:15, 159:5, 159:7  <b>adopted</b> [1] - 199:17  <b>adopting</b> [1] - 16:18  <b>advance</b> [2] - 181:7, 181:9  <b>advise</b> [1] - 108:21  <b>advocate</b> [1] - 153:11  <b>affected</b> [5] - 66:21, 105:20, 109:10, 132:3, 165:14  <b>affects</b> [2] - 130:19, 185:15  <b>afternoon</b> [1] - 52:15  <b>agencies</b> [12] - 34:3, 34:9, 115:17, 116:18, 116:19, 116:24, 120:7, 120:8, 120:9, 120:19, 121:6  <b>agency</b> [2] - 7:15,</p>	<p>120:10  <b>ago</b> [8] - 10:16, 18:4, 43:13, 48:12, 57:18, 85:15, 144:4, 191:22  <b>agree</b> [3] - 92:23, 178:20, 193:23  <b>agreed</b> [8] - 11:4, 12:15, 12:16, 24:6, 24:8, 158:5, 158:6, 158:20  <b>agreement</b> [1] - 128:15  <b>agrees</b> [1] - 23:8  <b>ahead</b> [1] - 33:16  <b>air</b> [1] - 61:24  <b>air conditioners</b> [1] - 98:7  <b>air conditioning</b> [1] - 50:6  <b>aircraft</b> [2] - 64:5, 66:15  <b>airplane</b> [1] - 106:24  <b>Airport</b> [2] - 177:9  <b>airport</b> [16] - 66:12, 138:21, 138:22, 138:25, 139:2, 143:21, 145:10, 175:11, 177:6, 177:7, 177:10, 177:17, 177:24, 178:7, 181:14  <b>airports</b> [1] - 106:18  <b>akin</b> [1] - 91:8  <b>align</b> [1] - 192:11  <b>alignment</b> [12] - 11:24, 128:3, 128:24, 133:8, 134:8, 136:2, 137:5, 148:15, 153:3, 157:17, 182:16, 195:14  <b>Allen's</b> [1] - 203:16  <b>allow</b> [8] - 30:16, 58:7, 108:7, 117:21, 130:9, 138:12, 151:23, 157:17  <b>allowed</b> [1] - 151:12  <b>allows</b> [3] - 55:11, 120:10, 120:13  <b>alone</b> [3] - 20:23, 187:23, 197:17  <b>alter</b> [1] - 201:16  <b>altered</b> [1] - 201:8  <b>alternate</b> [4] - 113:19, 136:12, 143:2, 146:9  <b>alternative</b> [33] - 16:11, 22:21, 74:9, 75:10, 115:25, 119:2, 122:14, 122:17, 122:22, 122:24, 127:15, 127:16, 127:21, 128:9,</p>	<p>128:10, 128:22, 130:7, 130:8, 131:6, 131:7, 133:25, 134:9, 134:24, 135:16, 138:8, 138:20, 143:1, 147:14, 156:6, 156:8, 165:6, 168:10, 174:18  <b>Alternative</b> [2] - 163:9, 163:15  <b>alternatives</b> [14] - 10:18, 10:22, 11:8, 15:17, 16:1, 102:11, 122:3, 131:3, 131:5, 135:13, 137:1, 139:6, 163:13, 187:18  <b>altitude</b> [2] - 168:3, 168:24  <b>Alto</b> [2] - 66:11, 66:14  <b>amended</b> [1] - 19:21  <b>American</b> [2] - 34:16, 38:6  <b>amount</b> [9] - 9:23, 23:10, 53:6, 53:7, 90:1, 108:13, 146:20, 182:11, 186:16  <b>amounts</b> [2] - 36:14, 42:20  <b>analysis</b> [15] - 15:15, 19:4, 94:10, 94:14, 113:21, 119:11, 124:3, 126:8, 136:18, 138:5, 139:16, 164:5, 165:15, 182:14, 189:14  <b>analyze</b> [3] - 126:14, 134:14, 174:23  <b>analyzed</b> [11] - 14:10, 14:15, 18:22, 22:16, 134:20, 142:12, 146:9, 172:20, 176:10, 189:2, 189:17  <b>analyzing</b> [1] - 17:21  <b>and-a-half</b> [1] - 8:9  <b>animated</b> [2] - 28:6, 51:8  <b>animation</b> [1] - 28:7  <b>announced</b> [2] - 35:12, 69:18  <b>annually</b> [1] - 34:19  <b>answer</b> [11] - 74:17, 79:8, 83:25, 88:1, 165:13, 185:7, 187:12, 190:4, 190:7, 199:25, 204:21  <b>answered</b> [1] - 17:18  <b>answers</b> [1] - 6:4  <b>anticipate</b> [3] - 6:24, 69:14, 159:9  <b>Anytime</b> [2] - 141:6,</p>	<p>170:21  <b>anytime</b> [2] - 170:19, 170:20  <b>apart</b> [3] - 59:8, 59:10, 64:25  <b>apologize</b> [3] - 57:6, 136:11, 153:2  <b>appear</b> [2] - 76:19, 78:21  <b>appearances</b> [3] - 4:14, 6:23, 8:13  <b>appeared</b> [2] - 6:21, 88:22  <b>appearing</b> [1] - 25:5  <b>appease</b> [1] - 11:20  <b>Appendix</b> [1] - 191:23  <b>applicant</b> [3] - 16:8, 16:16, 17:1  <b>application</b> [10] - 99:25, 119:3, 119:5, 121:3, 121:14, 121:16, 123:14, 149:5, 160:25, 194:1  <b>applied</b> [12] - 21:2, 21:7, 22:19, 25:6, 25:12, 39:8, 45:19, 152:8, 162:22, 183:14, 184:22, 185:9  <b>Appreciate</b> [1] - 109:19  <b>appreciate</b> [4] - 27:9, 67:2, 81:17, 81:21  <b>appreciation</b> [1] - 21:8  <b>Approach</b> [1] - 121:6  <b>approach</b> [3] - 15:22, 105:7, 159:25  <b>approached</b> [3] - 119:3, 120:8, 128:11  <b>approaching</b> [1] - 69:7  <b>appropriate</b> [3] - 8:5, 16:1, 109:24  <b>approve</b> [2] - 25:12, 158:14  <b>approved</b> [3] - 25:8, 25:19, 158:21  <b>approximate</b> [2] - 11:11, 149:9  <b>April</b> [3] - 67:11, 191:22  <b>architect</b> [1] - 29:25  <b>architectural</b> [1] - 90:2  <b>architecture</b> [1] - 77:15  <b>area</b> [166] - 10:7, 13:8, 21:5, 21:12, 21:24, 22:5, 22:9, 22:10, 24:2, 26:17,</p>
--	--	--	--	--

<p>31:3, 31:4, 31:11, 31:16, 32:4, 32:5, 32:7, 40:19, 41:9, 44:24, 45:12, 48:25, 49:5, 49:8, 49:13, 49:17, 49:21, 49:24, 49:25, 50:4, 50:20, 50:24, 51:2, 51:13, 51:22, 52:5, 52:6, 52:23, 54:1, 54:6, 54:10, 54:14, 54:19, 56:8, 56:13, 56:17, 57:20, 57:21, 58:5, 68:12, 81:3, 95:23, 97:24, 98:1, 98:12, 103:23, 105:15, 106:3, 106:20, 107:8, 112:24, 113:18, 114:3, 114:4, 114:7, 114:15, 115:13, 115:22, 115:23, 116:12, 117:8, 118:21, 124:11, 124:14, 125:14, 127:20, 128:3, 128:6, 128:12, 128:16, 128:18, 128:19, 128:21, 128:23, 130:7, 133:20, 133:25, 134:8, 134:23, 135:20, 136:4, 136:11, 137:11, 137:13, 137:15, 137:17, 137:24, 138:9, 138:22, 139:4, 139:24, 140:2, 140:13, 140:19, 140:20, 141:13, 141:17, 142:3, 142:17, 142:22, 142:23, 143:4, 143:12, 143:15, 143:24, 143:25, 144:9, 145:10, 146:15, 148:1, 148:16, 148:23, 148:25, 149:9, 149:24, 150:7, 150:11, 150:25, 151:7, 152:4, 152:11, 152:12, 152:23, 153:5, 153:16, 154:8, 157:20, 157:23, 162:23, 164:7, 165:9, 165:17, 165:18, 165:21, 165:23, 166:2, 171:23, 173:15, 173:18, 175:3, 175:24, 186:6, 192:23, 192:25, 194:13, 194:17,</p>	<p>195:16, 201:4, 204:10, 205:13, 205:17  <b>Area</b> [12] - 127:19, 128:7, 128:17, 128:25, 129:4, 129:9, 129:12, 129:16, 129:17, 142:25, 165:2, 199:12  <b>Areas</b> [1] - 143:25  <b>areas</b> [30] - 31:17, 36:5, 37:10, 37:11, 37:12, 37:15, 53:21, 59:24, 65:19, 94:20, 96:9, 125:6, 127:14, 127:18, 133:5, 136:25, 143:8, 143:10, 147:7, 147:21, 148:9, 152:1, 164:24, 167:23, 167:25, 168:20, 168:22, 193:17, 205:16  <b>argue</b> [1] - 5:15  <b>argument</b> [1] - 5:18  <b>arguments</b> [1] - 206:7  <b>arise</b> [1] - 6:9  <b>Arizona</b> [1] - 37:3  <b>Army</b> [9] - 124:16, 135:17, 135:19, 137:3, 138:6, 138:7, 138:10, 138:11, 139:9  <b>arrive</b> [1] - 83:23  <b>arrow</b> [1] - 41:7  <b>arrows</b> [1] - 40:20  <b>artifact</b> [1] - 50:6  <b>aside</b> [1] - 161:5  <b>aspect</b> [1] - 13:2  <b>aspects</b> [3] - 13:23, 29:15, 38:23  <b>assertion</b> [1] - 174:21  <b>assertions</b> [1] - 10:25  <b>assessment</b> [1] - 121:21  <b>asset</b> [2] - 29:15, 102:9  <b>assets</b> [6] - 29:18, 58:14, 62:4, 79:20, 79:21  <b>assistance</b> [2] - 19:19, 27:7  <b>assoc</b> [1] - 183:20  <b>associated</b> [10] - 25:22, 91:12, 129:22, 137:12, 176:22, 182:20, 183:7, 184:8, 185:8, 186:18  <b>assume</b> [5] - 52:11,</p>	<p>55:22, 76:9, 106:5, 175:2  <b>assuming</b> [3] - 108:5, 194:5, 197:10  <b>assure</b> [1] - 17:7  <b>attempt</b> [3] - 174:17, 190:6, 201:19  <b>attempting</b> [1] - 101:2  <b>attention</b> [4] - 9:18, 49:2, 136:21, 193:17  <b>Attorney</b> [1] - 8:25  <b>Attorney's</b> [2] - 9:3, 199:1  <b>attorneys</b> [1] - 8:10  <b>attribute</b> [3] - 37:1, 37:8, 88:20  <b>attributes</b> [2] - 35:21, 36:2  <b>atypical</b> [1] - 166:20  <b>audience</b> [1] - 190:8  <b>augmentation</b> [1] - 55:15  <b>August</b> [2] - 52:15, 99:6  <b>authority</b> [1] - 25:1  <b>available</b> [9] - 26:17, 70:7, 73:21, 104:8, 115:16, 115:24, 116:23, 171:5, 205:15  <b>avoid</b> [4] - 44:9, 63:13, 92:4, 141:15  <b>avoiding</b> [2] - 141:19, 148:9  <b>avoids</b> [1] - 89:23  <b>await</b> [1] - 13:16  <b>aware</b> [23] - 5:24, 9:23, 26:7, 78:1, 79:9, 79:10, 80:11, 81:12, 81:14, 82:15, 82:18, 126:25, 127:7, 150:9, 161:18, 191:10, 194:12, 195:10, 201:13, 202:7, 202:11, 202:12, 203:3  <b>awfully</b> [1] - 87:22  <b>axis</b> [2] - 51:18, 51:19</p>	<p><b>backs</b> [1] - 46:11  <b>backup</b> [13] - 13:7, 39:18, 46:17, 48:19, 60:24, 62:19, 62:20, 63:6, 66:2, 73:11, 73:14, 101:18, 102:19  <b>backwards</b> [1] - 129:4  <b>bad</b> [1] - 140:1  <b>balance</b> [1] - 37:13  <b>balancing</b> [4] - 37:12, 37:15, 168:9  <b>barely</b> [1] - 153:21  <b>barring</b> [1] - 5:15  <b>base</b> [5] - 7:25, 145:24, 174:21, 189:14, 189:15  <b>Base</b> [1] - 121:2  <b>Based</b> [11] - 145:1, 145:16, 146:6, 150:5, 156:1, 156:12, 169:3, 170:8, 170:11, 170:14, 180:24  <b>based</b> [37] - 5:11, 12:11, 17:4, 17:5, 20:23, 21:2, 25:3, 53:8, 62:2, 69:20, 84:8, 85:12, 85:23, 90:7, 94:22, 114:22, 117:24, 121:2, 121:20, 121:21, 122:14, 122:17, 126:4, 145:1, 146:10, 148:3, 150:5, 152:14, 156:18, 157:12, 158:15, 170:7, 170:10, 187:18, 187:24, 188:13, 197:14  <b>basin</b> [2] - 192:22, 194:10  <b>basis</b> [3] - 33:5, 83:25, 167:9  <b>bathroom</b> [2] - 174:7, 174:11  <b>Bay</b> [1] - 102:12  <b>bear</b> [1] - 51:9  <b>beauty</b> [1] - 21:12  <b>become</b> [2] - 177:24, 185:9  <b>bed</b> [1] - 145:9  <b>began</b> [1] - 10:15  <b>begin</b> [14] - 4:14, 4:15, 8:13, 9:7, 9:17, 10:1, 13:15, 30:3, 49:6, 94:4, 113:8, 115:11, 154:18, 156:21  <b>begins</b> [1] - 115:14  <b>behalf</b> [7] - 8:16, 8:20, 8:23, 8:25, 9:18,</p>	<p>19:17, 19:18  <b>behind</b> [13] - 11:15, 139:20, 146:7, 146:13, 148:22, 151:6, 188:20, 192:25, 193:4, 193:10, 195:25, 203:17, 203:24  <b>belabor</b> [1] - 107:4  <b>believable</b> [2] - 200:22, 200:23  <b>believes</b> [1] - 5:20  <b>below</b> [3] - 54:18, 153:9, 179:23  <b>belt</b> [7] - 90:21, 90:22, 91:7, 91:24, 105:7, 105:8, 107:7  <b>belt-and-suspenders</b> [1] - 105:7  <b>belts</b> [3] - 91:1, 91:6, 91:15  <b>Ben</b> [1] - 101:21  <b>Ben Lomond</b> [3] - 41:9, 102:3, 102:21  <b>Bench</b> [15] - 93:12, 133:9, 149:14, 149:15, 152:19, 165:20, 166:10, 167:7, 167:13, 169:17, 170:15, 171:4, 171:9, 180:3, 184:10  <b>bench</b> [9] - 21:5, 21:12, 22:18, 25:13, 75:9, 146:13, 150:22, 193:13, 200:5  <b>benefit</b> [7] - 13:3, 46:4, 68:1, 68:3, 68:23, 93:18, 185:25  <b>benefits</b> [4] - 37:7, 37:16, 41:22, 68:5  <b>best</b> [13] - 10:17, 19:10, 22:25, 27:6, 73:20, 92:5, 120:23, 127:4, 130:13, 147:18, 147:19, 156:10, 203:1  <b>best-case</b> [1] - 92:5  <b>Better</b> [1] - 199:7  <b>better</b> [10] - 18:11, 21:7, 75:23, 92:15, 141:22, 143:9, 143:11, 154:5, 200:13, 205:3  <b>between</b> [33] - 22:4, 22:14, 35:15, 39:14, 41:4, 45:4, 45:19, 46:13, 46:15, 46:18, 46:21, 47:7, 47:15, 59:20, 60:23, 62:21,</p>
		<p><b>B</b></p>		
		<p><b>B-r-o-a-d-h-e-a-d</b> [1] - 9:6  <b>Bachelor</b> [1] - 111:23  <b>Bachelor's</b> [2] - 29:3  <b>backed</b> [4] - 159:22, 165:5, 165:25, 199:16  <b>background</b> [5] - 14:2, 29:1, 29:22, 154:5, 155:16</p>		

<p>71:18, 73:8, 73:11, 83:13, 83:16, 102:3, 102:20, 102:21, 105:18, 105:19, 146:25, 148:2, 166:19, 176:12, 176:14, 184:21, 197:13  <b>beyond</b> [4] - 106:6, 155:13, 157:1, 187:15  <b>bid</b> [2] - 174:3, 174:12  <b>Big</b> [1] - 36:5  <b>big</b> [10] - 20:10, 36:4, 59:21, 71:6, 77:14, 83:21, 89:21, 103:16, 186:11, 186:12  <b>bigger</b> [3] - 41:10, 41:20, 145:21  <b>billion</b> [1] - 35:9  <b>bills</b> [1] - 23:13  <b>biological</b> [2] - 116:20, 130:21  <b>bit</b> [18] - 30:22, 31:8, 31:12, 35:5, 35:21, 38:18, 40:5, 43:23, 50:16, 60:11, 60:14, 63:11, 74:16, 119:13, 143:9, 154:15, 163:3, 181:2  <b>black</b> [4] - 126:6, 136:8, 136:11, 136:15  <b>blacked</b> [1] - 84:19  <b>blend</b> [1] - 179:22  <b>blends</b> [1] - 154:5  <b>blizzard</b> [1] - 63:21  <b>BLM</b> [123] - 14:10, 14:13, 15:5, 15:19, 15:20, 15:22, 16:4, 16:12, 16:18, 16:21, 17:3, 17:13, 17:18, 17:23, 18:3, 18:4, 19:7, 22:15, 23:7, 24:7, 24:18, 26:6, 34:9, 85:1, 85:3, 86:9, 86:16, 119:3, 119:5, 119:8, 119:13, 119:19, 120:6, 120:24, 121:2, 121:14, 121:16, 121:19, 122:12, 122:13, 122:14, 122:22, 123:7, 123:13, 123:20, 124:1, 124:7, 124:17, 126:5, 126:8, 126:13, 126:19, 126:21, 127:1, 127:8, 127:11, 127:16, 128:11, 128:14, 128:19, 129:6, 129:14, 129:21, 129:24,</p>	<p>130:6, 130:13, 130:15, 131:1, 131:6, 131:10, 131:20, 131:21, 132:1, 133:19, 136:24, 138:1, 139:12, 140:20, 142:25, 147:18, 150:13, 150:15, 151:19, 151:22, 152:14, 152:18, 153:18, 154:20, 156:6, 160:9, 160:11, 160:23, 160:25, 161:6, 161:17, 162:7, 162:10, 164:24, 165:2, 165:4, 165:25, 166:4, 171:25, 176:9, 176:17, 176:21, 179:2, 192:4, 192:12, 193:13, 193:19, 195:24, 196:3, 199:14, 199:16, 200:6, 200:7, 200:24, 200:25, 201:14, 201:21, 203:17, 204:1  <b>BLM's</b> [17] - 123:12, 125:20, 126:9, 127:24, 128:9, 128:22, 134:24, 135:15, 135:22, 136:5, 138:3, 139:25, 151:18, 154:11, 156:8, 179:4, 193:20  <b>BLM-preferred</b> [8] - 122:22, 124:17, 126:19, 127:1, 131:6, 192:4, 195:24, 196:3  <b>BLM-proposed</b> [1] - 192:12  <b>block</b> [2] - 95:6  <b>blocks</b> [1] - 98:12  <b>blue</b> [3] - 30:15, 135:5, 136:15  <b>Board</b> [130] - 4:6, 4:10, 5:16, 5:20, 5:23, 5:24, 6:1, 7:5, 7:12, 8:11, 9:13, 9:17, 9:24, 10:1, 10:5, 10:11, 10:13, 10:20, 11:2, 11:22, 12:2, 12:10, 12:20, 12:22, 12:25, 13:10, 13:13, 13:19, 14:7, 14:19, 14:22, 15:6, 15:8, 15:12, 15:19, 16:20, 17:7, 17:8, 17:11, 17:13, 18:6, 18:13, 18:19, 18:20, 18:22, 19:2, 19:5, 19:8, 19:19, 20:6, 20:11, 20:13, 24:24, 25:11, 25:16,</p>	<p>27:8, 27:23, 28:4, 29:1, 30:3, 30:11, 30:22, 32:13, 32:16, 34:23, 38:15, 39:23, 40:13, 41:21, 45:9, 48:3, 49:3, 49:7, 50:19, 53:19, 55:20, 57:14, 58:3, 59:22, 60:5, 60:8, 60:15, 62:9, 63:15, 64:8, 67:24, 69:6, 70:8, 77:4, 84:6, 89:16, 94:3, 107:3, 111:4, 112:17, 113:15, 114:3, 116:3, 118:24, 120:24, 123:20, 124:20, 124:23, 125:19, 134:18, 136:18, 138:4, 139:16, 142:10, 146:3, 149:8, 151:1, 151:20, 153:13, 155:15, 155:17, 155:21, 157:10, 158:10, 158:25, 182:5, 182:8, 183:15, 184:14, 184:21, 185:22, 203:6, 204:16  <b>Board's</b> [3] - 27:22, 28:10, 158:8  <b>bodies</b> [1] - 114:11  <b>body</b> [1] - 114:20  <b>border</b> [1] - 138:15  <b>bottom</b> [12] - 10:23, 51:14, 52:12, 56:7, 68:9, 127:20, 143:6, 151:3, 153:1, 178:16, 199:13, 205:18  <b>Boulevard</b> [1] - 28:21  <b>boundaries</b> [1] - 138:13  <b>boundary</b> [8] - 114:19, 114:22, 114:24, 115:1, 115:9, 140:11, 148:13, 193:8  <b>Bountiful</b> [1] - 102:13  <b>Boyer</b> [1] - 4:8  <b>branch</b> [1] - 136:3  <b>Brandon</b> [27] - 77:1, 93:25, 105:2, 110:12, 111:3, 111:20, 112:15, 116:25, 123:5, 124:18, 130:11, 130:24, 136:17, 142:6, 146:3, 147:13, 153:10, 154:14, 155:15, 156:18, 157:9, 198:23, 198:25, 199:10, 202:6, 203:3,</p>	<p>205:1  <b>Brandon Smith</b> [8] - 14:1, 59:19, 83:18, 93:20, 110:11, 110:23, 111:6, 159:6  <b>Brandon's</b> [1] - 74:19  <b>break</b> [4] - 8:8, 142:21, 159:12, 159:13  <b>Bridger</b> [7] - 31:5, 41:12, 41:13, 64:20, 88:3, 100:18, 101:13  <b>brief</b> [2] - 4:25, 12:22  <b>briefings</b> [1] - 132:15  <b>briefly</b> [5] - 10:12, 28:25, 39:22, 95:2, 111:21  <b>bring</b> [3] - 49:19, 53:7, 145:23  <b>bringing</b> [1] - 85:25  <b>brings</b> [1] - 68:22  <b>broad</b> [3] - 96:2, 130:14, 130:18  <b>BROADHEAD</b> [2] - 9:2, 9:6  <b>Broadhead</b> [1] - 9:5  <b>brought</b> [5] - 31:6, 80:21, 90:8, 134:12, 193:16  <b>bubble</b> [4] - 31:20, 51:16, 52:9, 53:7  <b>bucks</b> [2] - 109:22, 197:1  <b>build</b> [24] - 14:17, 38:11, 43:14, 51:8, 57:9, 77:4, 92:2, 99:22, 109:8, 112:23, 125:8, 137:20, 143:13, 143:15, 144:10, 145:17, 145:23, 146:23, 164:6, 164:15, 175:18, 175:21, 177:5, 186:17  <b>building</b> [8] - 41:22, 146:19, 174:4, 175:23, 183:10, 183:18, 184:9, 185:10  <b>built</b> [24] - 25:20, 36:22, 38:18, 38:20, 40:19, 56:7, 72:19, 73:16, 84:22, 97:11, 99:16, 99:20, 101:1, 102:4, 104:4, 104:12, 104:19, 117:22, 138:22, 146:17, 162:17, 171:2, 174:5, 184:1  <b>bulk</b> [2] - 21:14, 38:7  <b>Bureau</b> [4] - 14:9,</p>	<p>15:11, 18:10, 85:3  <b>buried</b> [2] - 186:1, 186:10  <b>burn</b> [3] - 22:9, 65:3, 65:4  <b>burying</b> [1] - 186:7  <b>business</b> [5] - 12:9, 23:24, 34:5, 111:4, 111:21  <b>Butterfield</b> [2] - 135:9, 140:10  <b>BY</b> [7] - 28:16, 71:2, 104:24, 111:2, 159:20, 198:22, 204:24</p> <hr/> <p style="text-align: center;"><b>C</b></p> <hr/> <p><b>calculated</b> [3] - 32:10, 56:22, 182:22  <b>calculating</b> [1] - 94:11  <b>California</b> [3] - 66:11, 84:16  <b>camp</b> [1] - 204:4  <b>Camp</b> [1] - 118:7  <b>Camp Williams</b> [10] - 46:2, 46:13, 46:18, 47:18, 56:10, 56:20, 62:21, 62:22, 105:18, 105:19  <b>Canada</b> [1] - 84:15  <b>cannot</b> [8] - 10:8, 11:18, 22:17, 54:1, 54:19, 76:13, 161:11, 185:5  <b>canyon</b> [5] - 140:9, 194:5, 194:7, 194:11, 194:25  <b>Canyon</b> [16] - 76:18, 134:8, 135:9, 135:10, 135:21, 139:20, 140:5, 140:7, 140:10, 148:16, 148:19, 149:1, 149:13, 149:14, 192:5, 193:6  <b>capabilities</b> [1] - 20:14  <b>capability</b> [16] - 51:12, 51:20, 53:6, 56:9, 57:10, 57:12, 62:20, 72:3, 73:8, 79:22, 97:16, 98:22, 99:11, 100:11, 102:23, 104:11  <b>capable</b> [2] - 16:10, 197:12  <b>capacity</b> [22] - 36:9, 36:16, 37:17, 38:4, 39:15, 39:20, 40:14, 40:25, 41:3, 41:23,</p>
--	--	---	---	---

<p>44:16, 45:6, 47:10, 47:13, 48:15, 49:19, 56:3, 67:15, 68:16, 85:6, 104:7, 155:13 <b>capture</b> [1] - 146:18 <b>Carbon</b> [2] - 31:3, 49:20 <b>care</b> [1] - 178:13 <b>career</b> [1] - 84:12 <b>carried</b> [2] - 126:7, 126:13 <b>carry</b> [2] - 106:24, 116:1 <b>cascaded</b> [1] - 65:9 <b>case</b> [37] - 5:16, 5:18, 6:8, 8:1, 11:6, 15:13, 16:9, 17:13, 18:14, 23:2, 23:19, 24:18, 50:17, 53:14, 54:8, 57:5, 65:20, 65:23, 66:23, 67:8, 81:25, 82:14, 83:23, 89:9, 90:6, 91:24, 92:3, 92:5, 109:9, 156:7, 158:7, 158:10, 161:9, 190:19, 192:2, 201:20, 203:5 <b>catastrophic</b> [1] - 101:7 <b>caused</b> [2] - 63:21, 64:7 <b>causes</b> [3] - 87:17, 98:15, 101:7 <b>causing</b> [1] - 87:17 <b>cautious</b> [1] - 18:13 <b>center</b> [4] - 29:20, 39:17, 132:4, 199:22 <b>Center</b> [4] - 146:8, 146:14, 146:17, 187:20 <b>centers</b> [5] - 36:5, 42:12, 42:13, 46:15 <b>Central</b> [5] - 37:20, 39:13, 39:17, 48:15, 102:24 <b>centralized</b> [1] - 106:12 <b>Cert</b> [2] - 96:20, 168:19 <b>certain</b> [5] - 13:1, 36:2, 90:1, 167:23, 183:20 <b>Certainly</b> [7] - 29:2, 30:5, 45:15, 50:21, 63:18, 64:12, 185:14 <b>certainly</b> [19] - 8:3, 20:11, 20:23, 32:17, 35:1, 40:3, 49:10, 60:11, 62:14, 68:2, 69:9, 81:17, 91:4, 96:20, 166:6, 168:19,</p>	<p>185:14, 190:23, 191:25 <b>cetera</b> [1] - 200:13 <b>Chair</b> [2] - 4:9, 94:8 <b>Chairman</b> [21] - 4:8, 4:20, 8:24, 9:11, 19:16, 20:6, 27:25, 70:5, 70:25, 94:1, 109:15, 110:12, 158:23, 159:4, 159:18, 185:20, 188:6, 188:9, 189:3, 190:10, 191:19 <b>CHAIRMAN BOYER</b> [72] - 4:3, 6:17, 9:1, 9:4, 9:7, 9:14, 19:13, 27:11, 27:16, 27:20, 28:1, 28:11, 70:9, 70:13, 70:16, 70:21, 70:23, 94:2, 94:7, 96:13, 96:16, 100:15, 100:20, 101:4, 101:7, 101:20, 101:25, 103:1, 103:18, 103:21, 104:20, 109:16, 109:21, 110:3, 110:7, 110:15, 110:19, 111:11, 111:14, 111:16, 111:18, 159:2, 159:5, 159:8, 159:11, 159:16, 185:21, 191:7, 191:10, 191:13, 191:17, 195:19, 195:21, 196:2, 196:7, 196:10, 196:12, 196:18, 196:23, 197:9, 197:16, 197:20, 197:24, 198:6, 198:12, 198:18, 203:10, 204:11, 205:21, 205:24, 206:2, 206:10 <b>challenge</b> [7] - 25:22, 26:2, 26:8, 26:15, 181:22, 202:10, 202:15 <b>challenged</b> [1] - 184:8 <b>challenges</b> [3] - 26:5, 26:7, 183:24 <b>challenging</b> [1] - 202:9 <b>chance</b> [4] - 4:22, 6:5, 6:12, 166:6 <b>change</b> [3] - 24:23, 165:3, 192:18 <b>changed</b> [2] - 130:7, 176:23 <b>changes</b> [1] - 164:24 <b>characteristics</b> [1] -</p>	<p>103:9 <b>characterize</b> [1] - 167:6 <b>characterized</b> [2] - 72:11, 166:9 <b>charge</b> [2] - 16:20, 17:18 <b>charged</b> [3] - 17:24, 18:1, 25:17 <b>chart</b> [3] - 56:5, 56:6, 58:24 <b>charts</b> [2] - 74:23, 74:24 <b>chat</b> [1] - 10:11 <b>cheapest</b> [1] - 10:21 <b>check</b> [3] - 17:13, 88:5, 96:21 <b>choice</b> [2] - 24:8, 27:3 <b>choke</b> [1] - 175:9 <b>choose</b> [5] - 88:9, 88:11, 170:7, 172:24 <b>choosing</b> [2] - 25:14, 156:5 <b>chose</b> [1] - 10:21 <b>chosen</b> [3] - 133:19, 147:18, 147:19 <b>Church</b> [1] - 137:23 <b>circle</b> [2] - 75:3, 165:9 <b>circuit</b> [7] - 66:15, 99:1, 99:3, 99:17, 99:20, 186:10 <b>circumstances</b> [1] - 89:23 <b>cited</b> [3] - 87:15, 87:19, 89:6 <b>Cities</b> [1] - 132:18 <b>citizen</b> [3] - 14:15, 18:20, 134:16 <b>citizens</b> [14] - 11:20, 11:21, 19:1, 23:16, 34:7, 67:25, 133:7, 148:4, 150:3, 157:24, 166:18, 186:5, 199:23, 200:6 <b>City</b> [29] - 11:16, 21:14, 23:20, 23:23, 23:24, 25:23, 25:25, 132:17, 135:14, 135:20, 137:2, 137:16, 138:9, 138:15, 138:19, 139:2, 140:7, 154:23, 155:2, 177:21, 177:23, 183:15, 183:16, 198:14, 202:4 <b>city</b> [4] - 133:7, 137:6, 189:24, 191:4 <b>city's</b> [1] - 165:17 <b>civil</b> [3] - 14:2,</p>	<p>111:23, 112:2 <b>claim</b> [2] - 23:7, 87:23 <b>claims</b> [1] - 202:22 <b>clarify</b> [15] - 12:24, 74:16, 86:17, 93:6, 107:16, 107:25, 108:4, 108:15, 108:22, 109:3, 123:5, 151:16, 151:20, 158:10, 188:10 <b>cleanup</b> [2] - 112:7, 112:10 <b>clear</b> [9] - 52:11, 65:9, 67:5, 84:6, 87:14, 131:14, 153:20, 170:13, 195:23 <b>clearly</b> [3] - 153:17, 174:13, 175:10 <b>click</b> [1] - 105:1 <b>clicker</b> [2] - 161:19, 198:23 <b>client</b> [12] - 9:18, 10:4, 10:16, 10:21, 11:18, 12:3, 12:7, 12:10, 13:6, 15:4, 18:9, 19:7 <b>client's</b> [4] - 11:23, 12:14, 13:5, 15:16 <b>climate</b> [1] - 171:22 <b>close</b> [20] - 22:6, 59:1, 59:14, 60:12, 62:7, 64:24, 82:1, 87:22, 87:25, 88:5, 92:8, 93:3, 93:14, 100:18, 103:5, 107:1, 107:22, 175:14, 181:15, 195:4 <b>closely</b> [2] - 88:23, 163:11 <b>closer</b> [8] - 76:20, 88:8, 88:12, 93:16, 108:25, 111:18, 187:19, 199:6 <b>closing arguments</b> [1] - 206:7 <b>closure</b> [1] - 39:12 <b>co</b> [23] - 44:18, 47:4, 62:6, 65:16, 66:24, 78:23, 83:15, 87:13, 87:16, 88:23, 92:7, 92:21, 101:22, 102:17, 108:14, 108:17, 165:4, 166:1, 180:8, 180:25, 181:8, 181:10, 181:19 <b>co-locate</b> [3] - 78:23, 83:15, 180:8 <b>co-located</b> [9] - 44:18, 47:4, 65:16, 66:24, 87:13, 88:23,</p>	<p>101:22, 108:17, 181:19 <b>co-locating</b> [8] - 92:7, 92:21, 102:17, 108:14, 165:4, 180:25, 181:8, 181:10 <b>co-location</b> [3] - 62:6, 87:16, 166:1 <b>coauthored</b> [1] - 85:1 <b>code</b> [1] - 15:21 <b>coined</b> [2] - 31:13, 38:16 <b>collapse</b> [1] - 98:5 <b>colleague</b> [4] - 59:19, 83:18, 110:13, 196:13 <b>collect</b> [1] - 8:10 <b>collected</b> [1] - 205:16 <b>color</b> [3] - 161:25, 162:25, 179:13 <b>Colorado</b> [1] - 40:22 <b>colors</b> [1] - 135:4 <b>com</b> [1] - 41:2 <b>Com</b> [1] - 173:8 <b>combination</b> [1] - 114:7 <b>combine</b> [1] - 115:18 <b>comfortable</b> [2] - 9:15, 110:17 <b>Coming</b> [2] - 173:19, 185:25 <b>coming</b> [16] - 31:10, 53:1, 53:12, 64:20, 77:16, 79:17, 80:8, 100:17, 102:22, 103:24, 103:25, 104:14, 107:20, 136:13, 146:18, 197:25 <b>commence</b> [1] - 159:14 <b>comment</b> [8] - 5:8, 58:3, 77:2, 120:4, 132:8, 148:4, 188:14, 201:18 <b>comments</b> [3] - 5:12, 25:4, 122:8 <b>Commerce</b> [1] - 7:16 <b>Commission</b> [3] - 25:5, 34:17, 158:14 <b>commissioned</b> [2] - 84:21, 84:25 <b>Commissioner</b> [2] - 188:13, 203:16 <b>Commissioner Allen</b> [20] - 94:7, 94:8, 94:18, 94:25, 95:20, 96:3, 96:12, 188:8, 191:18, 191:19,</p>
---	--	---	--	---

<p>192:8, 192:15, 193:21, 194:3, 194:18, 194:22, 194:24, 195:2, 195:8, 195:17</p> <p><b>Commissioner</b></p> <p><b>Campbell</b> [14] - 96:16, 96:17, 97:14, 98:19, 99:8, 99:14, 99:21, 100:1, 100:6, 103:3, 203:11, 203:13, 203:23, 204:19</p> <p><b>Commissioners</b> [1] - 7:18</p> <p><b>commissions</b> [1] - 34:4</p> <p><b>common</b> [31] - 39:5, 44:11, 44:18, 47:5, 59:4, 63:19, 64:7, 81:24, 81:25, 82:4, 84:23, 86:22, 86:24, 87:16, 88:24, 103:15, 118:18, 128:3, 142:20, 143:18, 144:12, 145:6, 147:6, 150:17, 169:15, 176:13</p> <p><b>common-cause</b> [1] - 88:24</p> <p><b>common-mode</b> [6] - 39:5, 44:11, 44:18, 47:5, 59:4</p> <p><b>commonly</b> [1] - 60:17</p> <p><b>commonly-used</b> [1] - 60:17</p> <p><b>communications</b> [1] - 29:11</p> <p><b>communities</b> [4] - 134:3, 134:15, 147:15, 150:3</p> <p><b>community</b> [7] - 14:15, 66:14, 132:12, 132:15, 133:1, 147:25, 186:1</p> <p><b>companies</b> [2] - 16:22, 17:24</p> <p><b>Company</b> [132] - 11:13, 13:14, 13:16, 14:8, 14:9, 14:13, 14:14, 14:17, 23:8, 32:12, 32:13, 32:15, 34:21, 48:2, 57:4, 62:10, 62:12, 67:4, 69:6, 79:11, 81:7, 83:22, 86:14, 86:16, 90:7, 91:9, 93:17, 94:13, 98:23, 100:21, 100:23, 104:21, 105:8, 105:13, 106:1, 107:7, 112:9, 112:16, 113:4, 113:11, 114:4,</p>	<p>115:11, 117:2, 117:14, 121:11, 122:12, 122:16, 123:7, 123:10, 123:22, 125:11, 126:21, 126:25, 127:7, 127:15, 129:4, 129:7, 129:13, 129:23, 130:1, 131:9, 131:22, 132:1, 132:11, 132:14, 132:16, 133:10, 133:12, 134:3, 134:14, 136:19, 137:20, 138:1, 138:5, 139:10, 139:17, 141:4, 141:15, 142:7, 142:11, 142:12, 144:7, 144:13, 144:15, 144:20, 145:6, 146:4, 147:12, 147:13, 147:15, 147:18, 147:24, 149:3, 150:13, 151:25, 154:16, 154:17, 154:25, 155:17, 155:18, 155:19, 156:6, 157:22, 158:18, 162:11, 162:12, 163:25, 164:14, 164:19, 173:9, 176:18, 177:1, 177:4, 180:16, 181:1, 181:6, 181:7, 181:8, 182:4, 182:6, 182:7, 192:9, 192:15, 196:9, 199:14, 199:15, 200:19, 200:25, 202:21</p> <p><b>company</b> [17] - 29:24, 35:11, 36:1, 36:22, 37:11, 41:15, 42:17, 50:24, 52:3, 64:17, 69:11, 88:9, 90:12, 113:2, 171:6, 177:14, 202:19</p> <p><b>Company's</b> [34] - 50:19, 61:5, 92:20, 121:16, 127:3, 127:12, 127:21, 128:8, 130:8, 131:2, 131:6, 134:24, 136:6, 136:23, 136:25, 137:19, 139:13, 143:1, 145:15, 147:9, 151:17, 156:1, 156:7, 157:7, 157:15, 157:25, 165:6, 173:8, 177:1, 180:2, 180:7, 181:12, 185:15, 199:17</p>	<p><b>Company-</b> <b>proposed</b> [1] - 127:15</p> <p><b>compare</b> [3] - 125:20, 167:11, 200:11</p> <p><b>compared</b> [2] - 139:25, 144:24</p> <p><b>compares</b> [1] - 127:11</p> <p><b>Comparing</b> [1] - 168:25</p> <p><b>comparison</b> [5] - 113:21, 122:2, 124:3, 126:17, 189:18</p> <p><b>compensate</b> [1] - 140:24</p> <p><b>Compensate</b> [1] - 145:22</p> <p><b>compilation</b> [1] - 170:8</p> <p><b>compile</b> [2] - 116:24, 117:16</p> <p><b>compiled</b> [1] - 205:16</p> <p><b>complaint</b> [1] - 18:21</p> <p><b>complete</b> [5] - 9:19, 41:17, 46:11, 69:25, 71:24</p> <p><b>completed</b> [1] - 26:6</p> <p><b>completely</b> [5] - 5:25, 66:25, 89:23, 166:13, 181:13</p> <p><b>completion</b> [2] - 38:2, 69:8</p> <p><b>complied</b> [1] - 182:8</p> <p><b>composed</b> [1] - 20:7</p> <p><b>composition</b> [1] - 20:8</p> <p><b>compromise</b> [1] - 11:7</p> <p><b>compromised</b> [2] - 11:9, 39:14</p> <p><b>conceivable</b> [1] - 80:12</p> <p><b>concept</b> [12] - 36:2, 36:3, 39:9, 39:11, 39:24, 45:18, 68:24, 69:13, 69:18, 95:5, 95:11, 124:21</p> <p><b>conceptual</b> [2] - 94:17, 95:3</p> <p><b>concern</b> [16] - 19:2, 80:4, 80:9, 106:7, 109:11, 133:5, 133:15, 141:3, 149:11, 149:12, 150:2, 150:4, 167:4, 168:14, 182:4, 203:5</p> <p><b>concerned</b> [11] - 18:20, 32:13, 87:9, 133:6, 140:3, 148:5,</p>	<p>157:8, 166:18, 166:22, 182:7, 182:14</p> <p><b>concerns</b> [9] - 129:6, 132:22, 136:19, 145:13, 146:15, 157:23, 189:11, 190:25, 200:6</p> <p><b>Concerns</b> [1] - 18:24</p> <p><b>condemn</b> [4] - 177:13, 177:15, 177:21, 178:4</p> <p><b>condemnation</b> [5] - 25:23, 26:3, 178:5, 183:17, 198:14</p> <p><b>conditional</b> [5] - 149:5, 154:21, 154:22, 155:5, 194:1</p> <p><b>Conditional</b> [8] - 11:25, 155:1, 155:8, 157:16, 158:3, 158:13, 158:15, 194:2</p> <p><b>conditions</b> [14] - 37:5, 37:6, 55:8, 98:11, 150:23, 158:4, 158:15, 158:19, 158:20, 164:16, 164:22, 171:23, 173:5, 189:19</p> <p><b>conducted</b> [4] - 15:15, 121:12, 132:1</p> <p><b>conducting</b> [1] - 94:9</p> <p><b>confident</b> [2] - 133:19, 182:13</p> <p><b>configuration</b> [1] - 76:5</p> <p><b>confined</b> [1] - 137:24</p> <p><b>conflict</b> [2] - 27:2, 166:16</p> <p><b>conflicts</b> [1] - 16:3</p> <p><b>confused</b> [1] - 184:11</p> <p><b>congestion</b> [1] - 137:15</p> <p><b>Congress</b> [2] - 16:21, 17:2</p> <p><b>connect</b> [13] - 62:10, 62:11, 62:14, 78:11, 78:13, 78:20, 80:12, 80:13, 80:16, 80:25, 81:1, 84:15</p> <p><b>connected</b> [7] - 36:8, 36:10, 36:16, 42:13, 43:18, 44:5, 68:25</p> <p><b>connecting</b> [3] - 47:14, 69:2, 191:1</p> <p><b>connection</b> [4] - 40:23, 40:24, 41:20, 102:25</p> <p><b>connections</b> [3] - 36:17, 78:6, 79:9</p>	<p><b>connects</b> [6] - 37:1, 37:23, 41:25, 62:12, 78:9</p> <p><b>cons</b> [1] - 14:21</p> <p><b>consensus</b> [3] - 14:17, 133:16, 134:1</p> <p><b>consequence</b> [1] - 61:12</p> <p><b>consequences</b> [1] - 13:15</p> <p><b>consider</b> [8] - 11:8, 15:9, 15:20, 19:9, 19:24, 21:11, 21:22, 60:6</p> <p><b>considerably</b> [1] - 197:16</p> <p><b>consideration</b> [8] - 27:10, 106:17, 114:1, 118:20, 126:4, 173:9, 180:11, 186:7</p> <p><b>considered</b> [15] - 15:17, 24:20, 74:9, 77:11, 80:22, 87:1, 117:3, 124:7, 142:11, 146:5, 167:22, 183:3, 185:17, 188:18, 203:18</p> <p><b>considering</b> [1] - 174:18</p> <p><b>consists</b> [1] - 11:2</p> <p><b>constituents</b> [1] - 92:2</p> <p><b>constitute</b> [2] - 36:13, 88:18</p> <p><b>constrained</b> [1] - 104:6</p> <p><b>constraints</b> [6] - 63:7, 114:23, 116:4, 117:21, 137:21, 139:8</p> <p><b>construct</b> [3] - 38:11, 69:10, 113:13</p> <p><b>constructed</b> [12] - 22:1, 42:1, 50:11, 55:19, 64:22, 74:1, 92:7, 113:2, 124:11, 150:24, 152:3, 153:6</p> <p><b>constructible</b> [1] - 182:10</p> <p><b>constructing</b> [5] - 64:23, 125:11, 173:3, 183:4, 184:2</p> <p><b>Construction</b> [1] - 174:9</p> <p><b>construction</b> [12] - 26:11, 29:16, 35:13, 69:13, 69:15, 69:25, 101:1, 151:24, 154:19, 155:10, 164:1, 170:18</p> <p><b>consultant</b> [6] - 5:25, 6:3, 6:8, 6:13, 7:13,</p>
--	---	---	---	---

<p>7:14 <b>contained</b> [4] - 22:14, 154:11, 163:12, 194:20 <b>contains</b> [1] - 21:14 <b>contaminated</b> [1] - 112:8 <b>contemplate</b> [1] - 8:26 <b>contender</b> [1] - 167:24 <b>contention</b> [4] - 149:17, 150:6, 150:12, 157:21 <b>contest</b> [1] - 183:17 <b>context</b> [1] - 196:25 <b>contiguous</b> [2] - 39:13, 47:11 <b>contingencies</b> [1] - 43:20 <b>contingency</b> [1] - 43:19 <b>continue</b> [1] - 99:6 <b>continues</b> [3] - 50:12, 57:2, 140:11 <b>continuous</b> [1] - 46:14 <b>contractor</b> [1] - 174:2 <b>contractors</b> [1] - 18:5 <b>control</b> [3] - 37:10, 37:11, 52:3 <b>controversial</b> [1] - 183:22 <b>controversy</b> [3] - 23:5, 26:24, 183:14 <b>conversation</b> [1] - 108:1 <b>convey</b> [1] - 204:15 <b>convince</b> [1] - 24:23 <b>cool</b> [2] - 186:20, 186:22 <b>cooling</b> [2] - 186:22, 197:11 <b>cooperating</b> [3] - 120:9, 120:10, 120:19 <b>Coordinating</b> [2] - 80:18, 85:18 <b>copies</b> [1] - 13:19 <b>Copper's</b> [1] - 140:14 <b>copy</b> [1] - 28:4 <b>core</b> [1] - 33:2 <b>corner</b> [7] - 41:8, 115:10, 124:15, 135:19, 138:10, 162:4, 189:10 <b>Corners</b> [1] - 49:23 <b>Corporation</b> [2] - 177:18, 177:22 <b>correct</b> [50] - 6:15,</p>	<p>52:16, 56:1, 71:8, 71:11, 72:9, 73:24, 79:7, 81:8, 82:6, 82:7, 82:12, 89:9, 90:3, 90:4, 90:5, 90:11, 90:16, 91:16, 92:8, 92:22, 92:23, 97:19, 99:23, 100:5, 101:24, 103:12, 107:24, 108:20, 109:2, 131:17, 160:12, 161:3, 161:12, 162:2, 163:1, 163:14, 163:15, 165:6, 168:3, 174:25, 177:11, 177:14, 178:4, 181:4, 191:5, 191:6, 205:11, 206:1, 206:8 <b>Correct</b> [17] - 130:10, 155:6, 160:13, 160:15, 161:4, 162:3, 162:14, 163:2, 165:7, 173:10, 177:12, 181:5, 182:3, 197:19, 198:16, 200:16, 201:12 <b>correctly</b> [5] - 81:5, 107:17, 181:16, 189:7, 193:2 <b>corresponding</b> [4] - 52:7, 52:8, 52:25, 53:10 <b>Corridor</b> [12] - 21:22, 23:22, 76:11, 79:1, 80:7, 84:9, 168:25, 169:21, 171:10, 171:15, 174:16, 187:21 <b>corridor</b> [42] - 63:12, 63:17, 63:19, 64:7, 64:11, 82:20, 83:11, 84:11, 84:24, 85:4, 87:10, 87:11, 99:12, 99:16, 99:18, 99:19, 102:20, 103:15, 106:6, 106:9, 108:16, 115:5, 117:3, 117:13, 118:8, 118:18, 119:10, 128:1, 129:20, 129:25, 132:4, 132:11, 135:14, 142:20, 143:18, 144:12, 145:7, 145:12, 147:2, 147:6, 175:23, 176:13 <b>corridors</b> [30] - 14:14, 17:22, 59:25, 83:4, 85:8, 85:19, 86:22, 86:24, 99:8, 113:20, 113:24, 115:12, 115:19, 115:21, 116:6, 117:1,</p>	<p>117:6, 117:18, 117:25, 118:5, 118:15, 118:20, 118:23, 119:2, 121:23, 122:11, 125:24, 126:2, 126:7, 126:14 <b>cosmetic</b> [1] - 178:17 <b>cost</b> [47] - 25:16, 25:17, 25:19, 25:22, 26:10, 33:9, 34:1, 37:17, 50:23, 75:18, 79:25, 94:12, 94:14, 94:15, 94:22, 96:18, 112:21, 140:25, 145:14, 145:17, 168:6, 168:13, 180:8, 182:20, 182:22, 183:3, 183:8, 183:10, 183:18, 184:1, 184:9, 184:22, 185:1, 185:5, 185:9, 186:23, 186:25, 187:8, 187:10, 187:16, 187:21, 188:1, 188:3, 196:20, 196:25, 197:13, 202:19 <b>cost-estimating</b> [1] - 94:15 <b>costs</b> [25] - 26:8, 26:11, 26:13, 95:24, 95:25, 96:5, 168:9, 178:3, 182:21, 182:25, 183:2, 183:3, 183:7, 184:1, 184:8, 184:12, 184:13, 184:17, 185:11, 196:13, 196:14, 197:17, 198:13, 201:25 <b>Council</b> [3] - 34:16, 80:18, 85:18 <b>Council's</b> [1] - 38:7 <b>counsel</b> [3] - 9:14, 70:8, 159:1 <b>Counsel</b> [2] - 4:22, 28:4 <b>count</b> [1] - 15:4 <b>counties</b> [2] - 120:16, 186:14 <b>county</b> [7] - 21:4, 21:9, 22:12, 165:15, 165:16, 199:21, 200:4 <b>County</b> [10] - 9:10, 22:16, 22:24, 25:8, 132:18, 154:22, 155:1, 188:17, 193:15 <b>County's</b> [4] - 21:1, 92:9, 155:7, 184:25 <b>county's</b> [2] - 21:14, 165:17</p>	<p><b>couple</b> [20] - 15:20, 30:8, 64:16, 64:18, 67:20, 68:19, 79:11, 84:18, 95:3, 100:16, 101:8, 101:11, 104:25, 108:23, 118:3, 123:5, 127:14, 185:24, 204:14, 204:17 <b>course</b> [8] - 5:4, 24:23, 25:14, 31:15, 82:9, 190:13, 199:1, 199:25 <b>courses</b> [1] - 16:2 <b>Courthouse</b> [1] - 174:6 <b>cover</b> [6] - 34:6, 36:3, 38:17, 67:22, 83:19, 93:25 <b>crash</b> [4] - 105:12, 106:16, 106:19, 106:20 <b>create</b> [1] - 89:22 <b>Create</b> [1] - 157:2 <b>created</b> [1] - 140:25 <b>creates</b> [5] - 143:5, 144:9, 144:12, 145:5, 146:25 <b>Creates</b> [1] - 143:14 <b>creating</b> [4] - 94:20, 118:18, 144:23, 147:5 <b>criteria</b> [31] - 23:1, 59:13, 81:9, 81:12, 85:17, 85:19, 85:21, 86:1, 86:20, 86:21, 86:23, 87:8, 87:13, 88:9, 113:25, 123:22, 137:20, 138:14, 167:23, 168:1, 168:16, 173:3, 173:8, 174:20, 175:21, 176:4, 176:6, 176:9, 176:19, 176:25, 180:24 <b>critical</b> [51] - 9:19, 10:6, 10:7, 13:7, 13:9, 13:13, 13:22, 20:3, 31:11, 31:13, 31:14, 31:19, 32:4, 32:7, 34:21, 44:24, 48:3, 48:25, 49:5, 49:7, 49:13, 49:17, 49:21, 49:24, 49:25, 50:3, 50:20, 51:1, 51:12, 51:16, 51:22, 52:5, 52:6, 52:23, 54:6, 54:10, 56:8, 56:13, 56:17, 57:20, 57:21, 58:5, 67:24, 68:4, 68:12, 74:24, 83:24, 86:10, 97:24, 98:1, 98:11</p>	<p><b>criticality</b> [1] - 50:2 <b>cross</b> [4] - 76:17, 137:13, 183:24, 194:25 <b>Cross</b> [1] - 102:13 <b>cross examination</b> [11] - 5:4, 7:3, 7:11, 70:18, 70:24, 71:1, 159:9, 159:14, 159:17, 159:19, 199:1 <b>crosses</b> [3] - 149:14, 183:14, 183:23 <b>crossing</b> [2] - 93:10, 195:9 <b>crossings</b> [1] - 58:6 <b>cultural</b> [3] - 21:18, 116:22, 130:21 <b>curious</b> [1] - 161:23 <b>current</b> [18] - 30:4, 30:11, 41:2, 41:10, 50:19, 55:21, 61:4, 73:18, 97:1, 98:24, 99:8, 100:9, 104:2, 136:2, 150:23, 171:24, 191:3 <b>curtailed</b> [1] - 44:20 <b>curtailment</b> [1] - 44:23 <b>customer</b> [11] - 30:21, 43:17, 51:15, 51:18, 52:4, 52:17, 53:8, 53:9, 54:17, 55:4, 56:8 <b>customers</b> [29] - 33:2, 33:3, 33:4, 33:17, 33:24, 37:7, 37:16, 41:22, 44:6, 44:21, 46:8, 46:24, 54:18, 55:13, 55:16, 56:23, 57:11, 58:1, 62:24, 65:11, 68:17, 79:13, 79:17, 84:20, 113:3, 157:7, 202:24, 203:1 <b>customers'</b> [2] - 37:13, 157:18 <b>cut</b> [1] - 101:10</p>
<b>D</b>				
<p><b>Dakotas</b> [1] - 40:24 <b>damage</b> [5] - 65:17, 66:8, 67:1, 67:11, 157:2 <b>damaged</b> [7] - 56:21, 63:25, 65:10, 65:24, 89:10, 89:13, 89:17 <b>danger</b> [1] - 169:20 <b>dark</b> [2] - 114:14, 118:5 <b>dark-shaded</b> [1] -</p>				

<p>118:5 <b>darker</b> [1] - 194:17 <b>darker-shaded</b> [1] - 194:17 <b>Darrell</b> [14] - 39:21, 45:8, 47:22, 52:10, 57:13, 60:5, 104:25, 110:14, 118:17, 155:11, 156:23, 157:5, 175:22, 176:19 <b>Darrell Gerrard</b> [6] - 12:5, 27:15, 28:12, 28:19, 70:6, 70:14 <b>dashed</b> [8] - 42:23, 42:24, 43:3, 43:24, 74:21, 114:14, 121:15 <b>data</b> [12] - 6:3, 9:23, 52:2, 115:14, 117:16, 121:4, 121:21, 126:14, 161:6, 170:6, 201:15, 205:12 <b>databases</b> [1] - 121:6 <b>date</b> [8] - 10:17, 69:19, 72:22, 73:22, 132:20, 155:12, 156:25 <b>dates</b> [1] - 119:25 <b>daylight</b> [1] - 149:1 <b>days</b> [3] - 18:7, 19:6, 182:1 <b>de</b> [3] - 64:3, 65:7, 89:18 <b>de-energize</b> [1] - 89:18 <b>de-energized</b> [2] - 64:3, 65:7 <b>deal</b> [7] - 34:3, 116:10, 141:24, 146:21, 171:15, 171:16, 176:13 <b>dealing</b> [4] - 20:9, 137:25, 148:8, 186:3 <b>dealings</b> [1] - 34:9 <b>dealt</b> [1] - 167:9 <b>decades</b> [1] - 29:23 <b>deceiving</b> [1] - 140:5 <b>decide</b> [4] - 27:8, 100:21, 184:15 <b>decided</b> [3] - 119:14, 177:1, 193:2 <b>deciding</b> [1] - 19:20 <b>decision</b> [9] - 7:25, 16:24, 17:4, 18:7, 20:4, 99:5, 123:12, 154:20, 165:15 <b>declined</b> [1] - 120:19 <b>decreased</b> [3] - 50:5, 54:23, 58:13 <b>decreases</b> [3] - 50:10, 54:7, 97:16</p>	<p><b>dedicated</b> [1] - 94:14 <b>deep</b> [2] - 19:1, 37:10 <b>deeper</b> [1] - 145:21 <b>deficient</b> [1] - 23:4 <b>deficit</b> [1] - 44:21 <b>define</b> [1] - 115:11 <b>defined</b> [1] - 114:24 <b>defining</b> [1] - 113:17 <b>definite</b> [1] - 68:2 <b>definitely</b> [1] - 68:3 <b>definition</b> [2] - 95:12, 194:12 <b>degrades</b> [1] - 98:11 <b>Degree</b> [1] - 29:3 <b>degree</b> [1] - 111:23 <b>delay</b> [6] - 25:22, 156:20, 156:21, 181:21, 201:25, 202:20 <b>delayed</b> [2] - 13:17, 58:8 <b>delays</b> [2] - 26:7, 182:14 <b>deliberates</b> [1] - 13:10 <b>deliver</b> [4] - 32:2, 33:25, 36:23, 79:23 <b>delivers</b> [1] - 11:19 <b>delivery</b> [4] - 13:7, 20:24, 52:9, 112:13 <b>Delivery</b> [3] - 14:4, 111:9, 112:16 <b>demand</b> [19] - 30:21, 37:13, 50:20, 51:15, 51:16, 51:18, 52:4, 52:8, 52:17, 52:23, 52:24, 53:8, 53:9, 53:19, 54:10, 54:15, 54:17, 56:8, 57:19 <b>demand's</b> [1] - 54:22 <b>demanded</b> [1] - 68:21 <b>demolition</b> [1] - 66:1 <b>demonstrate</b> [5] - 10:25, 13:22, 42:8, 60:14, 150:17 <b>demonstrated</b> [1] - 157:25 <b>demonstrates</b> [1] - 151:11 <b>denial</b> [1] - 155:7 <b>denied</b> [1] - 149:6 <b>deny</b> [1] - 164:21 <b>department</b> [1] - 112:22 <b>Department</b> [7] - 7:16, 14:4, 34:10, 34:14, 111:9, 112:16 <b>depicted</b> [3] - 30:12, 42:25, 173:19</p>	<p><b>Depot</b> [10] - 124:16, 135:18, 135:19, 137:3, 137:4, 138:6, 138:7, 138:10, 138:11, 139:9 <b>Describe</b> [2] - 32:16, 118:23 <b>describe</b> [40] - 10:12, 12:10, 14:7, 14:12, 14:21, 15:25, 28:25, 30:2, 32:11, 32:12, 34:23, 39:23, 45:8, 48:3, 50:18, 55:20, 57:14, 58:21, 60:8, 67:24, 95:3, 96:4, 111:21, 112:17, 113:15, 114:3, 120:23, 125:19, 126:9, 127:10, 134:18, 136:17, 136:22, 138:4, 139:16, 142:9, 146:3, 152:13, 155:15, 177:3 <b>described</b> [9] - 45:9, 48:4, 136:21, 139:15, 142:10, 157:5, 163:7, 175:18, 180:15 <b>describes</b> [2] - 13:13, 17:21 <b>describing</b> [2] - 93:13, 178:15 <b>Desert</b> [2] - 41:19, 97:10 <b>desert</b> [2] - 171:17, 178:25 <b>design</b> [11] - 13:1, 13:2, 13:8, 29:6, 29:10, 69:10, 91:21, 151:25, 152:5, 164:19, 187:25 <b>designated</b> [1] - 82:19 <b>designation</b> [1] - 72:15 <b>designed</b> [14] - 13:4, 36:1, 36:18, 39:25, 42:2, 66:5, 66:12, 78:13, 89:20, 89:22, 113:1, 155:14, 157:1 <b>designs</b> [1] - 201:2 <b>desirable</b> [6] - 16:15, 17:2, 17:15, 19:9, 80:15, 82:9 <b>desire</b> [1] - 80:13 <b>desired</b> [1] - 18:16 <b>desktop</b> [1] - 205:14 <b>Despite</b> [1] - 164:9 <b>detail</b> [5] - 25:7, 34:21, 56:6, 156:4, 170:5 <b>detailed</b> [8] - 14:7,</p>	<p>15:15, 19:4, 94:17, 95:19, 119:18, 122:10, 156:2 <b>details</b> [3] - 25:24, 160:17, 161:10 <b>determination</b> [2] - 90:11, 179:5 <b>determine</b> [19] - 25:1, 59:12, 74:11, 113:12, 113:22, 115:19, 117:19, 122:4, 122:5, 123:14, 124:3, 124:4, 126:15, 126:18, 133:24, 150:10, 151:23, 152:9, 184:17 <b>determined</b> [15] - 15:17, 81:7, 83:12, 90:23, 114:4, 114:7, 118:10, 118:12, 118:19, 119:1, 119:19, 124:17, 125:3, 140:20, 185:5 <b>determines</b> [3] - 75:13, 121:17, 126:19 <b>Determines</b> [1] - 119:10 <b>determining</b> [9] - 18:1, 20:3, 25:17, 27:5, 90:9, 94:12, 122:14, 122:16, 127:4 <b>detrimental</b> [1] - 65:18 <b>develop</b> [1] - 15:25 <b>developed</b> [3] - 35:8, 125:15, 152:7 <b>developing</b> [1] - 195:15 <b>development</b> [6] - 32:15, 68:18, 120:14, 137:9, 137:25, 138:14 <b>Development</b> [1] - 137:10 <b>devil's</b> [1] - 153:11 <b>diagram</b> [2] - 52:4, 62:23 <b>dictate</b> [2] - 38:11, 60:3 <b>dictated</b> [1] - 176:16 <b>dictates</b> [1] - 75:21 <b>difference</b> [4] - 127:14, 129:1, 141:18, 187:11 <b>differences</b> [1] - 127:19 <b>different</b> [19] - 44:7, 66:20, 72:2, 76:22, 81:3, 117:8, 124:22, 124:23, 126:1, 132:6, 134:15, 134:22, 142:10, 155:17,</p>	<p>166:7, 166:14, 177:22, 185:2, 188:15 <b>differentiate</b> [1] - 184:21 <b>difficult</b> [11] - 10:10, 65:21, 91:21, 125:17, 137:8, 151:2, 153:2, 164:1, 168:20, 169:13, 170:25 <b>Difficult</b> [1] - 143:13 <b>difficulty</b> [1] - 165:4 <b>dim</b> [1] - 27:23 <b>dimensional</b> [2] - 51:11 <b>dimensions</b> [1] - 152:5 <b>diminish</b> [1] - 20:14 <b>diminished</b> [1] - 50:14 <b>diminishing</b> [1] - 81:21 <b>direct</b> [6] - 16:12, 123:11, 160:1, 168:25, 178:12, 205:10 <b>DIRECT</b> <b>EXAMINATION</b> [2] - 28:15, 111:1 <b>directed</b> [1] - 16:18 <b>directing</b> [1] - 15:22 <b>direction</b> [1] - 104:16 <b>directives</b> [1] - 15:20 <b>directly</b> [1] - 132:9 <b>directs</b> [1] - 16:4 <b>disagree</b> [2] - 91:8, 93:1 <b>disagrees</b> [1] - 24:17 <b>disaster</b> [2] - 103:10, 106:13 <b>disasters</b> [1] - 105:10 <b>discretion</b> [2] - 27:25, 90:7 <b>discuss</b> [5] - 11:23, 34:24, 40:1, 133:14, 166:17 <b>discussed</b> [10] - 22:21, 22:24, 118:17, 123:18, 125:13, 129:18, 163:11, 179:1, 180:15, 204:3 <b>discussing</b> [1] - 167:10 <b>discussion</b> [8] - 4:17, 14:19, 38:15, 60:12, 76:9, 93:25, 197:20, 200:21 <b>Discussions</b> [1] - 198:2 <b>discussions</b> [2] - 129:21, 193:15</p>
---	---	--	---	---

<p><b>dismiss</b> [1] - 174:20 <b>disparate</b> [1] - 22:18 <b>dispersed</b> [1] - 45:1 <b>disposal</b> [1] - 18:6 <b>dispute</b> [6] - 20:21, 45:12, 47:23, 149:10, 182:17, 198:14 <b>disputed</b> [1] - 200:3 <b>disruption</b> [3] - 43:17, 53:25 <b>dissipate</b> [1] - 186:19 <b>distance</b> [7] - 50:8, 75:19, 138:25, 149:15, 176:12, 176:14, 181:11 <b>distances</b> [1] - 98:13 <b>distinct</b> [1] - 76:22 <b>distribution</b> [2] - 29:10, 112:13 <b>Distribution</b> [4] - 146:8, 146:14, 146:16, 187:20 <b>disturbance</b> [2] - 53:23, 140:19 <b>disturbances</b> [1] - 42:3 <b>diverse</b> [5] - 39:2, 39:3, 42:12, 45:10, 69:1 <b>divert</b> [1] - 146:19 <b>Division</b> [1] - 195:12 <b>Division of Public Utilities</b> [1] - 7:15 <b>DJ</b> [1] - 31:6 <b>doc</b> [1] - 151:15 <b>docket</b> [1] - 12:13 <b>document</b> [8] - 17:20, 24:12, 24:13, 24:16, 26:5, 28:3, 132:23, 163:6 <b>documented</b> [1] - 115:17 <b>documenting</b> [1] - 182:13 <b>documents</b> [1] - 120:13 <b>dollar</b> [3] - 24:11, 24:13, 186:16 <b>dollars</b> [6] - 26:1, 35:9, 145:25, 183:20, 183:21, 188:4 <b>done</b> [12] - 15:5, 36:24, 47:12, 83:19, 84:10, 121:13, 150:10, 154:2, 160:4, 161:11, 179:3, 199:24 <b>doorstep</b> [1] - 137:23 <b>dots</b> [7] - 36:13, 52:12, 52:14, 53:20,</p>	<p>55:3, 56:14, 56:22 <b>dotted</b> [1] - 75:4 <b>double</b> [6] - 66:15, 99:1, 99:3, 99:17, 140:18, 186:10 <b>double-circuit</b> [3] - 99:1, 99:3, 186:10 <b>doubt</b> [1] - 17:9 <b>Doug</b> [1] - 6:14 <b>Doug Hogan</b> [1] - 8:24 <b>Down</b> [2] - 52:18, 114:15 <b>down</b> [64] - 31:3, 32:5, 37:2, 41:19, 43:8, 44:3, 45:20, 45:21, 47:15, 49:19, 51:17, 52:11, 54:24, 55:5, 61:3, 61:15, 62:11, 63:6, 66:7, 66:25, 77:7, 82:6, 84:18, 87:17, 88:25, 89:8, 89:10, 89:13, 89:16, 90:21, 95:22, 104:9, 104:15, 106:11, 107:20, 110:12, 113:18, 116:11, 124:10, 127:20, 129:10, 135:4, 136:4, 136:16, 140:4, 141:17, 141:21, 141:23, 141:24, 142:23, 143:11, 144:23, 146:11, 153:8, 154:8, 175:7, 176:21, 179:10, 179:12, 179:15, 179:23, 193:12, 196:11 <b>Downey</b> [2] - 35:16, 125:11 <b>Downtown</b> [1] - 112:5 <b>Downy</b> [1] - 41:13 <b>Draft</b> [3] - 122:6, 126:23, 130:25 <b>Draft EIS</b> [13] - 120:15, 122:22, 127:2, 127:9, 127:11, 127:13, 128:7, 131:4, 132:21, 148:4, 167:3, 201:6, 201:10 <b>drag</b> [1] - 106:25 <b>drainage</b> [4] - 146:15, 146:18, 146:20, 197:25 <b>draw</b> [5] - 76:11, 76:20, 111:18, 175:18, 175:20 <b>drawers</b> [2] - 90:25, 91:5 <b>drawing</b> [4] - 48:11,</p>	<p>151:3, 174:19, 189:15 <b>drawn</b> [1] - 45:22 <b>Drive</b> [2] - 150:21, 192:22 <b>drive</b> [5] - 13:1, 200:18, 205:4, 205:6, 205:8 <b>driven</b> [1] - 31:21 <b>drivers</b> [1] - 73:2 <b>drives</b> [1] - 123:14 <b>driving</b> [3] - 123:8, 200:18, 200:20 <b>drop</b> [1] - 141:17 <b>drops</b> [1] - 153:8 <b>due</b> [7] - 43:1, 65:9, 130:3, 144:4, 168:13, 169:14, 189:10 <b>duly</b> [3] - 4:5, 28:13, 110:24 <b>during</b> [14] - 116:5, 118:1, 120:11, 120:13, 121:3, 123:10, 142:13, 147:13, 148:3, 158:3, 158:16, 164:5, 170:17, 170:24 <b>During</b> [1] - 118:10</p>	<p><b>effectively</b> [1] - 24:22 <b>efficiencies</b> [2] - 173:3, 173:6 <b>efficiency</b> [12] - 11:19, 23:3, 24:19, 79:19, 79:20, 79:22, 127:5, 144:17, 145:4, 147:10, 198:4, 198:7 <b>efficient</b> [9] - 20:25, 33:18, 61:19, 62:3, 92:17, 113:5, 144:19, 144:21, 145:2 <b>efficiently</b> [4] - 61:11, 144:10, 144:11, 176:1 <b>effort</b> [1] - 9:21 <b>efforts</b> [1] - 14:16 <b>EHV</b> [2] - 49:18, 59:21 <b>eight</b> [3] - 37:18, 64:14, 64:15 <b>EIS</b> [26] - 24:13, 81:13, 81:16, 83:12, 99:24, 120:12, 120:25, 121:17, 126:7, 130:19, 146:9, 149:22, 150:5, 150:17, 152:8, 156:2, 162:22, 163:4, 165:23, 169:23, 170:5, 182:11, 182:13, 182:17, 191:20, 202:9 <b>either</b> [10] - 5:11, 25:6, 25:9, 36:15, 42:25, 46:7, 79:15, 102:11, 141:16, 196:13 <b>Either</b> [1] - 65:6 <b>elected</b> [1] - 23:15 <b>electric</b> [7] - 29:5, 35:22, 41:25, 50:7, 68:6, 88:19, 112:2 <b>Electric</b> [4] - 34:16, 38:6, 80:18, 85:17 <b>Electrical</b> [1] - 29:3 <b>electrical</b> [10] - 7:18, 12:5, 20:7, 20:10, 20:24, 41:4, 41:20, 50:20, 161:16, 202:23 <b>electricity</b> [2] - 60:18, 61:10 <b>electromagnetic</b> [1] - 18:25 <b>electronic</b> [1] - 29:11 <b>elegantly</b> [1] - 45:22 <b>element</b> [2] - 161:2, 176:16 <b>elements</b> [2] - 42:10, 42:19</p>	<p><b>elevation</b> [4] - 139:3, 139:23, 141:23, 145:9 <b>elevations</b> [2] - 142:24, 143:25 <b>eliminate</b> [2] - 118:20, 168:1 <b>eliminated</b> [9] - 114:1, 118:1, 118:22, 126:3, 168:5, 173:4, 173:9, 176:25, 189:10 <b>emergency</b> [2] - 38:25, 64:2 <b>Emery</b> [3] - 31:4, 49:20, 66:16 <b>Emery-Hunter</b> [1] - 31:4 <b>Emery-Huntington</b> [1] - 49:20 <b>Emery-to-Sigurd</b> [1] - 66:16 <b>emotion</b> [2] - 17:5, 17:8 <b>emphasis</b> [1] - 16:5 <b>emphasize</b> [3] - 16:17, 25:2, 56:2 <b>enable</b> [1] - 176:1 <b>encapsulate</b> [1] - 49:6 <b>end</b> [7] - 26:14, 27:1, 61:2, 77:17, 122:21, 166:21, 179:25 <b>ended</b> [1] - 64:23 <b>ends</b> [2] - 74:2, 138:8 <b>energize</b> [1] - 89:18 <b>energized</b> [2] - 64:3, 65:7 <b>energy</b> [21] - 13:7, 30:17, 33:6, 33:15, 36:14, 37:5, 37:6, 37:17, 40:18, 41:23, 42:9, 44:2, 44:13, 45:7, 52:3, 61:23, 62:18, 68:6, 75:25, 79:23, 82:20 <b>Energy</b> [12] - 34:14, 34:17, 35:3, 36:2, 36:20, 39:23, 40:23, 40:25, 41:5, 41:16, 48:9, 71:4 <b>engage</b> [1] - 120:6 <b>engineer</b> [10] - 12:6, 14:2, 81:18, 112:4, 155:24, 161:17, 170:2, 202:21, 202:23, 202:25 <b>Engineering</b> [2] - 29:4, 112:6 <b>engineering</b> [20] - 13:22, 14:3, 29:6, 29:12, 29:15, 57:15,</p>
		<p><b>E</b></p>		
		<p><b>eager</b> [1] - 174:9 <b>early</b> [4] - 173:4, 183:5, 188:25, 189:10 <b>earthquake</b> [1] - 164:18 <b>easier</b> [3] - 169:6, 170:15, 171:3 <b>easiest</b> [2] - 9:16, 153:12 <b>East</b> [3] - 149:15, 152:19, 192:21 <b>east</b> [13] - 37:13, 97:8, 128:16, 135:20, 136:14, 140:8, 142:19, 149:13, 152:18, 172:11, 180:21, 188:22, 193:10 <b>eastern</b> [2] - 114:19, 114:22 <b>easy</b> [2] - 10:2, 169:7 <b>economic</b> [1] - 68:18 <b>edge</b> [3] - 115:9, 148:20, 148:21 <b>editorial</b> [1] - 200:23 <b>editorializing</b> [1] - 200:24 <b>education</b> [2] - 29:1, 111:21 <b>effect</b> [3] - 108:24, 155:7, 155:9</p>		



<p>58:19, 94:10, 97:22, 111:24, 112:2, 116:4, 116:8, 117:22, 126:4, 143:14, 144:9, 161:14, 168:9, 201:15  <b>engineers</b> [3] - 7:19, 20:7, 58:20  <b>enjoy</b> [1] - 37:16  <b>ensued</b> [1] - 183:25  <b>ensure</b> [1] - 85:10  <b>ensures</b> [1] - 33:9  <b>enter</b> [2] - 135:7, 139:19  <b>entire</b> [4] - 13:5, 32:8, 87:9, 154:17  <b>entirely</b> [1] - 21:2  <b>entities</b> [1] - 132:19  <b>environment</b> [15] - 18:12, 18:25, 119:11, 121:18, 124:4, 130:12, 130:14, 130:17, 130:18, 130:22, 133:21, 140:21, 161:7, 202:23, 202:25  <b>environmental</b> [17] - 14:3, 111:24, 112:2, 112:10, 113:12, 114:9, 116:4, 116:16, 119:16, 123:24, 126:4, 126:16, 133:18, 157:14, 168:10, 195:24  <b>Environmental impact</b> [20] - 15:10, 16:19, 17:20, 18:23, 24:7, 24:10, 26:9, 119:14, 119:20, 120:21, 121:9, 122:6, 126:19, 126:23, 130:25, 154:11, 163:4, 181:22, 184:7, 204:18  <b>Environmentally</b> [1] - 163:8  <b>environmentally</b> [17] - 18:2, 122:24, 122:25, 123:15, 126:20, 127:8, 127:16, 128:9, 131:8, 131:10, 131:14, 156:9, 163:21, 193:14, 196:3, 196:8, 204:1  <b>Environmentally-Preferred</b> [1] - 163:8  <b>environmentally-preferred</b> [11] - 18:2, 122:24, 123:15, 126:20, 127:8, 127:16, 128:9, 131:14, 163:21,</p>	<p>193:14, 196:3  <b>envision</b> [1] - 7:17  <b>EPA</b> [1] - 195:13  <b>Episcopalian</b> [1] - 137:23  <b>equal</b> [2] - 76:6, 137:18  <b>equipment</b> [5] - 50:7, 98:3, 98:8, 157:2, 169:8  <b>equivalent</b> [2] - 45:7, 91:4  <b>Erda</b> [2] - 136:4, 142:23  <b>Especially</b> [1] - 105:23  <b>essence</b> [1] - 16:21  <b>essential</b> [4] - 32:17, 33:1, 72:7, 113:3  <b>establish</b> [1] - 114:19  <b>established</b> [5] - 113:25, 115:1, 116:5, 118:21, 119:25  <b>establishing</b> [1] - 129:25  <b>esti</b> [1] - 187:17  <b>estimate</b> [7] - 95:10, 95:14, 95:19, 155:24, 171:22, 186:25, 188:1  <b>estimated</b> [3] - 145:24, 187:8, 187:16  <b>estimates</b> [8] - 95:6, 96:8, 186:13, 187:18, 187:21, 187:22, 189:20  <b>estimating</b> [2] - 94:15, 94:16  <b>et</b> [1] - 200:13  <b>evaluate</b> [3] - 23:1, 27:4, 122:3  <b>evaluated</b> [13] - 23:6, 23:7, 24:18, 124:10, 124:16, 125:6, 125:24, 126:3, 137:1, 139:7, 147:23, 167:23, 169:19  <b>evaluates</b> [2] - 124:1, 156:3  <b>evaluating</b> [2] - 125:3, 147:21  <b>evening</b> [2] - 52:19, 206:13  <b>event</b> [11] - 38:25, 44:13, 44:17, 44:19, 46:23, 48:20, 88:24, 90:24, 106:3, 107:1  <b>events</b> [2] - 64:6, 82:3  <b>eventually</b> [4] - 134:9, 135:9, 136:15,</p>	<p>138:19  <b>evidence</b> [5] - 5:17, 6:4, 17:12, 18:14, 18:19  <b>exact</b> [4] - 165:10, 169:23, 170:3, 180:22  <b>exactly</b> [7] - 24:14, 46:13, 66:17, 93:11, 166:15, 175:4, 180:22  <b>Exactly</b> [2] - 49:8, 73:5  <b>examined</b> [3] - 28:14, 110:25, 155:18  <b>example</b> [14] - 43:5, 53:12, 65:1, 66:10, 87:25, 89:5, 90:18, 91:14, 93:7, 96:6, 101:21, 105:11, 125:10, 198:1  <b>examples</b> [11] - 63:15, 64:9, 64:14, 64:15, 64:16, 87:15, 87:18, 89:1, 106:15, 116:3, 204:17  <b>excavation</b> [1] - 173:17  <b>except</b> [1] - 55:18  <b>exception</b> [2] - 88:21, 106:11  <b>excess</b> [2] - 62:17, 184:17  <b>Excuse</b> [2] - 85:2, 97:7  <b>excuse</b> [8] - 32:12, 36:7, 37:24, 48:13, 63:2, 78:5, 87:3, 97:1  <b>excused</b> [2] - 109:17, 205:22  <b>executed</b> [1] - 35:18  <b>executive</b> [1] - 29:13  <b>exhaust</b> [1] - 147:14  <b>Exhibit</b> [1] - 96:21  <b>exhibit</b> [4] - 30:10, 35:2, 40:3, 49:10  <b>Exhibit No. 4</b> [1] - 96:25  <b>exhibits</b> [2] - 30:6, 45:15  <b>exist</b> [4] - 22:3, 40:21, 42:14, 202:15  <b>existing</b> [49] - 28:2, 31:24, 40:21, 41:1, 41:6, 43:10, 44:15, 46:1, 46:11, 46:17, 47:7, 50:10, 50:13, 55:7, 55:12, 56:16, 58:12, 62:4, 65:23, 68:16, 76:17, 79:21, 83:5, 102:4, 103:6, 114:10, 114:15, 114:18, 115:3,</p>	<p>116:17, 116:22, 118:7, 118:14, 124:12, 127:25, 128:13, 128:21, 129:9, 129:19, 135:14, 137:17, 144:3, 147:2, 152:22, 153:8, 153:23, 153:25, 194:25, 195:14  <b>exists</b> [5] - 21:17, 46:12, 46:19, 73:15, 82:16  <b>exit</b> [1] - 21:25  <b>expand</b> [1] - 106:6  <b>expansion</b> [1] - 29:24  <b>expect</b> [2] - 78:3, 179:5  <b>expected</b> [7] - 30:24, 35:8, 50:1, 57:19, 65:22, 66:4, 68:15  <b>expense</b> [2] - 94:21, 189:17  <b>expensive</b> [1] - 186:15  <b>experience</b> [13] - 7:19, 12:9, 29:7, 30:6, 59:1, 60:4, 63:18, 91:19, 91:20, 107:12, 111:22, 155:16, 202:19  <b>experienced</b> [1] - 179:2  <b>experiences</b> [1] - 101:5  <b>expertise</b> [6] - 7:24, 15:15, 20:12, 24:3, 24:21, 161:6  <b>experts</b> [2] - 18:6, 161:8  <b>explain</b> [6] - 47:16, 69:6, 84:3, 96:18, 97:14, 97:18  <b>explained</b> [4] - 131:13, 165:3, 176:19, 199:14  <b>explaining</b> [2] - 129:22, 165:23  <b>exploration</b> [1] - 140:15  <b>export</b> [1] - 30:17  <b>expose</b> [1] - 42:2  <b>exposed</b> [1] - 141:7  <b>exposure</b> [6] - 39:4, 55:4, 57:25, 59:4, 85:25, 108:13  <b>expressed</b> [4] - 129:6, 133:11, 150:2, 150:4  <b>extended</b> [1] - 64:1</p>	<p><b>extensive</b> [3] - 69:11, 83:19, 84:11  <b>extent</b> [2] - 153:13, 156:4  <b>external</b> [2] - 43:2, 46:7  <b>extra</b> [1] - 193:4  <b>extreme</b> [1] - 22:13  <b>extremely</b> [1] - 14:22  <b>eye</b> [1] - 87:24</p> <hr/> <p style="text-align: center;"><b>F</b></p> <hr/> <p><b>FAA</b> [3] - 139:4, 143:21, 177:16  <b>facilities</b> [3] - 22:1, 47:8, 116:14  <b>Facility</b> [2] - 4:6, 157:10  <b>facility</b> [3] - 38:20, 100:9, 146:18  <b>fact</b> [16] - 7:22, 11:14, 13:9, 20:21, 25:3, 36:21, 50:11, 62:2, 68:11, 83:11, 97:22, 102:8, 102:10, 164:9, 168:4, 199:11  <b>factor</b> [3] - 60:13, 180:4, 183:8  <b>factored</b> [2] - 183:3, 183:18  <b>factors</b> [16] - 23:2, 23:6, 23:8, 27:3, 51:3, 51:4, 92:20, 98:16, 114:9, 116:16, 117:22, 158:9, 165:19, 165:20, 166:1, 180:1  <b>failure</b> [2] - 44:11, 44:18  <b>failures</b> [1] - 47:5  <b>fair</b> [6] - 6:16, 105:6, 117:2, 123:5, 123:8, 200:14  <b>fairly</b> [2] - 100:18, 103:5  <b>fall</b> [1] - 90:21  <b>falls</b> [1] - 153:8  <b>Falls</b> [1] - 112:6  <b>familiar</b> [14] - 72:22, 76:24, 79:12, 158:8, 177:15, 177:19, 178:5, 181:20, 181:24, 181:25, 185:11, 192:5, 192:13, 192:14  <b>far</b> [27] - 4:21, 11:6, 13:8, 28:8, 59:8, 59:10, 86:4, 108:6, 114:25, 116:7, 118:18, 122:18,</p>
--	---	--	---	--

<p>123:22, 132:23, 137:19, 138:11, 140:2, 157:7, 157:13, 170:23, 176:19, 193:13, 193:14, 193:18, 195:2, 200:12, 204:6 <b>farthest</b> [2] - 162:5 <b>fashion</b> [3] - 7:11, 8:5, 175:19 <b>fast</b> [1] - 118:11 <b>fast-paced</b> [1] - 118:11 <b>fastest</b> [1] - 10:21 <b>favorable</b> [2] - 37:5, 37:6 <b>feasibility</b> [23] - 17:6, 17:16, 113:12, 113:16, 113:17, 115:13, 117:12, 118:1, 118:10, 118:22, 118:25, 121:11, 121:13, 123:7, 160:3, 160:5, 162:8, 162:10, 162:11, 172:10, 172:14, 182:12, 188:25 <b>feasible</b> [6] - 16:14, 18:17, 19:11, 114:22, 119:1, 197:11 <b>feathering</b> [1] - 138:17 <b>features</b> [2] - 115:3, 116:22 <b>Federal</b> [7] - 11:17, 15:21, 34:17, 38:10, 119:24, 184:7 <b>federal</b> [7] - 17:25, 26:5, 26:9, 115:16, 131:18, 131:20, 181:22 <b>federal EIS</b> [1] - 26:5 <b>Federal Government</b> [3] - 17:19, 23:11, 23:17 <b>feedback</b> [4] - 94:19, 132:25, 133:8, 148:3 <b>feet</b> [36] - 22:4, 64:25, 82:24, 83:2, 83:13, 83:16, 85:7, 86:3, 86:6, 86:10, 87:1, 87:4, 87:18, 88:12, 105:15, 105:21, 106:4, 106:21, 107:9, 107:21, 108:2, 108:3, 141:5, 143:11, 148:17, 160:24, 175:14, 176:8, 176:18, 192:10, 193:3, 193:8, 193:11,</p>	<p>193:23, 193:24, 195:7 <b>FEIS</b> [1] - 204:2 <b>felt</b> [1] - 5:13 <b>fences</b> [1] - 194:19 <b>FERC</b> [2] - 33:20, 34:15 <b>few</b> [12] - 11:15, 11:21, 19:6, 19:9, 26:19, 107:21, 143:11, 166:21, 175:13, 180:10, 186:1, 191:21 <b>field</b> [2] - 112:1, 112:4 <b>fields</b> [1] - 18:25 <b>Fifteen</b> [1] - 108:3 <b>fight</b> [5] - 168:21, 169:6, 170:16, 171:3, 171:7 <b>fighters</b> [1] - 64:1 <b>fighting</b> [1] - 170:24 <b>figure</b> [1] - 185:5 <b>figured</b> [1] - 196:22 <b>file</b> [1] - 34:19 <b>filed</b> [4] - 12:13, 20:20, 154:11, 159:3 <b>filing</b> [1] - 202:8 <b>filings</b> [1] - 184:24 <b>Final</b> [7] - 15:9, 16:19, 17:19, 24:7, 120:21, 163:4, 204:18 <b>final</b> [2] - 28:8, 191:21 <b>final EIS</b> [5] - 61:5, 61:6, 122:23, 131:7, 203:4 <b>Finally</b> [1] - 69:5 <b>finally</b> [3] - 13:12, 16:12, 27:1 <b>fine</b> [5] - 9:14, 9:15, 28:1, 109:5, 181:10 <b>finish</b> [2] - 5:7, 154:4 <b>finished</b> [1] - 18:4 <b>finishing</b> [1] - 35:13 <b>fire</b> [16] - 22:8, 63:22, 63:25, 64:1, 65:1, 67:3, 67:5, 105:11, 105:13, 105:14, 168:22, 169:6, 169:20, 169:23, 170:16, 171:3 <b>firefighter</b> [1] - 169:10 <b>firefighting</b> [4] - 65:7, 169:16, 200:13, 200:17 <b>firemen</b> [1] - 170:14 <b>fires</b> [10] - 84:18, 101:9, 105:18, 168:21, 170:10, 170:17, 170:20,</p>	<p>170:22, 170:24, 171:7 <b>firm</b> [2] - 8:16, 8:22 <b>first</b> [35] - 4:3, 4:18, 6:25, 7:1, 9:9, 12:4, 24:10, 27:12, 27:14, 30:10, 38:20, 40:11, 51:14, 62:11, 62:13, 62:15, 63:8, 86:21, 113:10, 114:2, 123:16, 127:7, 131:5, 131:9, 136:21, 139:18, 142:12, 142:13, 146:6, 151:15, 159:23, 161:2, 178:6, 190:13, 190:15 <b>First</b> [4] - 4:21, 12:3, 12:24, 205:4 <b>firstrand</b> [2] - 20:2, 177:10 <b>Fish</b> [2] - 34:10, 85:1 <b>fits</b> [1] - 35:6 <b>Five</b> [2] - 86:5, 97:6 <b>five</b> [29] - 4:7, 10:15, 15:2, 18:8, 26:23, 59:23, 60:1, 66:20, 69:24, 82:14, 85:8, 85:15, 85:23, 85:24, 93:16, 108:2, 108:3, 108:11, 108:12, 108:19, 117:7, 151:13, 166:19, 171:2, 171:19, 171:20, 171:21, 178:24, 182:12 <b>five-span</b> [1] - 85:15 <b>fix</b> [2] - 109:12, 109:13 <b>flat</b> [2] - 169:7, 188:22 <b>flip</b> [2] - 66:23, 164:23 <b>flood</b> [3] - 105:12, 107:5, 143:25 <b>floods</b> [2] - 64:5, 65:15 <b>floor</b> [1] - 110:21 <b>flow</b> [10] - 44:3, 52:5, 52:25, 56:12, 60:19, 61:13, 75:25, 98:9, 98:16 <b>flowchart</b> [3] - 121:8, 160:8, 161:2 <b>flowing</b> [6] - 42:21, 43:3, 43:8, 43:9, 44:2, 44:13 <b>flows</b> [1] - 98:3 <b>flying</b> [1] - 67:18 <b>focus</b> [5] - 16:13, 17:3, 18:15, 45:11, 154:15</p>	<p><b>focused</b> [1] - 17:16 <b>focussing</b> [1] - 11:15 <b>foliage</b> [6] - 153:8, 154:1, 154:7, 179:22, 195:25, 196:5 <b>folks</b> [8] - 94:15, 95:1, 132:17, 133:23, 137:4, 137:10, 167:9, 171:6 <b>folks'</b> [2] - 148:5, 167:2 <b>follow</b> [10] - 6:19, 7:8, 65:15, 66:13, 135:13, 159:25, 166:24, 195:14, 196:23, 198:25 <b>followed</b> [1] - 199:2 <b>following</b> [4] - 93:10, 103:2, 123:19, 138:3 <b>Follows</b> [1] - 196:7 <b>follows</b> [4] - 28:14, 60:16, 110:25, 196:6 <b>foot</b> [2] - 139:23, 194:1 <b>foothill</b> [1] - 179:15 <b>foothills</b> [1] - 193:10 <b>footprint</b> [1] - 100:25 <b>forced</b> [5] - 43:1, 44:1, 46:6, 59:1, 65:6 <b>forces</b> [2] - 61:16 <b>forecast</b> [2] - 54:21, 55:2 <b>forecasted</b> [1] - 62:17 <b>forecasting</b> [1] - 54:9 <b>forecasts</b> [2] - 30:24, 51:6 <b>forefront</b> [1] - 20:17 <b>foreseeable</b> [3] - 105:13, 106:1, 106:19 <b>foresight</b> [2] - 102:6, 181:9 <b>Forest</b> [3] - 34:9, 84:18, 85:3 <b>forever</b> [1] - 61:25 <b>forgive</b> [1] - 194:8 <b>form</b> [3] - 14:6, 15:7, 117:18 <b>formative</b> [2] - 33:12, 36:20 <b>formerly</b> [1] - 194:6 <b>formulate</b> [1] - 7:22 <b>forth</b> [2] - 19:2, 188:10 <b>fortunate</b> [1] - 15:12 <b>fortunately</b> [1] - 53:18 <b>forward</b> [12] - 32:2, 33:10, 80:21, 83:3, 116:1, 126:13, 127:3,</p>	<p>132:24, 164:23, 201:14, 202:20, 206:12 <b>forward-looking</b> [1] - 32:2 <b>foundation</b> [1] - 146:1 <b>foundations</b> [5] - 145:20, 187:23, 187:25, 197:17 <b>Four</b> [1] - 49:23 <b>four</b> [10] - 23:2, 27:3, 52:15, 64:23, 93:16, 117:7, 120:16, 154:21, 186:6 <b>fraction</b> [1] - 175:14 <b>frame</b> [2] - 6:6, 121:11 <b>frank</b> [1] - 174:1 <b>freeways</b> [1] - 30:13 <b>frequently</b> [1] - 105:21 <b>front</b> [7] - 35:3, 40:4, 92:1, 166:20, 193:1, 195:25, 196:4 <b>Front</b> [1] - 106:12 <b>fuel</b> [3] - 22:9, 67:3, 67:5 <b>full</b> [4] - 47:9, 67:15, 119:14, 119:19 <b>fully</b> [1] - 104:8 <b>functional</b> [1] - 64:4 <b>functions</b> [1] - 39:24 <b>funds</b> [1] - 24:21 <b>FURTHER</b> <b>REDIRECT</b> <b>EXAMINATION</b> [1] - 204:23 <b>Furthermore</b> [1] - 18:18 <b>future</b> [10] - 32:3, 32:15, 34:22, 36:25, 45:25, 50:22, 75:4, 96:18, 123:24, 148:10 <b>future-load</b> [1] - 45:25</p>
<b>G</b>				
<p><b>gain</b> [2] - 109:7, 139:2 <b>Gateway</b> [57] - 30:1, 35:3, 36:2, 36:18, 36:20, 37:2, 37:9, 37:18, 37:19, 37:20, 39:13, 39:15, 39:16, 39:17, 39:24, 40:12, 40:23, 40:25, 41:5, 41:9, 41:16, 41:19, 42:8, 42:23, 43:9, 43:25, 44:3, 44:9,</p>				

<p>45:6, 47:10, 48:5, 48:10, 48:13, 48:15, 48:16, 48:17, 49:1, 59:17, 59:25, 69:18, 71:4, 78:13, 81:1, 98:21, 101:12, 101:17, 101:18, 102:24, 104:4, 104:12, 104:13</p> <p><b>gather</b> [1] - 120:24</p> <p><b>gathered</b> [1] - 172:22</p> <p><b>gathering</b> [2] - 115:15, 161:6</p> <p><b>Gee</b> [1] - 199:20</p> <p><b>gen</b> [1] - 44:19</p> <p><b>general</b> [4] - 131:11, 134:12, 164:7, 189:16</p> <p><b>generally</b> [5] - 12:10, 194:11, 194:20, 198:25, 205:17</p> <p><b>generation</b> [14] - 29:11, 37:14, 43:18, 44:20, 46:9, 46:25, 48:23, 50:8, 52:8, 53:24, 54:16, 58:15, 97:10, 98:13</p> <p><b>Genesis</b> [1] - 101:17</p> <p><b>gentleman</b> [1] - 71:14</p> <p><b>geographic</b> [2] - 47:3, 59:3</p> <p><b>geographically</b> [3] - 39:3, 44:25, 49:8</p> <p><b>geological</b> [2] - 66:18, 205:12</p> <p><b>geotechnical</b> [4] - 66:19, 116:15, 116:21, 164:17</p> <p><b>Gerrard</b> [29] - 12:5, 14:24, 27:16, 27:19, 28:5, 28:17, 30:2, 32:11, 34:20, 39:22, 49:3, 50:18, 67:23, 69:5, 70:21, 71:3, 100:15, 109:17, 112:22, 113:7, 118:17, 124:19, 125:13, 129:17, 144:2, 144:12, 156:19, 175:22, 197:4</p> <p><b>Gerrard's</b> [7] - 12:21, 12:24, 13:12, 70:10, 145:1, 181:4, 181:16</p> <p><b>gigawatts</b> [2] - 30:23, 30:25</p> <p><b>GIS</b> [1] - 117:17</p> <p><b>given</b> [15] - 10:3, 15:20, 16:20, 17:18, 18:6, 34:20, 86:13, 86:14, 114:23, 147:22, 180:24, 186:6, 189:13,</p>	<p>189:15, 189:16</p> <p><b>Given</b> [2] - 89:25, 190:22</p> <p><b>gold</b> [1] - 94:22</p> <p><b>gonna</b> [33] - 4:14, 25:19, 26:12, 27:2, 27:3, 27:4, 63:14, 72:21, 73:22, 76:20, 77:16, 78:19, 80:7, 82:1, 90:17, 90:21, 90:24, 91:5, 93:17, 106:9, 106:10, 151:23, 163:5, 171:3, 173:12, 179:23, 184:4, 187:11, 195:6, 198:25, 202:22, 203:10</p> <p><b>Goshen</b> [2] - 128:3, 128:6</p> <p><b>government</b> [2] - 120:6, 162:16</p> <p><b>governor's</b> [1] - 34:4</p> <p><b>grab</b> [1] - 106:24</p> <p><b>grace</b> [1] - 67:12</p> <p><b>grant</b> [1] - 182:6</p> <p><b>Granted</b> [1] - 76:19</p> <p><b>granted</b> [1] - 182:5</p> <p><b>Grantsville</b> [40] - 21:25, 23:20, 23:24, 25:7, 75:10, 76:10, 78:22, 79:4, 80:2, 83:14, 83:17, 93:9, 134:10, 135:3, 135:24, 135:25, 136:8, 138:15, 142:10, 142:15, 144:6, 146:4, 147:3, 147:8, 163:13, 172:2, 187:7, 189:23, 190:8, 190:13, 191:11, 191:15, 196:19, 197:18, 200:12, 200:15, 202:2, 202:4, 202:8</p> <p><b>GRANTSVILLE</b> [1] - 191:6</p> <p><b>graph</b> [4] - 54:5, 54:20, 57:18, 68:6</p> <p><b>graphs</b> [1] - 57:7</p> <p><b>grass</b> [1] - 153:16</p> <p><b>gravel</b> [4] - 148:7, 148:8, 148:10, 148:14</p> <p><b>Great</b> [4] - 65:14, 110:15, 115:8, 135:25</p> <p><b>great</b> [5] - 6:19, 19:3, 80:9, 86:9, 178:12</p> <p><b>greater</b> [12] - 72:12, 92:19, 105:16, 165:12, 167:14, 167:16, 167:18, 167:19, 168:23,</p>	<p>169:21, 171:9, 173:18</p> <p><b>greatest</b> [3] - 73:20, 87:17, 156:4</p> <p><b>green</b> [4] - 134:23, 136:14, 175:4, 192:12</p> <p><b>grid</b> [9] - 29:19, 35:23, 35:24, 36:15, 41:25, 65:18, 68:5, 77:24</p> <p><b>ground</b> [2] - 65:9, 66:2</p> <p><b>group</b> [5] - 18:20, 18:22, 112:13, 133:14, 135:12</p> <p><b>Group</b> [1] - 84:10</p> <p><b>groups</b> [3] - 14:15, 14:16, 134:16</p> <p><b>grow</b> [2] - 50:12, 57:2</p> <p><b>growing</b> [1] - 32:3</p> <p><b>grows</b> [5] - 50:3, 56:25, 58:11, 97:15, 97:24</p> <p><b>growth</b> [7] - 31:17, 62:16, 63:9, 67:18, 69:22, 118:11</p> <p><b>guess</b> [17] - 53:2, 58:23, 67:12, 89:15, 91:17, 92:5, 93:19, 97:22, 129:3, 149:6, 165:24, 166:24, 168:15, 183:9, 184:11, 192:16, 200:23</p> <p><b>guidance</b> [1] - 5:23</p> <p><b>guideline</b> [1] - 86:1</p> <p><b>guidelines</b> [2] - 90:8, 143:20</p> <p><b>guys</b> [1] - 201:15</p>	<p><b>handouts</b> [2] - 30:9, 36:12</p> <p><b>hands</b> [1] - 151:2</p> <p><b>happy</b> [2] - 9:12, 27:23</p> <p><b>hard</b> [7] - 13:19, 28:4, 28:7, 54:2, 136:10, 164:21, 194:16</p> <p><b>hazard</b> [2] - 22:8, 169:20</p> <p><b>hazardous</b> [1] - 147:7</p> <p><b>head</b> [2] - 142:22, 196:11</p> <p><b>heading</b> [2] - 128:2, 140:8</p> <p><b>heads</b> [2] - 82:17, 151:5</p> <p><b>healthy</b> [1] - 23:9</p> <p><b>hear</b> [17] - 4:18, 6:24, 6:25, 7:10, 10:13, 10:24, 12:3, 13:13, 17:8, 18:19, 18:22, 19:14, 29:2, 110:7, 193:2, 196:1, 206:6</p> <p><b>heard</b> [9] - 33:17, 60:16, 65:3, 81:5, 81:6, 98:17, 150:4, 190:4, 191:15</p> <p><b>hearing</b> [12] - 4:5, 4:11, 4:22, 5:12, 6:24, 9:8, 17:12, 19:22, 83:9, 180:7, 192:2, 206:14</p> <p><b>hears</b> [2] - 18:14, 19:5</p> <p><b>heat</b> [2] - 61:24, 186:19</p> <p><b>heavily</b> [1] - 67:14</p> <p><b>height</b> [1] - 138:24</p> <p><b>held</b> [4] - 29:13, 47:1, 91:18, 132:6</p> <p><b>helicopter</b> [1] - 101:1</p> <p><b>helipad</b> [1] - 137:12</p> <p><b>help</b> [7] - 7:20, 30:11, 102:19, 123:19, 124:20, 128:13, 179:22</p> <p><b>helped</b> [1] - 114:18</p> <p><b>helpful</b> [1] - 194:3</p> <p><b>helping</b> [1] - 9:19</p> <p><b>helps</b> [1] - 113:12</p> <p><b>Hemingway</b> [2] - 36:6, 78:10</p> <p><b>hidden</b> [1] - 148:22</p> <p><b>hide</b> [1] - 154:1</p> <p><b>high</b> [35] - 21:16, 22:11, 24:2, 36:9, 36:16, 38:3, 38:4, 39:22, 48:15, 49:18,</p>	<p>49:19, 51:20, 53:19, 59:16, 65:14, 78:23, 86:1, 94:21, 95:5, 118:7, 118:19, 127:25, 129:18, 129:19, 137:11, 141:3, 143:25, 144:1, 144:4, 145:9, 157:3, 168:17, 168:22, 182:23, 187:17</p> <p><b>high-capacity</b> [4] - 36:9, 36:16, 48:15, 49:19</p> <p><b>high-level</b> [2] - 95:5, 187:17</p> <p><b>high-voltage</b> [11] - 22:11, 24:2, 49:18, 51:20, 59:16, 118:7, 118:19, 127:25, 129:18, 129:19, 182:23</p> <p><b>higher</b> [11] - 31:18, 39:20, 61:17, 142:2, 146:13, 153:25, 169:1, 169:4, 170:4, 170:10, 204:10</p> <p><b>highest</b> [3] - 31:16, 52:23, 62:16</p> <p><b>highlight</b> [1] - 136:7</p> <p><b>highlighted</b> [1] - 128:18</p> <p><b>highlighting</b> [1] - 201:3</p> <p><b>highly</b> [4] - 12:12, 12:22, 14:25, 36:17</p> <p><b>highly-qualified</b> [1] - 14:25</p> <p><b>highly-reliable</b> [1] - 36:17</p> <p><b>highway</b> [2] - 129:2, 129:11</p> <p><b>Highway</b> [5] - 115:4, 137:14, 143:4, 198:11</p> <p><b>hill</b> [2] - 151:9, 152:20</p> <p><b>hillside</b> [3] - 140:4, 146:19, 151:6</p> <p><b>hindrance</b> [1] - 144:10</p> <p><b>hindrances</b> [2] - 143:14, 145:8</p> <p><b>hired</b> [2] - 7:14</p> <p><b>history</b> [4] - 51:6, 52:2, 56:15, 85:23</p> <p><b>hit</b> [1] - 54:15</p> <p><b>Hogan</b> [11] - 9:1, 19:15, 27:11, 70:18, 70:24, 94:2, 159:8, 159:17, 185:21, 191:13, 205:24</p> <p><b>HOGAN</b> [19] - 6:15,</p>
<p><b>H</b></p>				
<p><b>habitat</b> [1] - 116:21</p> <p><b>half</b> [3] - 8:9, 44:23, 159:10</p> <p><b>HALL</b> [1] - 8:22</p> <p><b>hand</b> [11] - 10:4, 10:7, 21:11, 21:21, 21:22, 27:17, 29:21, 114:13, 118:5, 121:10, 152:2</p> <p><b>handed</b> [3] - 28:3, 59:18, 60:21</p> <p><b>handful</b> [8] - 133:6, 166:11, 166:12, 166:18, 167:6, 167:8, 186:4, 186:5</p> <p><b>handing</b> [1] - 110:13</p> <p><b>handle</b> [1] - 99:16</p> <p><b>handout</b> [2] - 49:12, 153:12</p>				

<p>8:24, 19:16, 70:12, 70:25, 71:2, 94:1, 159:4, 159:10, 159:18, 159:20, 185:18, 188:9, 189:4, 189:12, 190:6, 190:12, 206:1, 206:9  <b>hold</b> [2] - 132:11, 202:22  <b>hole</b> [1] - 138:23  <b>Homeland</b> [1] - 34:18  <b>homes</b> [3] - 118:13, 137:17, 193:12  <b>homework</b> [2] - 66:19  <b>honestly</b> [1] - 196:21  <b>hopefully</b> [1] - 60:15  <b>horizontal</b> [1] - 51:18  <b>host</b> [1] - 59:2  <b>hostile</b> [1] - 95:24  <b>hour</b> [3] - 8:9, 52:6, 159:10  <b>hours</b> [3] - 52:7, 54:25, 55:4  <b>house</b> [1] - 161:7  <b>houses</b> [1] - 132:1  <b>hub</b> [7] - 36:11, 45:24, 45:25, 62:16, 68:24, 78:4  <b>hubs</b> [11] - 36:4, 36:8, 36:13, 42:13, 44:4, 44:5, 45:24, 46:1, 47:14, 68:24, 68:25  <b>huge</b> [8] - 41:24, 84:19, 100:13, 140:25, 146:17, 146:20, 175:25, 199:22  <b>humans</b> [1] - 130:19  <b>hundred</b> [2] - 108:3, 175:13  <b>Hunter</b> [4] - 31:4, 50:13, 58:12, 97:17  <b>Huntington</b> [4] - 49:20, 50:13, 58:12, 97:18  <b>hurdle</b> [1] - 177:25  <b>Hurtado</b> [2] - 96:13, 195:19  <b>HURTADO</b> [3] - 96:15, 97:6, 195:20  <b>hyperbole</b> [2] - 17:5, 17:9</p>	<p>80:7, 168:25, 169:2, 169:7, 169:21, 170:10, 170:16, 171:4, 171:10, 171:15, 174:16, 187:19, 187:21  <b>ice</b> [8] - 63:21, 64:6, 65:9, 65:15, 66:3, 84:19, 101:9  <b>Idaho</b> [13] - 35:16, 36:6, 40:22, 41:13, 64:21, 65:11, 78:8, 104:9, 112:5, 112:6, 125:11  <b>idea</b> [9] - 40:13, 81:18, 117:4, 124:23, 134:12, 140:22, 176:23, 187:10, 198:13  <b>ideas</b> [1] - 18:11  <b>identical</b> [1] - 128:8  <b>identified</b> [23] - 14:13, 50:24, 75:3, 79:13, 83:4, 114:2, 116:5, 117:2, 118:1, 127:18, 158:16, 162:1, 162:6, 162:8, 162:12, 164:5, 172:10, 172:13, 183:5, 183:19, 188:25, 191:24, 194:20  <b>identifies</b> [1] - 125:25  <b>identify</b> [6] - 111:3, 115:24, 117:4, 117:13, 126:12, 151:21  <b>ignore</b> [2] - 18:8, 19:6  <b>ignoring</b> [1] - 10:22  <b>illustrate</b> [3] - 64:19, 90:18, 92:6  <b>illustrated</b> [1] - 160:7  <b>illustrates</b> [1] - 167:21  <b>illustrative</b> [1] - 43:23  <b>image</b> [1] - 140:6  <b>imagery</b> [1] - 179:1  <b>imagine</b> [2] - 167:22, 169:22  <b>immediacy</b> [1] - 13:14  <b>immediate</b> [3] - 165:9, 165:16, 165:18  <b>immediately</b> [3] - 11:15, 174:15, 180:13  <b>impact</b> [40] - 41:24, 60:8, 67:7, 67:19, 100:13, 105:15,</p>	<p>106:20, 119:10, 121:17, 121:21, 121:23, 121:25, 126:15, 128:14, 133:20, 137:16, 138:1, 138:2, 140:24, 142:3, 148:10, 148:24, 151:6, 152:12, 152:14, 156:15, 168:6, 168:22, 170:10, 171:9, 175:11, 177:24, 185:15, 185:17, 186:4, 189:25, 203:14, 204:8  <b>impacted</b> [4] - 65:11, 67:10, 80:3, 193:18  <b>impactful</b> [5] - 122:4, 139:12, 140:21, 156:16, 157:15  <b>impacting</b> [1] - 204:9  <b>impacts</b> [13] - 60:9, 122:15, 123:25, 124:4, 150:6, 150:7, 150:10, 156:3, 168:10, 171:11, 187:24, 190:18, 193:15  <b>impaired</b> [1] - 58:14  <b>impairs</b> [1] - 155:9  <b>implement</b> [1] - 186:21  <b>implementing</b> [1] - 16:11  <b>implications</b> [1] - 10:25  <b>implied</b> [1] - 18:11  <b>import</b> [16] - 30:16, 31:20, 49:16, 50:4, 50:9, 50:14, 51:1, 51:12, 51:20, 53:10, 53:15, 54:12, 54:23, 55:5, 56:9, 56:16  <b>importance</b> [4] - 13:8, 21:17, 58:18, 129:24  <b>important</b> [18] - 12:22, 13:21, 14:22, 14:25, 25:10, 31:8, 34:3, 38:17, 38:22, 58:22, 71:23, 71:24, 77:11, 180:1, 180:16, 184:20, 188:13, 199:15  <b>importantly</b> [1] - 24:25  <b>Importantly</b> [1] - 12:14  <b>imposed</b> [1] - 176:24  <b>impossible</b> [2] - 83:15, 108:10  <b>impressive</b> [2] -</p>	<p>178:16, 178:18  <b>improved</b> [1] - 92:9  <b>improves</b> [1] - 69:3  <b>in-house</b> [1] - 161:7  <b>in-service</b> [1] - 69:19  <b>inability</b> [1] - 144:10  <b>inaudible</b> [1] - 195:25  <b>incidences</b> [1] - 63:22  <b>incident</b> [1] - 164:18  <b>inclines</b> [1] - 173:16  <b>include</b> [3] - 130:16, 160:17, 174:6  <b>included</b> [3] - 49:9, 96:24, 165:22  <b>including</b> [7] - 12:17, 24:25, 29:11, 29:19, 57:20, 82:25, 83:1  <b>incorporated</b> [1] - 123:25  <b>incorrect</b> [3] - 162:9, 189:4, 201:16  <b>increase</b> [3] - 54:7, 61:7, 140:25  <b>increased</b> [1] - 68:7  <b>increases</b> [5] - 50:9, 61:25, 98:12, 166:25, 167:1  <b>increasing</b> [1] - 52:17  <b>incredible</b> [1] - 178:20  <b>independently</b> [4] - 14:10, 15:5, 19:7, 19:8  <b>indicate</b> [2] - 189:5  <b>indicated</b> [7] - 24:4, 25:23, 59:9, 128:23, 129:12, 175:9, 179:16  <b>indicates</b> [1] - 156:10  <b>indicating</b> [1] - 183:16  <b>indication</b> [1] - 132:22  <b>individuals</b> [3] - 14:25, 133:11, 134:2  <b>Industrial</b> [1] - 137:4  <b>industrial</b> [1] - 22:10  <b>industry</b> [3] - 11:17, 29:8, 108:12  <b>influence</b> [1] - 123:11  <b>infor</b> [1] - 51:6  <b>inform</b> [2] - 126:21, 131:1  <b>informally</b> [1] - 22:24  <b>information</b> [26] - 6:4, 9:25, 20:12, 73:21, 84:7, 85:12,</p>	<p>115:15, 115:18, 115:24, 116:22, 116:23, 120:25, 121:5, 121:7, 126:13, 132:24, 147:22, 151:22, 156:18, 160:11, 160:22, 169:22, 172:22, 200:24, 205:14, 205:15  <b>infrastructure</b> [1] - 70:1  <b>initial</b> [4] - 150:6, 160:1, 193:5, 193:6  <b>initiate</b> [1] - 119:21  <b>initiated</b> [4] - 113:11, 132:14, 133:13, 167:16  <b>inner</b> [1] - 105:2  <b>input</b> [5] - 120:14, 121:2, 147:25, 156:12, 157:12  <b>inside</b> [2] - 118:14, 154:7  <b>insinuate</b> [1] - 201:20  <b>instance</b> [9] - 75:8, 120:15, 135:4, 144:1, 165:15, 174:4, 181:12, 183:11, 183:13  <b>instances</b> [1] - 186:20  <b>instantaneous</b> [1] - 108:8  <b>Instantaneous</b> [1] - 108:10  <b>instantaneously</b> [1] - 37:14  <b>instead</b> [3] - 172:24, 173:14, 175:12  <b>instructive</b> [1] - 30:10  <b>insulator</b> [1] - 56:20  <b>insurmountable</b> [1] - 177:25  <b>integrated</b> [1] - 31:25  <b>Integrated</b> [6] - 32:1, 33:11, 36:21, 36:23, 97:2, 104:1  <b>integrates</b> [1] - 41:25  <b>intend</b> [3] - 5:5, 26:2, 177:20  <b>intended</b> [1] - 179:21  <b>intends</b> [1] - 183:16  <b>intent</b> [1] - 119:23  <b>intention</b> [1] - 7:24  <b>intentional</b> [1] - 72:16  <b>intentionally</b> [1] -</p>
<p><b>I</b></p>				
<p><b>I-80</b> [20] - 21:22, 23:21, 76:11, 76:18, 76:21, 77:7, 78:25,</p>				

<p>154:6  <b>interact</b> [1] - 94:25  <b>interacted</b> [1] - 14:9  <b>interconnect</b> [1] - 79:6  <b>interconnected</b> [2] - 43:11, 44:4  <b>interconnection</b> [2] - 42:3, 101:16  <b>Interior</b> [1] - 34:15  <b>internally</b> [1] - 80:11  <b>International</b> [2] - 177:9, 194:6  <b>interpretation</b> [1] - 179:8  <b>interrelated</b> [2] - 51:4, 51:24  <b>interring</b> [1] - 21:5  <b>interruption</b> [2] - 46:9, 46:25  <b>interstate</b> [1] - 82:25  <b>Interstate</b> [4] - 22:2, 82:16, 82:17, 83:10  <b>intertie</b> [1] - 84:14  <b>interties</b> [2] - 67:21, 79:21  <b>introduce</b> [1] - 39:25  <b>intuitive</b> [1] - 81:20  <b>inventory</b> [6] - 115:15, 121:4, 121:20, 121:22, 122:10  <b>invited</b> [1] - 120:18  <b>involved</b> [5] - 94:11, 112:1, 119:7, 120:16, 122:8  <b>involvement</b> [1] - 156:5  <b>involves</b> [1] - 16:3  <b>IRP</b> [1] - 36:19  <b>issuance</b> [1] - 130:25  <b>issue</b> [15] - 12:19, 19:24, 20:4, 20:17, 72:3, 89:19, 93:21, 100:24, 112:19, 116:13, 157:16, 197:11, 200:18, 200:19, 200:20  <b>issued</b> [2] - 155:4, 191:21  <b>issues</b> [12] - 20:10, 116:9, 130:21, 137:7, 138:20, 140:17, 141:7, 146:20, 184:4, 204:5  <b>issuing</b> [1] - 182:9  <b>itself</b> [5] - 16:10, 17:14, 41:15, 59:15, 88:18</p>	<p style="text-align: center;"><b>J</b></p> <p><b>January</b> [1] - 52:13  <b>Jeff Richards</b> [1] - 8:18  <b>jeopardize</b> [4] - 11:18, 103:13, 103:16, 105:14  <b>job</b> [7] - 9:20, 91:22, 174:3, 174:10, 174:11, 174:13  <b>jobs</b> [1] - 29:9  <b>Johnson's</b> [2] - 188:13, 188:14  <b>join</b> [1] - 136:14  <b>joining</b> [1] - 128:2  <b>Jordan</b> [1] - 132:18  <b>Jordan/West</b> [1] - 132:18  <b>Juab</b> [1] - 120:17  <b>jumped</b> [1] - 191:25  <b>jumping</b> [1] - 188:10  <b>June</b> [2] - 155:12, 156:25  <b>junior</b> [1] - 137:11  <b>jurisdictions</b> [4] - 23:19, 23:23, 121:7, 162:17  <b>jurisdictions's</b> [1] - 184:18</p> <p style="text-align: center;"><b>K</b></p> <p><b>keep</b> [7] - 46:9, 63:11, 94:23, 151:11, 182:24, 186:20, 186:22  <b>Keep</b> [1] - 46:25  <b>keeping</b> [1] - 132:20  <b>Kenne</b> [1] - 196:15  <b>Kennecott</b> [5] - 132:19, 140:14, 140:23, 168:13, 196:16  <b>Kennecott Copper</b> [1] - 132:18  <b>key</b> [9] - 32:19, 33:11, 36:20, 38:15, 39:12, 45:1, 59:6, 132:12, 147:15  <b>kind</b> [23] - 4:25, 29:21, 49:6, 54:5, 63:15, 66:6, 95:16, 103:2, 113:14, 120:22, 121:9, 136:18, 140:5, 141:18, 143:8, 151:21, 153:4, 153:16, 153:18, 161:24, 170:2, 182:17</p>	<p><b>Kind</b> [1] - 5:17  <b>kinds</b> [2] - 17:1, 64:9  <b>knowledge</b> [4] - 20:12, 20:22, 186:9, 201:23  <b>kV</b> [16] - 38:19, 38:20, 67:21, 69:12, 71:6, 71:17, 71:18, 71:22, 71:24, 71:25, 72:3, 96:9, 125:4, 125:5</p> <p style="text-align: center;"><b>L</b></p> <p><b>labeled</b> [1] - 72:10  <b>labelled</b> [4] - 71:4, 71:9, 163:7, 163:20  <b>Laboratory</b> [1] - 112:7  <b>lack</b> [1] - 22:7  <b>lacks</b> [3] - 22:6, 24:20, 24:25  <b>lake</b> [10] - 61:2, 89:5, 93:15, 143:6, 143:24, 144:1, 145:9, 205:18  <b>Lake</b> [9] - 21:23, 22:5, 83:10, 83:13, 83:17, 93:10, 114:20, 118:6  <b>lake-bottom</b> [2] - 143:6, 205:18  <b>land</b> [5] - 7:19, 20:2, 34:11, 116:17, 123:1  <b>Land</b> [3] - 14:9, 15:11, 18:10  <b>landowner</b> [1] - 132:2  <b>lands</b> [7] - 16:23, 17:25, 18:2, 21:17, 131:15, 131:19, 131:20  <b>Lands</b> [1] - 132:19  <b>landslides</b> [1] - 66:20  <b>Large</b> [1] - 42:20  <b>large</b> [25] - 36:3, 36:9, 36:14, 36:16, 40:16, 42:5, 45:6, 45:23, 45:24, 45:25, 47:13, 50:6, 50:7, 54:24, 56:11, 59:22, 68:18, 68:22, 68:24, 70:1, 98:12, 103:16, 106:2, 114:20, 118:11  <b>large-capacity</b> [1] - 47:13  <b>large-load</b> [1] - 68:24  <b>large-scale</b> [1] - 36:9  <b>larger</b> [9] - 15:2, 34:24, 40:18, 41:5, 41:16, 48:4, 48:5,</p>	<p>67:19, 187:25  <b>largest</b> [4] - 31:15, 41:14, 45:25, 78:4  <b>laser</b> [1] - 149:9  <b>last</b> [17] - 23:12, 26:18, 29:13, 32:6, 34:13, 41:18, 53:3, 57:6, 57:7, 58:10, 69:11, 97:2, 103:2, 103:19, 203:14, 204:25  <b>Last</b> [1] - 108:22  <b>lasted</b> [1] - 67:10  <b>lasts</b> [1] - 72:24  <b>latest</b> [2] - 73:20, 191:21  <b>latitude</b> [1] - 178:24  <b>law</b> [4] - 5:19, 8:16, 8:22, 38:11  <b>laws</b> [2] - 97:23  <b>lawsuits</b> [2] - 202:9, 202:14  <b>lawyer</b> [1] - 202:6  <b>lawyers</b> [2] - 4:15, 58:20  <b>Lay</b> [1] - 117:18  <b>lay</b> [1] - 20:2  <b>layperson</b> [1] - 96:5  <b>Layton</b> [1] - 174:9  <b>lead</b> [1] - 153:22  <b>leader</b> [1] - 132:15  <b>leaders</b> [2] - 14:15, 132:12  <b>leading</b> [1] - 108:16  <b>least</b> [22] - 4:12, 6:21, 7:17, 36:10, 59:20, 60:17, 69:24, 72:21, 74:9, 84:16, 105:15, 106:21, 107:8, 122:4, 126:18, 133:20, 156:16, 157:14, 159:10, 185:2, 186:5  <b>least-impactful</b> [1] - 156:16  <b>leather</b> [1] - 90:22  <b>leave</b> [4] - 27:24, 79:3, 162:20, 179:21  <b>leaves</b> [1] - 25:15  <b>leaving</b> [2] - 107:21, 173:25  <b>left</b> [11] - 51:19, 56:9, 59:11, 60:3, 60:6, 90:12, 121:10, 127:21, 127:24, 162:4, 203:20  <b>left-hand</b> [1] - 121:10  <b>leg</b> [4] - 71:12, 74:20, 75:5, 75:7  <b>legal</b> [3] - 26:8, 183:24, 206:7</p>	<p><b>legislative</b> [1] - 23:12  <b>legislature</b> [1] - 23:14  <b>legs</b> [6] - 38:24, 39:18, 39:19, 43:15, 71:8, 71:10  <b>length</b> [15] - 26:23, 60:9, 60:13, 61:7, 61:21, 62:6, 63:4, 75:16, 75:17, 76:6, 86:10, 87:1, 176:12, 198:8, 198:10  <b>lengths</b> [4] - 39:6, 60:9, 76:6, 108:19  <b>Less</b> [1] - 180:9  <b>less</b> [19] - 26:22, 32:22, 60:19, 61:18, 61:19, 62:3, 62:5, 93:3, 97:17, 139:11, 144:19, 144:21, 145:2, 154:3, 156:14, 156:15, 167:14, 197:17  <b>letter</b> [2] - 25:24, 183:16  <b>letters</b> [1] - 132:3  <b>level</b> [12] - 39:23, 54:15, 55:5, 56:25, 94:17, 94:21, 95:3, 95:5, 119:11, 171:11, 187:17  <b>levels</b> [3] - 65:14, 95:3, 157:3  <b>licensed</b> [1] - 33:20  <b>lies</b> [1] - 23:5  <b>light</b> [4] - 85:14, 111:12, 111:14, 124:20  <b>Light</b> [1] - 112:4  <b>lighting</b> [1] - 28:2  <b>lights</b> [1] - 27:23  <b>likelihood</b> [1] - 107:2  <b>likely</b> [7] - 14:13, 26:4, 77:15, 77:24, 78:7, 118:13, 170:9  <b>Limber</b> [87] - 37:23, 45:5, 45:20, 46:1, 46:21, 46:22, 47:7, 48:19, 48:21, 60:23, 61:15, 68:23, 71:19, 71:20, 71:21, 72:15, 73:6, 73:9, 74:4, 74:6, 74:12, 75:4, 75:5, 75:13, 75:15, 75:17, 75:18, 75:19, 75:21, 75:23, 76:10, 77:10, 77:16, 78:2, 79:5, 79:10, 79:19, 80:25, 103:13, 103:17, 108:5, 117:9, 117:11,</p>
---	--	--	---	---

<p>124:13, 124:25, 134:10, 135:1, 135:2, 135:18, 135:24, 136:1, 136:3, 136:12, 138:9, 142:14, 142:16, 142:18, 142:19, 142:21, 144:8, 144:22, 146:1, 146:7, 146:10, 146:11, 148:2, 149:21, 162:21, 162:22, 163:16, 163:17, 163:22, 163:23, 164:3, 164:7, 172:6, 172:8, 174:23, 180:18, 187:19, 188:1, 189:14, 191:3, 197:21, 205:2</p> <p><b>Limber-Oquirrh</b> [2] - 136:3, 146:11</p> <p><b>Limber-Terminal</b> [2] - 136:1, 146:10</p> <p><b>Limber-to-Oquirrh</b> [2] - 75:5, 142:21</p> <p><b>Limber-to-Terminal</b> [3] - 72:15, 149:21, 164:7</p> <p><b>limit</b> [13] - 53:5, 53:11, 53:14, 53:16, 53:20, 54:2, 54:11, 54:18, 54:25, 55:10, 56:16, 57:8</p> <p><b>limitation</b> [2] - 104:17, 177:23</p> <p><b>limitations</b> [1] - 55:21</p> <p><b>limited</b> [7] - 31:22, 44:15, 51:2, 51:12, 53:11, 106:3</p> <p><b>limits</b> [7] - 42:17, 54:12, 137:6, 137:16, 138:19, 176:25, 202:4</p> <p><b>line</b> [202] - 10:23, 11:3, 11:5, 22:11, 26:21, 39:3, 42:24, 42:25, 43:4, 43:24, 44:1, 44:2, 45:1, 45:10, 47:6, 53:4, 53:10, 53:11, 53:14, 53:16, 53:21, 53:24, 54:2, 54:14, 55:3, 55:10, 55:17, 55:19, 56:15, 56:17, 56:24, 57:6, 57:7, 57:8, 57:16, 57:23, 58:18, 58:21, 60:7, 60:9, 60:13, 60:19, 61:7, 61:10, 61:11, 61:12, 61:13, 61:21, 61:23, 61:25, 62:2, 62:6, 63:4, 63:5, 63:6, 63:11, 63:24, 65:23,</p>	<p>66:7, 66:11, 66:21, 68:9, 69:1, 73:3, 73:4, 73:6, 74:1, 74:11, 74:14, 75:4, 75:16, 75:17, 75:23, 75:25, 76:4, 76:15, 76:25, 77:4, 84:17, 84:22, 84:23, 87:3, 88:7, 88:18, 88:24, 89:4, 89:8, 89:10, 91:25, 92:3, 95:8, 95:22, 96:11, 100:3, 100:7, 100:12, 100:13, 101:21, 102:3, 103:6, 103:14, 109:9, 109:11, 112:23, 114:14, 116:9, 117:20, 117:21, 118:8, 118:14, 121:15, 122:15, 125:20, 125:23, 126:2, 126:15, 127:6, 127:15, 128:20, 128:21, 129:10, 129:19, 129:20, 129:25, 130:4, 130:9, 132:4, 135:7, 136:1, 136:15, 138:12, 138:16, 138:18, 138:23, 139:5, 141:11, 141:16, 142:2, 142:4, 142:21, 143:22, 144:3, 145:3, 145:16, 148:16, 149:10, 150:11, 150:24, 151:5, 152:23, 153:25, 154:6, 156:14, 163:16, 163:18, 164:13, 173:3, 173:7, 175:4, 175:6, 175:19, 176:2, 179:17, 179:22, 180:25, 182:13, 182:16, 182:23, 183:4, 183:10, 183:13, 186:10, 186:11, 186:12, 186:17, 186:21, 187:1, 188:2, 189:24, 192:4, 192:10, 192:13, 192:24, 193:6, 193:11, 193:18, 193:20, 197:1, 197:6, 199:11, 199:14, 199:18, 201:9, 203:3</p> <p><b>Line</b> [1] - 205:8</p> <p><b>line's</b> [1] - 171:2</p> <p><b>line-length</b> [1] - 62:6</p> <p><b>linear</b> [5] - 22:1, 76:23, 115:3, 116:22, 159:25</p>	<p><b>lines</b> [193] - 24:2, 30:15, 30:19, 36:10, 39:4, 39:6, 41:4, 42:10, 42:12, 43:16, 44:10, 44:12, 44:14, 44:17, 45:4, 45:6, 47:2, 47:4, 47:14, 47:18, 48:9, 48:20, 49:16, 49:19, 50:4, 50:10, 50:15, 51:21, 53:1, 53:12, 55:22, 55:23, 55:24, 56:3, 56:13, 56:19, 57:4, 57:11, 57:22, 58:1, 58:4, 58:8, 59:1, 59:5, 59:8, 59:9, 59:11, 59:14, 59:16, 59:18, 59:21, 59:22, 60:9, 60:12, 61:9, 61:24, 62:20, 63:12, 63:17, 63:22, 64:2, 64:10, 64:23, 65:5, 65:8, 65:16, 66:9, 66:15, 66:17, 66:24, 67:4, 67:10, 67:13, 67:17, 68:12, 68:15, 74:21, 76:20, 77:5, 77:15, 77:21, 78:10, 78:19, 78:24, 79:5, 80:8, 81:24, 82:5, 83:5, 84:15, 84:24, 85:6, 85:10, 85:25, 86:22, 86:24, 87:6, 87:10, 87:12, 87:17, 88:3, 88:4, 88:8, 88:12, 88:22, 89:2, 90:7, 92:21, 93:3, 93:14, 98:5, 98:14, 100:17, 100:25, 101:13, 102:1, 102:18, 103:9, 103:11, 104:6, 104:9, 105:11, 105:14, 105:20, 107:13, 107:20, 107:22, 108:14, 108:17, 108:25, 109:9, 113:23, 116:7, 118:8, 118:19, 124:18, 126:1, 126:6, 128:5, 130:3, 134:23, 135:25, 136:13, 142:18, 143:18, 143:20, 145:6, 147:2, 147:6, 154:1, 160:18, 164:13, 164:22, 170:23, 173:5, 173:22, 173:24, 173:25, 175:15, 175:23, 176:12, 176:14, 180:9, 180:17, 180:21, 180:25, 181:18,</p>	<p>186:1, 186:2, 186:7, 186:19, 186:22, 189:11, 191:1, 194:25, 195:3, 195:5, 195:6, 195:7, 195:14, 203:5, 205:4, 205:6, 205:8</p> <p><b>Lines</b> [1] - 109:4</p> <p><b>link</b> [3] - 62:22, 63:1, 72:16</p> <p><b>liquefaction</b> [1] - 164:17</p> <p><b>listed</b> [1] - 31:10</p> <p><b>literally</b> [1] - 137:22</p> <p><b>litigation</b> [11] - 182:1, 183:2, 183:6, 183:7, 183:25, 184:8, 185:3, 185:8, 198:13, 201:25, 202:21</p> <p><b>live</b> [7] - 10:8, 12:4, 13:25, 15:7, 21:20, 171:17, 194:7</p> <p><b>lived</b> [1] - 67:9</p> <p><b>lives</b> [1] - 202:8</p> <p><b>load</b> [65] - 10:7, 13:7, 31:11, 31:13, 32:7, 32:8, 36:4, 42:12, 42:13, 43:17, 44:24, 45:25, 46:15, 48:25, 49:5, 49:7, 49:13, 49:14, 49:17, 49:21, 49:24, 49:25, 50:3, 50:4, 50:9, 50:12, 50:20, 51:2, 51:13, 51:16, 51:22, 52:5, 52:6, 52:23, 54:6, 54:7, 54:10, 55:7, 56:8, 56:13, 56:17, 56:23, 57:20, 57:21, 58:5, 58:11, 62:16, 63:9, 67:18, 68:4, 68:12, 68:24, 69:21, 74:24, 97:15, 97:24, 98:1, 98:5, 98:11, 98:12, 98:13</p> <p><b>load/customer</b> [1] - 52:7</p> <p><b>loaded</b> [1] - 67:14</p> <p><b>loading</b> [1] - 66:6</p> <p><b>loads</b> [8] - 32:4, 36:4, 36:7, 44:5, 48:22, 50:7, 68:21</p> <p><b>local</b> [17] - 20:13, 23:10, 23:19, 23:22, 48:24, 73:10, 74:20, 115:17, 116:18, 120:6, 120:9, 121:6, 162:16, 172:17, 184:17</p> <p><b>locals</b> [1] - 174:17</p> <p><b>locate</b> [7] - 78:23, 83:15, 88:8, 88:12,</p>	<p>113:13, 180:8, 190:24</p> <p><b>located</b> [27] - 12:18, 31:2, 32:5, 44:18, 47:4, 49:14, 50:25, 63:17, 64:10, 65:16, 66:24, 78:19, 78:22, 79:14, 87:13, 88:23, 101:22, 108:17, 115:10, 124:14, 124:15, 127:19, 138:21, 162:23, 174:5, 181:19</p> <p><b>locating</b> [10] - 60:12, 92:7, 92:21, 102:17, 108:14, 113:9, 165:4, 180:25, 181:8, 181:10</p> <p><b>location</b> [39] - 26:16, 62:6, 74:3, 74:6, 74:11, 75:13, 76:12, 80:3, 87:16, 123:18, 124:6, 125:17, 144:8, 146:2, 146:23, 162:6, 162:16, 166:1, 172:7, 172:13, 172:18, 172:20, 172:23, 172:25, 174:23, 174:25, 188:16, 188:24, 188:25, 189:1, 189:14, 189:16, 191:3, 198:3, 202:5, 204:1, 205:4, 205:13, 206:4</p> <p><b>locations</b> [12] - 76:23, 94:11, 112:12, 113:24, 114:10, 117:5, 120:2, 124:2, 124:9, 140:25, 162:1, 188:15</p> <p><b>Lomond</b> [1] - 101:21</p> <p><b>Lomond-to-Terminal</b> [1] - 101:21</p> <p><b>long-range</b> [4] - 33:2, 34:11, 35:7, 99:15</p> <p><b>Long-Term</b> [1] - 72:11</p> <p><b>long-term</b> [1] - 32:20</p> <p><b>longer-term</b> [1] - 101:9</p> <p><b>look</b> [36] - 11:7, 22:10, 32:1, 35:3, 40:23, 41:2, 60:22, 78:16, 80:24, 83:19, 86:10, 87:21, 88:2, 115:20, 116:8, 116:15, 138:17, 143:10, 143:11, 144:22, 147:16, 151:24, 172:1, 172:9, 178:16, 178:21, 179:6, 191:20, 191:22, 192:11,</p>
---	--	---	---	--

<p>192:22, 201:17, 204:21, 204:25, 205:11, 206:12 <b>Look</b> [2] - 16:22, 91:10 <b>looked</b> [13] - 20:1, 81:7, 81:13, 83:10, 87:22, 87:25, 135:13, 135:23, 136:13, 146:7, 176:9, 187:3, 204:6 <b>looking</b> [22] - 10:22, 21:6, 32:2, 33:10, 66:7, 85:9, 91:14, 91:15, 95:18, 109:12, 130:13, 130:15, 138:5, 150:22, 152:18, 153:12, 155:20, 161:25, 163:10, 173:11, 188:14 <b>looks</b> [14] - 42:20, 76:4, 83:22, 90:2, 103:3, 143:9, 172:10, 174:1, 174:2, 174:14, 174:17, 192:24, 194:24 <b>loose</b> [1] - 164:18 <b>lose</b> [6] - 46:5, 46:23, 87:10, 90:25, 102:20, 198:7 <b>losing</b> [2] - 91:5, 139:3 <b>loss</b> [2] - 79:22, 87:9 <b>losses</b> [3] - 61:23, 61:25, 62:1 <b>lossy</b> [1] - 62:5 <b>low</b> [2] - 50:23, 96:18 <b>low-cost</b> [2] - 50:23, 96:18 <b>lower</b> [6] - 125:5, 142:24, 143:24, 170:4, 179:10, 195:6 <b>lower-transmission</b> [1] - 125:5 <b>lower-voltage</b> [1] - 195:6 <b>lowest</b> [3] - 33:9, 37:17, 75:18 <b>lowest-cost</b> [1] - 33:9 <b>lunch</b> [1] - 109:24 <b>luncheon</b> [1] - 110:5</p>	<p><b>Main</b> [1] - 114:10 <b>main</b> [1] - 134:11 <b>maintain</b> [4] - 45:2, 116:14, 144:11, 157:4 <b>maintaining</b> [1] - 26:20 <b>maintenance</b> [6] - 43:1, 46:7, 56:18, 57:5, 58:1, 141:7 <b>major</b> [8] - 21:25, 25:15, 30:13, 30:20, 31:1, 31:7, 49:16, 69:11 <b>majority</b> [3] - 11:12, 26:21, 127:14 <b>Man</b> [1] - 41:4 <b>manage</b> [1] - 112:20 <b>managed</b> [4] - 112:7, 112:9, 112:13, 128:19 <b>Management</b> [7] - 14:10, 15:11, 18:10, 128:17, 128:25, 129:9, 142:25 <b>management</b> [5] - 29:16, 77:3, 112:1, 128:24, 170:24 <b>manager</b> [4] - 14:4, 111:8, 112:15, 112:20 <b>Map</b> [1] - 125:25 <b>map</b> [23] - 47:16, 80:24, 82:18, 82:21, 104:4, 114:6, 114:7, 115:20, 118:4, 124:8, 125:22, 127:20, 134:22, 134:23, 135:3, 136:24, 139:21, 143:3, 152:16, 189:15, 191:22, 192:16, 192:17 <b>mapping</b> [1] - 117:18 <b>maps</b> [4] - 192:3, 192:11, 192:13, 194:15 <b>March</b> [1] - 97:3 <b>Mark Moench</b> [1] - 8:20 <b>markets</b> [2] - 37:2, 79:16 <b>Mart</b> [7] - 146:8, 146:14, 146:16, 187:20, 188:2, 188:20, 189:18 <b>match</b> [1] - 130:8 <b>material</b> [1] - 145:23 <b>Matt Moscon</b> [1] - 8:15 <b>matter</b> [6] - 13:10, 15:9, 62:12, 182:18, 202:3, 202:16 <b>matters</b> [1] - 4:16</p>	<p><b>maxim</b> [1] - 23:17 <b>maximize</b> [1] - 145:4 <b>maximizes</b> [1] - 198:4 <b>maximum</b> [9] - 53:6, 53:7, 81:5, 91:4, 91:13, 91:15, 104:9, 104:10, 180:17 <b>MAY</b> [1] - 4:1 <b>MAYOR</b> [1] - 191:6 <b>Mayor</b> [2] - 188:14, 190:7 <b>Mayor Johnson</b> [14] - 94:4, 94:6, 185:23, 185:24, 186:11, 187:2, 187:14, 187:16, 188:5, 189:3, 189:22, 190:6, 190:9, 196:24 <b>mean</b> [27] - 36:4, 36:9, 49:7, 74:7, 74:8, 79:22, 87:22, 87:23, 87:24, 95:6, 104:15, 108:23, 109:5, 130:14, 141:23, 162:24, 166:12, 170:1, 170:6, 173:15, 177:8, 178:18, 179:20, 180:6, 197:6, 204:15 <b>meaning</b> [1] - 166:15 <b>means</b> [4] - 39:3, 98:4, 109:3, 124:22 <b>meant</b> [1] - 108:4 <b>measured</b> [2] - 16:24, 182:1 <b>measures</b> [1] - 170:22 <b>meet</b> [27] - 33:16, 38:6, 86:15, 108:17, 113:2, 113:24, 117:23, 118:16, 125:18, 128:24, 129:5, 133:23, 138:13, 143:20, 147:9, 155:10, 155:11, 156:25, 157:6, 157:7, 157:17, 158:20, 171:6, 173:2, 173:6, 174:20, 175:21 <b>meeting</b> [6] - 132:10, 133:21, 166:22, 167:9, 172:3, 172:4 <b>meetings</b> [8] - 132:2, 132:6, 132:11, 142:14, 166:17, 166:19, 167:10, 172:5 <b>meets</b> [2] - 38:13, 157:15 <b>megawatt</b> [1] - 99:11 <b>megawatts</b> [20] -</p>	<p>30:23, 30:25, 42:11, 43:6, 44:20, 44:22, 50:1, 50:2, 51:16, 51:17, 51:23, 52:24, 53:13, 54:11, 54:13, 54:21, 72:4, 99:13, 102:23 <b>member</b> [1] - 7:12 <b>members</b> [8] - 4:7, 7:5, 8:11, 17:10, 19:25, 25:11, 94:3, 185:22 <b>mentioned</b> [22] - 20:6, 23:2, 35:4, 35:22, 36:19, 50:1, 54:5, 58:18, 59:17, 64:20, 69:17, 75:22, 85:15, 98:25, 101:8, 103:7, 108:23, 127:3, 165:2, 176:18, 180:1, 190:25 <b>merely</b> [3] - 6:8, 18:15, 19:9 <b>met</b> [5] - 14:14, 132:16, 137:3, 137:10, 138:11 <b>methodology</b> [1] - 84:3 <b>metropolitan</b> [1] - 31:15 <b>Microbursts</b> [1] - 106:11 <b>microphone</b> [1] - 199:4 <b>Mid</b> [1] - 47:20 <b>middle</b> [1] - 41:7 <b>Middle</b> [6] - 135:9, 140:5, 140:7, 148:15, 149:1, 149:14 <b>Midpoint</b> [1] - 78:11 <b>might</b> [11] - 7:21, 31:18, 52:12, 52:15, 62:8, 94:20, 94:22, 95:25, 153:22, 166:12, 201:19 <b>mike</b> [1] - 111:12 <b>mile</b> [28] - 59:20, 60:1, 81:8, 83:23, 84:23, 85:8, 95:24, 95:25, 96:8, 96:9, 100:2, 100:7, 100:8, 100:14, 100:21, 132:3, 132:4, 175:14, 176:9, 180:10, 186:6, 196:25, 197:2, 197:7, 197:13 <b>miles</b> [32] - 11:3, 11:5, 11:8, 11:10, 11:11, 11:13, 11:15, 26:19, 59:23, 60:1, 61:4, 85:7, 85:9, 93:16, 95:13, 108:9,</p>	<p>108:10, 124:12, 125:23, 128:1, 144:24, 145:3, 145:17, 147:1, 149:16, 173:7, 175:12, 176:2, 180:10, 188:2 <b>Millard</b> [1] - 101:23 <b>million</b> [21] - 10:17, 15:2, 24:5, 24:11, 24:13, 84:20, 96:7, 96:8, 96:9, 96:10, 145:25, 187:23, 188:4, 197:1, 197:2, 197:7, 197:13, 197:14 <b>millions</b> [1] - 25:25 <b>mind</b> [4] - 21:24, 151:11, 178:10, 189:23 <b>minds</b> [1] - 20:17 <b>mine</b> [1] - 141:1 <b>mineral</b> [2] - 168:6, 178:2 <b>minerals</b> [1] - 140:24 <b>minimize</b> [5] - 100:25, 101:2, 128:14, 148:24, 151:6 <b>minimizes</b> [1] - 39:4 <b>minimizing</b> [1] - 81:18 <b>minimum</b> [16] - 81:4, 81:6, 83:16, 83:22, 90:9, 91:10, 92:22, 93:8, 100:2, 100:8, 107:10, 143:20, 160:17, 174:16, 175:13, 176:4 <b>minimum-mile</b> [1] - 100:2 <b>mining</b> [1] - 140:15 <b>minor</b> [1] - 128:12 <b>minus</b> [2] - 95:7, 95:15 <b>minute</b> [6] - 10:12, 85:2, 85:15, 105:5, 153:11, 159:13 <b>minutes</b> [3] - 4:24, 70:17 <b>mirrors</b> [1] - 163:12 <b>missed</b> [1] - 72:17 <b>misspoke</b> [2] - 85:20, 148:21 <b>mistake</b> [1] - 201:14 <b>mitigate</b> [3] - 90:16, 129:23, 158:20 <b>mitigation</b> [10] - 90:15, 121:24, 122:1, 130:2, 143:15, 158:9, 170:22, 192:9, 193:16, 193:22 <b>mitigations</b> [4] -</p>	
<b>M</b>					
<p><b>magical</b> [1] - 177:7 <b>Magna</b> [1] - 120:2 <b>magnitude</b> [2] - 17:25, 186:15 <b>mailed</b> [1] - 132:2</p>					

<p>152:8, 158:2, 158:17, 168:23  <b>Mitigations</b> [1] - 122:11  <b>moat</b> [1] - 146:17  <b>mode</b> [7] - 39:5, 44:11, 44:18, 47:5, 59:4, 103:15  <b>modify</b> [2] - 11:4, 129:5  <b>modifying</b> [1] - 13:1  <b>MOENCH</b> [1] - 8:20  <b>Moench</b> [1] - 6:22  <b>moment</b> [7] - 27:21, 39:8, 43:13, 48:12, 51:9, 57:18, 62:24  <b>Mona</b> [48] - 19:20, 26:16, 36:6, 37:23, 39:14, 44:9, 45:19, 45:21, 45:24, 46:17, 46:18, 47:7, 47:15, 48:11, 50:11, 51:21, 53:2, 55:16, 55:25, 57:9, 57:15, 71:16, 71:18, 73:9, 74:1, 75:5, 77:22, 78:3, 80:16, 97:9, 99:10, 102:18, 105:19, 112:23, 114:15, 114:24, 115:22, 116:12, 117:8, 118:7, 124:10, 124:12, 127:20, 127:21, 127:24, 176:21, 181:18  <b>Mona-Oquirrh</b> [9] - 19:20, 44:9, 46:17, 50:11, 55:16, 55:25, 57:9, 71:16, 102:18  <b>Mona-to-Camp</b> [1] - 118:7  <b>Mona-to-Oquirrh</b> [3] - 57:15, 74:1, 181:18  <b>Mona-to-Terminal</b> [1] - 102:18  <b>money</b> [1] - 178:3  <b>Montana</b> [3] - 41:3, 41:4, 78:10  <b>months</b> [3] - 66:20, 141:13, 182:1  <b>more or less</b> [1] - 145:14  <b>morning</b> [8] - 4:4, 28:19, 31:12, 52:13, 63:10, 90:20, 206:5  <b>Moscon</b> [5] - 6:18, 110:21, 111:20, 199:10, 204:12  <b>MOSCON</b> [25] - 4:20, 6:16, 8:15, 9:11, 9:16, 27:14, 27:21, 28:3,</p>	<p>28:16, 70:5, 104:22, 104:24, 109:14, 110:2, 110:10, 111:2, 158:22, 198:20, 198:22, 199:5, 199:8, 203:8, 204:13, 204:24, 205:20  <b>Most</b> [4] - 6:20, 31:4, 83:5, 106:8  <b>most</b> [20] - 4:23, 14:13, 21:3, 21:10, 24:25, 75:17, 79:12, 84:11, 87:9, 89:3, 105:17, 114:21, 119:16, 141:12, 157:14, 163:11, 167:4, 168:19, 194:5  <b>Mother</b> [2] - 65:13, 65:21  <b>mother</b> [1] - 43:2  <b>motives</b> [1] - 15:19  <b>motors</b> [1] - 98:7  <b>mountain</b> [8] - 21:16, 21:19, 114:21, 116:10, 116:11, 135:8, 141:9, 169:9  <b>Mountain</b> [3] - 47:19, 56:12, 115:7  <b>Mountain's</b> [2] - 22:15, 22:22  <b>mountainous</b> [1] - 168:20  <b>mountains</b> [4] - 61:2, 77:6, 93:11, 139:20  <b>Mountains</b> [4] - 21:23, 22:5, 127:23, 190:21  <b>mounted</b> [1] - 183:24  <b>mouth</b> [1] - 108:24  <b>Move</b> [1] - 132:24  <b>move</b> [27] - 7:9, 9:9, 11:4, 32:7, 40:17, 41:23, 42:11, 45:7, 52:10, 52:16, 55:10, 55:18, 70:6, 72:4, 82:8, 115:6, 123:4, 125:1, 134:10, 135:8, 139:1, 139:14, 142:14, 158:23, 193:3, 193:10, 193:23  <b>moved</b> [16] - 11:10, 11:12, 55:17, 75:7, 76:10, 80:6, 95:11, 112:12, 138:9, 143:23, 172:6, 172:11, 192:10, 193:19, 193:21, 193:24  <b>Moves</b> [1] - 196:11  <b>moves</b> [5] - 42:9, 57:8, 94:13, 125:3, 204:9</p>	<p><b>moving</b> [13] - 60:7, 124:21, 127:3, 135:18, 135:23, 144:22, 150:14, 188:1, 189:24, 193:16, 193:18, 197:21, 204:7  <b>mudslide</b> [1] - 88:22  <b>multi</b> [2] - 24:11, 24:13  <b>multi-million-dollar</b> [2] - 24:11, 24:13  <b>multiple</b> [3] - 59:5, 64:10, 108:2  <b>Multnomah</b> [1] - 28:20  <b>must</b> [1] - 17:13  <b>mustard</b> [2] - 161:25, 162:25  <b>mustard-color</b> [1] - 161:25</p> <p style="text-align: center;"><b>N</b></p> <p><b>name</b> [6] - 4:7, 9:4, 28:17, 28:19, 111:4, 111:6  <b>names</b> [1] - 194:7  <b>narrow</b> [1] - 113:18  <b>narrower</b> [1] - 106:4  <b>narrowest</b> [1] - 82:24  <b>National</b> [1] - 112:6  <b>Nature</b> [2] - 65:13, 65:22  <b>nature</b> [2] - 43:2, 192:17  <b>near</b> [14] - 41:9, 47:18, 115:22, 124:15, 127:20, 128:17, 134:10, 135:25, 138:10, 142:22, 149:12, 187:21, 188:2, 193:5  <b>nearing</b> [1] - 38:2  <b>nearly</b> [1] - 55:6  <b>necessarily</b> [3] - 26:25, 79:4, 82:1  <b>necessary</b> [6] - 48:1, 48:5, 48:8, 48:9, 103:24, 119:20  <b>necessitated</b> [1] - 180:2  <b>need</b> [59] - 5:10, 5:13, 6:1, 6:10, 8:2, 8:7, 11:20, 11:23, 11:24, 12:16, 12:19, 13:23, 20:21, 20:23, 33:1, 33:6, 33:8, 33:13, 43:24, 49:4, 57:10, 57:16, 59:8,</p>	<p>59:9, 59:10, 62:17, 62:19, 63:4, 63:8, 63:11, 69:13, 69:14, 70:2, 73:2, 73:11, 73:14, 78:17, 78:23, 79:5, 93:23, 94:22, 98:19, 108:3, 111:10, 111:16, 116:14, 117:9, 117:24, 119:9, 122:18, 125:6, 133:22, 160:10, 160:16, 186:19, 190:1, 201:16  <b>needed</b> [9] - 26:18, 72:18, 72:21, 73:4, 73:7, 73:22, 98:7, 101:3, 123:24  <b>needful</b> [1] - 181:25  <b>needing</b> [1] - 180:8  <b>Needs</b> [1] - 72:11  <b>needs</b> [17] - 12:10, 12:25, 13:14, 27:7, 33:16, 49:4, 62:14, 62:19, 86:15, 105:8, 113:2, 113:3, 147:9, 157:6, 157:16, 157:18, 202:24  <b>negate</b> [1] - 93:17  <b>negative</b> [1] - 133:8  <b>neglected</b> [1] - 205:1  <b>negotiate</b> [1] - 24:22  <b>negotiated</b> [1] - 122:12  <b>NEPA</b> [3] - 119:17, 201:25, 202:8  <b>Nephi</b> [2] - 120:3, 132:7  <b>NERC</b> [2] - 34:15, 34:19  <b>nervous</b> [1] - 90:24  <b>network</b> [1] - 43:7  <b>neutral</b> [1] - 15:13  <b>Nevada</b> [4] - 37:3, 40:22, 49:23, 79:2  <b>never</b> [8] - 65:13, 91:4, 126:25, 174:20, 188:18, 189:1, 189:13, 191:14  <b>Nevertheless</b> [1] - 12:21  <b>new</b> [26] - 12:17, 32:3, 36:13, 38:9, 46:6, 67:14, 76:1, 79:20, 84:21, 84:22, 85:10, 92:2, 99:17, 99:19, 100:7, 102:22, 118:14, 124:10, 124:13, 128:20, 129:25, 155:20, 155:25, 156:14, 174:5, 195:3</p>	<p><b>next</b> [22] - 19:6, 29:23, 35:19, 42:7, 42:22, 43:22, 44:8, 52:1, 54:20, 56:15, 66:3, 77:13, 91:23, 95:14, 106:24, 107:15, 117:14, 118:24, 148:22, 151:8, 179:10, 179:11  <b>next-step</b> [1] - 95:14  <b>nice</b> [1] - 178:21  <b>night</b> [1] - 190:11  <b>nine</b> [1] - 175:12  <b>No. 2</b> [3] - 75:5, 75:7, 75:23  <b>NOMA</b> [2] - 128:25, 142:24  <b>non</b> [4] - 57:15, 58:19, 58:20, 81:18  <b>non-engineer</b> [1] - 81:18  <b>non-engineering</b> [2] - 57:15, 58:19  <b>non-engineers</b> [1] - 58:20  <b>None</b> [2] - 70:12, 159:4  <b>normal</b> [1] - 42:8  <b>normally</b> [2] - 166:23, 186:17  <b>North</b> [10] - 28:22, 28:23, 34:16, 38:6, 93:9, 111:7, 128:17, 128:25, 129:8, 142:24  <b>north</b> [44] - 46:20, 56:10, 56:19, 61:1, 62:22, 75:8, 76:10, 77:17, 78:6, 78:8, 78:10, 78:20, 78:22, 79:3, 80:5, 80:7, 80:8, 80:14, 103:25, 104:3, 104:14, 104:15, 115:6, 115:22, 128:1, 134:10, 135:24, 138:9, 140:12, 142:15, 143:6, 143:23, 150:21, 162:5, 172:6, 173:2, 173:5, 180:19, 189:11, 189:19, 190:24, 191:1, 191:16, 192:20  <b>northeast</b> [1] - 115:10  <b>Northeast</b> [1] - 28:20  <b>northern</b> [3] - 115:9, 117:9, 172:21  <b>northwest</b> [4] - 37:12, 135:19, 138:10, 189:10  <b>Northwest</b> [1] -</p>
--	--	--	--	--



<p>84:16  <b>note</b> [1] - 204:15  <b>noted</b> [1] - 83:8  <b>notes</b> [1] - 84:1  <b>nothing</b> [5] - 6:9,  6:10, 8:12, 22:9, 65:3  <b>notice</b> [8] - 19:21,  21:25, 44:7, 116:25,  119:23, 162:24,  194:18  <b>noticed</b> [4] - 4:5,  21:7, 72:14, 119:22  <b>notification</b> [1] -  131:23  <b>notified</b> [1] - 131:11  <b>notify</b> [1] - 132:5  <b>notwithstanding</b> [1]  - 145:13  <b>November</b> [1] -  120:5  <b>number</b> [20] - 18:25,  29:9, 30:5, 53:3, 53:9,  53:13, 54:25, 63:18,  64:6, 83:4, 83:24,  85:15, 86:16, 87:18,  137:7, 176:7, 184:25,  191:23, 196:16, 197:5  <b>numbers</b> [6] - 84:2,  88:5, 188:18, 188:19,  197:14, 198:17  <b>numerous</b> [2] -  22:22, 23:13</p>	<p><b>occurrences</b> [2] -  63:16, 64:9  <b>occurs</b> [1] - 105:9  <b>October</b> [1] - 119:24  <b>OF</b> [1] - 191:6  <b>off-peak</b> [1] - 52:18  <b>offend</b> [1] - 144:19  <b>offer</b> [1] - 204:16  <b>offered</b> [2] - 6:12,  180:14  <b>office</b> [4] - 28:22,  28:23, 174:6  <b>Office</b> [1] - 9:3  <b>officers</b> [1] - 34:5  <b>offices</b> [1] - 34:4  <b>official</b> [3] - 134:13,  189:13, 191:15  <b>officially</b> [2] - 20:22,  119:22  <b>often</b> [2] - 63:25,  65:22  <b>oftentimes</b> [1] -  181:25  <b>Ogden</b> [1] - 41:9  <b>old</b> [1] - 192:17  <b>omitted</b> [1] - 72:17  <b>once</b> [8] - 59:6,  78:19, 95:11, 119:19,  122:5, 165:3, 170:11,  175:15  <b>Once</b> [4] - 104:12,  119:1, 121:13, 126:12  <b>one</b> [126] - 10:4,  15:7, 20:22, 21:11,  21:21, 24:10, 24:15,  27:23, 31:16, 32:19,  34:13, 35:25, 37:12,  41:18, 42:23, 43:15,  43:16, 43:19, 45:15,  49:12, 51:25, 52:11,  52:14, 52:21, 55:21,  55:24, 56:17, 56:19,  56:24, 57:23, 60:5,  60:21, 63:13, 64:19,  65:10, 65:13, 65:14,  66:4, 68:14, 74:19,  74:25, 81:8, 81:19,  82:2, 82:3, 83:23,  84:11, 86:6, 86:7,  87:8, 87:13, 88:19,  88:23, 88:24, 89:4,  89:8, 89:9, 89:10,  89:13, 90:22, 91:7,  100:3, 100:8, 102:15,  103:1, 103:19, 104:2,  107:25, 108:3,  109:25, 116:9, 117:3,  117:20, 120:4,  124:18, 126:18,  130:12, 139:18,  141:22, 142:13,</p>	<p>147:1, 151:9, 152:24,  152:25, 155:4, 158:5,  160:18, 161:21,  163:13, 163:16,  164:13, 164:16,  166:12, 166:13,  168:4, 168:12, 169:1,  169:6, 170:4, 170:7,  172:4, 176:7, 176:8,  180:1, 180:4, 184:15,  187:4, 187:19,  188:11, 189:22,  191:20, 191:21,  191:25, 192:1, 194:9,  194:15, 201:8,  201:20, 202:4,  203:11, 203:15,  204:3, 204:7, 205:13  <b>One</b> [12] - 31:15,  32:6, 62:8, 68:13,  71:4, 73:7, 89:2,  106:15, 123:17,  139:14, 204:25  <b>one-mile</b> [1] - 100:8  <b>ones</b> [6] - 113:25,  122:4, 134:11, 139:7,  139:18, 147:19  <b>online</b> [4] - 46:9,  46:25, 48:23, 54:16  <b>open</b> [8] - 21:19,  26:1, 33:5, 33:24,  95:22, 100:20,  105:23, 131:25  <b>Open</b> [2] - 33:19,  33:22  <b>open-access</b> [1] -  33:5  <b>opening statement</b>  [1] - 4:25  <b>opening</b>  <b>statements</b> [2] - 6:25,  9:8  <b>operate</b> [11] - 38:12,  39:19, 43:15, 53:21,  54:1, 54:18, 54:19,  95:21, 104:9, 157:2,  176:1  <b>operated</b> [2] - 42:2,  104:10  <b>operates</b> [2] - 29:19,  37:11  <b>operating</b> [7] - 51:5,  52:2, 53:22, 56:15,  103:8, 155:13, 157:1  <b>operation</b> [4] -  29:20, 141:7, 148:7,  148:14  <b>operation's</b> [1] -  140:23  <b>operational</b> [4] -  55:24, 57:16, 91:20,  138:13</p>	<p><b>operations</b> [4] -  42:8, 140:14, 148:10,  148:13  <b>operator</b> [1] - 42:17  <b>operators</b> [1] - 54:2  <b>opinion</b> [3] - 91:17,  169:11, 176:23  <b>opinions</b> [2] - 6:4,  6:12  <b>opponents</b> [2] - 7:4,  7:9  <b>opportunities</b> [1] -  117:19  <b>opportunity</b> [6] - 6:3,  7:3, 7:7, 7:11, 8:4,  8:10  <b>opposed</b> [4] - 11:21,  25:3, 149:19, 167:7  <b>opposing</b> [3] - 19:14,  70:8, 159:1  <b>opposition</b> [6] -  133:11, 149:20,  166:10, 166:25,  167:12  <b>optimize</b> [1] - 62:4  <b>optimum</b> [2] - 76:5  <b>option</b> [7] - 142:12,  142:13, 146:4, 146:6,  174:22, 178:6, 203:10  <b>Option</b> [4] - 147:4,  147:7, 202:3  <b>options</b> [7] - 5:19,  36:18, 37:5, 55:14,  55:18, 102:14, 135:23  <b>Oquirrh</b> [62] - 19:20,  26:18, 37:24, 44:9,  45:5, 45:20, 46:1,  46:13, 46:17, 46:21,  50:11, 55:16, 55:25,  57:9, 57:15, 60:23,  61:3, 61:11, 61:14,  61:15, 62:10, 62:12,  62:15, 62:21, 63:8,  68:14, 69:2, 71:16,  73:12, 74:1, 75:5,  75:23, 76:12, 76:16,  76:22, 77:7, 99:10,  100:4, 100:7, 102:18,  112:24, 114:16,  117:10, 128:17,  128:25, 129:8, 135:2,  136:3, 140:12,  142:19, 142:21,  142:24, 144:24,  144:25, 146:11,  147:11, 148:2, 176:2,  181:18, 198:5  <b>Oquirrhs</b> [1] - 116:12  <b>orange</b> [3] - 128:18,  135:11, 137:1  <b>order</b> [6] - 11:20,</p>	<p>25:18, 63:12, 118:13,  145:4, 182:8  <b>orders</b> [1] - 25:11  <b>Oregon</b> [3] - 28:21,  69:12, 78:4  <b>organization</b> [1] -  80:19  <b>original</b> [1] - 96:24  <b>originally</b> [1] -  192:12  <b>otherwise</b> [2] -  24:22, 56:4  <b>outage</b> [11] - 38:25,  43:2, 44:11, 46:23,  53:24, 66:14, 84:13,  84:17, 84:21, 103:14  <b>outages</b> [13] - 39:5,  47:6, 55:4, 56:4, 58:2,  59:4, 63:20, 64:7,  67:16, 67:20, 89:23,  157:5  <b>outcome</b> [2] -  123:11, 152:9  <b>outguess</b> [1] - 65:13  <b>outline</b> [1] - 194:12  <b>Outlined</b> [1] - 156:24  <b>outlined</b> [3] - 99:9,  155:11, 194:15  <b>outset</b> [1] - 160:12  <b>outside</b> [1] - 64:17  <b>Overall</b> [1] - 138:1  <b>overall</b> [4] - 40:2,  68:4, 112:21, 133:4  <b>overhead</b> [1] - 197:1  <b>Overlake</b> [1] - 137:10  <b>own</b> [5] - 33:23,  38:11, 121:6, 173:8,  185:25  <b>owned</b> [3] - 177:7,  177:16, 177:21  <b>owner</b> [1] - 195:12  <b>owners</b> [1] - 204:8  <b>owns</b> [3] - 29:19,  37:11, 177:16</p>
<b>O</b>				
<p><b>object</b> [1] - 191:5  <b>objection</b> [3] - 21:1,  159:2, 191:11  <b>objections</b> [3] - 21:8,  70:10, 163:25  <b>obligated</b> [3] - 33:25,  182:24, 182:25  <b>obligation</b> [1] - 33:14  <b>observe</b> [1] - 206:12  <b>obtain</b> [5] - 59:24,  116:18, 132:23,  154:16, 154:18  <b>obtained</b> [4] -  117:17, 154:25,  155:3, 187:22  <b>obtaining</b> [2] -  115:14, 182:21  <b>obvious</b> [3] - 98:1,  162:25, 170:12  <b>obviously</b> [5] - 6:9,  88:2, 171:14, 173:15,  179:23  <b>occasions</b> [1] - 83:8  <b>occurred</b> [3] -  103:21, 132:16,  151:14</p>				
<b>P</b>				
				<p><b>p.m</b> [3] - 110:6,  159:15, 206:14  <b>paced</b> [1] - 118:11  <b>PacifiCorp</b> [5] - 8:21,  29:9, 29:14, 29:19,  112:11  <b>packets</b> [1] - 110:13  <b>page</b> [4] - 42:15,  64:13, 66:23, 163:6  <b>pair</b> [2] - 91:1, 91:2  <b>pairs</b> [2] - 91:6,  91:16  <b>Palo</b> [2] - 66:10,</p>

<p>66:14 <b>pants</b> [1] - 90:21 <b>parallel</b> [7] - 79:5, 82:17, 93:8, 122:19, 147:2, 160:18, 173:5 <b>paralleled</b> [1] - 127:25 <b>paralleling</b> [1] - 128:21 <b>parameters</b> [2] - 86:13, 152:6 <b>part</b> [35] - 9:21, 15:1, 26:24, 26:25, 31:19, 42:23, 47:23, 47:24, 61:17, 61:18, 83:1, 91:23, 97:11, 101:12, 101:17, 102:24, 120:7, 125:12, 131:15, 139:1, 141:21, 145:5, 149:10, 149:18, 158:12, 160:22, 161:14, 178:24, 182:21, 183:2, 183:13, 184:13, 184:14, 185:9, 187:12 <b>Part</b> [1] - 102:15 <b>participate</b> [1] - 120:11 <b>participation</b> [1] - 206:11 <b>particular</b> [6] - 10:5, 11:24, 24:6, 65:1, 91:14, 161:24 <b>particularly</b> [1] - 80:2 <b>parties</b> [5] - 5:1, 5:10, 5:13, 5:15, 132:3 <b>parts</b> [4] - 35:25, 63:2, 63:3 <b>party</b> [4] - 5:20, 15:14, 33:4 <b>pass</b> [1] - 158:24 <b>Pass</b> [2] - 76:18, 135:21 <b>passed</b> [2] - 38:10, 185:12 <b>past</b> [3] - 21:24, 111:25, 156:2 <b>path</b> [16] - 13:7, 41:6, 41:11, 41:14, 41:15, 41:16, 46:14, 48:14, 48:15, 60:16, 76:23, 101:15, 101:19, 109:4, 109:7, 109:10 <b>paths</b> [7] - 30:13, 30:16, 30:20, 31:7, 40:21, 104:5, 117:13 <b>patience</b> [3] - 70:19, 109:20, 109:22</p>	<p><b>paused</b> [1] - 83:9 <b>pay</b> [2] - 187:11, 187:13 <b>paying</b> [1] - 196:15 <b>peak</b> [7] - 52:18, 53:3, 56:23, 141:2, 141:3, 141:19, 141:20 <b>people</b> [19] - 16:22, 17:9, 20:15, 26:19, 27:2, 30:14, 33:24, 65:3, 79:12, 94:13, 101:10, 124:23, 165:12, 166:19, 166:22, 166:25, 167:6, 172:17, 202:14 <b>per</b> [2] - 95:24, 95:25 <b>percent</b> [16] - 26:23, 32:8, 32:10, 49:14, 55:6, 56:22, 61:9, 61:23, 62:1, 62:5, 62:17, 68:7, 89:22, 93:5, 95:7, 95:15 <b>percentage</b> [1] - 26:22 <b>perform</b> [3] - 90:15, 91:25, 109:12 <b>performance</b> [10] - 35:24, 42:18, 59:15, 75:24, 84:8, 85:23, 88:15, 88:19, 90:12, 102:16 <b>performing</b> [1] - 101:15 <b>performs</b> [2] - 90:14, 121:19 <b>Perhaps</b> [1] - 159:11 <b>perhaps</b> [1] - 6:6 <b>perimeter</b> [1] - 31:21 <b>period</b> [4] - 66:19, 91:11, 148:4, 181:10 <b>periods</b> [1] - 64:1 <b>permission</b> [1] - 28:10 <b>permit</b> [15] - 13:14, 22:19, 25:9, 59:20, 69:10, 69:21, 113:13, 149:21, 155:25, 158:21, 180:6, 180:14, 180:25, 182:7, 182:9 <b>Permit</b> [7] - 11:25, 155:8, 157:17, 158:3, 158:13, 158:15, 194:2 <b>permissibility</b> [1] - 182:20 <b>permits</b> [8] - 154:15, 154:17, 154:21, 154:22, 154:24, 155:1, 155:5, 182:21 <b>permitted</b> [7] - 113:1, 119:12, 130:5,</p>	<p>140:14, 140:15, 140:23, 143:23 <b>permitting</b> [6] - 67:6, 95:18, 119:17, 125:16, 157:13, 161:14 <b>person</b> [1] - 166:13 <b>personally</b> [3] - 12:8, 80:24, 190:5 <b>persons</b> [1] - 17:23 <b>perspective</b> [2] - 62:6, 62:7 <b>persuade</b> [1] - 24:22 <b>petition</b> [6] - 12:15, 22:15, 22:22, 25:8, 74:10, 75:11 <b>photo</b> [3] - 153:17, 178:15, 179:13 <b>photograph</b> [1] - 106:16 <b>photographs</b> [3] - 200:22, 201:5, 204:20 <b>photos</b> [1] - 178:11 <b>phrase</b> [1] - 31:13 <b>physical</b> [2] - 40:16, 97:23 <b>physics</b> [1] - 97:23 <b>pick</b> [2] - 32:9, 106:25 <b>picked</b> [3] - 52:22, 53:13, 141:18 <b>picture</b> [13] - 20:11, 30:7, 49:13, 65:12, 66:3, 71:6, 77:14, 83:21, 89:12, 89:21, 101:14, 125:9, 152:21 <b>pictures</b> [8] - 64:18, 87:23, 88:3, 105:10, 105:25, 153:15, 153:23, 154:10 <b>piece</b> [2] - 37:21, 169:8 <b>pilots</b> [1] - 66:13 <b>pinch</b> [1] - 181:14 <b>pit</b> [1] - 148:7 <b>pits</b> [2] - 148:8, 148:11 <b>placate</b> [1] - 174:17 <b>place</b> [5] - 4:5, 16:4, 72:1, 174:24, 198:3 <b>placed</b> [7] - 61:21, 61:22, 74:11, 74:14, 75:15, 173:14, 173:17 <b>placement</b> [2] - 75:12, 174:14 <b>places</b> [2] - 132:7, 175:25 <b>placing</b> [1] - 35:14 <b>Plan</b> [6] - 32:1, 33:12, 36:21, 36:23, 97:2, 104:2</p>	<p><b>plan</b> [41] - 5:1, 10:18, 32:2, 32:15, 32:20, 32:25, 33:2, 33:7, 33:8, 33:10, 33:13, 33:16, 33:21, 34:2, 34:6, 34:8, 34:13, 34:22, 34:25, 35:18, 43:20, 58:22, 72:24, 73:17, 73:18, 78:9, 79:11, 90:1, 98:22, 98:25, 99:15, 104:13, 128:24, 152:7, 164:6, 171:24, 176:16, 183:24, 195:15, 206:2 <b>plane</b> [4] - 105:12, 106:16, 106:19, 106:20 <b>planes</b> [1] - 66:12 <b>planned</b> [12] - 56:4, 71:21, 72:19, 78:2, 79:17, 80:25, 81:1, 99:4, 99:13, 102:9, 104:3, 145:19 <b>planner</b> [11] - 42:16, 43:14, 44:25, 46:5, 61:8, 62:4, 76:3, 85:22, 106:2, 106:17, 107:9 <b>Planner</b> [2] - 158:3, 158:12 <b>planners</b> [1] - 80:22 <b>Planning</b> [6] - 20:13, 20:15, 25:4, 42:15, 57:3, 158:14 <b>planning</b> [19] - 7:20, 12:7, 29:22, 32:14, 32:21, 34:11, 59:12, 80:20, 80:21, 85:8, 85:19, 85:21, 86:22, 87:3, 87:7, 99:22, 107:12, 121:24 <b>plans</b> [10] - 34:11, 34:19, 73:9, 77:22, 78:8, 80:11, 116:17, 116:18, 201:3 <b>plant</b> [2] - 41:13, 143:19 <b>plants</b> [6] - 49:20, 50:13, 79:16, 97:11, 112:11 <b>Plants</b> [1] - 58:13 <b>plating</b> [1] - 94:22 <b>play</b> [1] - 184:9 <b>played</b> [1] - 117:22 <b>playing</b> [2] - 153:11, 203:11 <b>pleasure</b> [1] - 27:22 <b>Plus</b> [1] - 158:5 <b>plus</b> [3] - 26:11, 95:6, 95:15 <b>podium</b> [1] - 9:12</p>	<p><b>point</b> [65] - 8:5, 15:6, 25:10, 28:8, 30:3, 31:1, 31:23, 32:6, 38:14, 39:1, 45:3, 49:15, 50:3, 50:22, 52:25, 57:25, 64:19, 73:14, 77:6, 77:11, 78:18, 81:24, 81:25, 82:24, 86:11, 88:7, 88:17, 89:15, 90:18, 95:10, 95:17, 99:4, 99:23, 100:24, 102:1, 102:15, 105:5, 105:6, 108:22, 116:9, 117:20, 121:14, 121:16, 121:19, 122:21, 123:6, 131:1, 139:20, 139:22, 142:20, 143:5, 143:19, 153:4, 167:5, 172:21, 173:23, 175:9, 178:13, 181:14, 183:12, 185:6, 193:20, 196:10 <b>Point</b> [9] - 21:23, 22:5, 47:18, 56:11, 83:10, 83:13, 83:17, 93:10 <b>pointed</b> [4] - 107:17, 116:11, 156:23, 175:2 <b>pointer</b> [8] - 30:18, 46:12, 114:13, 149:9, 162:20, 173:12, 198:24, 199:13 <b>pointing</b> [2] - 139:21, 162:24 <b>points</b> [1] - 141:10 <b>poles</b> [6] - 153:23, 154:3, 179:10, 179:12, 179:15, 179:16 <b>Poor</b> [1] - 98:16 <b>poor</b> [3] - 164:10, 164:15, 172:24 <b>populated</b> [2] - 26:17, 165:11 <b>population</b> [6] - 118:12, 130:19, 165:8, 165:10, 199:22, 200:5 <b>Populus</b> [5] - 37:4, 38:1, 39:14, 78:9, 125:12 <b>Populus-Terminal</b> [1] - 125:12 <b>portion</b> [10] - 4:12, 5:9, 5:12, 45:14, 101:22, 103:4, 117:9, 180:9, 183:22, 186:25 <b>portions</b> [1] - 4:13 <b>Portland</b> [1] - 28:21 <b>position</b> [4] - 10:10,</p>
---	---	---	--	---

<p>57:8, 111:5, 184:25 <b>positions</b> [2] - 22:18, 29:14 <b>positive</b> [1] - 133:5 <b>possibilities</b> [1] - 185:3 <b>possibility</b> [2] - 106:18, 130:2 <b>possible</b> [25] - 17:21, 82:11, 89:24, 89:25, 95:21, 115:19, 122:1, 129:10, 129:24, 130:2, 145:4, 148:10, 148:25, 154:1, 156:4, 156:11, 156:17, 173:18, 175:6, 175:17, 175:20, 179:22, 186:8, 195:5, 202:5 <b>Possibly</b> [3] - 166:8, 175:20, 184:3 <b>possibly</b> [4] - 169:13, 180:10, 197:8, 198:11 <b>postage</b> [1] - 143:9 <b>potential</b> [29] - 14:14, 82:19, 94:12, 98:5, 113:24, 115:12, 115:21, 115:23, 116:6, 117:4, 117:13, 118:23, 119:9, 124:1, 124:9, 125:23, 131:24, 144:1, 162:1, 162:6, 162:13, 168:17, 168:18, 169:1, 169:5, 169:16, 182:17, 182:18, 189:1 <b>potentially</b> [2] - 64:4, 192:11 <b>Power</b> [3] - 58:13, 78:8, 102:5 <b>power</b> [28] - 10:7, 11:19, 20:11, 23:24, 26:15, 27:1, 29:5, 39:4, 41:13, 42:20, 43:3, 52:14, 53:7, 60:19, 61:13, 67:18, 79:16, 92:9, 92:15, 97:25, 98:3, 98:7, 98:16, 98:20, 112:11, 186:1, 190:17 <b>power company</b> [4] - 10:4, 11:6, 187:5, 187:9 <b>Power's</b> [2] - 30:3, 80:11 <b>practical</b> [3] - 16:14, 17:3, 18:17 <b>practicality</b> [2] - 17:6, 17:17 <b>practically</b> [1] - 19:10</p>	<p><b>practice</b> [1] - 150:17 <b>precious</b> [1] - 34:12 <b>precisely</b> [1] - 60:3 <b>predetermine</b> [1] - 74:3 <b>predicated</b> [1] - 51:2 <b>prefer</b> [1] - 195:13 <b>preference</b> [5] - 9:13, 190:13, 190:15, 190:19, 190:23 <b>Preferred</b> [1] - 163:8 <b>preferred</b> [63] - 18:2, 22:19, 61:5, 61:6, 69:3, 74:5, 122:14, 122:22, 122:24, 122:25, 123:3, 123:15, 124:17, 126:10, 126:19, 126:20, 126:22, 127:1, 127:8, 127:10, 127:16, 127:24, 128:9, 128:22, 130:7, 131:3, 131:6, 131:8, 131:10, 131:14, 131:18, 131:20, 134:24, 134:25, 135:16, 135:22, 136:5, 136:6, 136:25, 137:19, 140:1, 143:1, 147:20, 156:5, 156:7, 156:8, 156:9, 163:21, 192:4, 192:25, 193:14, 195:24, 196:3, 196:8, 196:9, 199:17, 200:7, 200:15, 204:2 <b>prefiled</b> [4] - 70:10, 70:14, 96:25, 159:6 <b>preliminary</b> [2] - 4:16, 117:25 <b>preparation</b> [2] - 15:3, 19:24 <b>prepared</b> [7] - 13:18, 15:10, 30:5, 126:24, 178:11, 188:19, 188:20 <b>preparing</b> [1] - 15:21 <b>present</b> [9] - 4:15, 111:4, 165:19, 165:20, 166:2, 166:18, 177:20, 181:4, 190:8 <b>presentation</b> [2] - 71:3, 159:22 <b>presented</b> [3] - 5:17, 9:25, 120:1 <b>presenting</b> [1] - 103:22 <b>presently</b> [3] - 22:3, 174:5, 175:7 <b>preserve</b> [1] - 102:6</p>	<p><b>president</b> [3] - 12:6, 29:15, 29:17 <b>presidents</b> [1] - 34:5 <b>pretty</b> [6] - 60:17, 96:2, 115:1, 133:13, 143:5, 156:23 <b>prevent</b> [1] - 202:11 <b>previous</b> [1] - 188:12 <b>previously</b> [1] - 105:10 <b>price</b> [3] - 94:23, 174:11, 184:14 <b>primarily</b> [1] - 29:8 <b>Primarily</b> [1] - 104:14 <b>primary</b> [8] - 62:15, 150:1, 150:4, 168:4, 168:5, 168:8, 168:12, 168:13 <b>print</b> [1] - 28:7 <b>prison</b> [1] - 56:11 <b>pristine</b> [1] - 21:12 <b>private</b> [4] - 18:2, 122:25, 131:8, 131:15 <b>problem</b> [12] - 26:20, 87:16, 89:17, 91:5, 98:2, 102:21, 130:3, 141:4, 141:11, 141:19, 172:5, 201:21 <b>procedure</b> [1] - 19:22 <b>Procedures</b> [1] - 6:20 <b>proceed</b> [6] - 4:17, 5:1, 27:12, 28:10, 110:7, 136:2 <b>proceeding</b> [5] - 5:9, 25:23, 26:3, 35:6, 149:23 <b>process</b> [49] - 4:21, 4:23, 5:21, 6:24, 14:7, 80:20, 83:3, 113:16, 113:22, 115:14, 116:2, 117:3, 118:2, 118:10, 118:24, 119:17, 119:18, 120:7, 120:10, 120:11, 120:24, 121:1, 121:4, 121:10, 122:2, 122:3, 122:20, 123:6, 123:10, 123:14, 123:19, 125:3, 125:20, 126:7, 126:9, 126:18, 133:18, 147:13, 147:21, 150:14, 155:20, 156:3, 156:22, 158:3, 158:8, 161:15, 167:14, 195:15, 202:15 <b>produce</b> [2] - 13:4,</p>	<p>13:20 <b>produced</b> [4] - 150:16, 152:18, 153:17, 179:2 <b>professional</b> [1] - 29:1 <b>professionals</b> [1] - 179:3 <b>prohibits</b> [1] - 195:9 <b>project</b> [161] - 9:19, 10:12, 10:15, 10:19, 11:2, 12:11, 12:16, 12:17, 12:25, 13:2, 13:3, 13:9, 13:15, 13:17, 13:24, 14:3, 14:8, 14:11, 14:18, 17:2, 17:22, 17:25, 18:3, 19:20, 20:21, 20:23, 21:1, 23:22, 24:12, 24:14, 24:15, 25:3, 30:1, 34:23, 35:4, 35:5, 35:6, 35:8, 35:10, 35:11, 36:20, 37:15, 37:22, 37:25, 38:1, 38:5, 38:12, 38:23, 39:9, 39:14, 40:12, 40:17, 41:9, 42:4, 42:9, 43:25, 44:10, 45:14, 45:19, 47:11, 47:23, 48:4, 48:5, 48:6, 49:1, 49:4, 51:7, 57:9, 58:22, 59:7, 59:18, 60:22, 67:24, 68:1, 68:17, 68:20, 68:22, 69:7, 69:11, 69:12, 69:16, 70:1, 75:6, 81:11, 84:9, 86:2, 86:15, 93:2, 93:24, 95:18, 98:21, 99:1, 99:11, 100:25, 102:22, 111:8, 112:1, 112:15, 112:19, 112:20, 112:21, 112:23, 113:1, 113:6, 113:9, 113:10, 113:14, 113:18, 114:5, 114:14, 114:22, 117:15, 117:23, 119:4, 119:7, 119:8, 119:12, 119:13, 119:15, 119:22, 119:25, 120:4, 120:11, 121:18, 122:9, 125:12, 125:24, 126:15, 132:5, 132:8, 132:9, 132:16, 132:20, 133:4, 133:22, 148:9, 150:18, 151:12, 151:13, 152:10, 154:17, 155:8,</p>	<p>155:10, 157:13, 160:10, 160:16, 161:9, 161:11, 166:21, 167:16, 170:1, 170:2, 174:7, 181:18, 181:21, 182:16, 183:6, 185:12, 187:4, 201:25 <b>Project</b> [4] - 40:25, 41:5, 48:10, 112:5 <b>projected</b> [1] - 65:14 <b>projecting</b> [1] - 54:9 <b>projections</b> [1] - 69:22 <b>projector</b> [1] - 27:22 <b>projects</b> [17] - 15:23, 40:14, 55:9, 55:12, 68:19, 69:10, 70:1, 80:20, 80:23, 80:25, 81:1, 81:9, 87:12, 94:12, 94:16, 112:10, 112:14 <b>prong</b> [1] - 144:20 <b>prongs</b> [1] - 144:18 <b>proof</b> [1] - 95:11 <b>proper</b> [1] - 19:18 <b>properly</b> [2] - 42:2, 107:16 <b>property</b> [18] - 26:1, 95:8, 102:5, 119:14, 131:8, 138:13, 138:16, 177:7, 177:14, 177:15, 177:16, 177:21, 178:9, 183:15, 183:17, 195:12, 196:16, 204:8 <b>proponent</b> [5] - 16:8, 24:14, 121:4, 123:2, 161:9 <b>proponent's</b> [3] - 119:8, 123:13, 160:9 <b>proponents</b> [1] - 8:14 <b>proposal</b> [3] - 15:16, 16:2, 177:20 <b>proposed</b> [53] - 4:12, 7:4, 19:15, 21:6, 61:6, 68:19, 69:16, 92:20, 93:11, 93:18, 95:13, 103:4, 122:17, 123:3, 124:5, 127:12, 127:15, 127:21, 128:8, 128:20, 128:23, 129:5, 130:8, 131:2, 131:6, 134:6, 134:15, 138:3, 138:20, 139:13, 139:19, 142:4, 145:15, 147:14, 147:25, 153:3, 153:21, 158:9, 160:9,</p>
--	---	--	--	---

<p>165:6, 167:1, 172:8, 173:25, 179:21, 187:5, 192:3, 192:12, 195:3, 197:22, 197:24, 199:16  <b>proposes</b> [1] - 187:5  <b>proposing</b> [2] - 36:14, 153:24  <b>pros</b> [1] - 14:21  <b>protect</b> [2] - 64:1, 67:5  <b>protection</b> [2] - 26:2, 65:7  <b>provide</b> [23] - 7:3, 7:6, 8:3, 10:6, 19:20, 33:20, 33:22, 36:2, 48:9, 71:10, 75:16, 88:10, 88:14, 101:18, 113:4, 116:3, 120:4, 120:14, 124:20, 131:22, 134:3, 200:25  <b>provided</b> [11] - 9:24, 21:20, 64:14, 123:22, 151:22, 151:25, 152:6, 154:10, 156:19, 160:11, 160:23  <b>provider</b> [2] - 32:18, 33:1  <b>providers</b> [1] - 80:13  <b>provides</b> [11] - 5:19, 6:3, 38:23, 39:17, 46:4, 46:17, 48:14, 48:19, 48:24, 49:1, 57:12  <b>providing</b> [4] - 13:6, 115:9, 122:8, 125:5  <b>proximity</b> [8] - 21:13, 22:6, 44:11, 59:1, 59:14, 62:7, 93:3, 107:1  <b>prudence</b> [1] - 91:19  <b>prudent</b> [2] - 32:25, 107:11  <b>prudently</b> [1] - 108:7  <b>public</b> [21] - 5:8, 5:12, 16:23, 17:10, 115:16, 119:25, 120:1, 120:3, 120:16, 122:8, 131:2, 131:11, 131:22, 131:23, 131:25, 132:8, 132:10, 166:9, 167:3, 167:12, 177:14  <b>Public Service Commission</b> [1] - 4:8  <b>published</b> [3] - 36:24, 119:23, 127:2  <b>pull</b> [1] - 80:17  <b>pulled</b> [1] - 159:22  <b>purchase</b> [2] - 37:5,</p>	<p>102:6  <b>purchased</b> [1] - 181:7  <b>purchases</b> [3] - 49:22, 97:9, 97:10  <b>purpose</b> [8] - 46:16, 117:24, 119:9, 122:18, 133:21, 157:15, 160:9, 160:16  <b>purposes</b> [4] - 85:8, 87:4, 87:7, 188:10  <b>pursue</b> [1] - 25:14  <b>pushed</b> [1] - 69:19  <b>put</b> [31] - 13:18, 19:2, 51:15, 53:4, 53:14, 56:8, 56:9, 56:15, 57:6, 57:7, 61:8, 66:17, 67:20, 68:6, 68:24, 91:1, 97:20, 108:24, 139:3, 139:5, 141:6, 141:16, 151:19, 160:24, 175:3, 186:13, 186:24, 187:17, 189:20, 193:3, 193:8  <b>Put</b> [1] - 117:17  <b>puts</b> [4] - 77:5, 142:2, 143:24, 144:13  <b>putting</b> [3] - 95:5, 141:4, 192:24</p>	<p><b>Quite</b> [3] - 63:25, 64:6, 119:13  <b>quote</b> [3] - 15:24, 16:5, 42:15  <b>quoting</b> [1] - 16:13</p>	<p>63:16  <b>realities</b> [1] - 17:4  <b>realize</b> [5] - 10:2, 15:1, 15:18, 164:11, 164:12  <b>realized</b> [2] - 138:2, 189:18  <b>Realized</b> [1] - 130:1  <b>really</b> [24] - 6:9, 11:14, 12:23, 22:25, 40:15, 47:23, 48:1, 51:25, 59:11, 102:14, 105:7, 105:8, 134:12, 149:17, 149:23, 161:8, 181:14, 192:16, 198:4, 200:18, 201:17  <b>reason</b> [24] - 16:17, 17:6, 17:16, 33:1, 33:13, 34:2, 34:8, 41:21, 47:3, 48:18, 58:11, 65:12, 73:10, 87:11, 101:12, 101:18, 102:16, 156:13, 168:5, 168:8, 181:17, 184:3, 184:14, 184:19  <b>reasonable</b> [7] - 16:6, 18:16, 85:24, 94:23, 106:5, 107:10, 133:24  <b>reasonably</b> [3] - 19:10, 105:12, 106:1  <b>reasoned</b> [1] - 16:25  <b>reasons</b> [11] - 12:23, 17:1, 57:17, 59:2, 62:15, 63:8, 63:9, 73:7, 91:25, 102:2, 192:1  <b>rebuilt</b> [2] - 65:21, 67:1  <b>rebuttal</b> [2] - 5:13, 206:6  <b>received</b> [3] - 15:8, 132:25, 183:15  <b>receives</b> [1] - 119:5  <b>recent</b> [1] - 101:21  <b>recently</b> [2] - 192:18, 193:22  <b>recess</b> [6] - 70:16, 70:22, 109:24, 110:5, 159:15, 206:3  <b>recessed</b> [1] - 206:14  <b>reclamation</b> [2] - 112:8, 112:10  <b>Reclamation's</b> [1] - 151:13  <b>Recogn</b> [1] - 108:5  <b>recognize</b> [2] - 9:20, 10:10</p>	<p><b>recognized</b> [1] - 129:24  <b>recommend</b> [2] - 77:3, 108:21  <b>recommendations</b> [2] - 6:5, 129:14  <b>recommended</b> [1] - 16:1  <b>recommending</b> [1] - 87:12  <b>reconstruct</b> [1] - 65:20  <b>Reconvene</b> [1] - 206:3  <b>reconvene</b> [1] - 206:5  <b>record</b> [9] - 4:19, 8:13, 9:5, 13:20, 28:8, 28:18, 70:23, 154:20, 159:17  <b>recreational</b> [1] - 21:16  <b>red</b> [3] - 31:21, 142:16, 175:6  <b>redirect</b> [3] - 7:7, 104:21, 159:9  <b>Redirect</b> [1] - 198:19  <b>REDIRECT</b>  <b>EXAMINATION</b> [2] - 104:23, 198:21  <b>redistribute</b> [3] - 43:5, 43:7, 44:3  <b>reduce</b> [1] - 54:17  <b>reduces</b> [1] - 59:3  <b>redun</b> [1] - 109:8  <b>redundancy</b> [12] - 40:7, 40:9, 48:8, 48:24, 49:1, 58:25, 88:10, 88:14, 109:1, 109:6, 109:8  <b>redundant</b> [3] - 43:23, 48:1, 48:15  <b>reestablish</b> [1] - 151:14  <b>refer</b> [9] - 64:12, 84:1, 97:21, 133:1, 135:6, 135:11, 135:17, 143:10, 163:5  <b>reference</b> [1] - 81:15  <b>referencing</b> [1] - 86:21  <b>referred</b> [4] - 134:7, 158:11, 167:8, 192:2  <b>referring</b> [4] - 71:14, 97:13, 183:9, 189:9  <b>refreshes</b> [1] - 79:11  <b>Reg</b> [1] - 34:17  <b>regarding</b> [3] - 131:23, 133:8, 148:1  <b>region</b> [2] - 50:25, 55:11</p>
<b>Q</b>		<b>R</b>	<p><b>Rail</b> [1] - 112:4  <b>Railroad</b> [4] - 135:12, 136:22, 138:7, 139:7  <b>railroad</b> [8] - 22:2, 58:6, 82:17, 82:25, 83:1, 115:4, 135:14, 137:18  <b>raise</b> [2] - 5:22, 27:17  <b>raised</b> [3] - 21:9, 105:6, 136:20  <b>ran</b> [2] - 23:13, 138:20  <b>Range</b> [1] - 115:7  <b>range</b> [10] - 33:2, 34:11, 35:7, 95:16, 99:15, 105:23, 113:19, 130:18, 188:3, 196:19  <b>ranges</b> [5] - 96:2, 96:3, 114:21, 116:10, 116:11  <b>ranking</b> [3] - 122:3, 126:17, 169:23  <b>rate</b> [2] - 68:9, 68:10  <b>ratepayers</b> [4] - 13:4, 13:16, 145:14, 185:13  <b>rates</b> [1] - 178:5  <b>rather</b> [11] - 16:6, 16:7, 16:15, 17:15, 61:14, 62:9, 66:13, 144:22, 154:7, 190:24, 205:13  <b>rattled</b> [1] - 197:5  <b>re</b> [1] - 103:7  <b>reaching</b> [1] - 20:4  <b>reaction</b> [1] - 167:2  <b>reactive</b> [4] - 98:3, 98:7, 98:15, 98:20  <b>read</b> [3] - 16:19, 19:21, 20:19  <b>readily</b> [5] - 24:1, 26:16, 115:16, 116:23, 205:15  <b>readily-available</b> [1] - 205:15  <b>real</b> [4] - 96:22, 97:20, 107:2, 168:25  <b>realistic</b> [5] - 179:9, 179:14, 179:19, 190:18, 190:22  <b>realistically</b> [1] -</p>	

<p><b>regional</b> [7] - 77:24, 78:25, 79:9, 80:21, 80:23, 85:17, 113:11 <b>Regional</b> [2] - 84:9, 177:8 <b>regionally</b> [1] - 79:6 <b>Register</b> [1] - 119:24 <b>registered</b> [1] - 82:20 <b>regrow</b> [3] - 151:12, 171:18, 178:23 <b>regrowth</b> [1] - 171:17 <b>regular</b> [1] - 178:3 <b>regulate</b> [1] - 34:15 <b>regulation</b> [1] - 33:15 <b>Regulatory</b> [1] - 34:17 <b>rejected</b> [1] - 155:22 <b>relatively</b> [1] - 67:14 <b>release</b> [5] - 126:24, 127:9, 131:4, 131:5, 167:3 <b>released</b> [5] - 120:16, 127:13, 128:7, 132:21, 133:3 <b>releases</b> [1] - 131:21 <b>relevant</b> [1] - 23:1 <b>reliability</b> [40] - 11:19, 23:3, 24:19, 35:23, 38:4, 38:7, 38:10, 38:16, 38:22, 38:23, 39:24, 40:2, 40:5, 40:8, 43:12, 45:2, 45:10, 45:13, 45:18, 45:23, 46:3, 46:19, 46:20, 46:22, 47:13, 53:11, 57:11, 59:6, 63:8, 68:22, 69:3, 71:5, 73:11, 80:19, 84:23, 85:11, 89:21, 144:17, 145:5, 147:10 <b>Reliability</b> [2] - 34:16, 38:6 <b>reliable</b> [10] - 20:25, 33:17, 36:17, 62:5, 75:17, 91:21, 92:16, 93:3, 113:5, 144:19 <b>reliably</b> [3] - 50:15, 53:15, 54:19 <b>relief</b> [2] - 157:9, 182:5 <b>relocate</b> [1] - 144:4 <b>rely</b> [3] - 153:22, 161:9, 172:21 <b>remain</b> [2] - 27:17, 44:6 <b>remaining</b> [3] - 11:9, 11:12, 126:14</p>	<p><b>remarks</b> [1] - 4:25 <b>remember</b> [5] - 60:24, 67:8, 172:3, 181:16, 199:18 <b>Remember</b> [1] - 46:4 <b>reminded</b> [1] - 16:20 <b>remote</b> [4] - 26:16, 26:20, 50:8, 98:13 <b>Removal</b> [1] - 145:22 <b>remove</b> [1] - 56:19 <b>removed</b> [1] - 65:25 <b>repair</b> [5] - 65:19, 66:8, 89:18, 171:1, 171:3 <b>repairs</b> [2] - 141:11, 141:14 <b>reparations</b> [1] - 196:15 <b>rephrase</b> [1] - 168:16 <b>replace</b> [1] - 58:6 <b>replacement</b> [1] - 56:20 <b>report</b> [6] - 6:10, 8:3, 15:13, 15:21, 120:15, 155:23 <b>REPORTER</b> [4] - 111:10, 196:1, 199:3, 199:7 <b>reporter</b> [2] - 8:9, 159:12 <b>represent</b> [1] - 23:16 <b>representation</b> [3] - 151:17, 151:18, 179:19 <b>representatives</b> [2] - 133:7, 148:5 <b>represented</b> [1] - 191:13 <b>request</b> [5] - 165:5, 166:1, 186:14, 188:18, 192:9 <b>requested</b> [14] - 47:4, 58:9, 158:18, 164:25, 165:3, 169:17, 172:4, 172:5, 172:17, 172:19, 182:6, 187:9, 188:21, 188:23 <b>requests</b> [2] - 16:24, 58:4 <b>require</b> [5] - 54:15, 54:16, 57:3, 99:17, 99:19 <b>required</b> [18] - 27:4, 34:14, 36:21, 36:22, 42:18, 48:18, 59:20, 103:8, 119:12, 119:15, 125:7, 154:16, 154:18, 154:22, 155:19, 157:7, 158:2, 171:12</p>	<p><b>requirement</b> [6] - 38:3, 38:5, 39:2, 88:15, 100:11, 100:14 <b>requirements</b> [11] - 42:18, 59:7, 60:2, 84:8, 84:9, 118:16, 122:18, 123:23, 125:18, 126:5, 155:10 <b>requires</b> [4] - 33:16, 33:21, 33:22, 109:1 <b>reroute</b> [1] - 60:6 <b>rerouting</b> [1] - 60:7 <b>res</b> [1] - 197:12 <b>research</b> [2] - 113:18, 150:5 <b>researched</b> [1] - 143:2 <b>reservoir</b> [4] - 148:20, 148:22, 193:9 <b>Reservoir</b> [3] - 149:13, 192:5, 193:6 <b>residence</b> [2] - 178:3, 178:8 <b>residences</b> [2] - 21:10, 22:6 <b>residential</b> [1] - 33:3 <b>residents</b> [9] - 19:17, 21:8, 21:15, 21:20, 22:12, 22:16, 23:11, 80:2, 166:11 <b>resistance</b> [4] - 60:17, 60:20, 61:9, 152:12 <b>resolution</b> [4] - 133:14, 142:14, 150:15, 166:16 <b>resolved</b> [1] - 197:12 <b>resource</b> [19] - 31:25, 36:4, 36:5, 36:7, 36:8, 44:5, 45:24, 46:15, 68:25, 78:3, 78:4, 79:11, 104:13, 121:20, 121:25, 122:10 <b>Resource</b> [6] - 32:1, 33:11, 36:21, 36:23, 97:2, 104:1 <b>Resources</b> [1] - 195:13 <b>resources</b> [26] - 15:14, 31:2, 31:9, 31:24, 32:2, 32:3, 33:9, 34:12, 47:14, 49:19, 50:23, 79:13, 79:16, 96:19, 97:8, 97:12, 97:17, 103:24, 103:25, 104:2, 104:14, 104:18, 104:19, 116:20, 126:16 <b>respect</b> [6] - 7:13,</p>	<p>81:11, 112:18, 161:11, 168:2, 177:6 <b>respector</b> [1] - 17:23 <b>respond</b> [3] - 6:7, 6:12, 8:4 <b>response</b> [4] - 12:14, 20:20, 133:2, 136:23 <b>Response</b> [1] - 133:4 <b>responsibilities</b> [1] - 112:17 <b>responsibility</b> [2] - 112:25, 184:18 <b>Responsible</b> [1] - 29:17 <b>rest</b> [4] - 8:10, 68:10, 153:13, 159:12 <b>restoration</b> [1] - 154:2 <b>restrictions</b> [4] - 117:24, 138:24, 139:4, 139:8 <b>result</b> [5] - 84:20, 84:21, 147:25, 156:20, 166:5 <b>resulted</b> [1] - 84:13 <b>results</b> [3] - 67:1, 121:20, 152:8 <b>resume</b> [2] - 70:17, 109:25 <b>retained</b> [2] - 5:25, 7:20 <b>return</b> [1] - 81:22 <b>revegetation</b> [2] - 171:12, 171:24 <b>Review</b> [3] - 4:6, 115:25, 157:10 <b>review</b> [10] - 8:4, 9:24, 113:19, 119:21, 120:3, 120:13, 120:14, 120:22, 130:17, 158:16 <b>reviewed</b> [3] - 128:14, 140:20, 160:9 <b>reviewing</b> [1] - 16:23 <b>reviews</b> [1] - 119:8 <b>revision</b> [1] - 97:2 <b>rhetorically</b> [1] - 190:3 <b>Richard Hall</b> [1] - 8:22 <b>Richards</b> [1] - 6:21 <b>RICHARDS</b> [1] - 8:18 <b>Ridge</b> [1] - 127:22 <b>ridge</b> [1] - 148:22, 179:17, 192:20, 192:23, 192:25, 193:4, 203:17, 203:19, 203:20, 204:3, 204:7 <b>right-hand</b> [3] - 114:13, 118:5, 152:2</p>	<p><b>right-of-way</b> [8] - 26:11, 82:16, 82:23, 101:3, 102:4, 168:6, 181:7, 181:9 <b>right-of-ways</b> [1] - 22:3 <b>rights</b> [6] - 67:5, 95:8, 102:5, 168:6, 178:2, 196:14 <b>rights-of-way</b> [1] - 196:14 <b>ring</b> [1] - 38:19 <b>Rio Tinto</b> [1] - 168:7 <b>risk</b> [26] - 56:25, 57:1, 59:23, 81:18, 90:1, 90:19, 90:21, 91:7, 91:11, 92:19, 103:10, 129:22, 130:1, 144:13, 145:6, 145:11, 147:10, 175:25, 176:22, 177:1, 181:1, 183:19, 183:20, 202:13, 202:15, 202:17 <b>risks</b> [2] - 183:5, 186:18 <b>Rives</b> [2] - 8:16, 8:23 <b>Road</b> [1] - 140:7 <b>road</b> [5] - 140:16, 152:7, 153:5, 195:15, 201:3 <b>roads</b> [7] - 128:13, 140:3, 142:1, 168:3, 171:5, 171:7, 171:8 <b>robust</b> [1] - 40:10 <b>Rocky</b> [2] - 22:15, 22:22 <b>Rocky Mountain</b> [3] - 30:3, 80:11, 90:1 <b>Rocky Mountain Power</b> [31] - 5:2, 8:17, 8:18, 8:21, 8:23, 9:8, 10:13, 11:3, 13:25, 14:5, 16:9, 21:2, 22:17, 23:6, 24:4, 24:17, 24:23, 25:6, 25:13, 29:14, 32:18, 33:10, 64:15, 73:21, 77:23, 100:16, 110:8, 111:9, 161:9, 176:17 <b>Rocky Mountain Power Company</b> [1] - 7:1 <b>Role</b> [1] - 112:20 <b>room</b> [1] - 153:13 <b>rotating</b> [3] - 50:7, 98:2, 98:8 <b>rough</b> [1] - 197:14 <b>roughly</b> [2] - 86:2, 195:6 <b>round</b> [2] - 88:4,</p>
--	---	--	---	--

<p>132:14  <b>Route</b> [1] - 163:8  <b>route</b> [200] - 4:13, 10:6, 10:9, 10:22, 11:21, 11:23, 14:21, 15:3, 18:1, 18:2, 21:2, 21:6, 22:19, 22:20, 22:24, 22:25, 23:21, 24:6, 24:8, 25:1, 25:12, 25:18, 26:10, 26:20, 26:23, 27:5, 27:6, 27:8, 41:1, 61:4, 66:16, 69:1, 69:2, 74:2, 74:3, 75:12, 76:4, 76:25, 77:4, 77:12, 93:12, 93:20, 95:13, 101:22, 103:4, 103:14, 117:7, 122:6, 122:17, 123:3, 123:15, 126:10, 126:20, 126:22, 127:1, 127:4, 127:8, 127:11, 127:12, 127:24, 129:5, 129:7, 131:2, 131:3, 131:15, 131:18, 133:3, 133:16, 133:17, 133:19, 134:5, 134:7, 134:25, 135:5, 135:7, 135:18, 135:22, 136:5, 136:6, 136:8, 136:18, 136:20, 137:8, 137:13, 137:19, 138:3, 138:6, 138:7, 138:8, 139:7, 139:10, 139:11, 139:12, 139:15, 139:17, 140:4, 140:17, 141:1, 141:17, 142:7, 144:7, 144:14, 144:19, 145:14, 145:15, 147:9, 147:11, 147:18, 147:19, 147:25, 148:18, 149:16, 149:18, 149:21, 150:3, 155:20, 155:25, 156:10, 156:17, 157:15, 157:20, 163:6, 163:10, 163:21, 166:10, 167:7, 167:13, 167:21, 167:22, 168:2, 168:17, 168:18, 169:2, 169:4, 169:9, 169:17, 169:18, 170:15, 170:16, 171:4, 171:9, 172:2, 172:5, 173:11, 176:25, 177:4, 179:21, 180:3,</p>	<p>180:13, 180:14, 182:9, 182:18, 183:18, 183:22, 184:2, 184:10, 184:16, 184:22, 185:1, 185:4, 185:8, 185:10, 185:16, 188:4, 189:18, 192:12, 192:20, 193:14, 193:16, 195:24, 196:4, 196:19, 197:18, 198:10, 199:17, 200:4, 200:7, 200:8, 200:11, 200:12, 200:14, 200:15, 202:2, 202:9, 202:16, 202:20, 204:2  <b>route's</b> [1] - 168:5  <b>routed</b> [1] - 61:1  <b>routes</b> [45] - 14:12, 14:16, 14:20, 22:14, 22:21, 22:23, 24:20, 25:7, 25:9, 42:12, 45:1, 74:10, 77:5, 95:8, 115:25, 116:1, 117:1, 125:21, 126:12, 128:8, 131:24, 134:3, 134:15, 134:19, 135:11, 135:12, 136:22, 136:23, 136:25, 137:18, 139:15, 142:11, 147:14, 155:17, 155:22, 166:17, 167:10, 168:1, 168:9, 169:19, 169:21, 170:7, 176:10, 181:10  <b>routing</b> [5] - 39:3, 45:11, 85:10, 134:22, 184:15  <b>rule</b> [3] - 87:5, 88:7, 95:23  <b>rules</b> [3] - 59:13, 66:13, 95:21  <b>ruling</b> [1] - 108:11  <b>run</b> [13] - 76:18, 79:5, 96:7, 100:7, 103:5, 103:10, 128:20, 133:18, 142:18, 192:4, 196:25, 197:6, 197:13  <b>Running</b> [1] - 135:24  <b>running</b> [3] - 93:8, 118:9, 160:17  <b>runs</b> [1] - 124:2  <b>rural</b> [2] - 26:15, 95:23  <b>Rush Valley</b> [1] - 128:6</p>	<p style="text-align: center;"><b>S</b></p> <p><b>sad</b> [1] - 101:4  <b>safe</b> [4] - 20:25, 33:17, 113:4, 149:6  <b>safety</b> [4] - 22:8, 24:19, 127:5, 144:18  <b>Safety</b> [1] - 23:3  <b>sake</b> [2] - 76:9, 175:1  <b>sales</b> [1] - 68:7  <b>Salt Lake</b> [11] - 28:22, 29:5, 36:5, 65:14, 67:9, 67:16, 114:17, 115:8, 135:25, 177:8, 177:9  <b>Salt Lake City</b> [6] - 35:16, 38:19, 111:7, 112:5, 177:18, 177:22  <b>Salt Lake County</b> [3] - 120:18, 135:10, 140:10  <b>satisfy</b> [1] - 84:4  <b>satisfying</b> [1] - 137:19  <b>saving</b> [1] - 67:12  <b>savings</b> [1] - 79:22  <b>saw</b> [4] - 56:5, 56:6, 167:2  <b>scale</b> [8] - 36:9, 39:10, 40:12, 41:1, 42:5, 51:15, 151:22  <b>scaled</b> [1] - 59:21  <b>scatter</b> [2] - 52:4, 62:23  <b>scenario</b> [4] - 44:8, 91:24, 92:3, 92:5  <b>schedule</b> [3] - 4:18, 6:18, 112:21  <b>schedule-wise</b> [1] - 4:18  <b>scheduled</b> [2] - 32:5, 69:7  <b>school</b> [1] - 137:11  <b>schools</b> [1] - 137:25  <b>Science</b> [1] - 111:23  <b>scout</b> [1] - 199:5  <b>scope</b> [2] - 112:21, 130:16  <b>scoping</b> [4] - 119:25, 120:11, 121:3, 121:20  <b>score</b> [2] - 170:3, 170:8  <b>scores</b> [1] - 170:8  <b>Scott Broadhead</b> [1] - 9:2  <b>scout</b> [1] - 204:4  <b>screen</b> [17] - 13:19, 27:24, 28:6, 36:13, 42:24, 78:14, 114:6, 114:12, 115:21,</p>	<p>118:4, 121:8, 124:8, 125:10, 125:20, 125:25, 134:21, 153:14  <b>seat</b> [3] - 110:16, 199:21, 200:4  <b>seated</b> [2] - 27:20, 110:20  <b>seats</b> [1] - 165:16  <b>second</b> [14] - 73:10, 87:8, 97:21, 107:7, 110:1, 110:8, 122:7, 143:22, 145:5, 146:4, 147:8, 184:16, 192:25, 203:14  <b>Second</b> [3] - 36:18, 57:23, 62:19  <b>second-to-the-last</b> [1] - 203:14  <b>section</b> [1] - 164:7  <b>Security</b> [1] - 34:18  <b>security</b> [1] - 35:23  <b>see</b> [67] - 6:5, 13:10, 17:8, 20:2, 27:23, 30:15, 34:18, 36:12, 37:2, 40:20, 42:24, 54:22, 55:5, 65:24, 66:17, 67:1, 71:15, 81:20, 86:17, 94:3, 107:3, 110:3, 114:12, 114:19, 117:1, 117:6, 118:4, 121:10, 125:15, 126:2, 135:4, 136:9, 136:10, 138:11, 139:14, 142:15, 143:3, 143:8, 146:16, 148:6, 150:20, 151:2, 151:3, 152:19, 152:22, 153:2, 153:5, 153:14, 153:18, 153:21, 156:16, 159:21, 160:7, 162:17, 174:2, 176:22, 178:14, 178:17, 179:20, 184:24, 185:22, 194:4, 194:16, 203:18, 203:20  <b>seeing</b> [1] - 206:13  <b>seeking</b> [1] - 157:10  <b>seem</b> [3] - 65:13, 76:22, 165:19  <b>segment</b> [16] - 35:5, 35:19, 35:25, 40:1, 46:6, 46:10, 46:11, 46:14, 46:18, 60:22, 71:16, 72:18, 73:15, 75:13  <b>Segment</b> [13] - 35:14, 35:15, 37:23, 38:1, 39:12, 46:16, 46:23, 46:24, 61:1,</p>	<p>71:9, 71:10, 71:15, 192:3  <b>segments</b> [3] - 37:18, 60:25, 191:24  <b>select</b> [2] - 123:20, 126:10  <b>selected</b> [5] - 22:18, 29:22, 74:3, 127:11, 202:16  <b>selection</b> [1] - 180:2  <b>selections</b> [1] - 180:13  <b>self</b> [1] - 176:24  <b>self-imposed</b> [1] - 176:24  <b>sell</b> [1] - 37:6  <b>send</b> [2] - 95:22, 155:22  <b>sense</b> [5] - 4:23, 6:19, 109:10, 166:25, 205:7  <b>separate</b> [6] - 17:21, 83:13, 101:25, 108:9, 175:15, 192:23  <b>separated</b> [5] - 59:10, 82:10, 85:7, 86:25, 105:20  <b>separating</b> [1] - 81:23  <b>Separation</b> [2] - 173:21, 173:22  <b>separation</b> [52] - 40:6, 45:1, 47:3, 58:19, 58:21, 59:3, 59:11, 59:20, 59:24, 60:1, 63:11, 81:4, 81:5, 81:6, 81:13, 82:10, 83:16, 83:22, 85:5, 85:11, 86:11, 87:18, 88:2, 88:8, 88:18, 90:6, 91:4, 91:10, 91:13, 91:15, 92:22, 93:9, 93:21, 100:2, 100:8, 100:21, 103:8, 106:22, 107:13, 108:8, 108:18, 130:9, 160:17, 173:19, 174:16, 175:8, 175:13, 175:15, 176:5, 180:17, 199:15  <b>series</b> [3] - 53:20, 201:24, 204:19  <b>seriously</b> [2] - 133:13, 174:18  <b>seriousness</b> [1] - 167:1  <b>serve</b> [28] - 4:9, 20:15, 30:14, 31:2, 31:24, 32:3, 33:14, 34:6, 44:21, 46:8, 46:24, 49:17, 50:24,</p>
---	---	--	--	--

<p>54:6, 55:7, 55:13, 55:16, 56:23, 57:10, 57:19, 58:1, 62:24, 64:2, 68:16, 68:18, 79:13, 79:17, 103:24  <b>served</b> [3] - 48:22, 57:21, 68:11  <b>serves</b> [1] - 100:12  <b>service</b> [40] - 32:18, 33:1, 33:18, 35:14, 35:17, 40:10, 40:19, 42:10, 42:19, 43:1, 43:4, 43:16, 44:1, 44:6, 44:12, 46:7, 48:21, 48:22, 53:25, 55:22, 55:25, 56:3, 56:18, 56:21, 57:5, 57:22, 58:4, 58:7, 58:9, 59:2, 63:23, 65:5, 65:6, 65:25, 66:1, 69:17, 69:19, 125:5  <b>Service</b> [3] - 34:9, 85:2, 85:3  <b>services</b> [3] - 33:21, 33:23, 64:2  <b>servicing</b> [4] - 30:12, 68:12, 68:15, 100:3  <b>session</b> [1] - 23:12  <b>set</b> [7] - 45:9, 81:8, 81:9, 106:25, 173:9, 176:4, 176:9  <b>Settlement</b> [6] - 134:8, 139:20, 148:19, 149:13, 192:5, 193:6  <b>seven</b> [6] - 30:16, 41:10, 62:17, 67:9, 69:12, 89:2  <b>several</b> [7] - 24:5, 66:25, 89:2, 105:18, 115:21, 117:1, 192:3  <b>severe</b> [1] - 141:8  <b>shaded</b> [2] - 118:5, 194:17  <b>share</b> [3] - 41:21, 62:25, 64:8  <b>sheared</b> [2] - 66:4, 66:15  <b>shift</b> [1] - 154:14  <b>shifted</b> [4] - 148:15, 148:16, 193:7, 193:11  <b>shirt</b> [2] - 91:2, 91:3  <b>short</b> [8] - 11:15, 32:19, 32:20, 32:21, 70:16, 76:4, 145:3, 180:9  <b>short-term</b> [1] - 32:19  <b>shorter</b> [2] - 61:11, 75:22</p>	<p><b>shortest</b> [2] - 75:16, 75:19  <b>shot</b> [2] - 79:2, 79:3  <b>shots</b> [1] - 78:22  <b>show</b> [27] - 13:6, 35:15, 39:8, 40:11, 42:25, 50:16, 51:5, 51:7, 51:10, 51:25, 52:1, 52:21, 53:16, 53:19, 54:4, 54:7, 54:20, 72:15, 78:16, 124:6, 136:24, 149:8, 162:21, 166:22, 173:13, 179:12, 192:19  <b>showed</b> [12] - 62:23, 62:24, 89:1, 98:21, 99:2, 101:13, 104:4, 106:13, 157:20, 172:23, 174:12  <b>showing</b> [3] - 193:14, 200:10, 201:8  <b>shown</b> [10] - 31:21, 43:24, 47:16, 53:20, 55:23, 56:2, 69:3, 74:5, 88:3, 155:16  <b>shows</b> [10] - 53:5, 97:8, 97:9, 104:13, 105:2, 121:9, 134:22, 164:24, 172:2, 178:11  <b>side</b> [15] - 4:24, 6:5, 56:9, 77:17, 77:19, 80:8, 114:13, 115:2, 118:5, 118:6, 121:10, 152:2, 190:20, 192:20, 204:15  <b>sides</b> [2] - 6:2, 140:16  <b>significance</b> [1] - 21:18  <b>Significant</b> [1] - 67:11  <b>significant</b> [12] - 42:3, 57:24, 58:17, 60:13, 65:11, 65:17, 67:3, 67:7, 84:17, 162:15, 171:16  <b>significantly</b> [4] - 31:22, 65:10, 83:6, 167:18  <b>signs</b> [1] - 194:19  <b>Sigurd</b> [1] - 66:16  <b>Silcox</b> [3] - 167:21, 168:2, 169:18  <b>Silcox Canyon</b> [9] - 134:7, 135:6, 135:7, 139:15, 139:18, 139:19, 142:6, 169:3, 200:11  <b>similar</b> [5] - 15:23, 110:13, 128:5, 138:7, 139:6</p>	<p><b>Similar</b> [1] - 56:5  <b>simple</b> [5] - 21:11, 22:12, 68:6, 90:17, 121:8  <b>simply</b> [14] - 5:8, 9:17, 10:21, 11:1, 11:13, 16:15, 17:14, 19:8, 26:10, 28:4, 107:6, 141:16, 157:9, 190:19  <b>simulation</b> [3] - 151:19, 152:17, 201:1  <b>simulations</b> [4] - 150:16, 201:7, 201:11, 204:16  <b>simultaneously</b> [2] - 39:7, 44:12  <b>sincerity</b> [2] - 17:9, 19:1  <b>single</b> [7] - 99:1, 99:20, 103:10, 108:16, 161:16, 163:18, 170:5  <b>single-circuit</b> [2] - 99:1, 99:20  <b>sister</b> [1] - 7:15  <b>sit</b> [2] - 9:12, 50:13  <b>site</b> [31] - 7:4, 10:18, 20:1, 21:4, 22:11, 59:19, 94:12, 112:8, 113:22, 115:23, 117:9, 123:21, 124:5, 124:9, 124:17, 125:7, 126:11, 126:22, 127:1, 138:12, 138:23, 146:8, 146:24, 155:24, 156:14, 173:1, 173:4, 180:24, 189:9, 194:10, 194:20  <b>site's</b> [1] - 146:13  <b>sited</b> [8] - 77:12, 79:19, 113:1, 119:12, 142:16, 153:25, 154:6, 184:16  <b>sites</b> [15] - 94:10, 113:20, 114:10, 114:18, 116:23, 117:5, 119:2, 119:10, 121:23, 124:2, 125:2, 125:17, 130:21, 140:23, 192:4  <b>siting</b> [11] - 8:14, 14:8, 19:15, 24:1, 24:5, 25:1, 95:18, 117:14, 123:17, 125:16, 129:18  <b>Siting</b> [1] - 116:7  <b>sits</b> [1] - 31:24  <b>sitting</b> [1] - 110:12  <b>situation</b> [9] - 90:16,</p>	<p>92:9, 92:16, 129:17, 147:3, 147:5, 186:3, 190:23, 205:8  <b>situations</b> [3] - 63:19, 98:6, 141:22  <b>six</b> [6] - 33:14, 49:18, 51:20, 53:1, 53:12, 66:20  <b>size</b> [10] - 30:22, 40:13, 40:15, 40:16, 44:24, 123:23, 124:24, 125:18, 186:21  <b>skeptical</b> [1] - 15:18  <b>skepticism</b> [1] - 23:10  <b>Skull</b> [1] - 190:21  <b>Skyline</b> [2] - 150:21, 192:22  <b>Slide</b> [1] - 105:2  <b>slide</b> [31] - 40:12, 42:7, 42:22, 43:22, 44:8, 45:4, 52:21, 71:4, 72:14, 74:18, 97:20, 97:21, 105:1, 105:4, 159:21, 159:23, 160:7, 161:21, 161:24, 162:20, 162:21, 164:23, 167:20, 172:2, 178:10, 179:10, 179:11, 200:10, 202:1, 203:15, 204:25  <b>slides</b> [7] - 28:5, 28:6, 28:9, 50:22, 51:9, 157:19, 204:22  <b>slight</b> [2] - 129:1, 148:13  <b>slope</b> [1] - 114:9  <b>sloping</b> [1] - 106:13  <b>small</b> [4] - 42:4, 103:23, 109:22, 177:10  <b>smaller</b> [1] - 39:10  <b>Smith</b> [19] - 14:1, 14:6, 14:24, 45:16, 60:22, 77:9, 110:1, 110:9, 110:16, 110:18, 111:19, 159:21, 188:17, 189:4, 191:8, 191:20, 203:12, 204:11, 205:21  <b>Smith's</b> [2] - 158:24, 159:3  <b>smoke</b> [2] - 63:22, 88:21  <b>soccer</b> [1] - 174:10  <b>socioeconomics</b> [1] - 130:20</p>	<p><b>soil</b> [4] - 143:9, 146:6, 164:10, 164:15  <b>soils</b> [19] - 112:8, 116:15, 143:3, 143:6, 143:12, 143:13, 145:9, 145:16, 145:22, 145:23, 146:22, 164:2, 164:11, 164:18, 172:24, 205:12, 205:18, 205:19  <b>sole</b> [1] - 90:7  <b>solely</b> [1] - 125:14  <b>solution</b> [1] - 19:11  <b>solve</b> [1] - 141:19  <b>solving</b> [1] - 172:5  <b>someone</b> [3] - 35:22, 98:17, 202:7  <b>somewhat</b> [1] - 82:1  <b>somewhere</b> [4] - 45:17, 73:18, 95:15, 155:23  <b>soon</b> [1] - 129:10  <b>sorry</b> [3] - 74:14, 196:1, 203:25  <b>Sorry</b> [2] - 66:16, 199:8  <b>sort</b> [8] - 26:7, 117:17, 130:3, 133:15, 133:24, 150:19, 186:21  <b>sought</b> [1] - 11:25  <b>sound</b> [2] - 96:4, 192:13  <b>sounds</b> [4] - 90:19, 95:20, 161:8, 192:14  <b>south</b> [36] - 49:17, 51:2, 53:8, 53:15, 54:23, 58:13, 66:7, 77:17, 77:19, 79:4, 96:19, 97:16, 102:19, 102:22, 103:24, 114:25, 124:12, 128:22, 129:8, 134:8, 142:22, 142:23, 148:17, 150:22, 188:21, 190:24, 192:10, 192:21, 193:8, 197:21, 198:1, 198:6, 201:9, 204:3  <b>South</b> [12] - 37:19, 39:16, 43:25, 47:19, 48:10, 48:17, 59:17, 105:19, 132:17, 149:14, 197:22, 197:24  <b>South Jordan</b> [2] - 154:23, 155:2  <b>Southeast</b> [13] - 64:21, 93:12, 133:9, 165:19, 166:10,</p>
--	---	---	---	---

<p>167:7, 167:12, 169:17, 170:15, 171:4, 171:9, 180:2, 184:10 <b>southeast</b> [8] - 21:5, 21:12, 22:18, 25:13, 75:9, 103:4, 189:25, 192:4 <b>Southern</b> [1] - 79:15 <b>southern</b> [8] - 97:11, 114:24, 115:1, 115:22, 139:1, 148:12, 148:20, 148:21 <b>southernmost</b> [1] - 143:19 <b>southwest</b> [2] - 41:8, 124:15 <b>Southwest</b> [4] - 31:17, 41:19, 79:15, 97:10 <b>space</b> [2] - 21:19, 26:1 <b>spaces</b> [1] - 100:20 <b>span</b> [8] - 85:15, 86:7, 86:25, 87:2, 108:3, 108:19, 176:8, 176:12 <b>spans</b> [8] - 66:25, 82:14, 85:23, 86:5, 108:2, 108:3, 108:11, 108:12 <b>speaking</b> [2] - 7:17, 190:12 <b>specced</b> [1] - 59:18 <b>specialty</b> [1] - 29:5 <b>specific</b> [19] - 12:25, 13:23, 64:8, 84:2, 112:18, 116:4, 124:6, 130:22, 134:3, 136:20, 141:17, 150:11, 158:17, 158:18, 161:5, 166:11, 170:8, 170:17, 176:14 <b>specifically</b> [9] - 11:24, 45:11, 49:4, 66:11, 67:25, 123:16, 133:1, 154:16, 191:23 <b>specifics</b> [1] - 77:8 <b>specified</b> [1] - 73:23 <b>speed</b> [1] - 35:20 <b>spell</b> [1] - 9:4 <b>spent</b> [4] - 10:16, 19:23, 24:5, 25:25 <b>spidering</b> [1] - 191:4 <b>spiderweb</b> [1] - 80:8 <b>split</b> [1] - 141:18 <b>spoken</b> [1] - 20:22 <b>spokes</b> [2] - 36:8, 36:9</p>	<p><b>spot</b> [3] - 162:4, 162:13, 172:9 <b>spots</b> [2] - 161:25 <b>stable</b> [1] - 145:23 <b>stadium</b> [1] - 174:10 <b>staff</b> [1] - 161:14 <b>stage</b> [4] - 99:1, 99:2, 99:3, 130:24 <b>Stage</b> [7] - 71:4, 72:18, 73:8, 73:9, 73:16, 73:19, 99:7 <b>stages</b> [1] - 98:25 <b>stakeholders</b> [2] - 132:12, 147:15 <b>stamp</b> [1] - 143:10 <b>stand</b> [3] - 5:3, 173:12, 192:21 <b>standalone</b> [1] - 120:22 <b>Standard</b> [1] - 43:13 <b>standard</b> [15] - 25:17, 47:1, 59:15, 82:14, 85:20, 86:23, 108:18, 182:22, 183:8, 183:10, 184:1, 184:9, 184:22, 185:1 <b>Standards</b> [2] - 42:15, 57:3 <b>standards</b> [12] - 11:18, 38:7, 38:10, 40:9, 42:14, 43:12, 46:5, 57:3, 90:8, 113:2, 144:17, 171:6 <b>standing</b> [2] - 27:17, 65:24 <b>standpoint</b> [7] - 16:16, 77:15, 90:2, 90:19, 171:2, 180:8, 185:16 <b>standpoints</b> [1] - 48:8 <b>stands</b> [1] - 77:2 <b>Stansbury</b> [7] - 21:23, 22:5, 115:6, 136:4, 136:16, 142:22, 190:20 <b>start</b> [9] - 9:8, 20:7, 70:3, 85:25, 95:18, 115:15, 155:9, 155:19, 159:23 <b>started</b> [7] - 18:3, 35:10, 35:11, 35:12, 150:6, 166:16, 167:13 <b>starting</b> [1] - 129:3 <b>starts</b> [3] - 113:17, 149:12, 155:12 <b>state</b> [27] - 13:5, 13:16, 18:17, 19:11, 23:13, 28:17, 30:12, 30:14, 30:17, 30:21, 30:23, 31:6, 31:16,</p>	<p>31:17, 31:24, 32:4, 34:7, 45:25, 49:14, 53:22, 68:11, 95:12, 115:16, 116:19, 120:6, 120:8, 178:23 <b>State</b> [4] - 11:17, 34:3, 97:11, 174:5 <b>State of Utah</b> [5] - 23:16, 31:2, 32:9, 68:9, 104:5 <b>statement</b> [4] - 6:16, 123:8, 171:18, 181:3 <b>Statement</b> [19] - 15:10, 16:19, 17:20, 18:23, 24:8, 24:11, 26:9, 119:15, 119:20, 120:21, 121:9, 122:7, 126:23, 131:1, 154:12, 163:5, 181:23, 184:7, 204:18 <b>States</b> [1] - 38:21 <b>states</b> [4] - 15:23, 33:14, 42:1, 73:17 <b>stating</b> [1] - 162:9 <b>Station</b> [1] - 172:6 <b>station</b> [1] - 56:11 <b>statute</b> [2] - 11:17, 16:17 <b>statutory</b> [1] - 24:25 <b>stay</b> [2] - 54:18, 154:7 <b>stayed</b> [1] - 175:4 <b>stays</b> [4] - 40:10, 48:21, 108:6 <b>steal</b> [1] - 198:23 <b>Steel</b> [1] - 194:9 <b>steel</b> [1] - 154:5 <b>Steep</b> [1] - 116:13 <b>steep</b> [3] - 171:14, 173:16 <b>steepness</b> [4] - 139:24, 139:25, 140:18, 141:25 <b>step</b> [7] - 35:19, 95:14, 113:10, 117:14, 118:24, 160:6, 193:22 <b>stewardship</b> [1] - 17:24 <b>still</b> [32] - 9:25, 25:15, 44:4, 44:5, 45:23, 46:8, 46:14, 48:21, 48:22, 48:23, 64:4, 65:24, 69:24, 77:2, 86:8, 88:10, 88:14, 98:22, 99:4, 103:9, 127:3, 133:21, 138:13, 141:24, 147:20, 164:6, 167:6, 171:5, 182:9, 192:19, 199:24, 200:7</p>	<p><b>stipulated</b> [1] - 12:20 <b>Stoel</b> [2] - 8:16, 8:23 <b>stop</b> [4] - 17:3, 17:13, 157:1, 202:7 <b>storm</b> [2] - 65:10, 84:19 <b>storms</b> [3] - 63:21, 101:9 <b>straight</b> [3] - 78:22, 79:2, 79:3 <b>straightforward</b> [1] - 176:15 <b>stress</b> [1] - 54:3 <b>strictly</b> [1] - 94:14 <b>strikes</b> [1] - 64:5 <b>stringent</b> [1] - 119:16 <b>strong</b> [4] - 63:3, 91:17, 167:24 <b>stronger</b> [1] - 30:18 <b>strongly</b> [1] - 191:5 <b>struck</b> [1] - 83:11 <b>structure</b> [8] - 151:8, 152:1, 152:23, 153:3, 153:6, 153:7, 154:4, 201:2 <b>structures</b> [4] - 139:4, 151:3, 152:3, 152:6 <b>studies</b> [3] - 84:12, 94:10, 152:15 <b>Study</b> [2] - 15:25, 84:10 <b>study</b> [39] - 10:15, 10:18, 15:3, 18:9, 19:7, 83:7, 84:11, 84:25, 85:4, 85:13, 113:12, 113:16, 113:17, 113:18, 114:3, 114:4, 114:7, 114:14, 115:13, 116:5, 117:12, 118:2, 118:21, 118:22, 118:25, 121:11, 121:13, 123:7, 150:9, 160:3, 160:5, 162:8, 162:10, 162:11, 172:10, 172:14, 182:12, 188:25 <b>stuff</b> [1] - 66:1 <b>subject</b> [2] - 5:4, 47:5 <b>Subject</b> [1] - 88:5 <b>submits</b> [1] - 123:7 <b>submission</b> [1] - 96:25 <b>submitted</b> [4] - 49:11, 121:14, 149:5, 193:25 <b>submitting</b> [2] - 119:3, 119:23 <b>Substation</b> [51] -</p>	<p>35:16, 45:19, 45:20, 45:21, 47:19, 48:19, 48:21, 56:10, 62:10, 68:13, 68:14, 68:23, 71:18, 71:19, 74:4, 74:6, 74:12, 75:4, 75:14, 75:16, 76:10, 77:10, 77:16, 79:6, 79:19, 100:4, 103:13, 108:6, 112:24, 114:15, 114:16, 115:10, 117:10, 124:12, 124:13, 124:25, 127:22, 135:1, 140:12, 142:14, 144:8, 146:1, 146:7, 146:12, 172:8, 174:24, 176:3, 180:18, 191:3, 197:21, 205:2 <b>substation</b> [76] - 12:17, 29:10, 76:19, 77:13, 77:17, 77:18, 78:18, 79:4, 80:3, 80:6, 80:9, 82:1, 82:5, 82:8, 85:24, 103:16, 103:17, 107:19, 107:22, 108:7, 108:16, 112:14, 113:20, 114:10, 114:18, 115:23, 117:5, 119:2, 119:10, 121:23, 123:17, 123:19, 123:21, 123:23, 124:2, 124:5, 124:9, 124:10, 124:21, 124:22, 124:24, 125:2, 125:8, 125:10, 125:17, 126:11, 126:22, 127:1, 136:12, 145:18, 145:24, 146:21, 146:24, 162:1, 162:6, 162:17, 172:20, 172:23, 173:1, 173:14, 173:20, 173:25, 174:15, 175:3, 187:22, 188:15, 188:19, 189:1, 189:8, 189:19, 190:24, 202:5, 205:5, 205:9 <b>Substation's</b> [1] - 114:25 <b>Substations</b> [1] - 112:24 <b>substations</b> [4] - 113:23, 125:4, 145:18, 145:20 <b>succinctly</b> [1] - 57:14 <b>sufficient</b> [1] - 90:23</p>
--	--	--	---	--



<p><b>suggest</b> <sup>[1]</sup> - 18:20  <b>suggested</b> <sup>[8]</sup> - 14:16, 18:11, 62:9, 92:7, 134:10, 142:13, 193:19, 196:5  <b>suggesting</b> <sup>[1]</sup> - 93:2  <b>suggestion</b> <sup>[1]</sup> - 18:21  <b>suggestions</b> <sup>[1]</sup> - 94:19  <b>suitable</b> <sup>[2]</sup> - 125:18, 146:23  <b>sum</b> <sup>[3]</sup> - 35:24, 63:1, 63:3  <b>summarized</b> <sup>[1]</sup> - 12:12  <b>summary</b> <sup>[3]</sup> - 14:6, 61:16, 70:5  <b>summertime</b> <sup>[1]</sup> - 52:18  <b>summing</b> <sup>[1]</sup> - 5:17  <b>Superfund site</b> <sup>[6]</sup> - 183:23, 183:25, 184:5, 194:4, 194:11, 195:10  <b>superimpose</b> <sup>[1]</sup> - 18:10  <b>superimposed</b> <sup>[1]</sup> - 178:14  <b>supplied</b> <sup>[2]</sup> - 47:12, 86:16  <b>supplier</b> <sup>[1]</sup> - 33:15  <b>supply</b> <sup>[1]</sup> - 33:6  <b>support</b> <sup>[1]</sup> - 23:21  <b>supposed</b> <sup>[3]</sup> - 64:23, 106:16, 153:21  <b>surface</b> <sup>[1]</sup> - 143:11  <b>surgery</b> <sup>[1]</sup> - 178:17  <b>surprise</b> <sup>[1]</sup> - 82:22  <b>surprising</b> <sup>[1]</sup> - 83:2  <b>surveyor's</b> <sup>[1]</sup> - 87:24  <b>suspenders</b> <sup>[9]</sup> - 91:2, 91:3, 91:6, 91:16, 91:18, 91:24, 105:7, 107:6, 107:7  <b>sustain</b> <sup>[1]</sup> - 50:19  <b>swath</b> <sup>[1]</sup> - 106:10  <b>swear</b> <sup>[2]</sup> - 27:18, 110:16  <b>switch</b> <sup>[2]</sup> - 50:22, 114:13  <b>sworn</b> <sup>[4]</sup> - 27:19, 28:13, 110:18, 110:24  <b>system</b> <sup>[67]</sup> - 12:7, 13:5, 20:11, 20:24, 29:5, 29:23, 30:4, 30:12, 31:6, 33:5, 35:23, 38:12, 39:19, 39:25, 40:2, 40:8, 40:10, 41:12, 42:16,</p>	<p>42:17, 43:10, 43:15, 44:4, 44:15, 52:3, 54:3, 54:12, 55:1, 55:7, 55:12, 55:15, 56:16, 58:25, 59:4, 60:10, 61:17, 61:18, 63:2, 64:20, 73:8, 75:24, 76:1, 80:13, 88:19, 89:20, 89:22, 90:12, 91:21, 94:22, 94:23, 96:7, 97:25, 98:4, 98:6, 98:10, 98:16, 100:13, 102:17, 113:5, 144:13, 145:2, 155:12, 156:24, 156:25, 157:5, 176:1, 186:22  <b>systems</b> <sup>[5]</sup> - 29:17, 34:22, 36:10, 38:8, 78:25</p> <p style="text-align: center;"><b>T</b></p> <p><b>table</b> <sup>[4]</sup> - 9:15, 97:1, 97:8, 144:5  <b>talks</b> <sup>[3]</sup> - 40:6, 86:23  <b>taller</b> <sup>[1]</sup> - 139:3  <b>Tariff</b> <sup>[2]</sup> - 33:19, 33:22  <b>task</b> <sup>[1]</sup> - 10:2  <b>team</b> <sup>[5]</sup> - 15:2, 18:5, 95:18, 113:8, 156:19  <b>technical</b> <sup>[4]</sup> - 7:21, 91:20, 95:12, 161:10  <b>technically</b> <sup>[2]</sup> - 197:11, 197:12  <b>Ted</b> <sup>[1]</sup> - 4:8  <b>teeth</b> <sup>[1]</sup> - 178:19  <b>Temple</b> <sup>[3]</sup> - 28:22, 28:23, 111:7  <b>Ten</b> <sup>[1]</sup> - 32:23  <b>ten</b> <sup>[14]</sup> - 29:13, 32:22, 64:14, 72:12, 72:13, 72:23, 72:24, 72:25, 159:13, 166:19, 175:12, 186:16  <b>ten-minute</b> <sup>[1]</sup> - 159:13  <b>ten-year</b> <sup>[1]</sup> - 72:24  <b>tend</b> <sup>[2]</sup> - 61:13, 168:1  <b>Term</b> <sup>[1]</sup> - 72:11  <b>term</b> <sup>[15]</sup> - 32:19, 32:20, 32:21, 32:22, 38:16, 60:16, 60:17, 67:13, 72:12, 98:17, 101:9, 130:12, 130:14  <b>Terminal</b> <sup>[40]</sup> - 35:16, 37:24, 38:1,</p>	<p>45:5, 46:21, 47:20, 48:12, 48:13, 61:2, 61:15, 62:11, 62:13, 63:5, 68:13, 69:2, 72:15, 73:7, 73:12, 76:12, 76:21, 101:21, 102:3, 102:18, 102:21, 112:24, 114:17, 115:10, 125:12, 135:3, 136:1, 142:19, 146:10, 149:21, 163:17, 163:22, 163:23, 164:3, 164:7, 198:5  <b>terminates</b> <sup>[3]</sup> - 48:11, 48:12, 48:13  <b>terms</b> <sup>[6]</sup> - 6:23, 22:8, 57:15, 58:19, 94:23, 164:17  <b>terrain</b> <sup>[12]</sup> - 95:24, 114:8, 116:13, 135:8, 140:18, 141:25, 161:7, 169:14, 169:16, 170:11, 170:14, 171:14  <b>terrible</b> <sup>[1]</sup> - 202:14  <b>test</b> <sup>[1]</sup> - 91:19  <b>testified</b> <sup>[6]</sup> - 28:14, 81:4, 110:25, 198:12, 198:15, 199:12  <b>testimony</b> <sup>[46]</sup> - 5:11, 7:24, 10:13, 10:24, 12:3, 12:11, 12:12, 12:21, 12:24, 13:12, 15:8, 15:13, 42:16, 45:17, 49:3, 49:11, 64:12, 67:22, 70:6, 70:11, 70:14, 73:1, 73:17, 74:20, 87:16, 96:21, 96:25, 107:16, 108:1, 145:1, 155:11, 156:24, 158:24, 159:3, 159:6, 160:1, 163:12, 175:22, 179:25, 181:3, 181:4, 181:17, 189:7, 204:15, 205:10, 206:6  <b>thank</b> <sup>[2]</sup> - 9:17, 10:1  <b>THE</b> <sup>[4]</sup> - 111:10, 196:1, 199:3, 199:7  <b>the witness</b> <sup>[67]</sup> - 18:18, 70:7, 70:19, 94:15, 94:24, 95:2, 96:1, 96:6, 96:20, 97:7, 97:19, 98:24, 99:12, 99:19, 99:23, 100:5, 100:10, 100:19, 100:23, 101:6, 101:8, 101:24, 102:2, 103:12,</p>	<p>103:20, 104:1, 109:19, 111:13, 111:15, 111:17, 158:24, 186:9, 186:12, 187:12, 187:15, 187:17, 188:11, 189:8, 189:13, 191:9, 191:12, 191:14, 192:7, 192:14, 193:5, 193:24, 194:14, 194:21, 194:23, 195:1, 195:4, 195:11, 196:6, 196:8, 196:11, 196:17, 196:21, 197:4, 197:15, 197:19, 197:22, 198:2, 198:9, 198:16, 203:22, 203:25, 205:23  <b>themselves</b> <sup>[2]</sup> - 130:19, 154:3  <b>Therefore</b> <sup>[2]</sup> - 12:19, 186:20  <b>therefore</b> <sup>[1]</sup> - 24:21  <b>thereof</b> <sup>[1]</sup> - 183:23  <b>they've</b> <sup>[8]</sup> - 21:6, 24:4, 24:6, 64:10, 121:22, 122:23, 163:20  <b>thinly</b> <sup>[1]</sup> - 202:18  <b>third</b> <sup>[7]</sup> - 15:14, 33:4, 65:10, 109:9, 122:23, 128:16, 131:7  <b>third-party</b> <sup>[1]</sup> - 33:4  <b>Thistle</b> <sup>[2]</sup> - 87:24  <b>thorough</b> <sup>[1]</sup> - 156:3  <b>thoughts</b> <sup>[1]</sup> - 8:11  <b>thousand</b> <sup>[7]</sup> - 84:23, 192:10, 193:3, 193:11, 193:23, 193:24, 194:1  <b>thousand-mile</b> <sup>[1]</sup> - 84:23  <b>thousands</b> <sup>[1]</sup> - 42:11  <b>thread</b> <sup>[1]</sup> - 67:21  <b>threat</b> <sup>[1]</sup> - 202:19  <b>threatened</b> <sup>[1]</sup> - 202:21  <b>three</b> <sup>[32]</sup> - 7:18, 12:23, 18:5, 18:9, 36:10, 55:9, 55:12, 64:22, 64:24, 65:5, 76:22, 88:4, 101:13, 120:2, 124:11, 127:18, 131:5, 131:25, 132:2, 132:6, 133:17, 149:16, 156:2, 164:24, 170:6, 171:19, 178:23, 185:2, 186:6, 197:13</p>	<p><b>Three</b> <sup>[4]</sup> - 151:12, 171:19, 171:20, 171:21  <b>three-mile</b> <sup>[1]</sup> - 197:13  <b>three-or-four-mile</b> <sup>[1]</sup> - 186:6  <b>threshold</b> <sup>[1]</sup> - 90:9  <b>threw</b> <sup>[1]</sup> - 64:18  <b>throughout</b> <sup>[1]</sup> - 15:9  <b>thumb</b> <sup>[3]</sup> - 87:5, 95:21, 95:23  <b>tie</b> <sup>[5]</sup> - 41:18, 77:16, 77:24, 78:23, 80:4  <b>tied</b> <sup>[3]</sup> - 39:19, 78:24, 185:11  <b>tier</b> <sup>[1]</sup> - 146:24  <b>ties</b> <sup>[13]</sup> - 34:24, 37:2, 37:3, 37:4, 37:9, 37:15, 40:1, 41:12, 45:13, 48:10, 48:16, 78:1  <b>tighter</b> <sup>[1]</sup> - 137:21  <b>timeline</b> <sup>[2]</sup> - 180:3, 182:10  <b>Timeline</b> <sup>[1]</sup> - 180:4  <b>today</b> <sup>[47]</sup> - 4:24, 5:3, 5:6, 5:7, 5:11, 10:14, 10:24, 11:14, 12:3, 12:4, 14:1, 25:6, 30:6, 31:25, 32:21, 34:24, 35:19, 37:21, 38:15, 40:1, 40:21, 41:20, 43:10, 45:17, 46:12, 47:8, 50:14, 51:8, 51:10, 54:12, 56:4, 57:1, 72:20, 73:15, 83:9, 92:10, 109:20, 112:19, 124:25, 133:2, 144:16, 157:11, 175:1, 180:6, 180:15, 184:15, 191:1  <b>Today</b> <sup>[1]</sup> - 67:17  <b>toe</b> <sup>[1]</sup> - 179:15  <b>together</b> <sup>[30]</sup> - 37:10, 37:16, 39:18, 39:19, 48:16, 60:12, 61:22, 64:24, 76:20, 77:5, 85:25, 88:4, 88:6, 88:8, 88:12, 92:8, 93:4, 93:15, 95:5, 100:18, 108:25, 115:18, 117:17, 133:14, 151:19, 181:15, 186:13, 186:24, 187:18, 189:21  <b>tomorrow</b> <sup>[6]</sup> - 5:8, 17:7, 17:11, 190:11, 206:3, 206:13  <b>Tooele</b> <sup>[58]</sup> - 11:16,</p>
--	--	--	---	---

<p>12:18, 14:20, 18:8, 19:6, 21:1, 21:13, 23:20, 23:23, 25:23, 25:25, 45:12, 45:14, 68:7, 68:15, 68:19, 68:23, 68:25, 69:4, 92:8, 100:3, 100:12, 103:5, 103:23, 105:3, 107:16, 115:7, 120:2, 120:18, 124:14, 124:16, 128:7, 128:17, 132:7, 132:17, 133:9, 134:19, 134:23, 135:14, 135:19, 135:20, 137:2, 137:3, 137:16, 138:9, 138:10, 139:2, 140:7, 148:1, 149:3, 152:13, 155:7, 177:21, 177:23, 183:14, 183:16, 198:14</p> <p><b>Tooele County</b> [55] - 4:13, 5:4, 8:24, 8:25, 9:2, 10:8, 10:20, 11:25, 12:15, 19:17, 19:18, 20:15, 20:20, 20:23, 21:10, 23:4, 23:20, 23:23, 24:17, 24:20, 24:24, 25:2, 25:4, 25:11, 27:7, 48:19, 57:20, 67:25, 68:3, 68:11, 68:13, 80:1, 92:1, 92:12, 103:5, 105:6, 132:17, 133:1, 133:6, 149:5, 154:23, 157:16, 158:1, 158:2, 158:12, 158:14, 180:5, 180:13, 182:8, 184:20, 187:9, 194:7, 199:1, 206:3</p> <p><b>Tooele's</b> [3] - 67:25, 155:5, 157:24</p> <p><b>took</b> [7] - 69:12, 84:18, 86:9, 117:14, 133:12, 178:12</p> <p><b>top</b> [10] - 43:9, 91:3, 129:3, 141:8, 148:19, 150:20, 187:6, 193:7, 195:9</p> <p><b>topography</b> [1] - 130:23</p> <p><b>Topography</b> [1] - 114:8</p> <p><b>total</b> [1] - 30:21</p> <p><b>tough</b> [1] - 27:3</p> <p><b>touring</b> [1] - 21:5</p> <p><b>Towards</b> [1] - 179:25</p> <p><b>towards</b> [4] - 117:14, 128:6, 139:2, 189:24</p> <p><b>tower</b> [5] - 99:20,</p>	<p>141:4, 141:6, 153:16, 176:8</p> <p><b>towers</b> [13] - 66:5, 85:24, 99:16, 101:11, 105:25, 106:25, 152:1, 153:18, 153:20, 153:21, 164:15, 164:19, 203:19</p> <p><b>town</b> [2] - 190:24, 190:25</p> <p><b>track</b> [1] - 182:24</p> <p><b>traits</b> [1] - 169:15</p> <p><b>transfer</b> [3] - 53:6, 97:16, 98:22</p> <p><b>transformation</b> [1] - 71:21</p> <p><b>transit</b> [1] - 195:24</p> <p><b>Transmission</b> [6] - 14:4, 42:15, 43:13, 57:3, 111:8, 112:16</p> <p><b>transmission</b> [88] - 4:13, 8:14, 12:6, 20:10, 22:11, 24:2, 29:10, 29:17, 29:18, 29:23, 30:4, 30:11, 30:13, 30:16, 30:20, 31:7, 32:14, 32:15, 33:10, 33:20, 33:22, 33:25, 34:18, 35:6, 35:7, 36:10, 36:17, 38:8, 38:12, 40:8, 40:21, 41:3, 41:6, 41:10, 41:14, 42:4, 43:16, 49:16, 51:21, 53:1, 53:25, 55:19, 56:2, 56:9, 56:12, 56:13, 65:16, 66:21, 67:10, 85:10, 97:25, 98:9, 104:7, 104:17, 104:19, 112:12, 112:14, 112:19, 112:23, 113:19, 113:23, 115:12, 116:7, 117:5, 117:18, 118:8, 118:14, 119:9, 121:22, 122:11, 122:15, 125:5, 125:20, 125:23, 126:2, 126:6, 126:15, 127:25, 129:19, 129:20, 143:20, 152:1, 161:16, 170:23, 182:23, 197:1, 203:5</p> <p><b>transmit</b> [4] - 61:10, 61:23, 97:25, 98:6</p> <p><b>transportation</b> [1] - 116:17</p> <p><b>traverse</b> [1] - 196:4</p> <p><b>triangle</b> [39] - 38:16, 38:18, 38:22, 39:2,</p>	<p>40:5, 42:9, 42:21, 43:24, 45:9, 45:13, 45:18, 45:23, 46:3, 46:19, 46:20, 46:22, 47:11, 47:13, 47:15, 47:17, 47:21, 47:24, 47:25, 48:2, 57:12, 71:5, 71:7, 71:9, 71:13, 71:23, 72:8, 73:11, 76:11, 76:18, 76:21, 103:22, 103:23, 105:3</p> <p><b>triangles</b> [1] - 89:21</p> <p><b>tried</b> [2] - 89:15, 148:24</p> <p><b>troubled</b> [2] - 144:20, 181:2</p> <p><b>true</b> [4] - 11:1, 25:16, 26:10, 184:22</p> <p><b>trust</b> [1] - 23:11</p> <p><b>Trust</b> [1] - 23:17</p> <p><b>try</b> [13] - 10:17, 14:17, 90:18, 130:4, 133:15, 133:24, 135:13, 135:21, 137:5, 137:15, 138:18, 156:14, 198:25</p> <p><b>trying</b> [17] - 44:8, 60:24, 65:19, 78:18, 88:17, 91:12, 92:2, 92:6, 138:17, 149:21, 150:14, 157:2, 165:1, 185:6, 188:16, 202:14</p> <p><b>Trying</b> [1] - 132:22</p> <p><b>tuck</b> [1] - 178:20</p> <p><b>tummy</b> [1] - 178:19</p> <p><b>turn</b> [9] - 42:22, 43:22, 49:2, 54:17, 95:17, 104:21, 174:19, 190:9, 203:13</p> <p><b>turns</b> [2] - 8:2, 140:10</p> <p><b>twice</b> [2] - 68:10, 140:1</p> <p><b>two</b> [71] - 5:2, 7:5, 12:4, 18:4, 22:13, 22:18, 25:15, 29:23, 37:10, 37:11, 37:15, 39:6, 39:18, 39:19, 47:2, 47:4, 48:7, 48:9, 51:3, 51:11, 51:24, 59:5, 62:15, 62:20, 63:16, 65:8, 68:12, 68:13, 69:25, 71:10, 73:2, 73:7, 76:6, 77:5, 79:10, 81:23, 84:14, 84:15, 86:20, 86:22, 87:6, 89:2, 91:1, 91:5, 91:6, 91:15, 91:16, 98:25, 102:2, 122:19, 125:25, 132:4,</p>	<p>134:11, 135:23, 136:13, 142:10, 145:6, 151:3, 157:19, 164:13, 173:5, 173:24, 175:23, 189:20, 195:22, 203:19</p> <p><b>Two</b> [3] - 4:21, 173:25, 189:8</p> <p><b>two-dimensional</b> [2] - 51:11</p> <p><b>two-mile-wide</b> [1] - 132:4</p> <p><b>tying</b> [1] - 39:18</p> <p><b>type</b> [5] - 66:7, 143:12, 169:8, 181:20, 205:18</p> <p><b>types</b> [2] - 107:13, 146:6</p> <p><b>typical</b> [3] - 87:2, 151:25, 152:2</p> <p><b>typically</b> [2] - 96:10, 108:12</p>	<p><b>undesirable</b> [1] - 17:15</p> <p><b>unfolds</b> [1] - 107:1</p> <p><b>unfortunately</b> [2] - 101:14, 106:23</p> <p><b>uninterrupted</b> [1] - 21:19</p> <p><b>unique</b> [2] - 20:8, 138:22</p> <p><b>units</b> [1] - 34:5</p> <p><b>University</b> [1] - 111:25</p> <p><b>University of Utah</b> [1] - 29:4</p> <p><b>unknown</b> [1] - 184:25</p> <p><b>unless</b> [1] - 80:6</p> <p><b>unlike</b> [1] - 18:4</p> <p><b>unnecess</b> [1] - 94:21</p> <p><b>unreliable</b> [1] - 53:22</p> <p><b>unresolved</b> [1] - 16:3</p> <p><b>unsuitable</b> [1] - 189:20</p> <p><b>Unsuitable</b> [1] - 143:13</p> <p><b>unwilling</b> [3] - 11:7, 181:13</p> <p><b>up</b> [157] - 5:17, 6:9, 6:10, 27:22, 35:14, 35:20, 37:23, 38:24, 42:24, 44:25, 45:9, 46:11, 46:20, 46:21, 47:7, 47:19, 47:24, 51:21, 52:14, 53:5, 53:14, 54:22, 57:6, 57:7, 57:18, 59:23, 61:13, 61:24, 63:4, 63:5, 63:7, 64:23, 68:6, 74:2, 77:6, 78:13, 85:8, 86:21, 90:8, 90:20, 92:3, 97:20, 98:5, 99:2, 102:23, 103:2, 106:25, 107:20, 111:17, 114:6, 114:12, 114:13, 114:16, 114:17, 115:9, 115:20, 115:22, 116:1, 116:12, 117:8, 117:11, 121:15, 122:21, 124:8, 124:14, 124:19, 125:9, 125:11, 125:22, 125:25, 128:2, 128:5, 128:6, 128:16, 128:18, 128:20, 132:20, 133:15, 134:8, 134:10, 134:12, 135:2, 135:14, 135:18, 135:24,</p>
---	--	--	---	--

**U**

**U-111** [2] - 129:2, 129:10

**U.S** [3] - 83:6, 85:3, 194:9

**ultimate** [1] - 125:7

**ultimately** [11] - 115:25, 124:4, 124:16, 126:10, 128:15, 129:5, 137:18, 139:9, 142:6, 147:8, 202:16

**Ultimately** [1] - 144:6

**unable** [2] - 68:18, 68:21

**unacceptable** [3] - 56:25, 57:24, 181:1

**unanimously** [1] - 23:21

**unanswered** [1] - 25:15

**under** [4] - 33:15, 33:19, 42:8, 55:7

**undercut** [1] - 13:3

**undergone** [1] - 19:3

**underground** [1] - 203:4

**undergrounding** [4] - 186:25, 196:24, 197:10, 203:3

**underneath** [1] - 91:2

**understood** [2] - 31:9, 176:21

**underway** [2] - 55:9, 174:8

<p>135:25, 137:6, 137:9, 137:16, 138:8, 138:15, 138:16, 139:19, 140:2, 140:11, 140:21, 141:6, 141:8, 141:12, 141:14, 141:18, 142:2, 142:14, 142:16, 142:20, 144:22, 144:25, 145:8, 146:7, 146:13, 146:16, 147:2, 150:22, 151:8, 152:16, 152:19, 152:20, 153:25, 154:6, 159:22, 161:21, 166:22, 166:25, 169:3, 169:13, 172:24, 173:5, 175:2, 175:3, 175:23, 179:12, 179:21, 180:14, 180:19, 187:5, 187:19, 187:21, 188:1, 189:11, 189:19, 191:16, 192:21, 192:22, 193:11, 196:11, 196:23, 197:7, 197:25, 202:22, 203:24, 204:10  <b>Up</b> [4] - 56:8, 118:3, 121:8, 134:21  <b>updated</b> [1] - 97:3  <b>upgrade</b> [1] - 93:18  <b>upper</b> [1] - 162:4  <b>uproar</b> [1] - 199:23  <b>upset</b> [1] - 202:14  <b>urban</b> [2] - 31:15, 96:9  <b>urbanized</b> [1] - 26:17  <b>urge</b> [1] - 18:13  <b>urgency</b> [1] - 51:7  <b>urgent</b> [1] - 58:11  <b>Utah</b> [23] - 4:6, 4:8, 30:4, 31:17, 38:21, 39:10, 40:22, 41:9, 78:5, 79:15, 102:5, 104:3, 104:10, 104:15, 114:20, 118:6, 120:17, 132:18, 137:3, 154:22, 155:1  <b>Utah State</b> [2] - 111:24, 137:4  <b>utility</b> [13] - 12:9, 29:8, 43:14, 44:25, 46:5, 59:12, 60:4, 61:8, 76:3, 85:22, 112:3, 116:17, 177:14  <b>Utility</b> [3] - 4:6, 84:10, 157:10</p>	<p><b>utilization</b> [2] - 61:17, 61:18  <b>utilized</b> [1] - 104:8  <b>utilizes</b> [1] - 23:21  <b>utmost</b> [1] - 13:8</p> <p style="text-align: center;"><b>V</b></p> <p><b>valley</b> [1] - 54:1  <b>Valley</b> [16] - 12:18, 14:20, 45:12, 45:14, 47:20, 100:3, 105:3, 114:17, 115:7, 124:14, 128:4, 128:6, 133:9, 134:19, 134:23, 190:21  <b>valuable</b> [1] - 178:8  <b>value</b> [3] - 21:16, 53:10, 178:9  <b>vandalism</b> [1] - 101:10  <b>variations</b> [1] - 22:23  <b>varied</b> [1] - 83:6  <b>various</b> [5] - 29:15, 74:10, 112:1, 112:11, 134:19  <b>vary</b> [1] - 22:4  <b>vast</b> [3] - 9:23, 11:12, 15:14  <b>vastly</b> [1] - 92:9  <b>vege</b> [1] - 171:12  <b>vegetation</b> [12] - 21:13, 22:7, 116:21, 130:22, 151:12, 168:20, 168:22, 169:3, 170:9, 170:23, 178:23, 179:14  <b>veiled</b> [1] - 202:18  <b>versus</b> [3] - 95:24, 187:9, 189:24  <b>vertical</b> [1] - 51:19  <b>very-thinly-veiled</b> [1] - 202:18  <b>viable</b> [2] - 102:10, 102:14  <b>Vice</b> [1] - 29:15  <b>vice</b> [2] - 12:6, 29:17  <b>vicinity</b> [1] - 106:18  <b>view</b> [4] - 18:24, 21:19, 32:21, 51:11  <b>View</b> [1] - 21:23  <b>viewpoint</b> [2] - 150:21, 152:18  <b>views</b> [1] - 22:13  <b>viewshed</b> [1] - 26:1  <b>visible</b> [6] - 153:17, 153:24, 154:3, 154:9, 179:16, 179:24  <b>visits</b> [2] - 20:1, 21:4  <b>visual</b> [16] - 148:24,</p>	<p>150:7, 150:8, 150:10, 150:16, 151:6, 152:14, 152:17, 186:4, 186:6, 189:25, 201:7, 201:11, 203:14, 204:16  <b>Visual</b> [1] - 171:11  <b>visually</b> [1] - 171:9  <b>visuals</b> [1] - 13:18  <b>vocal</b> [1] - 152:11  <b>voice</b> [1] - 163:25  <b>voiced</b> [1] - 167:4  <b>voltage</b> [17] - 22:11, 24:2, 49:18, 51:20, 59:16, 72:6, 78:24, 98:5, 98:10, 118:7, 118:19, 127:25, 129:18, 129:19, 182:23, 195:6  <b>voltages</b> [1] - 72:2  <b>voluntarily</b> [1] - 133:13  <b>voluntary</b> [1] - 189:17</p> <p style="text-align: center;"><b>W</b></p> <p><b>wait</b> [1] - 97:4  <b>wake</b> [1] - 90:20  <b>Wal</b> [7] - 146:8, 146:14, 146:16, 187:20, 188:2, 188:20, 189:18  <b>Wal-Mart</b> [7] - 146:8, 146:14, 146:16, 187:20, 188:2, 188:20, 189:18  <b>wants</b> [3] - 20:24, 34:18, 75:25  <b>warms</b> [1] - 27:22  <b>warning</b> [1] - 194:19  <b>Wasatch</b> [1] - 106:12  <b>water</b> [9] - 18:24, 60:16, 65:14, 102:12, 114:10, 114:20, 144:5, 145:9, 146:19  <b>watershed</b> [6] - 21:18, 26:2, 142:3, 142:4, 165:18, 204:10  <b>ways</b> [2] - 22:3, 117:8  <b>weak</b> [4] - 62:25, 63:1, 167:25  <b>weakest</b> [1] - 62:21  <b>wear</b> [3] - 90:21, 90:22  <b>weather</b> [3] - 63:20, 106:2, 141:8  <b>weathered</b> [1] - 154:5  <b>WECC</b> [1] - 87:7</p>	<p><b>Wednesday</b> [3] - 5:9, 5:16, 206:5  <b>week</b> [1] - 11:22  <b>weeks</b> [2] - 18:4, 191:22  <b>weigh</b> [1] - 23:1  <b>weighing</b> [1] - 180:12  <b>Welcome</b> [1] - 9:1  <b>welcome</b> [1] - 4:4  <b>west</b> [20] - 37:3, 41:1, 68:5, 77:25, 78:1, 78:2, 78:21, 79:17, 80:5, 80:14, 82:17, 115:2, 118:6, 127:22, 128:2, 151:5, 162:5, 172:23, 173:2, 191:2  <b>West</b> [16] - 28:23, 37:20, 39:15, 41:12, 42:23, 43:9, 44:3, 48:13, 48:16, 59:18, 64:20, 80:19, 104:13, 108:13, 111:7  <b>West Jordan</b> [4] - 129:2, 132:7, 154:22, 155:2  <b>West Tintic Mountains</b> [1] - 115:2  <b>west-wide</b> [1] - 68:5  <b>western</b> [1] - 42:3  <b>Western</b> [5] - 80:18, 84:9, 84:10, 85:17, 101:15  <b>westernmost</b> [1] - 21:25  <b>wetlands</b> [1] - 171:16  <b>white</b> [1] - 126:1  <b>whitening</b> [1] - 178:19  <b>whole</b> [9] - 12:16, 18:17, 19:11, 48:4, 59:2, 93:23, 149:23, 184:6, 205:17  <b>wholesale</b> [1] - 33:3  <b>Whoops</b> [1] - 74:22  <b>whoops</b> [1] - 39:21  <b>wide</b> [5] - 66:13, 68:5, 100:20, 113:19, 132:4  <b>wide-open</b> [1] - 100:20  <b>wider</b> [6] - 41:25, 105:20, 106:9, 106:10, 107:8, 107:12  <b>widespread</b> [2] - 67:16, 106:14  <b>widest</b> [1] - 83:1  <b>width</b> [4] - 82:15, 82:23, 83:6, 106:21</p>	<p><b>widths</b> [1] - 101:3  <b>wildfire</b> [2] - 168:17, 169:1  <b>Wildfire</b> [1] - 168:18  <b>wildlife</b> [6] - 18:24, 21:13, 22:7, 116:20, 130:15, 130:20  <b>Wildlife</b> [3] - 34:10, 85:1, 195:12  <b>Williams</b> [1] - 118:7  <b>willing</b> [5] - 144:14, 157:23, 158:24, 180:5, 181:1  <b>willingly</b> [1] - 11:18  <b>wind</b> [4] - 105:11, 105:25, 106:3, 106:9  <b>winds</b> [1] - 106:13  <b>windstorm</b> [2] - 67:10, 105:24  <b>wire</b> [1] - 106:24  <b>wired</b> [1] - 102:24  <b>wires</b> [1] - 101:11  <b>wise</b> [1] - 4:18  <b>wish</b> [1] - 190:3  <b>withstand</b> [2] - 164:15, 164:20  <b>witness</b> [13] - 7:1, 8:1, 13:25, 15:7, 27:13, 28:13, 94:5, 96:14, 110:1, 110:8, 110:24, 185:19, 188:12  <b>witnessed</b> [1] - 23:12  <b>witnesses</b> [6] - 5:3, 7:8, 7:10, 7:23, 12:4, 205:25  <b>wondering</b> [2] - 105:1, 124:19  <b>Woods</b> [1] - 102:13  <b>words</b> [12] - 30:7, 33:17, 53:23, 54:17, 59:5, 59:9, 108:24, 109:4, 155:20, 160:8, 202:13  <b>worst</b> [3] - 91:24, 92:3, 101:15  <b>worst-case</b> [2] - 91:24, 92:3  <b>worst-performing</b> [1] - 101:15  <b>worth</b> [2] - 30:7, 170:6  <b>write</b> [1] - 200:6  <b>writing</b> [1] - 6:6  <b>written</b> [2] - 8:2, 12:12  <b>Wyodak</b> [1] - 31:6  <b>Wyoming</b> [11] - 31:5, 37:4, 38:20, 38:21, 40:22, 41:4, 41:8,</p>
---	---	---	---	--

64:21, 79:14, 104:8, 104:15
<b>Y</b>
<b>yard</b> [1] - 125:14 <b>Ye</b> [1] - 148:1 <b>year</b> [8] - 32:9, 69:20, 69:24, 72:24, 99:5, 99:6, 156:14, 156:21 <b>years</b> [42] - 10:16, 12:8, 15:2, 18:5, 18:8, 18:9, 19:6, 24:5, 29:7, 29:13, 30:6, 32:22, 32:23, 35:10, 67:17, 69:12, 69:24, 69:25, 72:12, 72:13, 72:23, 72:25, 79:12, 111:25, 133:18, 144:4, 151:13, 156:2, 170:6, 171:2, 171:19, 171:20, 171:21, 178:24, 179:3, 179:4, 182:2, 182:12 <b>yellow</b> [2] - 36:13, 135:17 <b>yourself</b> [1] - 108:7
<b>Z</b>
<b>zone</b> [1] - 129:14 <b>Zoning</b> [3] - 20:13, 20:16, 25:5