1 THE PUBLIC UTILITIES COMMISSION 2 OF THE STATE OF SOUTH DAKOTA 3 4 IN THE MATTER OF THE COMPLAINT EL11-006 BY OAK TREE ENERGY, LLC, AGAINST 5 NORTHWESTERN ENERGY FOR REFUSING TO ENTER INTO A PURCHASE POWER 6 AGREEMENT 7 ORIGINAL Transcript of Proceedings 8 April 26, 2012 9 10 BEFORE THE PUBLIC UTILITIES COMMISSION, 11 CHRIS NELSON, CHAIRMAN KRISTIE FIEGEN, VICE CHAIRMAN 12 GARY HANSON, COMMISSIONER RECEIVED 13 COMMISSION STAFF MAY 1 5 2012 Rolayne Wiest SOUTH DAKOTA PUBLIC 14 John Smith UTILITIES COMMISSION Karen Cremer 15 Kara Semmler Ryan Soye 1.6 Greg Rislov Chris Daugaard 17 Patrick Steffensen Ross Pedersen 18 Jon Thurber Brittany Mehlhaff 19 Cindy Kemnitz Deb Gregg 20 Demaris Axthelm 21 **APPEARANCES** Michael Uda, Oak Tree 22 Yvette LaFrentz, Oak Tree 23 Al Brogan, NorthWestern Energy 24 25 Reported By Cheri McComsey Wittler, RPR, CRR

TRANSCRIPT OF PROCEEDINGS, held in the above-entitled matter, at the South Dakota State Capitol Building, Room 413, 500 East Capitol Avenue, Pierre, South Dakota, on the 26th day of April, 2012, commencing at 10:20 a.m. 

1 CHAIRMAN NELSON: EL11-006. And so I can lay 2 out and I think the parties are aware of the plan for the 3 remainder of the morning, but for anybody listening, I 4 just wanted to make it clear how we are going to proceed. 5 Oak Tree will have 30 minutes for your initial 6 arguments. NorthWestern will have 30 minutes for your 7 initial arguments. Staff will have 30 minutes for your 8 initial arguments. NorthWestern will have 10 minutes for 9 rebuttal, Oak Tree will have 10 minutes for rebuttal, and 10 then Commissioner discussion and questions. 11 I just want to ask my fellow Commissioners, are 12 you okay with waiting until the end to ask questions, or 13 would you like to during the presentations? 14 COMMISSIONER FIEGEN: I'm fine waiting. 15 CHAIRMAN NELSON: Okay. We will just hold our questions until the end, and hopefully they will have all 16 17 of them answered by that point. 18 Any questions on how we will proceed? Okay. If not, Mr. Uda. 19 20 As you may notice, I have a PowerPoint MR. UDA: 21 presentation because some of the things I'm going to be 22 reading to you are in the record either in the testimony 23 or the briefs in this case, and I wanted to have you guys be able to read along with me on that. And hopefully the 24 25 technology will not fail us. Demaris has been most

i i i

1 gracious in assisting me.

25

2 So the first thing that I want to talk about 3 just briefly is the bigger picture and what I don't want 4 the Commission to lose sight of in all this. And that is 5 the Makens family.

6 They have expended a significant amount of 7 resources in this effort to build their wind farm in 8 Clark. And they're long time property owners, family in 9 Clark for generation after generation. I can't even 10 remember how many. But they've been here a long time. 11 And I just want to remind you that this is something 12 that's exceedingly important to them.

13 It's also important -- this proceeding is 14 important in terms of setting policy for the State of 15 South Dakota. I could be wrong in saying this, but I 16 think this is the first qualifying facility of any size that has attempted to obtain a contract from a utility in 17 18 South Dakota at least since the MDU proceeding a few 19 years back, which apparently was never -- never reached a 20 decision.

21 So in a way you could look at this proceeding as 22 saying, well, we're setting a precedent here and so we 23 have to be very cautious about the approach that we use. 24 And I commend that.

But I also think -- and this is something that's

happened before in Montana, and you don't have to view it as precedential if you don't want to, I think. I think you can say this is a decision that was based on the facts of the law that was before you and that if you want to take a broader look at these issues, I think you should do that.

7 I think the Staff in particular should be 8 commended for taking that view. I think it would ease 9 the administration of any potential future disputes. I 10 know as a fact that there are other projects who are 11 looking at the outcome of this proceeding to see what 12 sort of guidance they might get from the Commission.

And so I think from that standpoint, you know, it is important to keep in mind the consequences of the Commission's decision.

I think that the real issue that really divides the parties more than anything is this whole question of the calculation of avoided cost. And I think there are a number of different issues. The way you could boil this down essentially comes down to three issues.

21 And the first is who do you trust? Who are the 22 people that you think you can rely upon?

The second issue is what methodology did they use, and is it an established methodology? Is it something that's been tested and utilized before?

And I think the third question is are the results that you're going to get within a certain range of reasonableness? And by that I mean and Mr. Lauckhart testified about this at the hearing, and what said was he said, well, look. You don't base your expectations on the high case or the low case.

Yeah. You might have a forecast with a number of different results, a number of different outliers, but what you want to do is try to figure out where is that range of reasonableness.

11 And his point to you about the factors that 12 NorthWestern mentioned in the Spion Kop proceeding, the 13 nonprice factors, was these things are true no matter 14 where you are. These things, including things like the 15 benefits of diversification of your portfolio.

I know NorthWestern probably doesn't agree with this, but there's a substantial prospect that if the president gets reelected, there will be cap and trade legislation by 2016. If that happens, what is now presently very inexpensive coal generation will no longer be inexpensive.

Now this is in addition to the proceeding that Otter Tail has filed with you with respect to the justification for doing a retrofit on the Big Stone Plant to comply with EPA regulations with respect to coal-fired

\_

1 generation. And when you add up and you compound those 2 factors you have to take a realistic view at the risks 3 that you potentially face.

The second thing is there is a substantial likelihood if the president gets reelected, there will be a national RPS legislation. Because not everybody's moving in that same direction. It's possible it won't happen, but it's possible it is. These are the kinds of things you have to evaluate.

10 The other thing that will happen is even if, for 11 example, in South Dakota there is not an effort to move 12 away from coal-fired generation, there is going to be 13 substantial numbers of coal plants that are retiring in 14 the United States because of these regulations. And that 15 will have several effects.

One is the natural gas now that is primarily used in the Eastern Interconnect to heat people's homes is going to be used to fire generation. Everybody is going to be chasing the same hydrocarbons. And as that happens, as that fuel switching takes place, supply will dry up.

The next issue that you have to face and you have to gauge the level of risk that you face is right now because of slant drilling and horizontal drilling in shale bed, companies have been able to take advantage of

1 the sweet spot in these shale beds.

And what I mean by that, if you don't understand 2 3 it, is essentially there are a number of valuable liquids 4 that you're able to get by horizontally drilling through the shale. And those sweet spots is what everybody's 5 6 hitting first. And when those sweet spots dry up, the cost of extracting natural gas through shale is going to 7 8 go up because you will not have all of these other 9 commercially beneficial liquids that you're obtaining by 10 doing that.

11 The other issue that Black & Veatch tried to 12 analyze to the best of their ability was this whole issue 13 with fracking. Was what the cost associated with 14 fracking? It's primarily a water pollution control 15 issue. It's something that the industry thinks is 16 manageable, but there will be costs associated with it.

17 So these are the kinds of things that you have 18 to evaluate. And these are things that in the Spion Kop 19 proceeding NorthWestern told the Montana Commission are 20 benefits to having a wind generating facility in their 21 portfolio. This is not what they've told the Commission 22 here.

Now going back to this whole question of who do you trust, in its briefs and at hearing to a degree NorthWestern has tried to make an issue out of the fact

1	that Mr. Lauckhart did not himself prepare the Black &
2	Veatch Electric Market Perspective for the fall of 2010.
3	First of all, he did help prepare it. He is one
4	of the experts in a team of experts from a variety of
5	different disciplines that were collected and assembled
6	by Black & Veatch, which is a nationally respected,
7	well-known organization that puts together these
8	forecasts twice a year at an enormous expense of about
9	half a million dollars.
10	The reason that it was protected, that
11	information was protected in this proceeding, is because
12	they sell this information to people. They sell it to
13	banks, in particular, to make investment decisions about
14	the likely return on investment they will make if they
15	provide debt financing to these projects.
16	So it's extremely important to keep in mind that
17	this is an off-the-shelf product, but that's not a bad
18	thing. In fact, this is not something that was prepared
19	for this proceeding. Mr. Lauckhart used it in doing his
20	analysis of the hourly dispatch models that were run and
21	taking each hour for 20 years and saying what's the value
22	of that energy likely to be?
23	So I don't think there's anything suspect or
24	wrong about what Mr. Lauckhart did. In fact, I think it
25	was a commendable thing for Oak Tree to spend that kind

1 of money to come up with the data that they came up with 2 for this proceeding.

I think the second thing is Mr. Lauckhart has 4 41 years of experience in the industry. He was at 5 Puget Sound Power & Light in Washington for a number of 6 years. I think NorthWestern's Reply Brief indicated 7 Mr. Lauckhart's been mentioned in 37 different orders.

8 And it's true, as NorthWestern suggested, 9 Mr. Lauckhart -- the commissions haven't always agreed 10 with Mr. Lauckhart. But I will submit to you any time 11 you've been in any industry for 41 years you can be sure 12 that there are going to be people who disagree with you, 13 including commissions.

That doesn't mean that you're not an expert, and it doesn't mean your opinions don't have value. It just means on those particular instances there were times when, you know, for whatever reason, the state agencies did not agree with Mr. Lauckhart's recommendation.

19 It wasn't all 37 times. I can guarantee you 20 that. Mr. Lauckhart is widely respect in the industry, 21 or he wouldn't be working at Black & Veatch.

I would also like to say on this issue of who do you trust, I have the greatest respect for Mr. LaFave and Mr. Green and Mr. Lewis, but they're not avoided cost experts. They may be experts in other areas within their

· ··

1 field, but they are not avoided cost experts. They are 2 not Electric Price Forecast experts. I think the record shows that this is the first 3 time any of them have testified in any proceeding on 4 5 these issues. And this will become important later when 6 we talk about the methodologies that were used. I think the first thing I want to point out 7 8 about forecasting is -- this was something that 9 Mr. Lauckhart read into the record at the hearing. This 10 is from the Northwest Power Planning Council. And this 11 addresses the criticism that's -- you know, criticism is maybe overstating it. But Mr. Rounds's concern at 12 hearing that February 25, 2011 we sent our -- or Oak 13 Tree's legally enforceable obligation letter to 1415 NorthWestern that the actual trends hadn't been taken 16 into account. 17 And Mr. Lauckhart testified that he looked at the numbers and looked at the way that they were moving

18 the numbers and looked at the way that they were moving 19 but didn't think based upon this six-year period that it 20 justified an update to the natural gas price input in 21 that model.

And the point he made, it is often difficult to distinguish short-term variations in fuel prices, which are expected, from significant long-term changes that can be expected to fundamentally alter the whole range of

future expectations. This is from the Northwest Power Planning Council. Actually it's the Northwest Power Conservation Council now. Rich, like I, grew up on cutting our teeth on the Northwest Power Act, and that's changed over time.

So, anyway, let's talk briefly about the 6 methodology. Mr. Lauckhart's methodology was very 7 As I mentioned, what he did was he took this 8 simple. Black & Veatch energy market perspective for 2010, he 9 took the expected output from the Oak Tree plant, and in 10 every hour over that 20-year period he just assigned a 11 12 value to that of the generation that could be expected from Oak Tree. It's a simple one-step procedure. 13

And this is what Mr. LaFave identified in his 14 direct and rebuttal prefiled testimony as the market 15 estimates method. It's a valid method. And the method 16 that NorthWestern chose and which Staff seems to prefer 17 is this method whereby in hours where NorthWestern is 18 long you assign the incremental costs of operating the 19 coal plants to Oak Tree, regardless of its value in the 20 market, and only assign the value of the market to 21 Oak Tree in hours where the utility is short. And I'll 22 23 explain in a minute why I think that's problematic.

Now this says Confidential at the top, but I'm not concerned about that, and neither is Rich. What this

24

25

1 shows is page 159, I believe, of the Black & Veatch slide 2 deck that was Exhibit 5 to Mr. Lauckhart's direct 3 prefiled testimony. And what this shows is what they 4 knew as of the fall of 2010.

And what you will see is on that blue line there is the actuals that led up to the forecast and the volatility in the gas markets up to that point. And the red line is the Black & Veatch perspective, and the yellow line or orange line, if you can see it, is the EIA perspective. And you'll see they were almost exactly the same as of the fall of 2010.

12 And the larger point here is that what you do is in a fundamentals-based forecast you take into account 13 14 all those factors I talked about earlier with respect to 15 the moves that you're likely to see in the future over 16 the next 20 years. And in this business, you know, even 17 looking two years out can be scary business, but you try and do the best job you can to try to figure out at a 18 19 particular point in time what you think the future is 20 going to look like. And you can see that EIA and 21 Black & Veatch were very similar at that time.

I would like to also point out just briefly that there is -- I want to move quickly to the next slide because I think this will illustrate the point better than I can make it.

Okay. This is from Mr. LaFave's Exhibit 2. And you may recall during the hearing that there was a point made that starting in 2011 and going to 2031 that Mr. Lauckhart's analysis basically showed a tripling of electric prices during that span of time.

And if you look at this particular slide, what you will see is over that period of time the average spot price in 2008 was \$80.77 per megawatt hour for NorthWestern. And you can see over time it's quite likely, given again the volatility in spot market pricing, that prices can jump dramatically in short periods of time.

And, again, these are one of the things that the
Black & Veatch Electric Price Forecast Energy Market
Perspective tried to take into account.

16 The exhibit also shows from 2008 to 2011 spot prices dropped by a factor of 2.3 over three years. 17 And 18 that's the kind of volatility you can expect in spot market prices. And so it's not surprising that you would 19 20 see an Electric Price Forecast that would say, you know, 21 in the outer years you can expect to see a range of prices, but it's not unreasonable to expect \$90 a 22 23 megawatt hour. That was almost the price that was being paid by NorthWestern in South Dakota three years ago. 24 This slide is from the EIA 2011 perspective. 25 Α

1 criticism that was raised at hearing of the -- of 2 Mr. Lauckhart's avoided cost analysis was that the EIA 3 forecast, Early Look Forecast, for 2011 was higher than 4 the Black & Veatch forecast that had been prepared in the 5 fall of 2010.

But as you can see, the EPA -- this is from the FIA. The EPA is expected to enact several key regulations in the coming decade that will have an impact on the U.S. power sector, particularly the fleet of coal-fired power plants. Because the rules have not yet been finalized, their impacts cannot be fully analyzed, and they are not included in the reference case.

13 Black & Veatch tried in the fall of 2010 to analyze the likely retirement of these coal plants. 14 ΕIΑ 15 did not. And that explains to a large degree the difference in those forecasts from the fall of 2011 for 16 EIA as opposed to Black & Veatch -- excuse me. 17 The Early 18 Look for 2011 to the fall of 2010 Black & Veatch Energy 19 Market Perspective.

20 So as I mentioned previously, the green -- the 21 Brown Power Valuation prepared by Mr. Lauckhart was 22 prepared using a one-step method of taking these energy 23 prices in every hour of every year for 20 years and 24 assigning that value to Oak Tree. The NorthWestern is a 25 two-step process. When NorthWestern is short they get the value that NorthWestern has calculated for hours in which it's short. And then when NorthWestern's long they get the incremental cost of the coal plants. But there are several flaws in NorthWestern's forecast.

First, Mr. Lewis's gas price forecast is wholly 6 7 unrealistic. It makes three fundamental errors. For Oak Tree calculations, NorthWestern assumed no increase in 8 9 the real cost of natural gas from 2015 to 2031. This isn't a credible assumption. No credible forecasting 10 11 agency is assuming that. And I believe Staff has taken the position in this proceeding that that is not a 12 reasonable assumption. 13

14 Two, for Oak Tree calculations, NorthWestern 15 assumed no change in the relationship of spot electricity 16 prices to spot gas prices from 2012 to 2031. Again, this 17 is an unrealistic assumption.

18 The relationship between spot energy and spot 19 natural gas prices will change, particularly as you make 20 this transition to a environment where coal plants are 21 being retired and being replaced with natural gas 22 generation.

Three, for the Oak Tree calculations,
NorthWestern Energy did not give Oak Tree its spot market
value whenever NorthWestern thought it would be long on

I want to talk a little bit more about that last 1 power. 2 one and why that is not an appropriate measure of avoided cost. 3 The thing to keep in mind -- and I don't want to 4

5 overstate this too much, but the thing to keep in mind is that -- this is according to Mr. LaFave's testimony in his response testimony to the Commission.

6

7

8 On page 2, line 8, "In 2011, 53 percent of the time NorthWestern customers were served by internal 9 generation only." So, in other words, there were market 10 purchases being made. 11

This percentage is affected by load growth and 12 base load plant outages that the forecast internal 13 14 generation percentage for 2015 is 35 percent of the time. Whatever that percentage is, it's going to go down over 15 time, according to NorthWestern. And as a result of 16 which, there will be many hours in which NorthWestern is 17 going to need energy, and this will help NorthWestern 18 avoid those costs. 19

Now one of the big issues that came up recently 20 is this whole issue of the fuel adjustment clause, and I 21 want to talk about that real quickly. This is from 22 NorthWestern's electric rate adjustment clause or power 23 purchase adjustment clause. This is the relevant 24 25 passage.

We have a bunch of stuff in our brief about this to explain essentially how power cost adjustment clauses are supposed to work. But they're really supposed to be for fuel. They're supposed to be for changes that can erode a utility's revenue position between rate cases so that they don't get caught in the market and they're not completely short.

8 What this clause essentially says is that 9 they're allowed to include power purchases in the power 10 cost adjustment clause if they're doing it in order to 11 take advantage of market opportunities when their cost of 12 generation is higher than market.

13 But there's no reason to be putting Titan Wind 14 or potentially Oak Tree in the fuel adjustment clause. 15 And the reason that NorthWestern has said, and Staff I 16 think agrees, is that sales that are being made pursuant 17 to these wholesale power purchase agreements with, for example, Titan Wind and prospectively with Oak Tree can't 18 19 be credited to rate payers is because of the fuel 20 adjustment clause.

21 Well, first of all, it shouldn't being going 22 into the fuel adjustment clause anyway. This is for 23 adjustments to fuel. If they believe this is going to 24 erode their revenue requirement, they can file a rate 25 case.

1 So, anyway, the point is look very carefully at 2 this because this is a major issue in the case. It's 3 broader than this case, but it's an important issue 4 nonetheless.

5 I want to briefly summarize some other problems 6 with NorthWestern's avoided cost forecast because I think 7 it's important to point it out.

8 So I described the methodology where they're 9 short. We get the value when they're long. We get the 10 incremental cost to the coal plant. But that really is 11 the way they did it up until 2014.

After 2023 NorthWestern estimates that it will be purchasing spot market power at all hours of the year starting in the year 2023. And for this they use the Lewis Electric Price Forecast, which as we pointed out, contains some wholly unrealistic assumptions.

17 So what did they use for the years between 2014 18 and 2022? Well, this is really interesting. What they 19 did was they took the 2013 number from Mr. Green and the 20 number from Mr. Lewis in 2023 and drew a straight line 21 between them. And now that's really simple, but really? 22 I mean, it seems pretty unrealistic to me.

You compare that to the effort that goes into
producing something like the Black & Veatch Energy Market
Perspective, and you'll see that this is just not a very

1 realistic assumption.

Now I want to quickly jump to the next slide. Now I was talking earlier about your range of expectations, you know, whether you base it on your low case, your high case, or your intermediate case. You can see that the first bar is the Guldseth value of Spion Kop, which was 75.52.

8 Mr. Lauckhart as of February 25, 2011 9 estimated a brown value avoided cost for Oak Tree at 10 78.92. Oak Tree then made an offer substantially below 11 what Mr. Lauckhart was calculating at 65.12 levelized 12 over the 20 years. And the cost of Titan Wind updated to 13 2011, in other words, starting the production in 2011 14 produces an avoided cost of 65.27.

And then the last bar, the one to the right, substantially less than all the others, is \$35.80 a megawatt hour, which is the NorthWestern Energy value of Oak Tree.

19 So this sort of graphically shows you, I think, 20 the range of expectations and what would be considered to 21 be the low case and what would be considered to be the 22 high case.

23 Real quickly, I want to run through the last 24 slides because I know I'm running out of time. This is 25 the language from 18 CFR 292.304(d)(2). The main point I want to make here is the plain language of this doesn't mention the Public Utilities Commission at all. We have substantial briefing authority to the effect that these are decisions that have to be made by the qualifying facility and that makes sense because the qualifying facility is the one that has to go to market, obtain financing.

8 If anybody other than the qualifying facility 9 can determine the length of the commitment, it 10 substantially changes the return on equity. It 11 substantially changes the cost of service to the debt.

12 And, in fact, the Commission could set it for 13 anything they wanted. They could potentially destroy 14 anybody's effort to actually try to arrange financing. 15 Since the utility is the one who has to make the 16 commitment, it makes sense to the utility to identify the 17 length of that commitment.

I think there's probably some range of reasonableness there again. Like if I said 50 years, you could probably say no, that's ridiculous, and you think you'd be right. But I think 20 years as Staff has suggested is a reasonable lengths of time.

This is from FERC Order 69. Many commentators have stressed the need for certainty with regards to return on investment in new technology. The Commission

1 agrees with these latter arguments and believes that in 2 the long run overestimations and underestimations of 3 avoided cost will balance out.

And then the last phrase from the same order, paragraph D2, "Permits a qualifying facility to enter into a contractor or other legally enforceable obligation to provide energy or capacity over a specified term." There's nothing in there about utility commissions. There's nothing in there about the utility being able to determine that term.

Thus, under our regulations -- this is from 11 Cedar Creek Wind, which was cited just a few months ago. 12 13 "Thus, under our regulations, a QF has the option to 14 commit itself to sell all or part of its electric output 15 to an electric utility. While this may be done through a contract, if the electric utility refuses to sign a 16 contract, the QF may seek state regulatory authority 17 assistance to enforce the PURPA imposed obligation on the 18 19 electric utility to purchase from the QF and a noncontractual but still legally enforceable obligation 20 21 will be created pursuant to the state's implementation of PURPA." 22

In this state they ordered NorthWestern to negotiate. We think the record is very clear that Mr. LaFave did not believe that he could negotiate at

1 anything other than the short-term avoided cost that was established for projects of design of 100 kilowatts or 2 3 less. This is contrary to your 1982 order. Now --4 Mr. Uda, I think at that point 5 CHAIRMAN NELSON: we've hit 30 minutes, and I'm going to respectfully ask 6 7 that we stop at this point, understanding you'll have 10 more minutes at the end. 8 Thank you, Commissioner Nelson. 9 MR. UDA: CHAIRMAN NELSON: 10 Thank you. 11 Mr. Brogan, 30 minutes. 12 MR. BROGAN: Good morning, Chairman Nelson, Commissioner Hanson, Commissioner Fiegen, and Staff. 13 14 It's good to be back before you, and I appreciate your consideration in this matter. 15 Mr. Uda is eloquent and dramatic. I can't and 16 17 won't try to match that. I'm kind of a simple person. But what I want to try to do is have a discussion with 18 19 you about what this case is about and is not about. We have already a Complaint, an Answer, two days 20 of hearings, and, by my count, 167 pages of Posthearing 21 I'm confident that the Commissioners have all 22 Briefs. 23 read all of that material. But, unfortunately, I have to say that in all of that there is a fair amount of 24 25 irrelevant and unnecessary material that tends to

1	obfuscate the real issues before you in this matter. And
	I guess I'd like to try to separate the grain from the
3	chaff. What is the key issue?

Simply you must determine what would
NorthWestern pay for energy and capacity if it did not
purchase that same energy and capacity from Oak Tree?
What would it cost NorthWestern to generate the
electricity? And to the extent that NorthWestern cannot
generate the electricity, what would it cost NorthWestern
to buy it?

11 That's the simple question. And it is all based 12 on the touch mark of what we have to go by which is 13 16 U.S.C. 824(a)(3)(D), which defines incremental cost. 14 And it says, "The cost to the electric utility which but 15 for the purchase from" the QF -- I've substituted QF for 16 longer words there -- "such utility would generate or 17 purchase from another source."

18 That's really the touchstone of what we have to 19 decide. Or what you have to decide.

20 With that as the main issue we can see that some 21 of what has been talked about is chaff. For instance, 22 how does and how will NorthWestern Energy recover its 23 power purchase agreement costs? That's not an issue. 24 That has nothing to do with what it pays or would pay to 25 purchase or to generate.

We've had talk about how does South Dakota allow NorthWestern to treat off system sales? Again, that has nothing to do with this particular docket and with what you're asked to decide here. It's not an issue.

5 Now the South Dakota Commission had good reasons 6 to establish the policy that it establishes in the 1980s. 7 You may change that policy in NorthWestern Energy's next 8 general rate case, but it's not an issue here. It 9 doesn't do anything for answering that question, what 10 would NorthWestern pay but for purchasing from Oak Tree?

We've had talk about the regulatory compact. That's a broad area. And it's great for academic discussions. And, you know, as trained as both an economist and an attorney, I find it fascinating. I'd love to talk about it. But it has nothing to do with the cost that NorthWestern would incur but for purchasing from the QF. And so it's not an issue in this docket.

18 Since the incremental cost is the issue, then we 19 come to the main sub issue: How do you determine that 20 incremental cost? How do you determine it?

Oak Tree says use our estimate of market prices, what they'll be for each hour within the next 20 years. Use that because Black & Veatch is credible, because they made realistic assumptions, and that they bought their gas forecast from a national firm, and so it must all be

1 good.

Inherent in this is some sort of assertion that the complexity and expense of a model is what determines tits accuracy. There's no empirical evidence of that.

5 NorthWestern says wait a minute. It's not 6 appropriate for you to set NorthWestern's avoided cost 7 based on market prices for those hours that 8 NorthWestern's not buying in the market. Pure and 9 simple. And then NorthWestern told you about five 10 methods that had been used in one form or another by 11 other states.

With respect to those five methods, I think we need to remember a couple things. One, there's no magic to what any other state has done. Some of those decisions by states have been good ones. Some of them have been real tragedies.

Mr. Uda just quoted Order 69 that indicated FERC thought that the overestimation and the underestimation would be balanced out, and yet there's testimony in this docket that shows that hasn't been the case, that the overestimation has vastly exceeded any underestimation.

Furthermore, there's nothing that requires a use of one of those methods. Not every state uses one of those five methods. Some of them use different ones. One that comes to mind is that there are some states that

actually set avoided cost as a market index. 1 The QF is 2 paid whatever the market index is. 3 In some cases it even has to be shaped by another index. Nevada comes to mind for that. 4 Other 5 states actually require QFs to be paid not off of an index but some sort of actual market price. 6 7 But NorthWestern has offered what we've called 8 a -- or what has been called. Not NorthWestern called 9 it, but what has been called a hybrid. It's said the 10avoided cost during those hours when we are generating 11 power and we're generating all that we need or can generate all that we need, is the variable cost of that 12 13 power, the variable cost of that generation. For other 14 hours newspaper until the size of the QF, it's whatever 15 we're purchasing up until the size of the QF. 16 Now NorthWestern believes it's offered an 17 appropriate method with appropriate inputs. Mr. Uda says 18 there's lots of problems with it. That the gas price is 19 wholly unrealistic. It had no real increase in the cost 20 of gas from -- to 2031. 21 But if we look at EIA for 2010, which would have been the EIA report available at the time that 22 23 Mr. Lauckhart -- or excuse me. Black & Veatch was 24 preparing their forecast, for natural gas for electric 25 generation EIA was projecting from 2008 to 2035 an annual

1 decrease in the real cost of gas of .3 percent. So it is 2 fair to say that at least some people at that time felt 3 that there wasn't necessarily going to be a real 4 increase.

5 Mr. Uda complains that Lewis assumed that the 6 market heat rate, as we would call it, the relationship 7 between the price of gas and the price of electricity, 8 would stay the same over that period of time.

9 That's true. Mr. Lewis did assume it. And I 10 would suggest that that's probably an assumption that 11 benefits QFs and Oak Tree. In all likelihood, as new and 12 more efficient natural gas plants are built and come 13 online, you will get more megawatts per dekatherm and is 14 that heat rate will improve instead of staying the same.

And, finally, Mr. Uda complains that NorthWestern doesn't offer to pay the market when it's long energy. That's right. And that's exactly what fits under the statutory definition.

I want to back up a bit, though. Why does NorthWestern even care? Now if the Commission tells us to buy power from Oak Tree at \$100 a megawatt hour, we will. We will recover that from our customers, and our customers will pay.

24If the Commission tells us to buy power from25Oak Tree at \$35 a megawatt hour, we will. We will

recover that from our customers, and our customers will 1 2 pay it. So NorthWestern's real concern is not -- at 3 least in the short run, not its bottom line. Its real 4 5 concern is what will this do to our South Dakota 6 consumers? 7 We can talk about forecasts. They can talk about methodologies. We can probably go until we're blue 8 in the face. Your task as a Commission is to do the best 9 1.0 you can, taking into account known facts. I think one thing is certain: If you rely on 11 12 forecasts, you will be wrong. It's how you are wrong 13 that affects South Dakota consumers in different ways. 14 If you estimate too high, customers are going to pay a 15 lot more. Based on what Mr. Uda said, I would suggest 16 not just for the Oak Tree project but for other projects 17 that are watching this docket. And, guite frankly, if you estimate too low, 18 19 that's not good either. Because then meritorious QFs 20 that should be built probably would not be. 21 The important part is to whom you want to assign 22 the risks and how do you want to manage those risks? That's what it boils down to. 23 One other issue that Mr. Uda took with the way 24 25 NorthWestern proposed its system is NorthWestern said in

1 2023 we will be in the market for at least 1 megawatt 2 each hour of the day. We're not going to be in the 3 market for 20 megawatts each hour of the day or even 10, 4 but we'll be in there for at least 1.

5 But since we're there for at least 1, we're 6 going to give Oak Tree the market price for the whole 7 thing Oak Tree generates. That's whether or not we're in 8 the market for that whole amount. That's an assumption 9 that benefits Oak Tree.

10 Similarly, Mr. Uda complains that we just did a 11 straight line analysis. As Mr. LaFave explained in his 12 testimony, we did do the straight line analysis, and that 13 probably -- that probably overstates market purchases. 14 Especially in off peak hours.

I want to talk briefly about the LEO issue. And I think we all recognize that the purpose of the LEO is to just present utility -- prevent utilities from refusing to purchase from qualifying facilities. But I think we need to talk about this in terms of utility resource allocation or acquisition.

21 When a utility goes out to acquire a resource 22 the first thing it has to do is be prudent. It's going 23 to come before this Commission to show you that it made a 24 prudent decision so that it can recover its costs 25 associated with that decision.

1 That's true whether it's a new generator, some 2 sort of power purchase agreement, or a QF power purchase 3 agreement. And to be prudent utility has to first look 4 at its need, what does it need, and then it has to figure 5 out how to meet that need and to show that the best --6 that it's chosen the appropriate way.

7 It does that through competitive solicitations 8 sometimes. It does that by comparing resources to 9 alternatives. But it has to be able to show you that it 10 acted prudently.

Well, when we're dealing with say a QF or 11 somebody who may be a QF, that affects how we negotiate. 12 And at least at the time that the negotiations were 13 14taking place NorthWestern truly believed it would not be prudent, it could not prove to you that it was prudent, 15 to pay more than the tariffed rate. And that was the 16 conundrum that faced Mr. LaFave and the rest of 17 NorthWestern. 18

I would also like to point out one problem that I think has been observed throughout the country. If the test for establishing an LEO does not include a true, real obligation, a QF -- let's say a QF could easily create an LEO by telling a utility I'm glad to sell you my power at \$150 a megawatt hour. Even knowing that that is above the avoided cost. But there's no real

1 enforcement mechanism in that process.

2 So they go before the Commission. The 3 Commission says, oh, no. The avoided cost today is \$40. 4 The LEO walks away.

5 Let's say, though, that was close to the avoided 6 cost and then market prices moved up. We're not really 7 talking reality here, I hope. I hope we're not talking 8 200 or \$250 per megawatt power. But let's say then that 9 before there was ever a contract actually signed the 10 avoided cost was suddenly 250 because the market's moved 11 up.

12 That QF can do the same thing. Says, well, no. 13 I'm not going to honor that LEO, and you can't enforce it 14 against me. I want a new LEO based on the price today. 15 And if there is no real obligation to deliver in whatever 16 created that LEO, a QF can do that.

The first one might have been called Bull Run 1, LLC, and it just says I'm not going to deliver. But the next one is Running Bull 2, LLC. Same principle, same place, but they can legitimately ask for an LEO based on a new avoided cost. I think that's a real problem. I think it's a problem that we have seen throughout the country.

I want to close with just one thing to really emphasize how important this can be. About 10 days

1 ago -- and it just hit the public media this Monday -- a 2 utility a couple of states over filed its annual tracker asking for a \$43 million increase of which it said \$30 3 million was due to its PURPA obligations. Those are the 4 5 stakes that are before you if you get it wrong. 6 Thank you for your time. 7 CHAIRMAN NELSON: Thank you, Mr. Brogan. 30 minutes for Staff. 8 9 MR. SOYE: Thank you, Mr. Chairman, 10 Commissioners. This is Ryan Soye. I'm part of Staff. 11 I'll start out again by saying that due to Staff's role as a third-party participant, there may be 12 13 overlap in arguments. We're going to apologize in advance for that. 14 15 There are also certain arguments Staff feels it has addressed sufficiently in its Posthearing Brief, and 16 we'll just shortly recap those here. We don't want to 17 delve into repeating our entire arguments again. 18 19 In addition, there are certain arguments that we feel do not need to be addressed that were brought up in 20 the posthearing briefing stage, such as the credentials 21 22 and qualifications of the witnesses. The Commission's 23 already decided this issue and has determined the 24 witnesses to be credible so we will not be addressing 25 that issue.

1 In addition, Staff will not focus on proceedings 2 that took place in Montana. Staff realizes that these -the issues brought up about Montana certainly speak to 3 the credibility of certain arguments. However, we feel 4 5 that the difference in systems does have certain 6 considerations that must be covered so we will only be 7 looking at the facts or discussing the facts as they exist before us in this case. 8

9 Hold on one second. My notes are a little bit 10 off here.

11 Simply stated, this dispute comes down to the 12 Commission's obligation to implement PURPA. Throughout 13 this proceeding there's been a great deal of evidence 14 that has been provided, some of which Staff believes can 15 help the Commission in fulfilling its obligation under 16 PURPA and some of it which cannot.

The bottom line, however, as seen by Staff, is that Oak Tree and NorthWestern have not provided the information sufficient to enable this Commission to make a final decision in this case.

As such, Staff has urged this Commission to forego making a final decision until the parties can provide the needed information. Further, the only way Staff believes this can be achieved is for the Commission to provide the parties with some direction on what they

1 feel needs to be addressed and then return for additional 2 proceedings to make a final decision on that issue.

3 Oak Tree has said additional proceedings will not likely resolve the disputed issues. Staff agrees 4 that not all the issues will likely be resolved through 5 additional proceedings. However, what Staff used as the 6 primary issues will -- addressed in these primary issues 7 will assist the Commission in bringing the avoided cost 8 disparities, if you want, or the avoided cost estimates 9 10 within a more proper scope for the Commission to make a 11 decision.

Staff understands this recommendation of 12 additional proceedings will certainly place Oak Tree in a 13 difficult position with the possible looming expiration 14 of the production tax credits at the end of this year. 15 Oak Tree has explained that the production tax credits 16 are the key element that has allowed it to offer its 17 18 output at \$65.12 per megawatt hour over the 20-year 19 period and suggests that the expiration of these. 20 production tax credits will represent a lost opportunity to NorthWestern's customers and affordable wind in 21 22 South Dakota.

No doubt a decision today will assist Oak Tree in meeting its deadline and begin construction and operation of the proposed wind farm. And arguably this

is the most effective way to promote small power
 production and cogeneration in South Dakota and fulfill
 the Commission's obligations under PURPA.

On the other hand, whether Oak Tree will, in 4 5 fact, benefit NorthWestern Energy's customers depends on 6 whether Oak Tree's avoided cost rate is -- proves to be 7 at or below NorthWestern's actual incremental costs over 8 the long term. As this assumption carries a great deal of uncertainty, Staff feels it is necessary to obtain 9 10 this additional information to ensure the pricing element 11 is properly explored.

12 Basically the potential expiration of the 13 production tax credits Staff feels is secondary to 14 determining the avoided cost, to properly determine the 15 avoided cost. Whatever benefit may be realized, the 16 production tax credit, this is beyond the scope of PURPA. 17 It is not one of the requirements in PURPA. And until 18 all of the controlling factors or elements of PURPA have 19 been satisfactorily fulfilled, Staff would say that 20 production tax credit consideration should not be a 21 consideration at all.

PURPA states the rates must be just and reasonable to the electric consumer and in the public interest, nondiscriminatory to qualifying facilities, and they shall not exceed the utility's incremental cost of
1 alternative electric energy.

2 Just and reasonable is a very ambiguous term. 3 However, this is clear that the rates must be just and reasonable to the utility, its consumers, and the QF. 4 5 The public interest includes NorthWest Energy as well as There is a need to protect customers against 6 Oak Tree. 7 high rates, but this must be balanced against the obligation to give PURPA affect through promoting 8 9 cogeneration in small power production.

In its Posthearing Response Brief Oak Tree 10 11 argued that a simple finding of full avoided cost fulfills the just and reasonable prong. And there seems 12 to be a great deal of authority to back that up. 13 However, the problem is, as we have seen throughout this 14 proceeding, what constitutes NorthWestern's full avoided 1.5 cost is certainly open to interpretation depending on 16 what modeling methodology has been selected and what 17 inputs have been used, so on and so forth. 18

As to the nondiscriminatory element, given Staff's belief that NorthWestern's calculated incremental cost is below its true incremental costs, apply and separate would discriminate against Oak Tree as a QF. However, it is true that PURPA does not require, and Staff agrees, that there be a rate that makes a project financially viable. That is also not an element in the

1 PURPA restrictions.

As stated in briefing, and quickly repeat this here, the incremental cost standard is intended to leave rate payers economically indifferent through the source of the utility's energy ensuring purchasing the QF does not exceed the cost in the absence of the qualifying facility.

8 I apologize. I probably shouldn't have brought 9 coffee to make sure I don't get dry mouth.

Now true customer indifference cannot be achieved when setting a long-term power purchase agreement. Long-term forecasting is very uncertain, and both parties have provided evidence that rates will either be above or below the true avoided cost but rarely equal.

If it is below, the customers are paying more. 16 17 If it is above, the customers are paying less. Both scenarios actually violate the customer indifference, as 18 the customer is either better off or worse off as they 19 would be without the gualifying facility. And FERC has 20 addressed these issues saying that these long-term 21 purchase agreements need not be at the actual incremental 22 23 cost.

Although customer indifference can only be seen as a guiding rule, it is something this Commission needs

1 to seek and strive for while recognizing it can never be 2 achieved. And this is the basis for Staff's 3 recommendation of additional proceedings. We need to get 4 as close as possible over the long-term of an avoided 5 cost estimate that will leave customers indifferent. 6 Right now Staff feels we have two bookends and nothing in 7 the middle that we can rely upon.

8 Staff will briefly recap its issues that it has 9 with each of these models. Oak Tree has offered an 10 avoided cost Staff believes is far too high. One 11 bookend. This is based on the particular modeling method 12 chosen by Oak Tree and certain assumptions it's used to 13 apply it.

And, again, Staff wants to make clear and 14 15 distinguish that it is not disputing the market price or 16 market estimates model. It's been referred to as both. 17 It does not dispute or object to this modeling approach 18 under PURPA, and it is certainly a viable and 19 appropriate modeling approach in certain circumstances. 20 It is simply that Staff does not believe it is as 21 accurate and appropriate under the circumstances of this 22 case.

This is based on Staff's understanding of the requirement of PURPA with respect to setting a rate at or below the incremental cost and the fact that the market 1 price approach does not properly consider when 2 NorthWestern's internal generation is sufficient to fill 3 its service requirements.

During these times Staff agrees that NorthWestern's incremental cost is the measure of the variable costs of internal generation and these are the only costs to be avoided. Whether or not they can actually be avoided is another issue.

9 Under Oak Tree's model, whether NorthWestern is 10 long or short an avoided cost is always measured at the 11 spot market rate. As such, NorthWestern Energy pays more 12 for energy than -- to Oak Tree than it can provide its 13 customers through internal generation.

Oak Tree has argued this approach does not reflect NorthWestern's full avoided cost because it does not consider the benefit of market sales or economy sales. However, during these times NorthWestern Energy -- I'm sorry. During the times when NorthWestern Energy is long they are not actually avoiding any costs.

They can either turn down their own plants or shift this additional energy to the market. But NorthWestern would then pay forecasted price in these times, and rate payers assume the risk of the long-term price forecast.

25

Also in countering Oak Tree's argument that the

customers will receive a benefit, NorthWestern's current
 tariff again does not provide for a credit of customers
 on asset based and nonasset based margins.

4 Finally, Staff will quickly address the 5 remaining concerns of natural gas price forecast and the carbon cost assumption in Oak Tree's avoided cost 6 7 estimate. While there has been a lot of back and forth even in these closing arguments -- or, I'm sorry, oral 8 arguments on whether a change in circumstances unforeseen 9 10 at the time the avoided cost estimate was developed 11 justifies updating the model which Staff has suggested, 12 this is a judgment call to be made by the Commission.

However, Staff believes the threshold here has been met. And reviewing the natural gas price forecast is required due to the significant increase in the EIA's estimate of technically recoverable unproved shale gas resources. I had to practice saying that several times. And this estimate came out shortly after the avoided cost estimate was prepared.

20 CHAIRMAN NELSON: Let's take just about a 10 21 second recess.

(Discussion off the record)
 MR. SOYE: Thank you, Mr. Commissioner.
 Staff will now move on to its concerns with
 NorthWestern's avoided cost model. In contrast with

Oak Tree, Staff believes NorthWestern's avoided cost estimate is too low. This is primarily due to the inputs used by NorthWestern in developing this avoided cost calculation.

As has been made clear, Staff puts great weight on selecting the proper avoided cost calculation method. Under the circumstances, Oak Tree has suggested that the hybrid peaker market method cannot be used, it is not an accepted method, and points to the fact that Mr. Bleau LaFave did not identify this or list this as one of the acceptable methods in his testimony.

However, much of the information that was presented on the accepted methods for calculating an avoided cost was also included in the document prepared for the Edison Electric Institute, which was included as BPR 1. Exhibit No. BPR 1 is part of Staff's prefiled testimony.

On page 11 of this document it specifically talks about hybrid methods and the use of hybrid methods by certain states. It does not contain any information that the use of a hybrid method is any less reliable or inappropriate as compared to strictly applying one of the listed methods.

As such, Staff does not believe the Commission is committed to applying any particular method in its

pure form and it's able to select a proper method under the circumstances. Even it means intermixing certain elements of each. And, again, FERC does not require any one particular method be used.

5 That being said, although Staff believes that 6 NorthWestern has chosen the correct modeling method under 7 the circumstances, in theory, Staff believes NorthWestern 8 has, unfortunately, failed to utilize this method and has 9 not given the Commission any evidence that will allow it 10 to make a decision in this case.

First and foremost, NorthWestern provided a five-year energy only forecast. It does not provide a 20-year avoided cost forecast. And as pointed out by A Oak Tree, that leaves only one 20-year avoided cost forecast which the Commission has seen.

16 In addition, the inputs relied upon by NorthWestern in its short-term energy forecast result in 17 avoided cost Staff argues cannot be relied upon. 18 19 Specifically, NorthWestern has included no capacity 20 element in its calculation. An avoided cost rate that 21 does not include a capacity element is contrary to the 22 specific directive of PURPA and the Commission's order in 23 F-3365. It is simply not a full avoided cost 24 calculation.

Second, NorthWestern's natural gas price

25

1 forecast. On this Staff agrees with Oak Tree that the assumption that there will be no real price increases 2 between 2015 and 2031 is just unsupportable. 3 NorthWestern's witness, Mr. Lewis, even plainly admits 4 5 that he knows of no other entity, expert, or individual in this industry making that same assumption. 6 7 Next NorthWestern includes a carbon component, something that also seems to be commonplace in this 8 9 industry, and although NorthWestern has suggested that this is too speculative to be included, Staff reasserts 10 11 its position that this Commission is more than capable to determine if it feels a carbon cost element should be 12 13 included and at what level. By not including this in the avoided cost rate 14 calculation, all the Commission can determine now is that 1.5 16 the NorthWestern's model is incomplete. As to the LEO issue, whether an LEO was 17 established, the parties have spent a great deal of time 18 19 researching and explaining how other states have handled this issue. Staff feels how other states have handled 20 this issue or approached the LEO is of little or no 21 22 value. All that's been determined is that almost every state has a different method and a State Commission can 23 24 adopt any method consistent with PURPA. 25 So, again, Staff urges the Commission to forego

setting any precise method of establishing an LEO and
 recommends adopting a policy of reviewing issues on a
 case-by-case basis concerning the actions of the parties
 in any particular circumstance.

5 So in this case PURPA and specifically the LEO 6 was created to prevent utilities from simply refusing to 7 enter a purchase power agreement with a nonutility 8 producer. So we must ask does this case present a 9 situation where -- in which PURPA and the LEO was meant 10 to prevent?

Staff believes there is clear evidence to show the negotiation process was unsuccessful in this case. And this was due to NorthWestern's refusal to negotiate a purchase power agreement consistent with PURPA.

This is primarily due to the refusal to 15 16 negotiate the -- or the refusal to negotiate above the 17 short-term rate offered small power producers under NorthWestern's tariff. NorthWestern seems to argue that 18 this methodology or its methodology for determining this 19 20 small power producer's rate -- I'm sorry. 100 kilowatts 21 It's the same as it will use or should be used is below. to the 100 kilowatts above. Or above. 22

This would be a valid argument if the methodology accounted for its avoided cost when NorthWestern is short on coal generation or long-term

nature of these negotiated contracts. However, Staff
 does not believe NorthWestern's methodology included
 these factors.

NorthWestern argues an LEO has not been created
because the price offered by Oak Tree was not at or below
its true avoided cost rate. To this point Staff believes
NorthWestern's true avoided cost rate or incremental rate
has not yet been determined.

9 So Staff would argue at the time that Oak Tree made its offer to negotiate it was working off of the 10 11 information that was available to it. It utilized an industry accepted method for determining avoided cost 12 and did all that it could to begin the negotiation 13 process with NorthWestern Energy prior to sending its 14 letter and executed PPA on February 25, 2011, to which 15 16 NorthWestern again pointed to its lack of need for 17 capacity and its rate of \$20 per megawatt hour for 100 kilowatts or below. 18

As such, Staff believes the circumstances under this case are of the type that PURPA meant to prevent and would suggest that the Commission find a LEO was created on September 25, 2011. Creating the LEO would then bring us to capacity needs.

As mentioned before, there is no doubt capacity credits must be included in the avoided cost rate for any

1	purchase power agreement resulting from this dispute.
2	However, when those capacity credits should
3	begin has been a continuing issue in this case. A lot of
4	back and forth. It is clear that NorthWestern well,
5	Staff believes it is clear through the contracts signed
6	with Basin Electric that it was clear that NorthWestern
7	didn't need capacity and would suggest that the capacity
8	elements apply throughout the life of the project of
9	Oak Tree.
10	We realize that this is a deviation from our
11	initial suggestion. However, it is due to the additional
12	evidence that was provided throughout this case that
13	Staff has altered its view on this point.
14	As to the accredited capacity the project should
15	receive, Staff would again just simply reassert its view
16	that Oak Tree should be treated no differently than the
17	Titan 1 project. If the Titan 1 project is accredited
18	through the MISO method, then that's how Oak Tree should
19	be treated. If the Titan 1 project received a stamp
20	value of 20 percent or accredited value, then that's what
21	Oak Tree should receive.
22	Finally, as to contract length, once again,
23	Staff will simply repeat its view that it sees absolutely
24	no reason why Oak Tree should not receive the 20-year
25	contract length it has asked for. It seems that

 $\left( \begin{array}{c} \\ \end{array} \right)$ 

-----

NorthWestern continually plans on this planning horizon, 1 and Oak Tree should be treated the same. 2 In conclusion, Staff believes there are issues 3 presented in this case such as LEO, contract lengths, so 4 forth, that can be resolved on the evidence that has been 5 The other issues such as the proper avoided provided. 6 cost rate, we again assert that there is insufficient 7 evidence and would recommend this Commission hold 8 additional proceedings. 9 10 Thank you. CHAIRMAN NELSON: Thank you. 11 Mr. Brogan, 10 minutes for rebuttal. 12 I will MR. BROGAN: Thank you, Chairman Nelson. 13 do my best to not use all 10 minutes. 14 CHAIRMAN NELSON: Very fair. 15 MR. BROGAN: Staff indicated that NorthWestern 16 17 had not provided a 20-year avoided cost forecast. That 18 is correct. 19 But Staff then said NorthWestern had only provided a five-year forecast. Exhibit BJL 1 is 20 21 NorthWestern's 20-year estimate of incremental costs So broken down by year, by peak, and by off peak period. 22 the Commission does have another forecast to look at. 23 24 Staff reiterates its concern that NorthWestern vastly underestimated the cost of natural gas going 25

1 forward. I think we all realize there's a lot of 2 difficulty in determining the cost of natural gas. Ι 3 think we realize that in NorthWestern's model if I recall, Mr. Lewis was estimating AECO prices at this time 4 5 of natural gas for 2012 in excess of \$4. I think we all 6 know that in the last week they traded at \$1.50 or \$1.49. 7 So it's not absolutely clear that NorthWestern vastly 8 underestimated the cost of gas.

9 With respect to the negotiation process, Staff 10 seems to say that the breakdown in negotiations was due 11 to NWE's refusal to increase its rate. NorthWestern in 12 its Brief and Posthearing Briefs has also shown that a 13 substantial part of the breakdown in negotiations was due 14 to the demand of Oak Tree for the type of contract that 15 it asked for.

And, in fact, not only did or does that contract exceed by a substantial margin NorthWestern's true avoided cost, in about 65 percent of the 175,000 plus hours for which it's estimated, that contract price exceeds Mr. Lauckhart's market forecast price.

There was substantial responsibility, I believe, on both parties' part that led to the failure of the negotiation process and to somehow decide that because of the negotiation process we're going to determine there was an LEO seems to fly in the face of what it should

1 take to establish an LEO.

Finally, Staff says go with the fixed rate 20-year contract; that's consistent with planning horizons, and Oak Tree should be treated the same as the utility.

6 But if the utility brings in a resource, it 7 doesn't necessarily have a 20-year fixed rate. If the 8 utility brings in a resource and it justified the prudency of that resource on some sort of gas cost and it 9 10 turns out that five years down the road gas costs are a lot less, well, the price from that plant's going to be a 11 12 lot less. Because the actual gas cost is what's going to 13 be passed through to customers.

14If it brings through a resource and five years 15 later is in with a new rate case and the financial 16 markets have changed and the, you know, borrowing cost is 17 down and the authorized return on equity is down so that 18 the rate of return is down, the utility is going to have 19 a lower return and get a lower price for that asset, for 20 that rate based asset. They're not going to get the 21 fixed price that they estimated at the beginning. So 22 giving a QF a 20-year fixed price is not treating it the 23 same as a utility.

Finally, I think that Staff raises the biggest issue, and that is what do you do now? And it recommends

\_\_\_\_\_

24

25

1 additional procedure. While NorthWestern's not 2 necessarily opposed to that, I think we would point out 3 we believe that what you will end up with is more 4 competing and conflicting expert opinion. Probably no 5 different than what we have today.

I personally am not sure that you gain a lot by that. And I think it's back to what I had said earlier. It's up to you to decide how much risk you want South Dakota consumers to assume.

Thank you.

10

11 CHAIRMAN NELSON: Thank you. Mr. Uda,12 10 minutes.

13 MR. UDA: Thank you, Mr. Chairman. I think I 14want to just talk a little bit about the Staff -- first 15 of all, I want to thank the Staff for what I think is --16 they have made an extraordinary effort to get their arms 17 around what is obviously a very highly complex and 18 technical case. I think they've done a really good job 19 of going kind of from 0 to 100 miles an hour in a 20 relatively short period of time.

And we're not opposed to having additional proceedings. I mean, I think the concern is two-fold. First is, and I think as Mr. Soye acknowledged, you know, we do have this looming expiration production tax credit. We do the potential loss of bonus

1 depreciation. You know, we've done our pro formas and 2 we've sort of figured it out.

And I understand that the Staff's position is that it's not the obligation of the utility under PURPA to make sure their avoided cost permits the financing of projects, and we respect that.

But it leads us to our second issue, which is, okay. Let's suppose Mr. Lauckhart's forecast is wrong. It's possible. Of course, it's wrong. But as we showed in one of the slides, look at the other contracts, and then look at NorthWestern's.

And do you believe in your heart that there's been a 24 percent error in the avoided cost for a project of this kind? And I submit to you there is no evidence that that's true.

16 As I said, we're not opposed to doing this, but 17 if the production tax credit expires and the bonus 18 depreciation expires, our proposal is probably going to 19 have to be higher than it would have been if the decision 20 had been made earlier and permitted us to start 21 construction by the end of the year. Or actually 22 complete construction by the end of the year I believe to 23 get the production tax credit.

24So this is a huge issue. This was an issue for25NorthWestern in Montana. This is why they told the

1	Commission there you have to act on this now.
2	And I respect the Staff's position there are
3	differences between the Montana system and the
4	South Dakota system, but you have to understand the
5	avoided cost does not look at what's going on today and
6	say, okay, well, in the market gas is really low now so
7	we have to assume that's going to continue forever.
8	I can remember a time in 2000, 2001 where gas
9	prices went to \$15 a dekatherm. I can recall a time in
10	the 1990s when gas was \$2 a dekatherm or \$1 a dekatherm.
11	It changes in response to markets. And to try to get
12	your arms around that is a very difficult exercise. And
13	I understand that.
14	But you don't say, okay, let's just ignore all
15	the fundamental analysis of the market and say, okay,
16	well, we need to use this method because it seems to be
17	the way that NorthWestern operates.
18	The real question is if NorthWestern is
19	obtaining value from selling its generation when it's
20	long on generation, why aren't you giving that value to
21	Oak Tree?
22	Well, the response seems to be because that's
23	not permitted by the power cost adjustment clause. And
24	my point is if that's going on now, that should stop
25	immediately. These are utility rate based assets that

have been paid for by customers. And in some portion of 1 2 that analysis they should be getting some return on that. 3 So because the language of the tariff doesn't permit it doesn't mean it's right and doesn't mean it's 4 5 consistent with avoided cost. 6 Now I want to talk briefly about this LEO issue. 7 I don't really think it's really that much in dispute. Ι 8 mean, Oak Tree did everything they could do. What else 9 were they supposed to do? Okay. We made phone calls. 10 We sent letters. We said, hey, negotiate with us. Ιf 11 you've got any questions call us. 12 The response back was, well, we don't need a need for capacity and our short-term rate is \$20 a 13 14 megawatt hour. If you want to negotiate at or below that 15 rate, that's fine. There was really nothing else we 16 could do. 17 So we tried to do the best job we could do 18 because we couldn't get any avoided cost information from 19 NorthWestern. They weren't producing any of the stuff pursuant to 18 CFR 292.302 that they were supposed to be 20 21 producing before. So we hired a expert who used an

off-the-shelf forecast not prepared for this proceeding, 23 supposed to be an objective look at the market and came 24 up with the best judgment we could.

22

25

And we said, you know, hey, here's this and

here's this contract. How many hours are over or below that rate -- our rate really is 54.50. And it's levelized to 65.12, but it's really a two and a half percent escalator per year. It's very similar to the Titan contract. And we submit that that's kind of -even though it's not an avoided resource, it's relevant, nonetheless, to how this particular project is treated.

8 I think it's beyond peradventure that when a 9 utility puts an asset in rate base it's entitled to a 10 reasonable return on its investment. And if it turns out 11 that project is underperforming and they're not getting 12 that return on their investment, they can come to you and 13 ask for more money.

We, once we lock in a contract we take the risk of that performance. We don't have rate payers as a recourse. We are stuck. So I think you should also take that into account.

I think the final point I want to make is this goes to this issue of credibility. All of the errors that NorthWestern made in its forecast all go in the same direction, producing a \$35.80 rate. That's not an accident. It's not an accident they didn't negotiate with us.

FERC recognized long ago when PURPA was adopted that utilities refuse to negotiate. They don't like

l	dealing with QFs. Understandable. We're competitors.
2	Either they build the resource or we do.
3	Okay. If you ask Coca Cola should they make
4	some kind of accommodation for Pepsi, I think they'd
5	probably say no way. But that's the nature of the beast.
6	This is a policy call that Congress made it's still the
7	law of the land, even under the Energy Policy Act of
8	2005. Especially for small projects under 20 megawatts.
9	They still don't have nondiscriminatory access to
10	markets.
11	I want to close on a note here because, you
12	know, you have a recent filing by Otter Tail, and it's in
13	your records. I think you can take administrative notice
14	of it. But Mr. Lauckhart did an analysis of the gas
15	price forecast used there to justify instead of retiring
16	Big Stone, retrofitting it, putting new pollution control
17	equipment on it, and they had to do an analysis of what
18	it could would cost to replace it with natural gas fired
19	generation.
20	He came up with \$9.50 an MMBtu levelized for
21	20 years. It's a rough approximation. They used \$5.14
22	in this proceeding, and Black & Veatch used \$8. What I'm
23	talking about here is consistency of positions. Before
24	the Montana Commission they said all these benefits
25	you'll get diversification, hedging against EPA
[	

1 regulations, carbon tax. That's a very important issue, something that shouldn't be looked over. 2 They might think ours is too high. They've got 3 There is a risk that is going to happen. Okay. 4 zero. 5 Waxman-Markey passed the House. It's a reality we have to deal with. 6 7 Finally, the capacity issue. They told their board as of April 25, 2011 they needed more capacity. 8 They told us they didn't need any. They told you even in 9 briefing here they didn't need any. This is entirely 10 11 inconsistent with the record in this case. And, again, it goes to the issue of credibility, which goes back to 12 13 the first issue that I talked about is who do you believe? 14 Mr. Lauckhart has testified for utilities. He's 15 testified for qualifying facilities. He's helped banks. 16 He doesn't have any particular ax to grind other than he 17 wants to implement PURPA in South Dakota in the most 1.8 efficient way possible. 19 Did Mr. Lauckhart get it right with his market 20 estimate approach? It's one of the recognized 21 22 approaches. Is it totally appropriate for South Dakota? I think it is, given the fact that 53 percent of their 23 load is going to be served by their own internal 24 resources by 2015? They are going to need -- and you 25

1 have to look at this over the long-term. There's this 2 incremental need for more capacity. 3 The errors that were made in NorthWestern's 4 forecast all go in the same direction. Mr. Brogan thinks that they're favorable to us, but I think every reputable 5 6 forecasting agency in this country would disagree. I'm 7 talking Ventyx, Black & Veatch, everybody else who does 8 these things for a living. 9 In closing, what I would like to say is we did 10 make a commitment. We sent them a contract. If they had signed the contract, we would have had a deal. 11 They didn't like the contract. They said, well, the contract 12 terms were a huge issue. They never told us that. 13 14 Look at the correspondence. I don't have to make that up. They never said a word about our contract 15 16 If they had said, hey, we don't like your terms. 17 contract terms, we would have said fine. If they had 18 said we think your rate is too high, we would have said 19 fine. 20 CHAIRMAN NELSON: One minute. 21 MR. UDA: But they didn't say those things. They forced us to come before the Commission. 22 I'm not saying that -- I'm not saying that we had to file 23 litigation. We didn't have to do that. We could have 24 25 gone away.

1 But all the investment, all the money, the time, 2 and the studies, and costing out the turbines, and 3 preparing the land, and the consulting work, and the avoided cost forecast, all of that would have been for 4 5 nothing. Congress requires that State Commissions 6 7 implement PURPA. They're supposed to encourage the 8 development of cogeneration and small power production. That's the directive from PURPA. 9 10 CHAIRMAN NELSON: Thank you, Mr. Uda. 11 MR. UDA: Thank you. CHAIRMAN NELSON: Great place to stop. 12 13 With that, we are now open for Commission 14 questions with no time limit. 15 Commissioner Fiegen. 16 COMMISSIONER FIEGEN: Mr. Chairman, may I have 17 like a 5-minute recess? Certainly. We are in recess. 18 CHAIRMAN NELSON: 19 (A short recess is taken) 20 CHAIRMAN NELSON: Okay. We are back in session. Mr. Brogan, do you have an issue that needs to 21 22 be addressed or not? No, I don't believe I do. 23 MR. BROGAN: 24 CHAIRMAN NELSON: Okay. Thank you. 25 With that, Commissioner questions.

COMMISSIONER FIEGEN: I'll start with a couple. CHAIRMAN NELSON: Commissioner Fiegen. COMMISSIONER FIEGEN: I'll start with a couple

for Oak Tree.

1

2

3

4

5 First of all, on the natural gas. Is it 6 reasonable to think that in your forecast that natural 7 gas will change? Because, you know, your forecast was 8 done early before maybe a lot of shale gas and et cetera. 9 So is that reasonable that you think your natural gas 10 forecast would change?

MR. UDA: I guess, Commissioner Fiegen, if I can answer that question this way: You know going in when you make a forecast that you're going to be wrong. You don't know the margin, the degree, the magnitude of which, but the slide that we showed you showed you that basically EIA and Black & Veatch were moving together in the fall of 2010.

And, you know, the point that Staff made as well, you know, EIA came up with this increased amount of approval reserves subsequent to that forecast.

And that's true, but there's a lot of other analysis that would go into that on a fundamental natural gas based forecast to determine what the significance of that increase was because it could be that you have an increased amount approval in reserves but there's an

1 increased cost associated with it. So you have to try to 2 figure out how all of those pieces fit together. It's a 3 complicated exercise.

Is it reasonable to assume that things will change? Yeah. I mean, of course. I think that's the fundamental assumption.

7 COMMISSIONER FIEGEN: Another question on your
8 259-page report, and it talks a little bit about wind
9 energy and the different states in -- on page 173.

Why isn't South Dakota included in that? 10 11 MR. UDA: I couldn't really answer that I think that would be a better question for 12 question. Mr. Lauckhart. My presumption is the reason it's not 13 specifically included in there is they for whatever 14 reason didn't choose to separately account for it in that 15 16 way.

I know that based on Mr. Lauckhart's testimony they did assume the amount of wind that existed as of the fall of 2010, and they added additional wind into this region because they had assumptions, for example, that coal plants were going to be retiring and they replaced them largely with natural gas fired generation and renewables.

24 COMMISSIONER FIEGEN: I'm going to go to your --25 you really talked a lot about coal retirement today.

1	MR. UDA: Uh-huh.
2	COMMISSIONER FIEGEN: Do you know what coal
3	retirement is being retired in South Dakota because of
4	the new EPA regulations?
5	MR. UDA: Well, I think it's an issue.
6	Obviously, as you're seeing with the Big Stone filing,
7	it's an issue that every utility is having to grapple
8	with. And so the answer is I don't know. And I think
9	part of that's going to be up to you guys.
10	I think part of it's going to be depending on
11	the showing that it's not going to be less expensive for
12	rate payers to switch to natural gas fired generation as
13	the kind of base load kind of resource than it is to kind
14	of retrofit and use coal.
15	I mean, I think there's two factors. One is the
16	EPA issue, the cost-effectiveness of upgrading the
17	pollution control equipment both as capital cost and
18	fixed costs over time and the variable cost of operating
19	those facilities. And also the risk of any carbon
20	legislation that comes down. Because you could have a
21	double whammy in a very short period of time where you
22	get the EPA regulations kicking in requiring these
23	improvements, and then on top of that you get cap and
24	trade legislation, Waxman-Markey or something like it.
25	So I think it will be up to you guys to decide

in di Natari

1 what the most cost-effective generating portfolio is 2 going to be for NorthWestern. But the answer to 3 specifically your question do I know that any of them are 4 planning on retiring in South Dakota? No.

But I also know that South Dakota is in a region 5 6 which is connected in the Eastern Interconnect. And T 7 know that Black & Veatch is forecasting I think in the 8 Eastern Interconnect 44,000 megawatts of generation they're going to retire by 2020. I know that in Oregon, 9 Portland General Electric decided to shut down its 10 Boardman plant rather than try to retrofit it because 11 they didn't think it was cost-effective. 12

I think the other factor is, you know, what is the Natural Resources Defense Council going to do about continuing coal generation. I can tell you from my experience in Montana when people have tried to build new coal plants you've had environmental organizations extremely opposed that idea.

And one of the costs that every developer has to take into account is how long, you know, projects can be tied up in environmental litigation and the costs associated with it.

23 COMMISSIONER FIEGEN: Okay. I think that's all 24 for now. Thank you.

25

CHAIRMAN NELSON: Additional questions? I have

none.

1 2 COMMISSIONER HANSON: Okay. Mr. Chairman. CHAIRMAN NELSON: Go ahead. 3 COMMISSIONER HANSON: I have a few questions. 4 And I'm mainly dealing with the LEO, trying to establish 5 6 a few things in my mind. 7 Staff stated that they believe a LEO was created and that -- I believe the discussion from Staff is that 8 9 we need to look at each LEO on an individual basis. And 10 I'll just make the comment that I believe we need to have 11 some parameters regarding what establishes a LEO as 12 opposed to leaving it up to some ambiguity because there were so many different I would say machinations that 13 14 could be considered in one. So I think as a Commission 15 we do need to establish something of that nature. 16 Staff -- well, I'll just ask Staff if they have 17 any comment on that, on my comment? 18 MR. SOYE: Staff would -- I believe it was --19 COMMISSIONER HANSON: No fair to take the Fifth 20 but --21 I believe Staff suggested at one MR. SOYE: 22 point that if we were going to establish rules, we would 23 prefer to do it through a rule making docket and not 24 here. And that's if the Commission would prefer some more concrete rules to -- or something to be met to 25

create an LEO, we're more than willing to put something 1 2 together and propose it based on what the Commission thinks should be included in that. 3 But in terms of this specific case, we just 4 don't think that we're going to be able to put something 5 together and make any concrete recommendations here. 6 7 COMMISSIONER HANSON: Thank you. Mr. Uda, NorthWestern contends that Oak Tree 8 never had any real intention of being operational before 9 September 2012 and never guaranteed that it would deliver 10 11 capacity at any time. Do you agree with that statement? By the way, I 12 will be quoting from a few places in NorthWestern's 13 Response Brief, Posthearing Response Brief. 14 MR. UDA: So could you restate the question, 15 16 Commissioner Hanson? I think I lost the first part of I'm kind of tired. I've been burying you in paper 17 it. for the last few days. 18 19 COMMISSIONER HANSON: Sure. On page 17 of NorthWestern Energy's Posthearing Response Brief they 20 state -- it's not numbered, but it looks like it's line 5 21 22 that Oak Tree never had any real intention of being 23 operational before September 2012 and never guaranteed that it would deliver capacity at any time. 24 25 MR. UDA: Okay. I think this issue of intent is

1 an interesting one. They had Mr. Makens on the stand, 2 and they could have asked him about what Oak Tree's 3 intentions were. The best way to establish intentions in 4 this case is to look at what Oak Tree did.

5 Oak Tree signed an Interconnection Agreement. 6 Oak Tree spent all of these money on studies. Oak Tree 7 did their environmental work. Oak Tree paid Black & 8 Veatch \$15,000 for an Energy Market Perspective so they 9 could prepare an avoided cost analysis.

10 They retained Mr. Lauckhart before they sent 11 their LEO letter. Then they sent a signed contract 12 saying they were going to deliver all of this stuff by 13 May 15, 2011. That's what the contract says.

14 If they have signed the agreement and sent it 15 back, we would have been bound. So we had every 16 intention based on the record to do exactly that and to 17 sell whatever capacity was available from our project.

We estimated it at 3.9 megawatts, which is the 20 percent calculation. NorthWestern's resource adequacy, whether that number's right or not, whatever capacity we had, we were willing to sell to them. And there's no question but that they needed the capacity, and if they needed the capacity, they were required to buy it from Oak Tree.

25

COMMISSIONER HANSON: NorthWestern also stated

1	that Oak Tree did not reveal the price for any capacity
2	until after it filed the Complaint on this docket.
3	MR. UDA: That is untrue. It's actually in
4	Mr. Lauckhart's analysis. I believe it was his reality
5	check. But I think that all the spreadsheets were made
6	available to NorthWestern when we sent the LEO letter on
7	February 25, 2011. I would say that's true, subject to
8	check. I haven't looked at that in awhile, but I believe
9	that was all part of the levelized cost of the Oak Tree
10	offer.
11	COMMISSIONER HANSON: And are you referring to
12	the offer of May 17, 2011?
13	MR. UDA: The offer of February 25, 2011.
14	COMMISSIONER HANSON: You stated that they sent
15	a signed contract. They being Oak Tree sent a signed
16	contract on May 17, 2011.
17	MR. UDA: I'm sorry. If I said that, I
18	misspoke. I meant to say February 25, 2011. And along
19	with the contract we also sent the avoided cost analysis
20	for both green and brown power to NorthWestern. Brown
21	power calculation based on Black & Veatch's energy market
22	perspective, and the green power calculation based on a
23	methodology that has been used in Montana, which was the
24	surrogate unit proxy method or something like that.
25	It's basically saying assuming you were going to

· ·

build something like this, this is what it would cost for 1 2 you to build that same thing, and we'd like to displace 3 that. COMMISSIONER HANSON: NorthWestern, do you have 4 5 any comment on that? We have here two completely opposite 6 statements. Not that that's unusual in these type of 7 8 proceedings but --MR. BROGAN: Commissioner Hanson, what was given 9 10 to NorthWestern in February 25 -- or on February 25 of 11 2011 was an 11-page contract. We are not aware of any 12 capacity values that were disclosed to NorthWestern at 13 that time. To the best of our knowledge, the first time we 14 saw capacity values or how they were calculated was in 15 16 Mr. Lauckhart's Exhibit 3. And I guess that would just That was filed with the -- with 17 be the response. Mr. Lauckhart's testimony. 18 19 COMMISSIONER HANSON: Forgive me. With all of 20 the evidence and discussions that we've had on this and 21 with all of the other dockets that we have, I do not 22 recall reading or looking at that contract. 23 Do we have that contract in evidence? We do, 24 don't we? 25 Okay. Thank you.

1 Oak Tree. Mr. Uda, a utility, according to 2 NorthWestern, is not required and should not now be 3 required in their words to pay for capacity that it does not need. What do you think of that? 4 MR. UDA: Well, I think there are sometimes, you 5 6 know, confusion about what we're talking about with 7 respect to capacity. When I'm talking about capacity I'm 8 talking about the specific component of electricity 9 that's separate from the energy component of it. 10 Is that what you're referring to, Commissioner 11 Hanson? 12 COMMISSIONER HANSON: Well, what I'm getting at 13 and I won't be coy about it, is the concern that -- I 14 don't want to be California, and I don't want to be 15 Minnesota. I don't want to open up the gates where QFs 16 are just allowed to overflow the state with capacity so 17 that -- in a fashion where the utilities are obliged to 18 purchase capacity that they don't need, that is 19 intermittent, that is of higher cost, that is going to 20 drive up the costs to the consumers. 21 Okay. I think I --MR. UDA: 22 COMMISSIONER HANSON: That eventually is going 23 to have to be curtailed and simply millions of dollars 24 will be spent for unneeded capacity. 25 MR. UDA: Well, I have a long answer to that.

1 Is that okay?

2 COMMISSIONER HANSON: I guess I have all the 3 time in the --

MR. UDA: You know, I think that's -- I think there's -- that's a valid concern. You know, I mean, obviously you have a situation in some states where, you know, they've had to grapple with these issues more than others.

9 I don't think it's an issue in California. I
10 think California has effectively dealt with their issues.
11 I think, for example, Idaho Power, which may have been
12 the entity that Mr. Brogan was referring to, has
13 struggled greatly with those issues.

But, I mean, you have to understand I think Idaho Power's -- I want to say Idaho Power's system has a peak of like -- I could be getting this wrong. This is just from recollection. I went to a rates conference not too long ago. I think their peak is like 3,000 megawatts, and I think they've acquired 1,500 megawatts of wind generation.

And that's a hell of a lot to absorb. And that causes all kinds of issues for the utility. I mean, it causes problems with the integration. It causes problems with intermittency things, resource adequacy, those kinds of things.

I think the Idaho Commission has dealt with that in terms of sort of shutting the door to a certain extent after a certain amount of megawatts were put in. The Montana has tried to deal with that uncertainty in that way.

6 The real issue is, though, I think, that you're 7 not deal -- you know, there's that old commercial that 8 this is not your father's Oldsmobile. This is really not 9 your father's PURPA anymore because you're dealing with a 10 new world, and the new world is moving towards renewable 11 generation.

12 And there's a likelihood there's a substantial 13 amount of fossil fuel generation is going to be replaced 14 in the next 20 years, and you're going to be looking at a 15 situation of how you hedge that risk.

Now coming down to the question of should the utility be required to buy the capacity they don't need? I think they need the capacity. I think they need the capacity as a hedge. I think they need the capacity because they're showing that they're going to be resource deficient in a relatively short period of time.

And there's also the possibility that when you guys look at the actual costs of continuing on with Big Stone and adding the retrofit onto it, it's not going to be as cost effective as switching to another form of

1 generation. And if they lose that capacity, there's a
2 substantial amount of capacity that will not be available
3 to them.

And so in terms of resource management, these are all very complicated issues, but I would suggest that these are issues that are much, much broader than the little Oak Tree 19 and a half megawatt project, which is, I think, fairly small in relation to any bills that consumers pay.

10 And we've tried to do an analysis, but it's not 11 in the record. I'm not going to say what it is, but I 12 can tell you the impact is going to be relatively small.

13

14

15

16

17

And, finally, what I would say is -- and I think this is a really important thing to keep in mind is we're here in front of you saying, look, you know, it's going to be really hard for us to do this project at 65 if we don't get the project completed by the end of 2012.

My understanding from going to this rates 18 19 conference recently was there are no major wind development companies. And big ones. Not the little 20 guys like Oak Tree. But, I mean, the big outfits that 21 22 build, you know 250 -- none of them are planning on 23 building anything until they know that the production tax 24 credit and the bonus depreciation treatment -- at least the production tax credit is going to be renewed. 25 And
1 nobody knows whether that will happen.

So I don't think you're going to get a -- you know, we used to talk about in Montana the QF gold rush. And the QF gold rush in Montana on a system between 12 and 1,500 megawatts, somewhere in there, on a peak basis has gotten required 50 megawatts of wind since 2004. And I don't think their system is swamped or overwhelmed by that.

9

COMMISSIONER HANSON: Thank you.

Mr. Soye, knowing the creative individuals that 10 you work with on Staff and the talents that are there and 11 12 understanding that your position -- Staff's position is that -- in regards to avoided cost that you used the term 13 14 bookends, which I think is a good way of explaining the difference of the high and low here, did Staff take any 15 16 serious effort -- not that you were required to by any means -- to take a shot at what they believed using the 17 inputs that Staff believes should be a part of an avoided 1.819 cost analysis, come up with what they thought might be a 20 reasonable avoided cost?

21 MR. SOYE: Mr. Commissioner, we actually did 22 contemplate performing such an analysis. However, we did 23 start out this case by admitting that we are not experts 24 in developing long-term avoided cost forecasts, and we 25 never have before.

1	The information that we looked into utilizing
2	was that available off of the EIA website. But in terms
3	of getting the specifics, we would just be relying on
4	others' information. And we didn't feel that well, we
5	certainly thought it would be objected to if we did do it
6	so we thought it best not in this case to develop our own
7	forecast.
8	COMMISSIONER HANSON: That was a yes or no, but
9	I wasn't going to I promise I wasn't going to follow
10	it up if you had. I was just curious if you had.
11	NorthWestern, there's a gorilla that walks in
12	and out of the room every so often with the Titan project
13	for me at least. I keep wrestling with it. And I may
14	I'll oversimplify this question to you.
15	But if NorthWestern was willing to purchase
16	power, provide a purchase power agreement or purchase
17	power, build Titan, whatever, at a higher cost on I
18	believe one of the reasons was that because there's a
19	renewable energy goal as opposed to a portfolio standard
20	or requirement in South Dakota.
21	In anticipation of being a good corporate
22	citizen, why not oblige the Maken family and seem like
23	a nice group of people, work hard. They did a lot of due
24	diligence here. Gosh. It just seems like something a
25	company would want to do. Why Titan?

- \*\*\*

MR. BROGAN: Commissioner Hanson, I think the answer to that is in the record. And it's two-fold. Now I haven't quickly opened the record so I may be wrong on my dates here a little bit. But, you know, I want to say subject to check of the years. I believe it was in 2008 that NorthWestern held or conducted a competitive solicitation for renewable resources.

8 At that time Titan was the result of that. The 9 market was significantly higher at that time, and when 10 NorthWestern evaluated the Titan market as the result of 11 the competitive solicitation in 2008 it looked like 12 something to go forward with.

13 COMMISSIONER HANSON: Let me slow you up here 14 because everybody -- everyone here is very familiar with 15 that discussion because it's gone around and around and 16 around, and we've read it several times. And obviously 17 my question was asked because I'm just not buying that 18 argument.

You know, we know that natural gas jumps around a lot. We know that costs are going to increase. We know that capacity is going to be retired. We know all of these things. So why not jump in ahead of that on a capacity that is environmentally sound, which provides --I mean, I'm going to regurgitate all the arguments that Oak Tree has been putting out here.

1	I just don't understand there isn't a
2	compelling argument here why you wouldn't jump out and
3	say and latch onto this.
4	MR. BROGAN: Commissioner Hanson, first off, I
5	need to correct my first part of my answer. That was in
6	2007 that we had the first competitive solicitation.
7	The next point was in 2009 we had another one.
8	There the lowest bids came in. Now NorthWestern, rightly
9	or wrongly, determined the lowest bids were still too
10	high because of the change in the marketplace. But
11	those lowest bids in 2009 were substantially lower than
12	Oak Tree.
13	And it seems to NorthWestern that it would have
14	been very difficult for us to convince you that it was
15	prudent for us to contract with Oak Tree at \$65 when we
16	could have got it for 50 something in the competitive
17	solicitation.
18	COMMISSIONER HANSON: Thank you.
19	And appreciate Oak Tree's testimony and Staff's
20	testimony.
21	Thank you, Mr. Chairman.
22	CHAIRMAN NELSON: Further Commissioner
23	questions?
24	Seeing none, I can continue, but, Cheri, would
25	you like us to do a lunch break?
l	

1	THE COURT REPORTER: I'm fine.
2	CHAIRMAN NELSON: Commissioners, would you like
3	a lunch break, or shall we move forward?
4	COMMISSIONER HANSON: What would you move
5	forward with?
6	CHAIRMAN NELSON: Well, at this point I've got
7	some observations. And I guess I would like to let
8	everybody know kind of what my position is, and hopefully
9	we can play off of that and see where we're going to end
10	up here today.
11	Cheri's okay? Just making sure we have no
12	further questions.
13	What I would like to do, and taking the
14	Chairman's prerogative, first of all, I'd like to say to
15	both sides I found this to be a greatly enjoyable docket.
16	It has real meaning in a lot of different contexts, and
17	I've enjoyed wrestling with this.
18	What I'd like to do for everybody is let you
19	know where I'm at on the various issues, and then there's
20	some questions that I think need to be answered. And I'm
21	going to use Staff's last filing and particularly work
22	off of their conclusions. Because I think they really
23	summarize the questions that we have to answer here
24	today.
25	And I'm on page 17 of Staff's last Brief. In

1 the Conclusion section Staff recommends that NorthWestern 2 Energy's hybrid method is the proper model to calculate 3 the avoided costs of NorthWestern Energy of 4 South Dakota's system. I concur with that.

5 Secondly, Staff says that NorthWestern Energy is 6 obligated to purchase Oak Tree output based on the 7 existence of an LEO created February 25, 2011. As such, 8 all model inputs shall be based on said date. I concur 9 with that conclusion.

10 Third, Staff says a capacity credit shall be 11 incorporated into the hybrid method beginning in 2012. I 12 concur with that assessment.

Fourthly, Staff says the proper avoided cost contract term is 20 years. I concur with that assessment.

16 The fifth item that Staff put in their 17 conclusion was that the parties have not provided 18 suitable inputs for this model, and as a result the 19 Commission cannot establish the proper avoided cost. I 20 would agree that neither party despite their efforts gave 21 us an accurate avoided cost number.

I would also agree that with all of the testimony on both sides it may be difficult to find exactly what that right number is. And there is a part of me that would like to accept Staff's recommendation

that we task both parties with coming back using some 1 2 specific input quidance with a more appropriate number. But I will say I am -- I am very sympathetic to 3 Oak Tree's reality of the production tax credit likely 4 5 going away. Now I will agree with Staff. That's not a PURPA 6 7 consideration. I feel it is a significant consideration for this Commission. I mean, we've had a proposed 8 business come to us with a reality that faces them that 9 10 this PTC may go away at the end of the year, and so I'm very sympathetic to that. 11 And so I'm faced with really two options at this 12 point. One is that we accept Staff's recommendation and 13 ask for a further proceeding with some specific guidance. 14 15 And, you know, we can get into that if we need to. The alternative to that that I would like to 16 17 propose is I've put together a number. Mr. Soye indicated they didn't want to go there. I did. And I'm 18 going to pass these sheets around in both directions so 19 20 everybody knows what I'm talking about. 21 In preparing this you will find figures on here 2.2 and numbers that are part of the record. I firmly agree 23 with NorthWestern that there are really two components There is the component of NorthWestern's 24 here. 25 generation that is being offset, and there is a component

1 that is being purchased. And so that the percentages you 2 see at the top of 58.4 and 42.6 represent those two 3 components, and those numbers I believe come from one of 4 NorthWestern's filings or testimony.

5 Mr. LaFave's Exhibit 1 he talks about 6 NorthWestern's generated avoided cost in 2013 as being 7 \$23.35. And so for the generation component I've started 8 with that number and added 2 percent a year to that.

9 For the purchase component I have accepted the 10 Black & Veatch numbers. Not that there aren't things there that can't be quibbled with, but I think there's 11 12 things that can be quibbled with on the generation component side also. But I've accepted those. 13 And 14 utilizing the appropriate percentage of purchase power 15 you can see how those numbers shake out, and a final 16 number in the last column with an average levelized cost 17 of \$46.47.

As I have already said, I believe capacity payments need to be part of this. I accept the \$17,000 per megawatt year, and I've added an increase of 2 percent per year to that. The capacity calculation I can accept 3.9 megawatts for 2013, but following that it would absolutely need to be based on the MISO method that NorthWestern is already familiar with.

25

Mr. Brogan this morning said that NorthWestern

would be willing to purchase at \$100 if this Commission Ordered or \$35 if this Commission ordered. I found it interesting that my number is between those two figures, and so I will take it that NorthWestern is willing to purchase at that figure if this Commission so orders. And so that really takes one side of this equation off the table, if you will.

8 That leaves Oak Tree. And I think what that leaves is a choice on your part at least from my 9 10 perspective. And I'm speaking as one. I have no idea 11 what my two fellow Commissioners are thinking here. But 12 the choice that I think I'd give you at this point is I'm 13 willing to order this particular number if you are 14 willing to accept it, and if you are not totalling accept 15 it, I'm willing to pursue and accept Staff's 16 recommendation that we go to further proceedings.

And, hence, that's my position. At this point I guess I'd appreciate maybe knowing what my fellow Commissioners -- what their thoughts are.

20 COMMISSIONER HANSON: Thank you, Mr. Chairman. 21 I'll work from the same platform that you established by 22 using Staff's recommendations here.

And as I -- as I read through them, I'll just simply state that I completely agree with you on the first four statements that you made regarding -- I won't

reiterate those because you listed them slightly differently by referring to number 5 as their statement on page -- their being the Staff's statement. The parties have not provided suitable inputs for this model, and as a result the Commission cannot establish the proper avoided cost.

7 I agree with Staff's position on that. I think 8 there's sufficient testimony and information that's been 9 provided to us, and Staff made a very good job of 10 articulating that position.

I would say that in regards to the amount of work that you did here, I appreciate the creativity and the considerable effort in putting your proposal together. I think it shows a real attempt by this Commission, by yourself, as attempting to resolve this matter in an expeditious fashion, and I congratulate you on putting it together.

18 My concern is that -- well, I don't want to 19 place those on record just because it would be 20 argumentative.

I would add one more item to Staff's recommendations. Staff recommended that -- a request for additional information and to schedule additional proceedings to determine four items. And those are found on page 18 of Staff's Posthearing Brief.

And I would simply add to that, that my inclination is that we establish some parameters of what establishes and when a LEO is created. I think that's something that's important to come out of not necessarily these specific hearings but of a future analysis so that people will be guided by that.

But I do agree with the Commission -- excuse me.
Well, with the Commission's Staff on the five points that
they have provided to us here.

CHAIRMAN NELSON: Thank you.

10

25

11 Commissioner Fiegen, would you like to respond? 12 COMMISSIONER FIEGEN: What I have -- you know, I 13 just received Chairman Nelson's proposal so I certainly 14 haven't had time to look at that. I would need time to 15 look at that.

But when I looked at Staff's proposal, I would agree with the five proposals or the five points that they are making and just remembering that we have to look at carbon costs, which you talk about, and getting an inflated cost on natural gas will be important.

It will be interesting to see on capital credits and et cetera what we need to do there. But I need to continue to research that. And I believe we just need more time on this docket.

CHAIRMAN NELSON: Okay. With that, I appreciate

both comments. What I'm going to do at this point is I'm going to turn to Oak Tree, and I'm going to ask a simple question. My proposal, is this something that you would like to at all entertain, or is it a can't do it, no way?

6 MR. UDA: I don't know the answer to that yet. 7 Can I confer?

8 CHAIRMAN NELSON: Absolutely. And here's where 9 I'm going. If it's something that you would at all 10 entertain, then I think I need to ask that same question 11 of my fellow Commissioners, and we would need to figure 12 out how much time you need.

13 If it's something no way, can't do it, then 14 that answers that question, and we move forward. So 15 let's just take a five-minute recess and allow you to 16 confer.

17 (A short recess is taken)
18 MR. UDA: Mr. Makens would like to speak for
19 himself. As you know, he can speak for himself.

20 CHAIRMAN NELSON: Okay. Knowing that, let me 21 just make sure we've got everybody back at the table.

22 MR. UDA: It's not a no, but it's not a definite 23 yes yet.

24CHAIRMAN NELSON: Understand. Understand. We25will be back in session, and, Mr. Makens, welcome to come

1 to the microphone.

2 MR. MAKENS: Thank you, Chairman Nelson. I want 3 to say thank you for putting something out there that's a 4 goal to reach a negotiation. That's been our goal 5 through this whole process.

And wow. I'd love to say, yes, let's do it. I'm not a financial expert on a 20-year \$40 million commitment. So I need to crunch these numbers and make sure that we can build it at this price.

And I think there's a hopeful possibility that we can go with this, and if we can, we absolutely will. But we need to talk to our financial consultants. We need to -- we need to make sure these numbers are accurate and right and reflect how it will be and make sure we're all on the same page here.

My understanding here you've got a mix and match of both sides' methodologies and numbers, and you have an energy price levelized total here of the 46.47. And then the capacity would be the extra. Recs aren't anywhere on here. So those would be extra.

So we need to look at everything, run it by financial consultants, and hopefully come back with a yes, we can do this or no, it's not reasonable or -- I can't answer that right now. I'd love to be able to say yes or no, and I thank you again for putting something

1 out here middle ground. And I'd love to say yes, let's 2 do it, but I need to run it by our team and financial 3 experts.

And hopefully -- you know, it's the end of the week here. Hopefully, early next week we could have an answer as to whether this is a go ahead. Because we're coming up on a time crunch, and we want to get going on this.

9 So if this is going to work, yeah, we'd love to 10 say yes. And, again, I want to thank you for putting 11 something out here. That's a good starting point of 12 something that both parties can agree to a negotiation, 13 which we've been working towards this whole time. So 14 thank you.

15 CHAIRMAN NELSON: And your understand is 16 certainly understandable. As long as at this point it's 17 not a definite no, that gives us something that we can 18 maybe move forward to.

I guess with that then I'd look at my two fellow Commissioners. And I think maybe you've got two choices. One would be to move forward with Staff's recommendation of additional proceedings, and the other choice would be to give the Oak Tree folks, you know, the weekend to decide whether or not this is something that they would accept and that each of you would accept.

And I'd open it up for your commentary. 1 Well, there's a few 2 COMMISSIONER HANSON: I appreciate the opportunity to speak to the 3 things. creativity and the offer that you've presented here. 4 First, I'd just like to make a comment regarding 5 Commissioner Fiegen pointed out on page 18 of Staff's 6 memo that we've been referring to that they talked about 7 a number of items there. And carbon costs was one of 8 those items. 9 They used the word "proper" and I think they did 10 that obviously with a great intention because they used 11 it each one of the -- I probably should say proper 12 parameters of what establishes a LEO. Because that makes 13 great sense. 14 Because somehow we have to reach a conclusion of 15What are the -- what 16 what really should be the inputs. specifically we can best define to be the proper 17 application of the hybrid method, the natural gas costs, 18 the carbon costs, the capacity credits. All of those 19 things we need to define as much as we possibly can. 20 And that's where I'm coming from in reaching a 21 conclusion of what is avoided cost. Or excuse me. At 22 least in that particular method of establishing avoided 23 24 cost. 25 And the reason I would struggle with a proposal

that -- there are a few reasons, but probably the main 1 2 reason -- one of the main reasons is that I look at avoided cost as being avoided cost. What is the cost 3 4 that a utility avoids by allowing a QF to sell into its 5 market? 6 And to me it's not what the next generating unit 7 costs in the future. It's what is the cost that is 8 avoided by allowing that entity to sell into that 9 marketplace. 10 And we can come up with the cost of nuclear capacity, the cost of any amounts of capacity. And that 11 12 really -- and we can use all sorts of carbon costs. And that really distorts the -- what the actual avoided cost 13 14 is. And certainly we need to look at it on a 20-year 15 period. I believe a LEO has been established here. 16 At 17 the same time, the avoided cost price is -- as was 18 pointed out by Mr. Uda when he was starting out, is the 19 most contentious part of this entire proceeding, 20 obviously. 21 But I just cannot come to a conclusion that we 22 as Commissioners could come up with a dollar amount to --23 even though we're taking it from different parts of expert testimony, that we could take those parts and make 24

a -- for what I would consider a proper avoided cost.

25

1 And that's what I struggle with. 2 Thank you. And I concur, CHAIRMAN NELSON: frankly, with all of those comments. And if we go ahead 3 with additional proceedings, I agree with you then. 4 5 We're going to have to really drill down and define the exact costs for each of those elements. And that would 6 7 be, frankly, in my mind, the purpose of additional proceedings. 8 9 Let me just make one final comment. My purpose in the proposal that I laid out was 10 11 not to firmly define each of those individual components 12 but rather to come up with a number that I felt 13 comfortable with, had some basis in what was on the 14 record but more as an offer to the parties to say is this something you can live with? Is this something you can 15 do business with? As opposed to we're going to define 16 each of those individual components. And given the time 17 constraints, that's the only way that I could see to do 18 19 it. 20 Commissioner Hanson. Just one last comment. 21 COMMISSIONER HANSON: And I really appreciate -- by my comments did not wish to 22 in any way infringe on the generosity of your proposal. 23 But I would like to know from NorthWestern Energy as well 24 25 what their comments would be from -- in regards to that

1 number. 2 I know that they said that they would accept whatever we required of them to do, but I would --3 anyone's going to have to accept whatever we require them 4 5 to do. So I would like to know what their comment would And at that later date as well. be. 6 7 Thank you. Commissioner Fiegen. CHAIRMAN NELSON: 8 9 COMMISSIONER FIEGEN: I believe next week will be an opportunity for us to come back and to study this 10 and take it under advisement and see where we go from 11 12 there. CHAIRMAN NELSON: So I take that as meaning you 13 are willing to wait for an answer from Oak Tree as to 14 whether this is something that would be acceptable to 1516 them? I'm willing to look at all 17 COMMISSIONER FIEGEN: 18 options and look at them next week. CHAIRMAN NELSON: 19 Okay. 20 In fairness, Mr. Brogan, I think Commissioner Hanson raised a good question. Are there any comments 21 that you'd like to make at this point that don't put a 22 23 bull's-eye on me? 24 MR. BROGAN: With all due respect, Chairman Nelson, I'm more concerned about putting a bull's-eye on 25

-	
1	myself. Because comments that I may make probably are
2	substantially above my pay grade.
3	That said and never having been smart enough to
4	be cautious, I would say two things. First, a minor
5	thing and that's with respect to the capacity payment.
6	As we have stated in both our Briefs and our Response
7	Brief, we think that the escalation of the capacity
8	payment should stop at a point certain. Not that the
9	payment should stop but the escalation of it. So I think
10	we have some concern with that.
11	I think it's also obvious throughout this docket
12	that we certainly think that the Black & Veatch market
13	forecast is highly inflated. That said, again, we
14	still I think we're bound by law to do what you tell
15	us to do.
16	CHAIRMAN NELSON: Thank you. I appreciate those
17	comments. Anything else from the perspective of the
18	Commissioners?
19	Now I don't know if both parties are aware but
20	we have set aside or reserved temporarily some time on
21	our schedule Wednesday morning to reconvene on this
22	issue. Are you all aware of that?
23	You weren't. Okay. Because we weren't sure how
24	this was going to play out today. We weren't sure if we
25	would have a final answer today or if we would need to

Г

1 | come back next week.

2 Let me just turn to both sides. Is that time frame something that you could make available to us? 3 MR. UDA: Speaking for Oak Tree, I will do 4 whatever the Commission needs me to do. 5 CHAIRMAN NELSON: Wednesday morning. 6 MR. BROGAN: Mr. Chairman, if I might ask a 7 question first. Are you contemplating the parties being 8 here in person again on Wednesday? 9 CHAIRMAN NELSON: You know, frankly, I don't 10 know that I see the need for that. I think -- I think 11 it's going to be fairly straightforward. A lot of it 12 will depend obviously on what the answer is from 13 Oak Tree. And if the answer is no, based on what I heard 14 from my fellow Commissioners, I'm thinking this could be 15 a pretty short deal. And if the answer is yes, then it 16 might be a little more involved. 17 And let me just make sure my fellow 18 Commissioners -- that I have not misspoken at all. 19 20 COMMISSIONER FIEGEN: I just want to make sure that the parties know that I'm sure the Commission 21 appreciates conference calling and you can always call in 22 and we accept that as testimony face to face. 23 I think for myself and I don't have MR. BROGAN: 24 25 my calendar in front of me but this is important enough

1 obviously that I can change anything else that's on my 2 calendar. I can't speak for my South Dakota sponsor, Mr. Olson. 3 CHAIRMAN NELSON: Mr. Olson, are you on the line 4 5 vet? 6 MR. OLSON: I'm on the line, and I can be Yes. 7 available at the Commission's convenience on Wednesday 8 morning. 9 CHAIRMAN NELSON: Thank you. 10 MR. BROGAN: So with that in mind, yes, we could 11 be available. 12 CHAIRMAN NELSON: Would it be -- and I'm going 13 to turn to my counsel. Would it be appropriate for 14 Oak Tree to have provided their answer to us in advance 15 of that so that all sides can be prepared to wrestle with 16 that? 17 MR. SMITH: That would probably be beneficial, I 18 And we just heard at least one observation from suppose. 19 NorthWestern so maybe we should make that reciprocal. 20 And we do have Staff here too. Maybe we want to hear 21 what they have to say because they've never seen this. 22 What do you think, Mr. Uda? Do you have --23 Well, here's the thing. MR. UDA: For us this 24 isn't about necessarily -- I understand why the 25 Commission feels the obligation, and I think you're right

1 to feel that obligation to, you know, really drill down 2 into these numbers and get them right. But this is a 3 practical endeavor for us.

So could we find ways to fly speck this and say, well, we don't agree with this assumption, we don't agree with that assumption? Sure, we can do that. We'd rather not.

And at this point I think if we can make this work, that's what's important to us. Because we want to build our project. And that's pretty much all there is to it. So that's all -- but I would say that it is reasonable from our standpoint that we get to you something hopefully, you know --

14 CHAIRMAN NELSON: Can we say 5 o'clock on 15 Monday?

16 MR. MAKENS: We'll do our best. It's not all 17 dependent on me. You know, there's a lot of inputs that 18 go into the -- and I've been -- the last month I've been 19 working on getting updated inputs and costs and 20 everything, and it's a long process so we'll do our best 21 and run it by the financial consultants. And we'll get 22 something to you by 5 o'clock Monday.

CHAIRMAN NELSON: And that offer certainly goes to NorthWestern and to Staff. And we're not talking 30-page briefs here. Okay. So we understand we're all

on the right page. Because John Smith doesn't want to 1 2 read 30 pages. We'll keep it simple. And I want MR. MAKENS: 3 to reiterate we understand this is a move towards 4 negotiation and not a Commission stance on avoided cost 5 and anything related. 6 7 CHAIRMAN NELSON: With that, my assumption would be we would probably be looking at 9 o'clock on Wednesday 8 morning, but we'll confirm that and John will put 9 10 together some kind of order. MR. SMITH: We can do that. Is that okay for 11 the Mountain Standard folks? Are you okay with that? 12 CHAIRMAN NELSON: Yeah. I quess we can go 13 10 o'clock if it works better. 14 Well, I'm not really an early morning 15 MR. UDA: 16 person, which comes as no surprise to anybody who's dealt 17 with me. So the later the better, but 10 o'clock works. 18 That works. CHAIRMAN NELSON: 19MR. BROGAN: Unlike Mr. Uda, I am an early 20 morning person. So 10 o'clock certainly works. And if you wanted to go at 7:00, that would be fine too. 21 22 MR. UDA: I would still be asleep. 23 CHAIRMAN NELSON: Okay. I think we've got a 24 tentative plan. We will reconvene and certainly 25 telephone access is certainly acceptable for what we need

to do but you're obviously welcome to be here in person. 1 2 Mr. Smith. MR. SMITH: I'm assuming since we're doing this 3 on the record with a reporter that I don't need to send 4 out any kind of formal notice or anything like that; 5 6 right? 7 MR. BROGAN: No. MR. UDA: No. 8 CHAIRMAN NELSON: With that, anything else for 9 10 the good of the order? Is there a motion? 11 COMMISSIONER HANSON: Mr. Chairman, I'll move to 12 adjourn. 13 CHAIRMAN NELSON: Motion to adjourn. All those 1415 in favor vote aye. 16 Commissioner Hanson. 17 COMMISSIONER HANSON: Aye. 18 CHAIRMAN NELSON: Commissioner Fiegen. COMMISSIONER FIEGEN: Fiegen votes aye. 19 20 CHAIRMAN NELSON: Nelson votes aye. We're 21 adjourned. 22 23 24 25

1	STATE OF SOUTH DAKOTA)
2	:SS CERTIFICATE
3	COUNTY OF SULLY )
4	
5	I, CHERI MCCOMSEY WITTLER, a Registered
6	Professional Reporter, Certified Realtime Reporter and
7	Notary Public in and for the State of South Dakota:
8	DO HEREBY CERTIFY that as the duly-appointed
9	shorthand reporter, I took in shorthand the proceedings
10	had in the above-entitled matter on the 26th day of
11	April, 2012, and that the attached is a true and correct
12	transcription of the proceedings so taken.
13	Dated at Onida, South Dakota this 14th day of
14	May, 2012.
15	
16	
17	
18	Cheri McComsey Wittler, Notary Public and
19	Registered Professional Reporter Certified Realtime Reporter
20	Service Reporter
21	
22	
23	
24	
25	
I	

}

\$	<b>175,000</b> [1] - 49:18 <b>18</b> [4] - 20:25, 54:20,	<b>2031</b> [5] - 14:3, 16:9, 16:16, 27:20, 44:3	7	acknowledged [1] - 51:23
	82:25, 87:6	2035 [1] - 27:25		acquire [1] - 30:21
<b>\$1.49</b> [1] - 49:6	<b>19</b> [1] - 72:7	24 [1] - 52:13	75.52 [1] - 20:7	acquired [1] - 70:19
<b>\$1.50</b> [1] - 49:6	1980s [1] - 25:6	<b>25</b> [11] - 11:13, 20:8,	78.92 [1] - 20:10	acquisition [1] - 30:20
<b>\$100</b> [2] - 28:21, 81:1	1982 [1] - 23:3	46:15, 46:22, 57:8,	<b>7:00</b> [1] - 95:21	act [2] - 12:4, 53:1
<b>\$15</b> [1] - 53:9	1990s [1] - 53:10	67:7, 67:13, 67:18,		- Act [1] - 56:7
<b>\$15,000</b> [1] - 66:8		68:10, 78:7	8	acted [1] - 31:10
<b>\$150</b> [1] - 31:24	2	250 [2] - 32:10, 72:22		actions [1] - 45:3
\$17,000 [1] - 80:19		259-page [1] - 61:8		actual [7] - 11:15,
<b>\$20</b> [2] - 46:17, 54:13		<b>26</b> [1] - 1:8	8[1] - 17:8	27:6, 36:7, 38:22,
\$23.35 [1] - 80:7	<b>2</b> [6] - 14:1, 17:8,	26th [2] - 2:4, 97:10	824(a)(3)(D[1] - 24:13	50:12, 71:23, 88:13
\$250 [1] ~ 32:8	32:19, 53:10, 80:8,	292.302 [1] - 54:20		actuals [1] - 13:6
\$30 [1] - 33:3	80:21	292.304(d)(2) [1] -	9	add [3] - 7:1, 82:21,
\$35 (2) - 28:25, 81:2	<b>2.3</b> [1] - 14:17	20:25		83:1
\$35.80 [2] - 20:16,	<b>20</b> [13] - 9:21, 13:16,		9 [1] - 95:8	added [3] - 61:19,
55:21	15:23, 20:12, 21:21,	3		80:8, 80:20
\$4 [1] - 49:5	25:22, 30:3, 47:20,		A	adding [1] - 71:24
\$40 [2] - 32:3, 85:7	56:8, 56:21, 66:19,		~	addition [4] - 6:22,
\$43 [1] - 33:3	71:14, 78:14	<b>3</b> [2] - 28:1, 68:16		33:19, 34:1, 43:16
\$46.47 [1] - 80:17	<b>20-year</b> [12] - 12:11,	3,000 [1] - 70:18	a.m [1] - 2:5	
\$5.14 [1] - 56:21	35:18, 43:13, 43:14,	<b>3.9</b> [2] - 66:18, 80:22	ability [1] - 8:12	additional [18] - 35:1,
\$65 (1) - 76:15	47:24, 48:17, 48:21,	30 [7] - 3:5, 3:6, 3:7,	able [8] - 3:24, 7:25,	35:3, 35:6, 35:13,
\$65.12 [1] - 35:18	50:3, 50:7, 50:22,	23:6, 23:11, 33:7,	8:4, 22:9, 31:9, 43:1,	36:10, 39:3, 40:21, 47:11, 48:9, 51:1,
\$8 [1] - 56:22	85:7, 88:14	95:2	65:5, 85:24	1
\$80.77 (1) - 14:8	200 [1] - 32:8	30-page [1] - 94:25	above-entitled [2] -	51:21, 61:19, 63:25,
<b>\$9.50</b> [1] - 56:20	<b>2000</b> [1] - 53:8	35 [1] - 17:14	2:2, 97:10	82:23, 86:22, 89:4, 89:7
	2001 [1] - 53:8	<b>37</b> [2] - 10:7, 10:19	absence [1] - 38:6	
<b>\$90</b> [1] - 14:22	2004 [1] - 73:7		absolutely [5] - 47 23,	address [1] - 41:4
	2005 [1] - 56:8	4	49:7, 80:23, 84:8,	addressed [6] - 33:16,
0	2007 [1] - 76:6		85:11	33:20, 35:1, 35:7,
	2008 [5] - 14:8, 14:16,		absorb [1] - 70:21	38:21, 59:22
<b>0</b> [1] - 51:19	27:25, 75:5, 75:11	<b>41</b> [2] - 10:4, 10:11	academic [1] - 25:12	addresses [1] - 11:11
	2009 [2] - 76:7, 76:11	<b>413</b> [1] - 2:3	accept [12] - 78:25,	addressing [1] - 33:24
1	2010 [10] - 9:2, 12:9,	42.6 [1] - 80:2	79:13, 80:19, 80:22,	adequacy [2] - 66:20,
	13:4, 13:11, 15:5	<b>44,000</b> [1] - 63:8	81:14, 81:15, 86:25,	70:24
	15:13, 15:18, 27:21,	46.47 [1] - 85:18	90:2, 90:4, 92:23	adjourn (2) - 96:13
<b>1</b> [12] - 30:1, 30:4,	60:17, 61:19		acceptable [3] -	96:14
30:5, 32:17, 42:16,	2011 [22] - 11:13, 14:3,	5	42:11, 90:15, 95:25	adjourned [1] - 96:21
47:17, 47:19, 48:20,	14:16, 14:25, 15:3,		accepted [5] - 42:9,	adjustment [9] -
53:10, 80:5	15:16, 15:18, 17:8,		42:13, 46:12, 80:9,	17:21, 17:23, 17:24,
<b>1,500</b> [2] - 70:19, 73:5	20:8, 20:13, 46:15,	5 [5] - 13:2, 65:21,	80:13	18:2, 18:10, 18:14,
<b>10</b> [12] - 3:8, 3:9, 23:8,	46:22, 57:8, 66:13,	82:2, 94:14, 94:22	access [2] - 56:9,	18:20, 18:22, 53:23
30:3, 32:25, 41:20,	67:7, 67:12, 67:13,	5-minute [1] - 59:17	95:25	adjustments [1] -
48:12, 48:14, 51:12,	67:16, 67:18, 68:11,	<b>50</b> [3] - 21:19, 73:6,	accident [2] - 55:22	18:23
95:14, 95:17, 95:20	78:7	76:16	accommodation [1] -	administration [1] -
<b>100</b> [5] - 23:2, 45:20,	<b>2012</b> [10] - 1:8, 2:4,	<b>500</b> [1] - 2:3		5:9
45:22, 46:18, 51:19	16:16, 49:5, 65:10,	<b>53</b> [2] - 17:8, 57:23	56:4	administrative (1) -
10:20 [1] - 2:5	65:23, 72:17, 78:11,	<b>54,50</b> [1] - 55:2	according [3] - 17:6,	56:13
11 [1] - 42:18	97:11, 97:14	<b>58.4</b> [1] - 80:2	17:16, 69:1	admits [1] - 44:4
11-page [1] - 68:11	<b>2013</b> [3] - 19:19, 80:6,		account [7] - 11:16,	admitting [1] - 73:23
<b>12</b> [1] - 73:5	80:22	6	13:13, 14:15, 29:10,	adopt [1] - 44:24
i4th [1] - 97:13	<b>2014</b> [2] - 19:11, 19:17		55:17, 61:15, 63:20	adopted [1] - 55:24
<b>15</b> [1] - 66:13			accounted [1] - 45:24	adopting [1] - 45:2
<b>159</b> [1] - 13:1	<b>2015</b> [4] - 16:9, 17:14,	65 [2] - 49:18, 72:16	accredited [3] - 47:14,	advance [2] - 33:14,
16 [1] - 24:13	44:3, 57:25	<b>65.12</b> [2] - 20:11, 55:3	47:17, 47:20	93:14
<b>167</b> [1] - 23:21	<b>2016</b> [1] - 6:19	65.27 [1] - 20:14	accuracy [1] - 26:4	advantage [2] - 7:25,
	<b>2020</b> [1] - 63:9	<b>69</b> [2] - 21:23, 26:17	accurate [3] - 39:21,	18:11
l <b>7</b> [4] - 65:19, 67:12, 67:16, 77:25	2022 [1] - 19:18		78:21, 85:14	advisement (1) -
VI.10. 11.20	<b>2023</b> [4] - 19:12,		achieved [3] - 34:24,	
1 <b>73</b> [1] - 61:9	19:14, 19:20, 30:1		38:11, 39:2	90:11

affect [1] - 37:8	83:5	40:14	46:11, 66:17, 67:6,	41:3, 50:20, 53:25,
affected [1] - 17:12	analyze [2] - 8:12,	argues [2] - 43:18,	72:2, 74:2, 92:3,	60:23, 61:17, 65:2,
affects [2] - 29:13,	15:14	46:4	93:7, 93:11	66:16, 67:21, 67:22,
31:12	analyzed [1] - 15:11	argument [4] - 40:25,	Avenue [1] - 2:3	78:6, 78:8, 80:23,
affordable [1] - 35:21	annual [2] - 27:25,	45:23, 75:18, 76:2	average [2] - 14:7,	92:14
AGAINST [1] - 1:4	33:2	argumentative [1] -	80:16	Basin [1] - 47:6
agencies (1) - 10:17	answer [18] - 23:20,	82:20	avoid [1] - 17:19	basis [5] - 39:2, 45:3,
agency [2] - 16:11,	60:12, 61:11, 62:8,	arguments [12] - 3:6,	avoided [82] - 5:18,	64:9, 73:6, 89:13
58:6	63:2, 69:25, 75:2,	3:7, 3:8, 22:1, 33:13,	10:24, 11:1, 15:2,	beast [1] - 56:5
ago [5] - 14:24, 22:12,	76:5, 77:23, 84:6,	33:15, 33:18, 33:19	17:2, 19:6, 20:9,	become [1] - 11:5
33:1, 55:24, 70:18	85:24, 86:6, 90:14,	34:4, 41:8, 41:9,	20:14, 22:3, 23:1,	bed [1] - 7:25
agree [15] - 6:16,	91:25, 92:13, 92:14,	75:24	26:6, 27:1, 27:10,	beds [1] - 8:1
10:18, 65:12, 78:20,	92:16, 93:14	arms [2] - 51:16, 53:12	31:25, 32:3, 32:5,	BEFORE [1] - 1:10
78:22, 79:6, 79:22,	answered [2] - 3:17	arrange [1] - 21;14	32:10, 32:21, 35:8,	begin (3) - 35:24,
81:24, 82:7, 83:7,	77:20	articulating [1] - 82:10	35:9, 36:6, 36:14,	46:13, 47:3
83:17, 86:12, 89:4,	answering (1) - 25:9	aside [1] - 91:20	36:15, 37:11, 37:15,	beginning [2] - 50:21,
94:5	answers [1] - 84:14	asleep [1] - 95:22	38:14, 39:4, 39:10,	78:11
agreed [1] ~ 10:9	anticipation [1] -	assembled [1] - 9:5	40:7, 40:8, 40:10,	belief [1] - 37:20
agreement [9] - 24:23,	74:21	assert [1] - 48:7	40:15, 41:6, 41:10,	believes [15] - 22:1,
31:2, 31:3, 38:12,	anyway [3] - 12:6,	assertion [1] - 26:2	41:18, 41:25, 42:1,	27:16, 34:14, 34:24,
45:7, 45:14, 47:1,	18:22, 19:1	assessment [2] -	42:3, 42:6, 42:14,	39:10, 41:13, 42:1,
66:14, 74:16	apologize [2] - 33:13,	78:12, 78:15	43:13, 43:14, 43:18,	43:5, 43:7, 45:11,
Agreement (1) - 66:5	38:8	asset [4] - 41:3, 50:19,	43:20, 43:23, 44:14	46:6, 46:19, 47:5,
AGREEMENT [1] - 1:6	APPEARANCES [1] -	50:20, 55:9	45:24, 46:6, 46:7,	48:3, 73:18
agreements [2] -	1:21	assets [1] - 53:25	46:12, 46:25, 48:6,	below [11] - 20:10,
18:17, 38:22	application [1] - 87:18	assign [3] - 12:19,	48:17, 49:18, 52:5,	36:7, 37:21, 38:14,
agrees (6) - 18:16,	apply [3] - 37:21,	12:21, 29:21	52:13, 53:5, 54:5	38:16, 39:25, 45:21,
22:1, 35:4, 37:24,	39:13, 47:8	assigned [1] - 12:11	54:18, 55:6, 59:4,	46:5, 46:18, 54:14,
40:4, 44:1	applying [2] - 42:22,	assigning [1] - 15:24	66:9, 67:19, 73:13,	55:1
ahead [4] - 64:3,	42:25	assist [2] - 35:8, 35:23	73:18, 73:20, 73:24,	beneficial [2] - 8:9,
75:22, 86:6, 89:3	appointed [1] - 97:8		78:3, 78:13, 78:19,	93:17
AI [1] - 1:23	appreciate [8] - 23:14,	assistance [1] - 22:18	78:21, 80:6, 82:6,	benefit [4] - 36:5,
allocation [1] - 30:20	76:19, 81:18, 82:12,	assisting [1] - 4:1	87:22, 87:23, 88:3,	
allow [3] - 25:1, 43:9,	83:25, 87:3, 89:22,	associated [5] - 8:13,	88:8, 88:13, 88:17,	36:15, 40:16, 41:1 benefits [5] - 6:15,
84:15	91:16	8:16, 30:25, 61:1,	88:25, 95:5	
allowed [3] - 18:9,	appreciates [1] -	63:22	avoiding [1] - 40:19	8:20, 28:11, 30:9, 56:24
35:17, 69:16	92:22	assume [6] - 28:9,	avolds [1] - 88:4	1
allowing [2] - 88:4,	approach [6] - 4:23,	40:23, 51:9, 53:7,	aware [4] - 3:2, 68:11,	<b>best</b> [13] - 8:12, 13:18,
	,	61:4, 61:18	91:19, 91:22	29:9, 31:5, 48:14,
88:8 Imaatic: 12:10	39:17, 39:19, 40:1, 40:14, 57:21	assumed [3] - 16:8,	awhile [1] - 67:8	54:17, 54:24, 66:3,
Ilmost [3] - 13:10,		16:15, 28:5	ax [1] - 57:17	68:14, 74:6, 87:17,
14:23, 44:22	approached [1] -	assuming [3] - 16:11,	Axtheim [1] - 1:20	94:16, 94:20
liter [1] - 11:25	44:21	67:25, 96:3	aye [4] - 96:15, 96:17,	better [5] - 13:24,
ltered [1] - 47:13	approaches [1] -	assumption [14] -	96:19, 96:20	38:19, 61:12, 95:14,
Iternative [2] - 37:1,	57:22	16:10, 16:13, 16:17,	30.10, 30.20	95:17
79:16	appropriate [11] -	20:1, 28:10, 30:8,		<b>between</b> [9] - 16:18,
Iternatives [1] - 31:9	17:2, 26:6, 27:17,	36:8, 41:6, 44:2,	B	18:5, 19:17, 19:21,
mbiguity [1] - 64:12	31:6, 39:19, 39:21,	44:6, 61:6, 94:5,		28:7, 44:3, 53:3,
mbiguous (1] - 37:2	57:22, 79:2, 80:14,	94:6, 95:7	bad [1] - 9:17	73:4, 81:3
mount [11] - 4:6,	93:13	assumptions [4] -	balance [1] - 22:3	beyond [2] - 36:16,
23:24, 30:8, 60:19,	approval [2] - 60:20,	19:16, 25:24, 39:12,	balanced [2] - 26:19,	55:8
60:25, 61:18, 71:3,	60:25	61:20	37:7	bids [3] - 76:8, 76:9,
71:13, 72:2, 82:11,	approximation [1] -	attached [1] - 97:11	banks [2] - 9:13, 57:16	76:11
88:22	56:21	attempt [1] - 82:14	bar [2] - 20:6, 20:15	<b>Big</b> [4] - 6:24, 56:16,
m <b>ounts</b> [1] - 88:11	April [4] - 1:8, 2:4,	attempted [1] - 4:17	base [5] - 6:5, 17:13	62:6, 71:24
nalysis [17] - 9:20,	57:8, 97:11	attempting [1] - 82:15	20:4, 55:9, 62:13	big [3] - 17:20, 72:20,
14:4, 15:2, 30:11,	area [1] - 25:12	attorney [1] - 25:14	based [24] - 5:3,	72:21
30:12, 53:15, 54:2,	areas [1] - 10:25	authority [3] - 21:3,	11:19, 13:13, 24:11,	bigger [1] - 4:3
JU. 12, JJ. 10, JT.2, [				biggest [1] - 50:24
	arguably [1] - 35:25	22:17, 37:13	26.7 20.15 22.14	Diggest[i] - 00.24
56:14, 56:17, 60:22, 66:9, 67:4, 67:19,	arguably [1] - 35:25 argue [2] - 45:18, 46:9	22:17, 37:13 authorized [1] - 50:17	26:7, 29:15, 32:14, 32:20, 39:11, 39:23,	bills [1] - 72:8

-<u>----</u>

			<u> </u>	
34:9, 51:14, 61:8,	23:11, 33:7, 48:12,	57:8, 58:2, 65:11,	chaff [2] - 24:3, 24:21	17:23, 17:24, 18:8,
75:4	58:4, 59:21, 70:12,	65:24, 66:17, 66:21,	CHAIRMAN [49] -	18:10, 18:14, 18:20,
BJL [1] - 48:20	80:25, 90:20	66:22, 66:23, 67:1,	1:11, 1:11, 3:1, 3:15,	18:22, 53:23
Black (23) - 8:11, 9:1,	broken (1) - 48:22	68:12, 68:15, 69:3,	23:5, 23:10, 33:7,	clauses [1] - 18:2
9:6, 10:21, 12:9,	brought [3] - 33:20,	69:7, 69:16, 69:18,	41:20, 48:11, 48:15,	clear [10] - 3:4, 22:24,
13:1, 13:8, 13:21,	34:3, 38:8	69:24, 71:17, 71:18,	51:11, 58:20, 59:10,	37:3, 39:14, 42:5,
14:14, 15:4, 15:13,	brown [3] - 20:9,	71:19, 72:1, 72:2,	59:12, 59:18, 59:20,	45:11, 47:4, 47:5,
15:17, 15:18, 19:24,	67:20	75:21, 75:23, 78:10,	59:24, 60:2, 63:25,	47:6, 49:7
25:23, 56:22, 58:7,	Brown [1] - 15:21	80:18, 80:21, 85:19,	64:3, 76:22, 77:2,	<b>close</b> [4] - 32:5, 32:24,
60:16, 63:7, 66:7,	build [9] - 4:7, 56:2,	87:19, 88:11, 91:5,	77:6, 83:10, 83:25,	39:4, 56:11
67:21, 80:10, 91:12	63:16, 68:1, 68:2,	91:7	84:8, 84:20, 84:24,	closing [2] - 41:8,
black [1] - 27:23	72:22, 74:17, 85:9,	capital [2] - 62:17,	86:15, 89:2, 90:8,	58:9
Bleau [1] - 42:10	94:10	83:21 Caritating 8-2	90:13, 90:19, 91:16,	coal [17] - 6:20, 6:25,
blue (2) - 13:5, 29:8	building [1] - 72:23	Capitol [2] - 2:3	92:6, 92:10, 93:4,	7:12, 7:13, 12:20,
board [1] - 57:8	Building [1] - 2:3	carbon [9] - 41:6,	93:9, 93:12, 94:14,	15:10, 15:14, 16:4,
Boardman [1] - 63:11	built [2] - 28:12, 29:20	44:7, 44:12, 57:1,	94:23, 95:7, 95:13,	16:20, 19:10, 45:25,
boil [1] - 5:19	Bull [2] - 32:17, 32:19	62:19, 83:19, 87:8,	95:18, 95:23, 96:9,	61:21, 61:25, 62:2,
boils [1] - 29:23	<b>bull's</b> [2] - 90:23,	87:19, 88:12	96:14, 96:18, 96:20	62:14, 63:15, 63:17
bonus [3] - 51:25,	90:25	care [1] - 28:20	Chairman [13] - 23:12,	coal-fired [3] - 6:25,
52:17, 72:24	bull's-eye [2] - 90:23,	carefully [1] - 19:1	33:9, 48:13, 51:13,	7:12, 15:10
bookend [1] - 39:11	90:25	carries [1] - 36:8	59:16, 64:2, 76:21,	Coca [1] - 56:3
bookends [2] - 39:6,	bunch [1] - 18:1	<b>case</b> [35] - 3:23, 6:6,	81:20, 83:13, 85:2,	coffee [1] - 38:9
73:14	burying [1] - 65:17	15:12, 18:25, 19:2,	90:24, 92:7, 96:12	cogeneration [3] -
borrowing (1) - 50:16	business [4] - 13:16,	19:3, 20:5, 20:21,	chairman's [1] - 77:14	36:2, 37:9, 59:8
bottom [2] - 29:4,	13:17, 79:9, 89:16	20:22, 23:19, 25:8,	change [9] - 16:15,	Cola [1] - 56:3
34:17	buy [5] - 24:10, 28:21,	26:20, 34:8, 34:20,	16:19, 25:7, 41:9,	collected [1] - 9:5
bought [1] - 25:24	28:24, 66:24, 71:17	39:22, 43:10, 45:3,	60:7, 60:10, 61:5,	column [1] - 80:16
<b>bound</b> [2] - 66:15,	buying [2] - 26:8,	45:5, 45:8, 45:12,	76:10, 93:1	comfortable [1] -
91:14	75:17	46:20, 47:3, 47:12,	changed [2] - 12:5,	89:13
BPR [2] - 42:16	BY [1] - 1:4	48:4, 50:15, 51:18,	50:16	coming [5] - 15:8,
break [2] - 76:25, 77:3		57:11, 65:4, 66:4,	changes [5] - 11:24,	71:16, 79:1, 86:7,
breakdown [2] -	C	73:23, 74:6	18:4, 21:10, 21:11,	87:21
49:10, 49:13		case-by-case [1] -	53:11	commencing [1] - 2:5
brìef [10] - 18:1, 33:16,	anloulate (4) 79:2	45:3	chasing [1] - 7:19	commend [1] - 4:24
37:10, 49:12, 65:14,	calculate [1] - 78:2 calculated [3] - 16:2,	cases [2] - 18:5, 27:3	check [3] - 67:5, 67:8,	commendable [1] -
65:20, 77:25, 82:25,		caught [1] - 18:6	75:5	9:25
91:7	37:20, 68:15 calculating [2] -	causes [3] - 70:22,	CHERI[1] - 97:5	commended [1] - 5:8
Brief [1] - 10:6		70:23	Cheri [3] - 1:25, 76:24,	comment [8] - 64:10,
briefing [4] - 21:3,	20:11, 42:13	cautious [2] - 4:23,	97:18	64:17, 68:5, 87:5,
33:21, 38:2, 57:10	calculation [10] - 5:18,	91:4	Cheri's [1] - 77:11	89:9, 89:21, 90:5
briefly [7] - 4:3, 12:6,	42:4, 42:6, 43:20, 43:24, 44:15, 66:19,	Cedar [1] - 22:12	choice [3] - 81:9,	commentary [1] - 87:1
13:22, 19:5, 30:15,	67:21, 67:22, 80:21	certain (13] - 6:2,	81:12, 86:22	commentators [1] -
39:8, 54:6	calculations [3] -	29:11, 33:15, 33:19,	choices [1] - 86:20	21:23
briefs [6] - 3:23, 8:24,		34:4, 34:5, 39:12,	choose [1] - 61:15	comments [7] - 84:1,
23:22, 49:12, 91:6,	16:8, 16:14, 16:23 calendar [2] - 92:25	39:19, 42:20, 43:2,	chose [1] - 12:17	89:3, 89:22, 89:25,
94:25		71:2, 71:3, 91:8	chosen [3] - 31:6,	90:21, 91:1, 91:17
bring [1] - 46:22	93:2 California (n. 60:14	certainly [14] - 34:3,	39:12, 43:6	commercial [1] - 71:7
bringing (1) - 35:8	California [3] - 69:14,	35:13, 37:16, 39:18,	CHRIS [1] - 1:11	commercially [1] - 8:9
brings (3) - 50:6, 50:8,	70:9, 70:10	59:18, 74:5, 83:13,	chris (1) - 1:16	Commission [53] -
50:14	cannot [9] - 15:11,	86:16, 88:14, 91:12,	Cindy [1] - 1:19	4:4, 5:12, 8:19, 8:21,
Brittany [1] - 1:18	24:8, 34:16, 38:10,	94:23, 95:20, 95:24,	circumstance [1] -	17:7, 2 <b>1:2</b> , 21:12,
broad [1] - 25:12	42:8, 43:18, 78:19,	95:25	45:4	21:25, 25:5, 28:20,
broader [3] - 5:5, 19:3,	82:5, 88:21	certainty [1] - 21:24	circumstances (7) -	28:24, 29:9, 30:23,
72:6	cap [2] - 6:18, 62:23	CERTIFICATE [1] -	39:19, 39:21, 41:9,	32:2, 32:3, 34:15,
BROGAN [13] - 23:12,	capable [1] - 44:11	97:2	42:7, 43:2, 43:7,	34:19, 34:21, 34:24,
	capacity [48] - 22:7,	Certified [2] - 97:6,	46:19	35:8, 35:10, 38:25,
48:13, 48:16, 59:23,		97:19	cited [1] - 22:12	
48:13, 48:16, 59:23, 68:9, 75:1, 76:4,	24:5, 24:6, 43:19,		01004[1] - 22.12	41:12, 42:24, 43:9,
	43:21, 46:17, 46:23,	CERTIFY [1] - 97:8	citizen (1) - 74:22	43:15, 44:11, 44:15,
68:9, 75:1, <b>7</b> 6:4,	,			

í Ì

56:24, 58:22, 59:13,	competing [1] - 51:4	59:6	47:5, 52:10	95:5
64:14, 64:24, 65:2,	competitive [5] - 31:7,	connected [1] - 63:6	contrary [2] - 23:3,	cost-effective [2] -
7 <b>1</b> :1, 78:19, 79:8,	75:6, 75:11, 76:6,	consequences [1] -	43:21	63:1, 63:12
81:1, 81:2, 81:5,	76:16	5:14	contrast [1] - 41:25	cost-effectiveness [1]
82:5, 82:15, 83:7,	competitors [1] - 56:1	Conservation [1] -	control [3] - 8:14,	- 62:16
92:5, 92:21, 93:25,	complains [3] - 28:5,	12:3	56:16, 62:17	costing (1) - 59:2
95:5	28:15, 30:10	consider [3] - 40:1,	controlling [1] - 36:18	costs [27] - 8:16,
COMMISSION [3] -	Complaint [2] - 23:20,	40:16, 88:25	conundrum [1] -	12:19, 17:19, 24:23,
1:1, 1:10, 1:13	67:2	considerable [1] -	31:17	30:24, 36:7, 37:21,
Commission's [7] -	COMPLAINT [1] - 1:4	82:13	convenience [1] -	40:6, 40:7, 40:19,
5:15, 33:22, 34:12,	complete [1] - 52:22	consideration [5] -	93:7	48:21, 50:10, 62:18,
36:3, 43:22, 83:8,	completed [1] - 72:17	23:15, 36:20, 36:21,	convince [1] - 76:14	63:19, 63:21, 69:20,
93:7	completely [3] - 18:7,	79:7	corporate [1] - 74:21	71:23, 75:20, 78:3,
COMMISSIONER [37]	68:6, 81:24	considerations [1] -	correct [4] - 43:6,	83:19, 87:8, 87:18,
- 1:12, 3:14, 59:16,	complex [1] - 51:17	34:6	48:18, 76:5, 97:11	87:19, 88:7, 88:12,
60:1, 60:3, 61:7, 61:24, 62:2, 63:23,	complexity [1] - 26:3	considered [3] -	correspondence [1] -	89:6, 94:19
64:2, 64:4, 64:19,	complicated [2] -	20:20, 20:21, 64:14	58:14	Council [3] - 11:10,
65:7, 65:19, 66:25,	61:3, 72:5	consistency [1] -	cost [132] - 5:18, 8:7,	12:2, 12:3
67:11, 67:14, 68:4,	comply [1] - 6:25	56:23	8:13, 10:24, 11:1,	council (1) - 63:14
68:19, 69:12, 69:22,	component [8] - 44:7,	consistent [4] - 44:24,	15:2, 16:4, 16:9,	counsel [1] - 93:13
70:2, 73:9, 74:8,	69:8, 69:9, 79:24,	45:14, 50:3, 54:5	17:3, 18:2, 18:10,	count [1] - 23:21
75:13, 76:18, 77:4,	79:25, 80:7, 80:9,	constitutes [1] - 37:15	18:11, 19:6, 19:10,	countering [1] - 40:25
81:20, 83:12, 87:2,	80:13	constraints [1] - 89:18 construction [3] -	20:9, 20:12, 20:14, 21:11, 22:3, 23:1,	country [3] - 31:20, 32:23, 58:6
89:21, 90:9, 90:17,	components [4] -	35:24, 52:21, 52:22	24:7, 24:9, 24:13,	52:23, 58:6 COUNTY [1] - 97:3
92:20, 96:12, 96:17	79:23, 80:3, 89:11, 89:17	consultants [3] -	24:14, 25:16, 25:18,	couple [4] - 26:13,
96:19	compound [1] - 7:1	85:12, 85:22, 94:21	25:20, 26:6, 27:1,	33:2, 60:1, 60:3
Commissioner [23] -	concern [9] - 11:12,	consulting [1] - 59:3	27:10, 27:12, 27:13,	course [2] - 52:9, 61:5
3:10, 23:9, 23:13,	29:3, 29:5, 48:24,	consumer [1] - 36:23	27:19, 28:1, 31:25,	COURT [1] - 77:1
41:23, 59:15, 59:25,	51:22, 69:13, 70:5,	consumers [6] - 29:6,	32:3, 32:6, 32:10,	covered [1] - 34:6
60:2, 60:11, 65:16,	82:18, 91:10	29:13, 37:4, 51:9,	32:21, 35:8, 35:9,	coy [1] - 69:13
68:9, 69:10, 73:21,	concerned [2] - 12:25,	69:20, 72:9	36:6, 36:14, 36:15,	create [2] - 31:23, 65:1
75:1, 76:4, 76:22,	90:25	contain [1] - 42:20	36:25, 37:11, 37:16,	created [8] - 22:21,
83:11, 87:6, 89:20,	concerning [1] - 45:3	contains (1) - 19:16	37:21, 38:3, 38:6,	32:16, 45:6, 46:4,
90:8, 90:20, 96:16,	concerns [2] - 41:5,	contemplate [1] -	38:14, 38:23, 39:5,	46:21, 64:7, 78:7,
96:18	41:24	73:22	39:10, 39:25, 40:5,	83:3
Commissioners [12] -	conclusion [7] - 48:3,	contemplating [1] -	40:10, 40:15, 41:6,	creating [1] - 46:22
3:11, 23:22, 33:10,	78:1, 78:9, 78:17	92:8	41:10, 41:18, 41:25,	creative [1] - 73:10
77:2, 81:11, 81:19,	87:15, 87:22, 88:21	contends (1) - 65:8	42:1, 42:3, 42:6,	creativity [2] - 82:12,
84:11, 86:20, 88:22,	conclusions [1] -	contentious [1] -	42:14, 43:13, 43:14,	87.4
91:18, 92:15, 92:19	77:22	88:19	43:18, 43:20, 43:23,	credentials [1] - 33:21
Commissions [1] - 59:6	concrete [2] - 64:25,	contexts [1] - 77:16	44:12, 44:14, 45:24,	credibility [3] - 34:4,
commissions [3] -	65:6	continually [1] - 48:1	46:6, 46:7, 46:12,	55:19, 57:12
10:9, 10:13, 22:8	concur [5] - 78:4,	continue [3] - 53:7,	46:25, 48:7, 48:17,	credible [4] - 16:10,
commit [1] - 22:14	78:8, 78:12, 78:14,	76:24, 83:23	48:25, 49:2, 49:8,	25:23, 33:24
commitment [5] -	89:2	continuing (3) - 47:3,	49:18, 50:9, 50:12,	credit [10] - 36:16,
21:9, 21:16, 21:17,	conducted [1] - 75:6	63:15, 71:23	50:16, 52:5, 52:13, 53:5, 53:23, 54:5,	36:20, 41:2, 51:25,
58:10, 85:8	confer [2] - 84:7,	contract [30] - 4:17,	54:18, 56:18, 59:4,	52:17, 52:23, 72:24,
committed [1] - 42:25	84:16	22:16, 22:17, 32:9,	61:1, 62:16, 62:17,	72:25, 78:10, 79:4
commonplace [1] -	conference [3] -	47:22, 47:25, 48:4,	62:18, 63:1, 63:12,	credited [1] - 18:19
44:8	70:17, 72:19, 92:22	49:14, 49:16, 49:19,	66:9, 67:9, 67:19,	credits [8] - 35:15,
compact [1] - 25:11	confident [1] - 23:22	50:3, 55:1, 55:5,	68:1, 69:19, 71:25,	35:16, 35:20, 36:13,
companies [2] - 7:25,	confidential [1] -	55:14, 58:10, 58:11,	73:13, 73:19, 73:20,	46:25, 47:2, 83:21,
72:20	12:24	58:12, 58:15, 58:17,	73:24, 74:17, 78:13,	87:19
company [1] - 74:25	confirm [1] - 95:9	66:11, 66:13, 67:15, 67:16, 67:10, 69:11	78:19, 78:21, 80:6,	Creek [1] - 22:12
compare [1] - 19:23	conflicting [1] - 51:4	67:16, 67:19, 68:11,	80:16, 82:6, 83:20,	Cremer [1] - 1:14
compared [1] - 42:22	confusion [1] - 69:6	68:22, 68:23, 76:15,	87:22, 87:24, 88:3,	criticism (3) - 11:11,
comparing [1] - 31:8	congratulate [1] -	78:14	88:7, 88:10, 88:11,	15:1
compelling [1] - 76:2	82:16	contractor [1] - 22:6	88:13, 88:17, 88:25,	CRR [1] - 1:25
	Congress [2] - 56:6,	contracts [3] - 46:1,		crunch [2] - 85:8, 86:7
	li			

 $\langle \cdot \rangle$ 

Ì

	dealers 10:0	25.14 52.40 70.44	durante aller an	1415 17:00 00:11
curious [1] - 74:10 current [1] - 41:1	deck [1] - 13:2 decrease [1] - 28:1	35:14, 53:12, 76:14, 78:23	dramatically [1] - 14:11	14:5, 17:23, 22:14, 22:15, 22:16, 22:19,
		difficulty [1] - 49:2		24:14, 27:24, 36:23,
curtailed [1] - 69:23	defense [1] - 63:14		drew [1] - 19:20	
ustomer [4] - 38:10,	deficient [1] - 71:21	diligence [1] - 74:24	drill [2] - 89:5, 94:1	37:1
38:18, 38:19, 38:24	<b>define</b> [5] - 87:17,	direct [2] - 12:15, 13:2	drilling [3] - 7:24, 8:4	Electric (7] - 11:2,
ustomers [17] - 17:9,	87:20, 89:5, 89:11,	direction [4] - 7:7,	drive [1] - 69:20	14:14, 14:20, 19:15,
28:22, 28:23, 29:1,	89:16	34:25, 55:21, 58:4	dropped [1] - 14:17	42:15, 47:6, 63:10
29:14, 35:21, 36:5,	defines [1] - 24:13	directions [1] - 79:19	dry [3] - 7:21, 8:6, 38:9	electricity [5] - 16:15,
37:6, 38:16, 38:17,	definite [2] - 84:22,	directive [2] - 43:22,	due [11] - 33:4, 33:11,	24:8, 24:9, 28:7,
39:5, 40:13, 41:1,	86:17	59:9	41:15, 42:2, 45:13,	69:8
41:2, 50:13, 54:1	definition [1] - 28:18	disagree [2] - 10:12,	45:15, 47:11, 49:10,	element [7] - 35:17,
cutting [1] - 12:4	degree [3] - 8:24,	58:6	49:13, 74:23, 90:24	36:10, 37:19, 37:25,
	15:15, 60:14	disciplines [1] - 9:5	duly [1] - 97:8	43:20, 43:21, 44:12
D		disclosed [1] - 68:12		elements [4] - 36:18,
	dekatherm [4] - 28:13,		duly-appointed [1] -	43:3, 47:8, 89:6
	53:9, 53:10	discriminate [1] -	97:8	
<b>02</b> [1] - 22:5	deliver [5] - 32:15,	37:22	during [7] - 3:13, 14:2,	eloquent [1] - 23:16
Dakota [24] - 2:2, 2:4,	32:18, 65:10, 65:24,	discussing [1] - 34:7	14:5, 27:10, 40:4,	emphasize [1] - 32:25
4:15, 4:18, 7:11,	66:12	Discussion [1] - 41:22	40:17, 40:18	empirical [1] - 26:4
	delve [1] - 33:18	discussion [4] - 3:10,		enable [1] - 34:19
14:24, 25:1, 25:5,	demand [1] - 49:14	23:18, 64:8, 75:15	E	enact [1] - 15:7
29:5, 29:13, 35:22,	Demaris [2] - 1:20,	discussions [2] -		encourage [1] - 59:7
36:2, 51:9, 53:4,	3:25	25:13, 68:20	.	end [11] - 3:12, 3:16,
57:18, 57:22, 61:10,	dependent [1] - 94:17	disparities [1] - 35:9	early [6] - 15:3, 15:17,	23:8, 35:15, 51:3,
62:3, 63:4, 63:5,	depreciation [3] -	dispatch [1] - 9:20	60:8, 86:5, 95:15,	52:21, 52:22, 72:17,
74:20, 93:2, 97:7,	52:1, 52:18, 72:24		95:19	77:9, 79:10, 86:4
97:13		displace [1] - 68:2	ease [1] - 5:8	endeavor [1] - 94:3
DAKOTA [2] - 1:2,	described [1] - 19:8	dispute [4] - 34:11,	easily [1] - 31:22	
97:1	design [1] - 23:2	39:17, 47:1, 54:7	East [1] - 2:3	Energy [17] - 1:23,
Dakota's [1] - 78:4	despite (1) - 78:20	disputed [1] - 35:4	Eastern [1] - 7:17	14:14, 15:18, 16:24,
data [1] - 10:1	destroy (1) - 21:13	disputes [1] - 5:9		19:24, 20:17, 24:22,
	determine [11] - 21:9,	disputing [1] - 39:15	eastern [2] - 63:6,	37:5, 40:11, 40:18,
date [2] - 78:8, 90:6	22:10, 24:4, 25:19,	distinguish (2) -	63:8	40:19, 46:14, 56:7,
Dated [1] - 97:13	25:20, 36:14, 44:12,	11:23, 39:15	economically [1] -	66:8, 78:3, 78:5,
dates (1] - 75:4	44:15, 49:24, 60:23,	distorts [1] - 88:13	38:4	89:24
Daugaard (1) - 1:16	82:24	diversification [2] -	economist [1] - 25:14	energy [20] - 9:22,
<b>days</b> [3] - 23:20,	determined [4] -		economy [1] - 40:16	12:9, 15:22, 16:18,
32:25, 65:18		6:15, 56:25	Edison [1] - 42:15	17:18, 22:7, 24:5,
ieadline [1] - 35:24	33:23, 44:22, 46:8,	divides (1] - 5:16	effect [1] - 21:3	24:6, 28:17, 37:1,
leal [9] - 34:13, 36:8,	76:9	DO [1] - 97:8	effective [4] - 36:1,	38:5, 40:12, 40:21
37:13, 44:18, 57:6,	determines [1] - 26:3	docket [9] - 25:3,	63:1, 63:12, 71:25	43:12, 43:17, 61:9,
58:11, 71:4, 71:7,	determining (4) -	25:17, 26:20, 29:17,		
92:16	36:14, 45:19, 46:12,	64:23, 67:2, 77:15,	effectively [1] - 70:10	67:21, 69:9, 74:19,
	49:2	83:24, 91:11	effectiveness [1] -	85:18
lealing [4] - 31:11,	develop [1] - 74:6	dockets [1] - 68:21	62:16	ENERGY [2] - 1:4, 1:5
56:1, 64:5, 71:9	developed [1] - 41:10	document [2] - 42:14,	effects [1] - 7:15	Energy's [4] - 25:7,
lealt [3] - 70:10, 71:1,	developer [1] - 63:19	42:18	efficient [2] - 28:12,	36:5, 65:20, 78:2
95:16	developing [2] - 42:3,	dollar [1] - 88:22	57:19	enforce [2] - 22:18,
<b>)eb</b> [1] - 1:19	73:24		effort [7] - 4:7, 7:11,	32:13
ebt [2] - 9:15, 21:11	1	dollars [2] - 9:9, 69:23	19:23, 21:14, 51:16,	enforceable [3] -
ecade [1] - 15:8	development [2] -	done [5] - 22:15,	73:16, 82:13	11:14, 22:6, 22:20
ecide (7] - 24:19,	59:8, 72:20	26:14, 51:18, 52:1,	efforts [1] - 78:20	enforcement [1] - 32:1
25:4, 49:23, 51:8,	deviation [1] - 47:10	60:8		
62:25, 86:24	difference [3] - 15:16,	door [1] - 71:2	EIA [13] - 13:9, 13:20,	enjoyable [1] - 77:15
	34:5, 73:15	double [1] - 62:21	14:25, 15:2, 15:7,	enjoyed [1] - 77:17
ecided (2) - 33:23,	differences (1) - 53:3	doubt [2] - 35:23,	15:14, 15:17, 27:21,	enormous [1] - 9:8
63:10	different [13] - 5:19,	46:24	27:22, 27:25, 60:16,	ensure [1] - 36:10
ecision (12) - 4:20,	6:8, 9:5, 10:7, 26:24,	down [16] - 5:20,	60:19, 74:2	ensuring [1] - 38:5
5:3, 5:15, 30:24,	29:13, 44:23, 51:5,		EIA's [1] - 41:15	ENTER [1] - 1:5
30:25, 34:20, 34:22,		17:15, 29:23, 34:11,	either [6] - 3:22,	enter [2] - 22:5, 45:7
35:2, 35:11, 35:23,	61:9, 64:13, 77:16,	40:20, 48:22, 50:10,	29:19, 38:14, 38:19,	entertain [2] - 84:4,
43:10, 52:19	88:23	50:17, 50:18, 62:20,	40:20, 56:2	
	differently (2) - 47:16,	63:10, 71:16, 89:5,		84:10
			EI 11.006 (2) - 1·4 - 2·1	autius in 00.40
lecisions [3] - 9:13, 21:4, 26:15	82:2 difficult [5] - 11:22,	94:1	EL11-006 [2] - 1:4, 3:1 electric [11] - 9:2,	entire [2] - 33:18, 88:19

}

<u>.....</u>

entirely [1] - 57:10	68:23	extraordinary [1] -	fellow [7] - 3:11,	11:7, 16:6, 18:21,
entitled [3] - 2:2, 55:9,	exact [1] - 89:6	51:16	81:11, 81:18, 84:11,	20:6, 30:22, 31:3,
97:10	exactly [4] - 13:10,	extremely [2] - 9:16,	86:19, 92:15, 92:18	32:17, 43:11, 51:14,
entity [3] - 44:5, 70:12,	28:17, 66:16, 78:24	63:18	felt [2] - 28:2, 89:12	51:23, 57:13, 60:5,
88:8	example [4] - 7:11,	eye [2] - 90:23, 90:25	FERC [5] - 21:23,	65:16, 68:14, 76:4,
environment [1] -	18:18, 61:20, 70:11		26:17, 38:20, 43:3,	76:5, 76:6, 77:14,
16:20	exceed [3] - 36:25,	F	55:24	81:25, 87:5, 91:4,
environmental [3] -	38:6, 49:17		few [8] - 4:18, 22:12,	92:8
63:17, 63:21, 66.7	exceeded [1] - 26:21	E 000E	64:4, 64:6, 65:13,	fit[1] - 61:2
environmentally [1] -	exceedingly [1] - 4:12	F-3365 [1] - 43:23	65:18, 87:2, 88:1	fits [1] - 28:17
75:23	exceeds [1] - 49:20	face [7] - 7:3, 7:22,	Fiegen [9] - 23:13,	five [11] - 26:9, 26:12,
<b>EPA</b> [7] - 6:25, 15:6,	excess [1] - 49:5	7:23, 29:9, 49:25,	59:15, 60:2, 60:11,	26:24, 43:12, 48:20,
15:7, 56:25, 62:4,	excuse [4] - 15:17,	92:23	83:11, 87:6, 90:8,	50:10, 50:14, 83:8,
62:16, 62:22	27:23, 83:7, 87:22	faced [2] - 31:17,	96:18, 96:19	83:17, 84:15
equal [1] - 38:15	executed [1] - 46:15	79:12	FIEGEN [14] - 1:11,	five-minute [1] - 84:15
equation [1] - 81:6	exercise [2] - 53:12,	faces [1] - 79:9	3:14, 59:16, 60:1,	five-year [2] - 43:12,
equipment [2] - 56:17,	61:3	facilities [4] - 30:18,	60:3, 61:7, 61:24,	48:20
62:17	Exhibit [5] - 13:2,	36:24, 57:16, 62:19	62:2, 63:23, 83:12,	fixed [5] - 50:2, 50:7,
equity [2] - 21:10,	14:1, 48:20, 68:16,	facility [8] - 4:16, 8:20,	90:9, 90:17, 92:20,	50:21, 50:22, 62:18
50:17	80:5	21:5, 21:6, 21:8,	96:19	flaws [1] - 16:5
erode [2] - 18:5, 18:24	exhibit [2] - 14:16,	22:5, 38:7, 38:20	field [1] - 11:1	fleet [1] - 15:9
error [1] - 52:13	42:16	fact [10] - 5:10, 8:25,	fifth [2] - 64:19, 78:16	fly [2] - 49:25, 94:4
errors [3] - 16:7,	exist [1] - 34:8	9:18, 9:24, 21:12,	figure [6] - 6:9, 13:18,	focus [1] - 34:1
55:19, 58:3	existed [1] - 61:18	36:5, 39:25, 42:9,	31:4, 61:2, 81:5,	fold [2] - 51:22, 75:2
scalation [2] - 91:7,	existence [1] - 78:7	49:16, 57:23	84:11	folks [2] - 86:23, 95:12
91:9	expect [3] - 14:18,	factor [2] - 14:17,	figured (1) - 52:2	foliow [1] - 74:9
scalator [1] - 55:4	14:21, 14:22	63:13	figures [2] - 79:21	
specially [2] - 30:14	1 .	factors [7] - 6:11,	81:3	following [1] - 80:22
56:8	expectations [4] - 6:5,	6:13, 7:2, 13:14,	file [2] - 18:24, 58:23	FOR [1] - 1:5
essentially [4] - 5:20,	12:1, 20:4, 20:20	36:18, 46:3, 62:15	filed [4] - 6:23, 33:2,	forced [1] - 58:22
• • • •	expected [5] - 11:24,	facts [4] - 5:4, 29:10,		Forecast [4] - 11:2,
8:3, 18:2, 18:8	11:25, 12:10, 12:12,	34:7	67:2, 68:17	14:14, 14:20, 19:15
establish [9] - 25:6,	15:7	fail [1] - 3:25	filing [3] - 56:12, 62:6,	forecast [38] - 6:7
50:1, 64:5, 64:15,	expeditious [1] -	failed [1] - 43:8	77:21	13:6, 13:13, 15:3,
64:22, 66:3, 78:19,	82:16	failure [1] - 49:22	filings [1] - 80:4	15:4, 16:5, 16:6,
82:5, 83:2	expended [1] - 4:6	fair [4] - 23:24, 28:2,	fill [1] - 40:2	17:13, 19:6, 25:25,
stablished [5] - 5:24,	expense [2] - 9:8, 26:3	48:15, 64:19	final [7] - 34:20, 34:22,	27:24, 40:24, 41:5,
23:2, 44:18, 81:21,	expensive [1] - 62:11	fairly [2] - 72:8, 92:12	35:2, 55:18, 80:15,	41:14, 43:12, 43:13,
88:16	experience [2] - 10:4,	fairness (1) - 90:20	89:9, 91:25	43:15, 43:17, 44:1,
stablishes [4] - 25:6,	63:16	fall [9] - 9:2, 13:4,	finalized [1] - 15:11	48:17, 48:20, 48:23,
64:11, 83:3, 87:13	expert [6] - 10:14,	13:11, 15:5, 15:13,	finally [7] - 28:15,	49:20, 52:8, 54:22,
stablishing [3] -	44:5, 51:4, 54:21,		41:4, 47:22, 50:2,	55:20, 56:15, 58:4,
31:21, 45:1, 87:23	85:7, 88:24	15:16, 15:18, 60:17,	50:24, 57:7, 72:13	59:4, 60:6, 60:7,
stimate [12] - 25:21,	experts [8] - 9:4,	61:19	financial [6] - 50:15,	60:10, 60:13, 60:20,
29:14, 29:18, 39:5,	10:25, 11:1, 11:2,	familiar [2] - 75:14,	85:7, 85:12, 85:22,	60:23, 74:7, 91:13
41:7, 41:10, 41:16,	73:23, 86:3	80:24	86:2, 94:21	forecasted [1] - 40:22
41:18, 41:19, 42:2,	expiration [4] - 35:14,	family [3] - 4:5, 4:8,	financially [1] - 37:25	forecasting [5] - 11:8,
48:21, 57:21	35:19, 36:12, 51:24	74:22	financing [4] - 9:15,	16:10, 38:12, 58:6,
stimated (4) - 20:9,	expires [2] - 52:17,	far (1) - 39:10	21:7, 21:14, 52:5	63:7
49:19, 50:21, 66:18	52:18	farm [2] - 4.7, 35:25	fine [6] - 3:14, 54:15,	forecasts [5] - 9:8,
stimates (4) - 12:16,	explain [2] - 12:23,	fascinating [1] - 25:14	58:17, 58:19, 77:1,	15:16, 29:7, 29:12,
19:12, 35:9, 39:16	18:2	fashion [2] - 69:17,	95:21	73:24
stimating [1] - 49:4	explained [2] - 30:11,	82:16	fire (1) - 7:18	forego [2] - 34:22,
[2] - 60:8, 83:22	35:16	father's [2] - 71:8,	fired [6] - 6:25, 7:12,	44:25
aluate [2] - 7:9, 8:18	explaining [2] - 44:19,	71:9	15:10, 56:18, 61:22,	foremost [1] - 43:11
valuated [1] - 75:10	73:14	favor (1) - 96:15	62:12	forever [1] - 53:7
ventually [1] - 69:22	explains [1] - 15:15	favorable [1] - 58:5	firm [1] - 25:25	forgive [1] - 68:19
/idence [11] - 26:4,	explored [1] - 36:11	February [9] - 11:13,	firmly [2] - 79:22,	form [3] - 26:10, 43:1,
34:13, 38:13, 43:9,		20:8, 46:15, 67:7,	89:11	71:25
45:11, 47:12, 48:5,	extent [2] - 24:8, 71:2 extra [2] - 85:19, 85:20	67:13, 67:18, 68:10,	first [28] - 4:2, 4:16	formal [1] - 96:5
		1 · · · · · · · · · · · · · · · · · · ·	1 11 3 L [20] = 4, 2, 4, 10,	IOMIA[[] = 00.0
48:8, 52:14, 68:20,	extracting [1] - 8:7	78:7	5:21, 8:6, 9:3, 11:3,	formas (1) - 52:1

····· }

-----\\_\_\_/

·.	forth [4] - 37:18, 41:7,	gates [1] - 69:15	60:11, 68:16, 70:2,	74:17, 75:9	implementation [1]
1	47:4, 48:5	gauge [1] - 7:23	77:7, 81:18, 86:19,	highly [2] - 51:17,	22:21
1	forward [7] - 49:1,	general (1) - 25:8	95:13	91:13	important [16] - 4:12
	75:12, 77:3, 77:5,	General [1] - 63:10	guidance [3] - 5:12,	himself [3] - 9:1,	
	84:14, 86:18, 86:21		-		4:13, 4:14, 5:14,
		generate [5] - 24:7,	79:2, 79:14	84:19	9:16, 11:5, 19:3,
	fossil [1] - 71:13	24:9, 24:16, 24:25,	guided [1] - 83:6	hired [1] - 54:21	19:7, 29:21, 32:25,
	four [2] - 81:25, 82:24	27:12	guiding [1] - 38:25	hit [2] - 23:6, 33:1	57:1, 72:14, 83:4,
	fourthly [1] - 78:13	generated [1] - 80:6	Guldseth [1] - 20:6	hitting [1] - 8:6	83:20, 92:25, 94:9
	fracking [2] - 8:13,	generates [1] - 30:7	guys [5] - 3:23, 62:9,	hold [3] - 3:15, 34:9,	imposed [1] - 22:18
	8:14	generating [5] - 8:20,	62:25, 71:23, 72:21	48:8	improve [1] - 28:14
	frame [1] - 92:3	27:10, 27:11, 63:1,		homes [1] - 7:17	improvements [1] -
	frankly (4) - 29:18,	88:6	Н	honor [1] - 32:13	62:23
	89:3, 89:7, 92:10	generation [31] - 4:9,		• •	
				hope [2] - 32:7	IN [1] - 1:4
	front [2] - 72:15, 92:25	6:20, 7:1, 7:12, 7:18,	half [3] - 9:9, 55:3,	hopeful [1] - 85:10	inappropriate [1] -
	fuel [9] - 7:20, 11:23,	12:12, 16:22, 17:10,	72:7	hopefully [7] - 3:16,	42:22
	17:21, 18:4, 18:14,	17:14, 18:12, 27:13,		3:24, 77:8, 85:22,	inclination [1] - 83:2
	18:19, 18:22, 18:23,	27:25, 40:2, 40:6,	hand [1] - 36:4	86:4, 86:5, 94:13	include [3] - 18:9,
	71:13	40:13, 45:25, 53:19,	handled [2] - 44:19,	horizon [1] - 48:1	31:21, 43:21
	fulfill [1] - 36:2	53:20, 56:19, 61:22,	44:20	horizons [1] - 50:4	included (11) - 15:12,
	fulfilled [1] - 36:19	62:12, 63:8, 63:15,	Hanson [9] - 23:13,	horizontal [1] - 7:24	42:14, 42:15, 43:19
	fulfilling [1] - 34:15	70:20, 71:11, 71:13,	65:16, 68:9, 69:11,		1
	-	72:1, 79:25, 80:7,	75:1, 76:4, 89:20,	horizontally [1] - 8:4	44:10, 44:13, 46:2,
	fulfills [1] - 37:12	1	90:21, 96:16	hour [16] - 9:21, 12:11,	46:25, 61:10, 61:14
	full [4] - 37:11, 37:15,	80:12	HANSON [24] - 1:12,	14:8, 14:23, 15:23,	65:3
	40:15, 43:23	generator [1] - 31:1	64:2, 64:4, 64:19,	20:17, 25:22, 28:21,	includes [2] - 37:5,
	fully [1] - 15:11	generosity [1] - 89:23	65:7, 65:19, 66:25,	28:25, 30:2, 30:3,	44:7
	fundamental [4] -	<b>given</b> [6] - 14:10,		31:24, 35:18, 46:17,	including [3] - 6:14,
	16:7, 53:15, 60:22,	37:19, 43:9, 57:23,	67:11, 67:14, 68:4,	51:19, 54:14	10:13, 44:14
	61:6	68:9, 89:17	68:19, 69:12, 69:22,	hourly [1] - 9:20	incomplete [1] - 44:10
	fundamentally [1] -	glad [1] - 31:23	70:2, 73:9, 74:8,	hours [11] - 12:18,	inconsistent (1) -
	11:25	goal [3] - 74:19, 85:4	75:13, 76:18, 77:4,	12:22, 16:2, 17:17,	57:11
	1	gold [2] - 73:3, 73:4	81:20, 87:2, 89:21,		
2	fundamentals (1) -	+	96:12, 96:17	19:13, 26:7, 27:10,	incorporated [1] -
	13:13	gorilla [1] - 74:11	hard [2] - 72:16, 74:23	27:14, 30:14, 49:19,	78:11
	fundamentals-based	gosh [1] - 74:24	hear [1] - 93:20	55:1	increase [9] - 16:8,
	[1] - 13:13	gracious [1] - 4:1	heard [2] - 92:14,	house [1] - 57:5	27:19, 28:4, 33:3,
	furthermore [1] -	grade [1] - 91:2	93:18	huge [2] - 52:24,	41:15, 49:11, 60:24,
	26:22	grain [1] - 24:2		58:13	75:20, 80:20
	future [6] - 5:9, 12:1,	graphically [1] - 20:19	hearing [6] - 6:4, 8:24,	hybrid [8] - 27:9, 42:8,	increased [3] - 60:19,
	13:15, 13:19, 83:5,	grapple [2] - 62:7,	11:9, 11:13, 14:2,	42:19, 42:21, 78:2,	60:25, 61:1
	88:7	70:7	15:1		increases [1] - 44:2
	00.7		hearings [2] - 23:21,	78:11, 87:18	
		great [9] - 25:12,	83:5	hydrocarbons [1] -	incremental [17] -
	G	34:13, 36:8, 37:13,	heart [1] - 52:12	7:19	12:19, 16:4, 19:10,
		42:5, 44:18, 59:12,	heat [3] - 7:17, 28:6,		24:13, 25:18, 25:20,
	nain as 61-0	87:11, 87:14	28:14		36:7, 36:25, 37:20,
	gain [1] - 51:6	greatest [1] - 10:23			37:21, 38:3, 38:22,
	GARY [1] - 1:12	greatly [2] - 70:13,	hedge [2] - 71:15,		39:25, 40:5, 46:7,
	gas [42] - 7:16, 8:7,	77:15	71:19	Idaho [4] - 70:11,	48:21, 58:2
	11:20, 13:7, 16:6,	green [5] - 10:24,	hedging [1] - 56:25	70:15, 71:1	incur[1] - 25:16
	16:9, 16:16, 16:19,	15:20, 19:19, 67:20,	held [2] - 2:1, 75:6	idea [2] - 63:18, 81:10	index [4] - 27:1, 27:2,
	16:21, 25:25, 27:18,		hell [1] - 70:21	identified [1] - 12:14	27:4, 27:6
	27:20, 27:24, 28:1,	67:22	help [3] - 9:3, 17:18,	identify [2] - 21:16,	
	28:7, 28:12, 41:5,	Greg [1] - 1:16	34:15	42:10	indicated [4] - 10:6,
	41:14, 41:16, 43:25,	Gregg [1] - 1:19	helped [1] - 57:16		26:17, 48:16, 79:18
		grew [1] - 12:3	1	ignore [1] - 53:14	indifference [3] -
	48:25, 49:2, 49:5,	grind [1] - 57:17	hence (1) - 81:17	illustrate [1] - 13:24	38:10, 38:18, 38:24
	49:8, 50:9, 50:10,	ground [1] - 86:1	HEREBY [1] - 97:8	immediately [1] -	indifferent [2] - 38:4,
	50:12, 53:6, 53:8,	group [1] - 74:23	high (10) - 6:6, 20:5,	53:25	39:5
	53:10, 56:14, 56:18,		20:22, 29:14, 37:7,	impact [2] - 15:8	individual [4] - 44:5,
	60:5, 60:7, 60:8,	growth [1] - 17:12	39:10, 57:3, 58:18,	72:12	
	60:9, 60:23, 61:22,	guarantee (1) - 10:19	73:15, 76:10	impacts [1] - 15:11	64:9, 89:11, 89:17
		guaranteed [2] -			individuals [1] - 73:10
Ŀ		guaranteeu [2] *	higher (a) - 15:3	implementary 04.40	
. <u></u>	62:12, 75:19, 83:20, 87:18	65:10, 65:23	higher [6] - 15:3, 18:12, 52:19, 69:19,	implement [3] - 34:12, 57:18, 59:7	industry [7] - 8:15, 10:4, 10:11, 10:20,

44:6, 44:9, 46:12	<b>issue</b> [48] - 5:16, 5:23,	45:20, 45:22, 46:18	74:13, 81:9, 87:23,	litigation [2] - 58:24
inexpensive [2] -	7:22, 8:11, 8:12,	kind [14] - 9:25, 14:18,	93:18	63:21
6:20, 6:21	8:15, 8:25, 10:22,	23:17, 51:19, 52:14,	leave [2] - 38:3, 39:5	live [1] - 89:15
inflated [2] - 83:20,	17:21, 19:2, 19:3,	55:5, 56:4, 62:13,	leaves [3] - 43:14,	living [1] - 58:8
91:13	24:3, 24:20, 24:23,	65:17, 77:8, 95:10,	81:8, 81:9	LLC [3] - 1:4, 32:18,
information [13] -	25:4, 25:8, 25:17,	96:5	leaving [1] - 64:12	32:19
9:11, 9:12, 34:19,	25:18, 25:19, 29:24,	kinds (4) - 7:8, 8:17,	led [2] - 13:6, 49:22	load [4] - 17:12, 17:13
34:23, 36:10, 42:12,	30:15, 33:23, 33:25,	70:22, 70:24	legally [3] - 11:14,	57:24, 62:13
42:20, 46:11, 54:18,	35:2, 40:8, 44:17,	knowing [4] - 31:24,	22:6, 22:20	lock [1] - 55:14
74:1, 74:4, 82:8,	44:20, 44:21, 47:3,	73:10, 81:18, 84:20	legislation [4] - 6:19,	long-term [9] - 11:24,
82:23	50:25, 52:7, 52:24,	knowledge [1] - 68:14	7:6, 62:20, 62:24	38:11, 38:12, 38:21,
infringe (1) - 89:23	54:6, 55:19, 57:1,	known [2] - 9:7, 29:10	legitimately [1] -	39:4, 40:23, 45:25,
inherent [1] - 26:2	57:7, 57:12, 57:13,	knows [3] - 44:5, 73:1,	32:20	58:1, 73:24
initial [4] - 3:5, 3:7	58:13, 59:21, 62:5,	79:20	length [4] - 21:9,	look [30] - 4:21, 5:5,
3:8, 47:11	62:7, 62:16, 65:25,	Kop [3] - 6:12, 8:18,	21:17, 47:22, 47:25	
input [2] - 11:20, 79:2	70:9, 71:6, 91:22	20:7	lengths [2] - 21:22,	6:5, 13:20, 14:6,
inputs [11] - 27:17	issues [23] - 5:5, 5:19,	KRISTIE [1] - 1:11	48:4	15:3, 15:18, 19:1,
37:18, 42:2, 43:16,	5:20, 11:5, 17:20,			27:21, 31:3, 48:23,
73:18, 78:8, 78:18,	24:1, 34:3, 35:4,	1	LEO [33] - 30:15, 30:16, 31:21, 31:23,	52:10, 52:11, 53:5,
82:4, 87:16, 94:17,	35:5, 35:7, 38:21,	ļ L		54:23, 58:1, 58:14,
94:19	39:8, 45:2, 48:3,		32:4, 32:13, 32:14,	64:9, 66:4, 71:23,
instance [1] - 24:21	48:6, 70:7, 70:10,	lack [1] - 46:16	32:16, 32:20, 44:17,	72:15, 83:14, 83:15,
instances [1] - 10:16	70:13, 70:22, 72:5,	LaFave [6] - 10:23	44:21, 45:1, 45:5,	83:18, 85:21, 86:19,
instead [2] - 28:14,	72:6, 77:19	12:14, 22:25, 30:11,	45:9, 46:4, 46:21,	88:2, 88:14, 90:17,
56:15	item [2] - 78:16, 82:21	31:17, 42:10	46:22, 48:4, 49:25,	90:18
	items [3] - 82:24, 87:8,	LaFave's [3] - 14:1,	50:1, 54:6, 64:5,	looked [7] - 11:17,
Institute [1] - 42:15	87:9	17:6, 80:5	64:7, 64:9, 64:11,	11:18, 57:2, 67:8,
insufficient [1] - 48:7	itself [1] - 22:14	LaFrentz [1] - 1:22	65:1, 66:11, 67:6,	74:1, 75:11, 83:16
integration [1] - 70:23	10001 [1] - 22.14	laid [1] - 89:10	78:7, 83:3, 87:13,	looking [6] - 5:11,
intended [1] - 38:3	J	land [2] - 56:7, 59:3	88:16	13:17, 34:7, 68:22,
intent [1] - 65:25		language [3] - 20:25,	less [7] - 20:16, 23:3,	71:14, 95:8
intention [4] - 65:9,		21:1, 54:3	38:17, 42:21, 50:11,	looks [1] - 65:21
65:22, 66:16, 87:11	job [4] - 13:18, 51:18,	large [1] - 15:15	50:12, 62:11	looming [2] - 35:14,
intentions [2] - 66:3	54:17, 82:9	largely [1] - 61:22	ietter [4] - 11:14,	51:24
Interconnect [2] -	John [3] - 1:14, 95:1,		46:15, 66:11, 67:6	lose [2] - 4:4, 72:1
7:17, 63:6	95:9	larger [1] - 13:12	letters [1] - 54;10	loss [1] - 51:25
interconnect [1] -	Jon [1] - 1:18	last [11] - 17:1, 20:15,	level [2] - 7:23, 44:13	lost [2] - 35:20, 65:16
63:8	judgment [2] - 41:12,	20:23, 22:4, 49:6,	levelized [6] - 20:11,	love (5) - 25:15, 85:6,
Interconnection [1] -	54:24	65:18, 77:21, 77:25,	55:3, 56:20, 67:9,	85:24, 86:1, 86:9
66:5	jump [4] - 14:11, 20:2,	80:16, 89:21, 94:18	80:16, 85:18	low [7] - 6:6, 20:4,
interest [2] - 36:24,	75:22, 76:2	latch [1] - 76:3	Lewis [7] - 10:24,	20:21, 29:18, 42:2,
37:5	jumps [1] - 75:19	latter [1] - 22:1	19:15, 19:20, 28:5,	53:6, 73:15
interesting (4) - 19:18,	justification [1] - 6:24	Lauckhart [19] - 6:3,	28:9, 44:4, 49:4	lower [3] - 50:19,
66:1, 81:3, 83:21	justified [2] - 11:20,	9:1, 9:19, 9:24, 10:3,	Lewis's [1] - 16:6	76:11
intermediate [1] - 20:5	50:8	10:9, 10:10, 10:20,	life [1] - 47:8	lowest [3] - 76:8, 76:9,
intermittency [1] -	justifies [1] - 41:11	11:9, 11:17, 15:21,	Light [1] - 10:5	76:11
70:24		20:8, 20:11, 27:23,	likelihood [3] - 7:5,	lunch (2) - 76:25, 77:3
intermittent [1] -	justify [1] - 56:15	56:14, 57:15, 57:20,	28:11, 71:12	
69:19		61:13, 66:10	likely [8] - 9:14, 9:22,	M
ntermixing [1] - 43:2	K	Lauckhart's [12] -	13:15, 14:10, 15:14,	
nternal [6] - 17:9,		10:7, 10:18, 12:7,	35:4, 35:5, 79:4	
17:13, 40:2, 40:6,	Kara [1] - 1:15	13:2, 14:4, 15:2,	limit (1) - 59:14	machinations [1] -
40:13, 57:24	Karen [1] - 1:14	49:20, 52:8, 61:17,	line [13] - 13:5, 13:8,	64:13
nterpretation [1] -	keep [7] - 5:14, 9:16,	67:4, 68:16, 68:18	13:9, 17:8, 19:20,	magic [1] - 26:13
37:16	17:4, 17:5, 72:14,	law [3] - 5:4, 56:7,	29:4, 30:11, 30:12,	magnitude [1] - 60:14
NTO [1] - 1:5		91:14	34:17, 65:21, 93:4,	main (5) - 20:25,
	74:13, 95:3	lay [1] - 3:1	93:6	24:20, 25:19, 88:1,
nvestment [6] - 9:13,	Kemnitz (1) - 1:19	leads [1] - 52:7		88:2
9:14, 21:25, 55:10,	key [3] - 15:7, 24:3,	least [12] - 4:18, 28:2,	liquids [2] - 8:3, 8:9	major [2] - 19:2, 72:19
55:12, 59:1	35:17	29:4, 30:1, 30:4,	list [1] - 42:10	Maken [1] - 74:22
nvolved [1] - 92:17	kicking [1] - 62:22	30:5, 31:13, 72:24,	listed [2] - 42:23, 82:1	Makens [4] - 4:5, 66:1,
rrelevant [1] - 23:25	kilowatts [4] - 23:2,	$\neg \neg $	listening [1] - 3:3	I HUNGIS  4  4.0.00.1.

·····, }

··· ·

	04-10 04-95	40:5	minorus 0414	67:13, 67:17, 68:9,	AE-10 40-40 E4-40
<b>、</b>	84:18, 84:25		minor [1] - 91:4		45:16, 46:10, 54:10,
)	MAKENS [3] - 85:2,	measured [1] - 40:10	minute [4] - 12:23,	69:5, 69:21, 69:25,	54:14, 55:22, 55:25
	94:16, 95:3	mechanism [1] - 32:1	26:5, 58:20, 84:15	70:4, 73:21, 75:1, 76:4, 84:6, 84:18,	negotiated [1] - 46:1
	manage [1] - 29:22	media [1] - 33:1	minutes [12] - 3:5, 3:6,		negotiation (8) -
	manageable [1] - 8:16	meet [1] - 31:5	3:7, 3:8, 3:9, 23:6,	84:22, 85:2, 90:24,	45:12, 46:13, 49:9,
	management [1] -	meeting (1] - 35:24	23:8, 23:11, 33:8,	92:4, 92:7, 92:24,	49:23, 49:24, 85:4,
	72:4	megawatt [13] - 14:8,	48:12, 48:14, 51:12	93:6, 93:10, 93:17,	86:12, 95:5
	margin [2] - 49:17,	14:23, 20:17, 28:21,	MISO [2] - 47:18,	93:23, 94:16, 95:3,	negotiations (3) -
	60:14	28:25, 30:1, 31:24,	80:23	95:11, 95:15, 95:19,	31:13, 49:10, 49:13
	margins [1] - 41:3	32:8, 35:18, 46:17,	misspoke [1] - 67:18	95:22, 96:3, 96:7, 96:8	Nelson [6] - 23:9,
	mark [1] - 24:12	54:14, 72:7, 80:20	misspoken [1] - 92:19	must (8) - 24:4, 25:25,	23:12, 48:13, 85:2,
	Market [4] - 14:14,	megawatts [11] -	mix [1] - 85:16	34:6, 36:22, 37:3,	90:25, 96:20
	15:19, 19:24, 66:8	28:13, 30:3, 56:8,	MMBtu (1) - 56:20	37:7, 45:8, 46:25	NELSON [48] - 1:11,
	market (45) - 9:2, 12:9,	63:8, 66:18, 70:19,	model [12] - 11:21,	57.7, 45.0, 40.25	3:1, 3:15, 23:5,
	12:15, 12:21, 14:10,	71:3, 73:5, 73:6,	26:3, 39:16, 40:9,	N	23:10, 33:7, 41:20,
	14:19, 16:24, 17:10,	80:22	41:11, 41:25, 44:16,	N	48:11, 48:15, 51:11,
	18:6, 18:11, 18:12,	Mehlhaff [1] - 1:18	49:3, 78:2, 78:8,		58:20, 59:10, 59:12,
	19:13, 21:6, 25:21,	memo [1] - 87:7	78:18, 82:4	national [2] - 7:6,	59:18, 59:20, 59:24,
	26:7, 26:8, 27:1,	mention [1] - 21:2	modeling [5] - 37:17,	25:25	60:2, 63:25, 64:3,
	27:2, 27:6, 28:6,	mentioned [5] - 6:12,	39:11, 39:17, 39:19,	nationally [1] - 9:6	76:22, 77:2, 77:6,
	28:16, 30:1, 30:3,	10:7, 12:8, 15:20,	43:6	natural [25] - 7:16, 8:7,	83:10, 83:25, 84:8,
	30:6, 30:8, 30:13,	46:24	models [2] - 9:20,	11:20, 16:9, 16:19,	84:20, 84:24, 86:15,
	32:6, 39:15, 39:16,	meritorious [1] -	39:9	16:21, 27:24, 28:12,	89:2, 90:8, 90:13,
	39:25, 40:11, 40:16,	29:19	Monday [3] - 33:1,	41:5, 41:14, 43:25,	90:19, 91:16, 92:6,
	40.21, 42:8, 49:20,	met [2] - 41:14, 64:25	94:15, 94:22	48:25, 49:2, 49:5,	92:10, 93:4, 93:9,
	53:6, 53:15, 54:23,	method [28] - 12:16,	money [4] - 10:1,	56:18, 60:5, 60:6,	93:12, 94:14, 94:23,
	57:20, 67:21, 75:9,	12:18, 15:22, 27:17,	55:13, 59:1, 66:6	60:9, 60:22, 61:22,	95:7, 95:13, 95:18,
	75:10, 88:5, 91:12	39:11, 42:6, 42:8,	Montana [12] - 5:1,	62:12, 63:14, 75:19,	95:23, 96:9, 96:14,
	market's [1] - 32:10	42:9, 42:21, 42:25,	8:19, 34:2, 34:3,	83:20, 87:18	96:18, 96:20
	marketplace [2] -	43:1, 43:4, 43:6,	52:25, 53:3, 56:24,	nature [3] - 46:1, 56:5,	Nelson's [1] - 83:13
	76:10, 88:9	43:8, 44:23, 44:24,	63:16, 67:23, 71:4,	64:15	Nevada [1] - 27:4
	markets [4] - 13:7,	45:1, 46:12, 47:18,	73:3, 73:4		never [12] - 4:19, 39:1,
	50:16, 53:11, 56:10	53:16, 67:24, 78:2	month [1] - 94:18	necessarily [5] - 28:3,	58:13, 58:15, 65:9,
	Markey [2] - 57:5,	78:11, 80:23, 87:18,	months [1] - 22:12	50:7, 51:2, 83:4, 93:24	65:10, 65:22, 65:23,
	62:24	87:23	morning [9] - 3:3,	-	73:25, 91:3, 93:21
	match [2] - 23:17,	methodologies [3] -	23:12, 80:25, 91:21,	necessary [1] - 36:9	new [11] - 21:25,
	85:16	11:6, 29:8, 85:17	92:6, 93:8, 95:9,	need [55] - 17:18,	28:11, 31:1, 32:14,
	material [2] - 23:23,	methodology [11] -	95:15, 95:20	21:24, 26:13, 27:11,	32:21, 50:15, 56:16,
	23:25	5:23, 5:24, 12:7	most [5] - 3:25, 36:1,	27:12, 30:19, 31:4,	62:4, 63:16, 71:10
	matter [6] - 2:2, 6:13,	19:8, 37:17, 45:19,	57:18, 63:1, 88:19	31:5, 33:20, 37:6,	newspaper [1] - 27:14
	23:15, 24:1, 82:16,	45:24, 46:2, 67:23	motion [2] - 96:11,	38:22, 39:3, 46:16,	next [15] - 7:22, 13:16,
	97:10	methods [9] - 26:10,	96:14	47:7, 53:16, 54:12,	13:23, 20:2, 25:7,
	MATTER [1] - 1:4	26:12, 26:23, 26:24,	mountain [1] - 95:12	54:13, 57:9, 57:10,	25:22, 32:19, 44:7,
	MCCOMSEY [1] - 97:5	42:11, 42:13, 42:19,	mouth [1] - 38:9	57:25, 58:2, 64:9,	71:14, 76:7, 86:5,
	McComsey [2] - 1:25,	42:23	move [10] - 7:11,	64:10, 64:15, 69:4,	88:6, 90:9, 90:18,
	97:18	Michael [1] - 1:21	13:23, 41:24, 77:3,	69:18, 71:17, 71:18,	92:1
	MDU [1] - 4:18	microphone [1] - 85:1	77:4, 84:14, 86:18,	71:19, 76:5, 77:20,	nice [1] - 74:23
	mean [17] - 6:3, 8:2,	middle [2] - 39:7, 86:1		79:15, 80:19, 80:23,	nobody [1] - 73:1
	10:14, 10:15, 19:22,	might [7] - 5:12, 6:7,	86:21, 95:4, 96:12 moved (2) - 32:6,	83:14, 83:22, 83:23,	nonasset [1] - 41:3
		32:17, 57:3, 73:19,	32:10	84:10, 84:11, 84:12,	noncontractual [1] -
	51:22, 54:4, 54:8, 61:5, 62:15, 70:5,	92:7, 92:17		85:8, 85:12, 85:13,	22:20
			moves [1] - 13:15	85:21, 86:2, 87:20,	nondiscriminatory [3]
	70:14, 70:22, 72:21,	miles [1] - 51:19	moving [4] - 7:7,	88:14, 91:25, 92:11,	- 36:24, 37:19, 56:9
	75:24, 79:8	million [4] - 9:9, 33:3,	11:18, 60:16, 71:10	95:25, 96:4	none [3] - 64:1, 72:22,
	meaning [2] - 77:16,	33:4, 85:7	MR [51] - 3:20, 23:9,	needed [4] - 34:23,	76:24
	90:13	millions [1] - 69:23	23:12, 33:9, 41:23,	57:8, 66:22, 66:23	nonetheless [2] -
	means [3] - 10:16,	mind [10] - 5:14, 9:16,	48:13, 48:16, 51:13,	needs [5] - 35:1,	19:4, 55:7
	43:2, 73:17	17:4, 17:5, 26:25,	58:21, 59:11, 59:23,	38:25, 46:23, 59:21,	
	meant [3] - 45:9,	27:4, 64:6, 72:14,	60:11, 61:11, 62:1,	92:5	nonprice [1] - 6:13
	46:20, 67:18	89:7, 93:10	62:5, 64:18, 64:21,	negotiate (11] - 22:24,	nonutility (1) - 45:7
	measure [2] - 17:2,	Minnesota [1] - 69:15	65:15, 65:25, 67:3	22:25, 31:12, 45:13,	Northwest [5] - 11:10,

12:1, 12:2, 12:4,	54:15, 59:5	obligated [1] - 78:6	one-step [2] - 12:13,	oversimplify [1] -
37:5	notice [3] - 3:20,	obligation [12] -	15:22	74:14
NORTHWESTERN [1]	56:13, 96:5	11:14, 22:6, 22:18,	ones (3) - 26:15,	overstate (1) - 17:5
- 1:5	nuclear [1] - 88:10	22:20, 31:22, 32:15,	26:24, 72:20	overstates [1] - 30:13
NorthWestern [107] -	number [19] - 5:19,	34:12, 34:15, 37:8,	Onida [1] - 97:13	overstating [1] - 11:12
1:23, 3:6, 3:8, 6:12,	6:7, 6:8, 8:3, 10:5,	52:4, 93:25, 94:1	online [1] - 28:13	overwhelmed [1] -
6:16, 8:19, 8:25,	19:19, 19:20, 78:21,	obligations [2] - 33:4,	open [4] - 37:16,	73:8
10:8, 11:15, 12:17,	78:24, 79:2, 79:17,	36:3	59:13, 69:15, 87:1	own [3] - 40:20, 57:24
12:18, 14:9, 14:24,	80:8, 80:16, 81:3,	oblige [1] - 74:22	opened (1) - 75:3	
				74:6
15:24, 16:1, 16:2,	81:13, 82:2, 87:8,	obliged [1] - 69:17	operates [1] - 53:17	owners [1] - 4:8
16:8, 16:14, 16:24,	89:12, 90:1	observation [1] -	operating [2] - 12:19,	
16:25, 17:9, 17:16,	number's [1] - 66:20	93:18	62:18	P
17:17, 17:18, 18:15,	numbered [1] - 65:21	observations [1] -	operation [1] - 35:25	·····
19:12, 20:17, 22:23,	numbers [10] - 7:13,	77:7	operational [2] - 65:9,	
24:5, 24:7, 24:8,	11:18, 79:22, 80:3,	observed [1] - 31:20	65:23	page [11] - 13:1, 17:8,
24:9, 24:22, 25:2,	80:10, 80:15, 85:8,	obtain [3] - 4:17, 21:6,	opinion [1] - 51:4	42:18, 61:9, 65:19,
25:7, 25:10, 25:16,	85:13, 85:17, 94:2	36:9	opinions [1] - 10:15	77:25, 82:3, 82:25,
26:5, 26:9, 27:7,	NWE's [1] - 49:11			85:15, 87:6, 95:1
27:8, 27:16, 28:16,		obtaining [2] - 8:9,	opportunities [1] -	pages [2] - 23:21, 95:2
28:20, 29:25, 31:14,	<b>^</b>	53:19	18:11	paid [5] - 14:24, 27:2,
	0	obvious [1] - 91:11	opportunity [3] -	27:5, 54:1, 66:7
31:18, 34:18, 36:5,		obviously [9] - 51:17,	35:20, 87:3, 90:10	
40:9, 40:11, 40:17,		62:6, 70:6, 75:16,	opposed [8] - 15:17,	paper [1] - 65:17
40:18, 40:22, 42:3,	o'clock [6] - 94:14,	87:11, 88:20, 92:13,	51:2, 51:21, 52:16,	paragraph [1] - 22:5
43:6, 43:7, 43:11,	94:22, 95:8, 95:14,	93:1, 96:1	63:18, 64:12, 74:19,	parameters [3] -
43:17, 43:19, 44:7,	95:17, 95:20	OF [6] - 1:2, 1:4, 2:1,	89:16	64:11, 83:2, 87:13
44:9, 45:18, 45:25,	Oak [92] - 1:21, 1:22,	97:1, 97:3		part [17] - 22:14,
46:4, 46:14, 46:16,	3:5, 3:9, 9:25, 11:13,		opposite [1] - 68:6	29:21, 33:10, 42:16,
47:4, 47:6, 48:1,	12:10, 12:13, 12:20,	off-the-shelf [2] -	option [1] - 22:13	49:13, 49:22, 62:9,
48:16, 48:19, 48:24,	12:22, 15:24, 16:7,	9:17, 54:22	options [2] - 79:12,	62:10, 65:16, 67:9,
49:7, 49:11, 52:25	16:14, 16:23, 16:24,	offer [10] - 20:10,	90:18	73:18, 76:5, 78:24,
	18:14, 18:18, 20:9,	28:16, 35:17, 46:10,	oral [1] - 41:8	
53:17, 53:18, 54:19,	20:10, 20:18, 24:6,	67:10, 67:12, 67:13,	orange [1] - 13:9	79:22, 80:19, 81:9,
55:20, 63:2, 65:8,		87:4, 89:14, 94:23	order [7] - 18:10, 22:4,	88:19
65:20, 66:25, 67:6,	25:10, 25:21, 28:11,	offered [5] - 27:7,	23:3, 43:22, 81:13,	participant [1] - 33:12
67:20, 68:4, 68:10,	28:21, 28:25, 29:16,	27:16, 39:9, 45:17,	95:10, 96:10	particular [14] - 5:7,
68:12, 69:2, 74:11,	30:6, 30:7, 30:9,	46:5		9:13, 10:16, 13:19,
74:15, 75:6, 75:10,	34:18, 35:3, 35:13,	offset [1] - 79:25	Order [2] - 21:23,	14:6, 25:3, 39:11,
76:8, 76:13, 78:1,	35:16, 35:23, 36:4,		26:17	42:25, 43:4, 45:4,
78:3, 78:5, 79:23,	36:6, 37:6, 37:10,	often [2] - 11:22,	Ordered [1] - 81:2	55:7, 57:17, 81:13,
80:24, 80:25, 81:4,	37:22, 39:9, 39:12,	74:12	ordered [2] - 22:23,	87:23
89:24, 93:19, 94:24	40:9, 40:12, 40:14,	old [1] - 71:7	81:2	
	40:25, 41:6, 42:1,	Oldsmobile [1] - 71:8	orders [2] - 10:7, 81:5	particularly [3] - 15:9,
NorthWestern's [36] -	42:7, 43:14, 44:1,	Olson [2] - 93:3, 93:4	Oregon [1] - 63:9	16:19, 77:21
10:6, 16:3, 16:5,		OLSON [1] - 93:6	organization [1] - 9:7	parties [15] - 3:2, 5:17
17:23, 19:6, 26:6,	46:5, 46:9, 47:9,	once [2] - 47:22, 55:14	-	34:22, 34:25, 38:13,
26:8, 29:3, 35:21,	47:16, 47:18, 47:21,		organizations [1] -	44:18, 45:3, 78:17,
36:7, 37:15, 37:20,	47:24, 48:2, 49:14,	one [50] - 7:16, 9:3,	63:17	79:1, 82:4, 86:12,
40:2, 40:5, 40:15,	50:4, 53:21, 54:8,	12:13, 14:13, 15:22,	others' [1] - 74:4	89:14, 91:19, 92:8,
41:1, 41:25, 42:1,	60:4, 65:8, 65:22,	17:2, 17:20, 20:15,	Otter [2] - 6:23, 56:12	92:21
43:25, 44:4, 44:16,	66:2, 66:4, 66:5,	21:6, 21:15, 26:10,	outages [1] - 17:13	parties' [1] - 49:22
45:13, 45:18, 46:2,	66:6, 66:7, 66:24,	26:13, 26:23, 26:25,	outcome [1] - 5:11	
	67:1, 67:9, 67:15,	29:11, 29:24, 31:19,	outer[1] - 14:21	parts [2] - 88:23,
46:7, 48:21, 49:3,	69:1, 72:7, 72:21,	32:17, 32:19, 32:24,		88:24
49:17, 51:1, 52:11,		34:9, 36:17, 39:10,	outfits [1] - 72:21	party [2] - 33:12,
58:3, 65:13, 66:19,	75:25, 76:12, 76:15,	42:11, 42:22, 43:4,	outliers [1] - 6:8	78:20
79:24, 80:4, 80:6	76:19, 78:6, 79:4,		output [4] - 12:10,	pass [1] - 79:19
lotary [2] - 97:7,	81:8, 84:2, 86:23,	43:14, 52:10, 57:21,	22:14, 35:18, 78:6	passage [1] - 17:25
97:18	90:14, 92:4, 92:14,	58:20, 62:15, 63:19,	overestimation [2] -	passed [2] - 50:13,
note [1] - 56:11	93:14	64:14, 64:21, 66:1,	26:18, 26:21	
notes [1] - 34:9	OAK [1] - 1:4	74:18, 76:7, 79:13,	overestimations [1] -	57:5
	obfuscate [1] - 24:1	80:3, 81:6, 81:10,	22:2	Patrick [1] - 1:17
nothing [9] - 22:8,		82:21, 86:21, 87:8,	[	pay [12] - 24:5, 24:24,
22:9, 24:24, 25:3,	object [1] - 39:17	87:12, 88:2, 89:9,	overflow [1] - 69:16	25:10, 28:16, 28:23,
25:15, 26:22, 39:6,	objected [1] - 74:5	89:21, 93:18	overlap [1] - 33:13	29:2, 29:14, 31:16,
	objective [1] - 54:23	00.21,00.10	1	1

40:22, 69:3, 72:9,	phrase [1] - 22:4	85:10	7:5	process [9] - 15:25,
91:2	picture [1] - 4:3	possible [6] - 7:7, 7:8,	presumption [1] -	32:1, 45:12, 46:14,
payers (5) - 18:19,	pieces [1] - 61:2	35:14, 39:4, 52:9,	61:13	49:9, 49:23, 49:24,
38:4, 40:23, 55:15,	Pierre [1] - 2:4	57:19		
62:12			pretty [3] - 19:22,	85:5, 94:20
	piace [7] - 7:20, 31:14,	possibly [1] - 87:20	92:16, 94:10	producer [1] - 45:8
paying [2] - 38:16,	32:20, 34:2, 35:13,	posthearing (8) -	prevent [4] - 30:17,	producer's [1] - 45:20
38:17	59:12, 82:19	23:21, 33:16, 33:21,	45.6, 45:10, 46:20	producers [1] - 45:17
payment [3] - 91:5,	places [1] - 65:13	37:10, 49:12, 65:14,	previously [1] - 15:20	produces [1] - 20:14
91:8, 91:9	plain (1) - 21:1	65:20, 82:25	price [30] - 11:20,	producing [4] - 19:24,
payments (1) - 80:19	plainly [1] - 44:4	potential [3] - 5:9,	14:8, 14:23, 16:6,	54:19, 54:21, 55:21
<b>pays</b> [2] - 24:24, 40:11	plan [2] - 3:2, 95:24	36:12, 51:25	27:6, 27:18, 28:7,	product [1] - 9:17
<b>peak</b> [6] - 30:14	planning [5] - 11:10,	potentially [3] - 7:3,	30:6, 32:14, 39:15,	production [16] -
48:22, 70:16, 70:18,	48:1, 50:3, 63:4,	18:14, 21:13	40:1, 40:22, 40:24,	20:13, 35:15, 35:16,
73:5	72:22	POWER [1] - 1:5	41:5, 41:14, 43:25,	35:20, 36:2, 36:13,
peaker [1] - 42:8	Planning (1) - 12:2	Power [4] - 10:5, 12:1,	44:2, 46:5, 49:19,	36:16, 36:20, 37:9,
Pedersen [1] - 1:17	plans [1] - 48:1	12:2, 15:21	49:20, 50:11, 50:19,	51:24, 52:17, 52:23,
people [7] - 5:22,	Plant [1] - 6:24	power [38] - 11:10,	50:21, 50:22, 56:15,	59:8, 72:23, 72:25,
9:12, 10:12, 28:2,	plant [4] - 12:10,	12:4, 15:9, 15:10,	67:1, 85:9, 85:18,	79:4
63:16, 74:23, 83:6	17:13, 19:10, 63:11	17:1, 17:23, 18:2,	88:17	Professional [2] -
people's [1] - 7:17	piant's [1] - 50:11	18:9, 18:17, 19:13,	Price [4] - 11:2, 14:14,	97:6, 97:19
Pepsi [1] - 56:4		24:23, 27:11, 27:13,	14:20, 19:15	project [16] - 29:16,
per [8] - 14:8, 28:13,	plants [10] - 7:13,	28:21, 28:24, 31:2,	prices [15] - 11:23,	37:24, 47:8, 47:14,
•••	12:20, 15:10, 15:14,	31:24, 32:8, 36:1,	14:5, 14:11, 14:17,	
32:8, 35:18, 46:17,	16:4, 16:20, 28:12,		14:19, 14:22, 15:23,	47:17, 47:19, 52:13,
55:4, 80:20, 80:21	40:20, 61:21, 63:17	37:9, 38:11, 45:7,		55:7, 55:11, 66:17,
peradventure [1] -	platform [1] - 81:21	45:14, 45:17, 45:20,	16:16, 16:19, 25:21,	72:7, 72:16, 72:17,
55:8	play [2] - 77:9, 91:24	47:1, 53:23, 59:8,	26:7, 32:6, 49:4,	74:12, 94:10
percent [11] - 17:8,	plus [1] - 49:18	67:20, 67:21, 67:22,	53:9	projecting [1] - 27:25
17:14, 28:1, 47:20,	point [34] - 3:17, 6:11,	70:11, 74:16, 74:17,	pricing [2] - 14:11	projects [7] - 5:10,
49:18, 52:13, 55:4,	11:7, 11:22, 13:7,	80:14	36:10	9:15, 23:2, 29:16,
57:23, 66:19, 80:8,	13:12, 13:19, 13:22,	Power's [2] - 70:15	primarily [4] - 7:16,	52:6, 56:8, 63:20
80:21	13:24, 14:2, 19:1,	PowerPoint [1] - 3:20	8:14, 42:2, 45:15	promise [1] - 74:9
percentage (4) -	19:7, 20:25, 23:5,	PPA [1] - 46:15	primary [2] - 35:7	promote [1] - 36:1
17:12, 17:14, 17:15,	23:7, 31:19, 46:6,	practical [1] - 94:3	principle [1] - 32:19	promoting [1] - 37:8
80:14	47:13, 51:2, 53:24,	practice [1] - 41:17	pro (1) - 52:1	prong [1] - 37:12
percentages [1] - 80:1	55:18, 60:18, 64:22,	precedent [1] - 4:22	problem [4] - 31:19,	proper [12] - 35:10,
performance [1] -	76:7, 77:6, 79:13,	precedential [1] - 5:2	32:21, 32:22, 37:14	42:6, 43:1, 48:6,
55:15	81:12, 81:17, 84:1,	precise [1] - 45:1	problematic [1] -	78:2, 78:13, 78:19,
performing [1] - 73:22	86:11, 86:16, 90:22,	prefer [3] - 12:17,	12:23	82:6, 87:10, 87:12,
period [10] - 11:19,	91:8, 94:8	64:23, 64:24	problems [4] - 19:5,	87:17, 88:25
12:11, 14:7, 28:8,	4 '	prefiled [3] - 12:15	27:18, 70:23	,
35:19, 48:22, 51:20,	pointed [5] - 19:15,	13:3, 42:16	procedure [2] - 12:13,	properly [3] - 36:11,
	43:13, 46:16, 87:6,			36:14, 40:1
62:21, 71:21, 88:15	88:18	prepare [3] - 9:1, 9:3,	51:1	property [1] - 4:8
eriods [1] - 14:12	points [3] - 42:9, 83:8,	66:9	proceed [2] - 3:4, 3:18	proposal [8] - 52:18,
ermit [1] - 54:4	83:17	prepared [8] - 9:18,	proceeding [18] -	82:13, 83:13, 83:16,
ermits [2] - 22:5,	policy [5] - 4:14, 25:6,	15:4, 15:21, 15:22,	4:13, 4:18, 4:21,	84:3, 87:25, 89:10,
52:5	25:7, 45:2, 56:6	41:19, 42:14, 54:22,	5:11, 6:12, 6:22,	89:23
ermitted [2] - 52:20,	Policy [1] - 56:7	93:15	8:19, 9:11, 9:19,	proposais [1] - 83:17
53:23	pollution [3] - 8:14,	preparing [3] - 27:24,	10:2, 11:4, 16:12,	propose [2] - 65:2,
erson [5] - 23:17,	56:16, 62:17	59:3, 79:21	34:13, 37:15, 54:22,	79:17
92:9, 95:16, 95:20,	portfolio [4] - 6:15,	prerogative [1] - 77:14	56:22, 79:14, 88:19	proposed [3] - 29:25,
96:1	8:21, 63:1, 74:19	present [2] - 30:17,	proceedings [16] -	35:25, 79:8
ersonally [1] - 51:6	portion (1) - 54:1	45:8	34:1, 35:2, 35:3,	prospect [1] - 6:17
erspective [8] - 9:2,	Portland [1] - 63:10	presentation [1] -	35:6, 35:13, 39:3,	prospectively [1] -
12:9, 13:8, 13:10	position [12] - 16:12,	3:21	48:9, 51:22, 68:8,	18:18
14:25, 67:22, 81:10,		presentations [1] -	81:16, 82:24, 86:22,	protect [1] - 37:6
91:17	18:5, 35:14, 44:11,	3:13	89:4, 89:8, 97:9,	protected [2] - 9:10,
	52:3, 53:2, 73:12,		97:12	
Perspective [4] -	77:8, 81:17, 82:7,	presented [3] - 42:13,	Proceedings [1] - 1:8	9:11
14:15, 15:19, 19:25,	82:10	48:4, 87:4	PROCEEDINGS [1] -	prove [1] - 31:15
		□ DTPSHDUV[1] = 6'20		proves [1] - 36:6
66:8 hone [1] - 54:9	positions [1] - 56:23 possibility [2] - 71:22,	presently [1] - 6:20 president [2] - 6:18,	2:1	provide [8] - 9:15,

22:7, 34:23, 34:25, 40:12, 41:2, 43:12, 74:16	56:16, 75:25, 82:13, 82:17, 85:3, 85:25, 86:10, 90:25	37:7, 38:13, 70:17, 72:18 rather [3] - 63:11,	receive [4] - 41:1, 47:15, 47:21, 47:24 received [2] - 47:19,	regarding [3] - 64:11, 81:25, 87:5 regardless [1] - 12:20
provided [13] - 34:14,		89:12, 94:6	83:13	regards (4) - 21:24.
34:18, 38:13, 43:11,	Q	reach [2] - 85:4, 87:15	recent (1) - 56:12	73:13, 82:11, 89:25
47:12, 48:6, 48:17,		reached [1] - 4:19	recently [2] - 17:20,	region [2] - 61:20
48:20, 78:17, 82:4,	05 00 40 00 47	reaching [1] - 87:21	72:19	63:5
82:9, 83:9, 93:14	QF [23] - 22:13, 22:17,	read [6] - 3:24, 11:9,	recess [6] - 41:21	Registered [2] - 97:5,
provides [1] - 75:23	22:19, 24:15, 25:17,	23:23, 75:16, 81:23,	59:17, 59:18, 59:19,	97:19
proxy [1] - 67:24	27:1, 27:14, 27:15,	95:2	84:15, 84:17	regulations [8] - 6:25,
prudency [1] - 50:9	31:2, 31:11, 31:12,	reading [2] - 3:22,	reciprocal [1] - 93:19	7:14, 15:8, 22:11,
prudent (6) - 30:22,	31:22, 32:12, 32:16,	68:22	recognize [1] - 30:16	22:13, 57:1, 62:4,
30:24, 31:3, 31:15,	37:4, 37:22, 38:5,	real [22] - 5:16, 16:9,	recognized [2] -	62:22
76:15	50:22, 73:3, 73:4,	17:22, 20:23, 24:1,	55:24, 57:21	regulatory [2] - 22:17,
prudently [1] - 31:10	88:4 OF a trial 27:15 - 28:14	26:16, 27:19, 28:1,	recognizing (1) - 39:1	25:11
PTC [1] - 79:10	QFs [5] - 27:5, 28:11,	28:3, 29:3, 29:4,	recollection [1] -	regurgitate [1] - 75:24
Public [3] - 21:2, 97:7,	29:19, 56:1, 69:15	31:22, 31:25, 32:15,	70:17	reiterate [2] - 82:1,
97:18	qualifications [1] -	32:21, 44:2, 53:18,	recommend [1] - 48:8	95:4
PUBLIC [2] - 1:1, 1:10	33:22 gualifying (c) 4:16	65:9, 65:22, 71:6,	recommendation [7] -	reiterates [1] - 48:24
public [3] - 33:1,	qualifying [10] - 4:16,	77:16, 82:14	10:18, 35:12, 39:3,	related [1] - 95:6
36:23, 37:5	21:4, 21:5, 21:8,	realistic [3] - 7:2,	78:25, 79:13, 81:16,	relation [1] - 72:8
Puget [1] - 10:5	22:5, 30:18, 36:24,	20:1, 25:24	86:21	relationship [3] -
PURCHASE [1] - 1:5	38:6, 38:20, 57:16	reality [5] - 32:7, 57:5,	recommendations [3]	16:15, 16:18, 28:6
purchase [25] - 17:24,	questions [13] - 3:10, 3:12, 3:16, 3:18,	67:4, 79:4, 79:9	- 65:6, 81:22, 82:22	relatively [3] - 51:20,
18:17, 22:19, 24:6,	54:11, 59:14, 59:25,	realize [3] - 47:10,	recommended [1] -	71:21, 72:12
24:15, 24:17, 24:23,		49:1, 49:3	82:22	relevant [2] - 17:24,
24:25, 30:18, 31:2,	63:25, 64:4, 76:23,	realized [1] - 36:15	recommends [3] -	55:6
38:11, 38:22, 45:7,	77:12, 77:20, 77:23	realizes [1] - 34:2	45:2, 50:25, 78:1	reliable [1] - 42:21
45:14, 47:1, 69:18,	quibbled [2] - 80:11, 80:12	really [32] - 5:16, 18:3,	reconvene [2] - 91:21,	relied [2] - 43:16,
74:15, 74:16, 78:6,		19:10, 19:18, 19:21,	95:24	43:18
80:9, 80:14, 81:1,	quickiy [7] - 13:23,	24:18, 32:6, 32:24,	record [14] - 3:22,	rely [3] - 5:22, 29:11,
81:5	17:22, 20:2, 20:23,	51:18, 53:6, 54:7,	11:3, 11:9, 22:24,	39:7
purchased (1) - 80:1	38:2, 41:4, 75:3	54:15, 55:2, 55:3,	41:22, 57:11, 66:16,	relying [1] - 74:3
purchases [3] - 17:11,	quite [2] - 14:9, 29:18	61:11, 61:25, 71:8,	72:11, 75:2, 75:3,	remainder [1] - 3:3
18:9, 30:13	quoted [1] - 26:17 quoting [1] - 65:13	72:14, 72:16, 77:22,	79:22, 82:19, 89:14,	remaining [1] - 41:5
purchasing [5] -	quoung [1] - 05.15	79:12, 79:23, 81:6,	96:4	remember [3] - 4:10,
19:13, 25:10, 25:16,	<b>D</b>	87:16, 88:12, 88:13,	records [1] - 56:13	26:13, 53:8
27:15, 38:5	R	89:5, 89:22, 94:1,	recourse [1] - 55:16	remembering [1] -
pure [2] - 26:8, 43:1		95:15	recover [4] - 24:22,	83:18
PURPA [28] - 22:18,	raised [2] - 15:1,	Realtime [2] ~ 97:6,	28:22, 29:1, 30:24	remind [1] - 4:11
22:22, 33:4, 34:12,	90:21	97:19	recoverable [1] -	renewable [3] - 71:10,
34:16, 36:3, 36:16,	raises (1) - 50:24	reason [9] - 9:10,	41:16	74:19, 75:7
36:17, 36:18, 36:22,	range [7] - 6:2, 6:10,	10:17, 18:13, 18:15,	recs [1] - 85:19	renewables (1) -
37:8, 37:23, 38:1,	11:25, 14:21, 20:3,	47:24, 61:13, 61:15,	red [1] - 13:8	61:23
39:18, 39:24, 43:22,	20:20, 21:18	87:25, 88:2	reelected [2] - 6:18,	renewed [1] - 72:25
44:24, 45:5, 45:9,	rarely [1] - 38:14	reasonable [13] -	7:5	repeat [2] - 38:2,
45:14, 46:20, 52:4,	rate [40] - 17:23, 18:5,	16:13, 21:22, 36:23,	reference [1] - 15:12	47:23
55:24, 57:18, 59:7,	18:19, 18:24, 25:8,	37:2, 37:4, 37:12,	referred [1] - 39:16	repeating [1] - 33:18
59:9, 71:9, 79:6	28:6, 28:14, 31:16,	55:10, 60:6, 60:9,	referring [5] - 67:11,	replace [1] - 56:18
purpose [3] - 30:16,	36:6, 37:24, 38:4,	61:4, 73:20, 85:23,	69:10, 70:12, 82:2,	replaced [3] - 16:21,
89:7, 89:10	39:24, 40:11, 40:23,	94:12	87:7	61:21, 71:13
pursuant [3] - 18:16,	43:20, 44:14, 45:17,	reasonabieness [3] -	reflect [2] - 40:15,	Reply [1] - 10:6
22:21, 54:20	45:20, 46:6, 46:7,	6:3, 6:10, 21:19	85:14	report [2] - 27:22, 61:8
pursue [1] - 81:15	46:17, 46:25, 48:7,	reasons [4] - 25:5,	refusal [4] - 45:13,	Reported [1] - 1:25
, put [7] - 65:1, 65:5,	49:11, 50:2, 50:7,	74:18, 88:1, 88:2	45:15, 45:16, 49:11	reporter [2] - 96:4,
71:3, 78:16, 79:17,	50:15, 50:18, 50:20,	reassert [1] - 47:15	refuse (1) - 55:25	97:9
90:22, 95:9	53:25, 54:13, 54:15,	reasserts [1] - 44:10	refuses [1] - 22:16	
puts [3] - 9:7, 42:5,	55:2, 55:9, 55:15,	rebuttal [4] - 3:9	refusing [2] - 30:18,	REPORTER [1] - 77:1
55:9	55:21, 58:18, 62:12	12:15, 48:12	45:6	Reporter [4] - 97:6,
			-0.0	97:19, 97:19
putting (9) - 18:13,	rates [6] - 36:22, 37:3,	recap [2] - 33:17, 39:8	REFUSING [1] - 1:5	represent [2] - 35:20,

)

.

80:2	retirement [3] - 15:14,	36:16	shall [4] - 36:25, 77:3,	six [1] - 11:19
reputable (1) - 58:5	61:25, 62:3	second [7] - 5:23, 7:4,	78:8, 78:10	six-year [1] - 11:19
request [1] - 82:22	retiring [4] - 7:13,	10:3, 34:9, 41:21,	shaped [1] - 27:3	size [3] - 4:16, 27:14,
require [4] - 27:5,	56:15, 61:21, 63:4	43:25, 52:7	sheets [1] - 79:19	27:15
37:23, 43:3, 90:4	retrofit [4] - 6:24,	secondary [1] - 36:13	shelf [2] - 9:17, 54:22	slant [1] - 7:24
required [8] - 41:15,	62:14, 63:11, 71:24	secondly [1] - 78:5	shift[1] - 40:21	slide [6] - 13:1, 13:23,
66:23, 69:2, 69:3,	retrofitting [1] - 56:16	section [1] - 78:1	short [20] - 11:23,	14:6, 14:25, 20:2,
71:17, 73:6, 73:16,	return [10] - 9:14,	sector [1] - 15:9	12:22, 14:11, 16:1,	60:15
90:3	21:10, 21:25, 35:1,	see [21] - 5:11, 13:5,	16:3, 18:7, 19:9,	slides [2] - 20:24,
requirement [3] -	50:17, 50:18, 50:19,	13:9, 13:10, 13:15,	23:1, 29:4, 40:10,	52:10
18:24, 39:24, 74:20	54:2, 55:10, 55:12	13:20, 14:7, 14:9,	43:17, 45:17, 45:25,	slightly [1] - 82:1
requirements [2] -	reveal [1] - 67:1	14:20, 14:21, 15:6,	51:20, 54:13, 59:19,	slow [1] - 75:13
36:17, 40:3	revenue [2] - 18:5,	19:25, 20:6, 24:20,	62:21, 71:21, 84:17,	smali [8] - 36:1, 37:9,
requires [2] - 26:22,	18:24	77:9, 80:2, 80:15,	92:16	45:17, 45:20, 56:8,
59:6	reviewing [2] - 41:14	83:21, 89:18, 90:11,	short-term [5] - 11:23,	59:8, 72:8, 72:12
requiring [1] - 62:22	45:2	92:11	23:1, 43:17, 45:17,	smart [1] - 91:3
research [1] - 83:23	rich [1] - 12:25	seeing [2] - 62:6,	54:13	Smith [3] - 1:14, 95:1,
researching [1] -	Rich m - 12:3	76:24	shorthand [2] - 97:9	96:2
44:19	ridiculous [1] - 21:20	seek [2] - 22:17, 39:1	shortly [2] - 33:17,	SMITH [3] - 93:17,
reserved [1] - 91:20	rightly [1] - 76:8	seem [1] - 74:22	41:18	95:11, 96:3
reserves [2] - 60:20,	risk [7] - 7:23, 40:23,	sees [1] - 47:23	shot [1] - 73:17	solicitation [4] - 75:7
60:25	51:8, 55:14, 57:4,	select [1] - 43:1	show [4] - 30:23, 31:5,	75:11, 76:6, 76:17
resolve [2] - 35:4,	62:19, 71:15	selected [1] - 37:17	31:9, 45:11	solicitations [1] - 31:7
82:15	risks [3] - 7:2, 29:22	selecting [1] - 42:6	showed [4] - 14:4,	sometimes [2] - 31:8,
resolved [2] - 35:5,	<b>Risiov</b> [1] - 1:16	sell (8) - 9:12, 22:14,	52:9, 60:15	69:5
48:5	road [1] - 50:10	31:23, 66:17, 66:21,	showing [2] - 62:11,	somewhere [1] - 73:5
resource [13] - 30:20,	Rolayne [1] - 1:13	88:4, 88:8	71:20	sorry [4] - 40:18, 41:8,
30:21, 50:6, 50:8,	role [1] - 33:12	selling [1] - 53:19	shown [1] - 49:12	45:20, 67:17
50:9, 50:14, 55:6,	room [1] - 74:12	Semmier [1] - 1:15	shows [7] - 11:3, 13:1,	sort [8] - 5:12, 20:19,
56:2, 62:13, 66:19,	Room [1] - 2:3	send [1] - 96:4	13:3, 14:16, 20:19,	26:2, 27:6, 31:2,
70:24, 71:20, 72:4	Ross [1] - 1:17	sending [1] - 46:14	26:20, 82:14	50:9, 52:2, 71:2
resources [6] - 4:7	rough [1] - 56:21	sense [3] - 21:5,	shut [1] - 63:10	sorts [1] - 88:12
31:8, 41:17, 57:25,	rounds's [1] - 11:12	21:16, 87:14	shutting [1] - 71:2	Sound [1] - 10:5
63:14, 75:7	RPR [1] - 1:25	sent [10] - 11:13,	side [2] - 80:13, 81:6	sound [1] - 75:23
respect [13] - 6:23,	RPS [1] - 7:6	54:10, 58:10, 66:10	sides [4] - 77:15,	source [2] - 24:17,
6:25, 10:20, 10:23,	rule [2] - 38:25, 64:23	66:11, 66:14, 67:6,	78:23, 92:2, 93:15	38:4
13:14, 26:12, 39:24,		67:14, 67:15, 67:19	sides' [1] - 85:17	SOUTH [2] - 1:2, 97:1
49:9, 52:6, 53:2,	rules [3] - 15:10,	separate [3] - 24:2,	sight [1] - 4:4	South [25] - 2:2, 2:4,
69:7, 90:24, 91:5	64:22, 64:25	37:22, 69:9	sign [1] - 22:16	4:15, 4:18, 7:11,
respected [1] - 9:6	Run [1] - 32:17	separately [1] - 61:15	signed [8] - 32:9,	
espectfully [1] - 23:6	run (7) - 9:20, 20:23,	September [3] - 46:22,	47:5, 58:11, 66:5,	14:24, 25:1, 25:5, 29:5, 29:13, 35:22,
espond [1] - 83:11	22:2, 29:4, 85:21,	65:10, 65:23	66:11, 66:14, 67:15	
esponse [10] - 17:7,	86:2, 94:21	serious [1] - 73:16	significance [1] -	36:2, 51:9, 53:4, 57:18, 57:22, 61:10,
37:10, 53:11, 53:22,	running [1] - 20:24		60:23	62:3, 63:4, 63:5,
54:12, 65:14, 65:20,	Running [1] - 32:19	served [2] - 17:9,	significant [4] - 4:6,	74:20, 78:4, 93:2,
68:17, 91:6	rush [2] - 73:3, 73:4	57:24	11:24, 41:15, 79:7	97:7, 97:13
esponsibility [1] -	<b>Ryan</b> [2] - 1:15, 33:10	service [2] - 21:11,	significantly [1] - 75:9	1
49:21	<u> </u>	40:3		SOYE (5) - 33:9,
est (1) - 31:17	S	session [2] ~ 59:20,	similar [2] - 13:21,	41:23, 64:18, 64:21, 73:21
estate [1] - 65:15		- 84:25	55:4 similarly y 20:40	
	sales [4] - 18:16, 25:2,	set [4] - 21:12, 26:6,	similarly [1] - 30:10	Soye [5] - 1:15, 33:10,
estrictions [1] - 38:1	40:16, 40:17	27:1, 91:20	simple [9] - 12:8,	51:23, 73:10, 79:17
esult [6] - 17:16,	satisfactorily [1] -	setting [5] - 4:14,	12:13, 19:21, 23:17,	span [1] - 14:5
43:17, 75:8, 75:10,		4:22, 38:11, 39:24,	24:11, 26:9, 37:11,	speaking [2] - 81:10,
78:18, 82:5	36:19	45:1	84:3, 95:3	92:4
esulting [1] - 47:1	saw [1] - 68:15	several [5] - 7:15,	simply [10] - 24:4,	specific [6] - 43:22,
esults [2] ~ 6:2, 6:8	scary [1] - 13:17	15:7, 16:5, 41:17,	34:11, 39:20, 43:23,	65:4, 69:8, 79:2,
etained [1] - 66:10	scenarios [1] - 38:18	75:16	45:6, 47:15, 47:23,	79:14, 83:5
etire [1] - 63:9	schedule [2] - 82:23,	shake [1] - 80:15	69:23, 81:24, 83:1	specifically [6] -
etired [3] - 16:21,	91:21	shale [6] - 7:25, 8:1,	situation [3] - 45:9,	42:18, 43:19, 45:5,
62:3, 75:21	scope [2] - 35:10,	8:5, 8:7, 41:16, 60:8	70:6, 71:15	61:14, 63:3, 87:17

specifics [1] - 74:3 specified [1] - 22:7 speck [1] - 94:4 speculative (1) - 44:10 spend [1] - 9:25 spent [3] - 44:18, 66:6, 69:24 Spion [3] - 6:12, 8:18, 20.7 sponsor [1] - 93:2 spot [12] - 8:1, 14:7, 14:10, 14:16, 14:18, 16:15, 16:16, 16:18, 16:24, 19:13, 40:11 spots [2] - 8:5, 8:6 spreadsheets [1] -67:5 SS [1] - 97:2 STAFF (1) - 1:13 staff [1] - 21:21 Staff [81] - 3:7, 5:7, 12:17, 16:11, 18:15, 23:13, 33:8, 33:10, 33:15, 34:1, 34:2, 34:14, 34:17, 34:21, 34:24, 35:4, 35:6, 35:12, 36:9, 36:13, 36:19, 37:24, 39:6, 39:8, 39:10, 39:14, 39:20, 40:4, 41:4, 41:11, 41:13, 41:24, 42:1, 42:5, 42:24, 43:5, 43:7, 43:18, 44:1, 44:10, 44:20, 44:25, 45:11, 46:1, 46:6, 46:9, 46:19, 47:5, 47:13, 47:15, 47:23, 48:3, 48:16, 48:19, 48:24, 49:9, 50:2, 50:24, 51:14, 51:15, 60:18, 64:7, 64:8, 64:16, 64:18, 64:21, 73:11, 73:15, 73:18, 78:1, 78:5, 78:10, 78:13, 78:16, 79:6, 82:9, 82:22, 83:8, 93:20, 94:24 Staff's [22] - 33:12, 37:20, 39:2, 39:23, 42:16, 52:3, 53:2, 73:12, 76:19, 77:21, 77:25, 78:25, 79:13, 81:15, 81:22, 82:3, 82:7, 82:21, 82:25, 83:16, 86:21, 87:6 stage [1] - 33:21 stakes [1] - 33:5 stamp [1] - 47:19 stance (1) - 95:5 stand [1] - 66:1

standard [3] - 38:3, 74:19, 95:12 standpoint [2] - 5:13, 94:12 start [5] - 33:11, 52:20, 60:1, 60:3, 73:23 started [1] - 80:7 starting (5) - 14:3, 19:14, 20:13, 86:11, 88:18 STATE [2] - 1:2, 97:1 state [9] - 10:17, 22:17, 22:23, 26:14, 26:23, 44:23, 65:21, 69:16.81:24 State [5] - 2:2, 4:14, 44:23, 59:6, 97:7 state's [1] - 22:21 statement [3] - 65:12, 82:2, 82:3 statements [2] - 68:7, 81.25 states [11] - 26:11, 26:15, 26:25, 27:5, 33:2, 36:22, 42:20, 44:19, 44:20, 61:9, 70:6 States [1] - 7:14 statutory [1] - 28:18 stay [1] - 28:8 staying [1] - 28:14 Steffensen [1] - 1:17 step [3] - 12:13, 15:22, 15:25 still [6] - 22:20, 56:6, 56:9, 76:9, 91:14, 95:22 Stone [4] - 6:24, 56:16, 62:6, 71:24 stop [5] - 23:7, 53:24, 59:12, 91:8, 91:9 straight [3] - 19:20, 30:11, 30:12 straightforward [1] -92:12 stressed [1] - 21:24 strictly [1] - 42:22 strive [1] - 39:1 struggle [2] - 87:25, 89:1 struggled [1] - 70:13 stuck [1] - 55:16 studies [2] - 59:2, 66:6 study [1] - 90:10 stuff [3] - 18:1, 54:19, 66:12 sub [1] - 25:19 subject [2] - 67:7,

75:5 submit [3] - 10:10, 52:14, 55:5 subsequent [1] -60:20 substantial [9] - 6:17, 7:4, 7:13, 21:3, 49:13, 49:17, 49:21, 71:12, 72:2 substantially [6] -20:10, 20:16, 21:10, 21:11, 76:11, 91:2 substituted [1] - 24:15 suddenly [1] - 32:10 sufficient [3] - 34:19, 40:2, 82:8 sufficiently [1] - 33:16 suggest [5] - 28:10, 29:15, 46:21, 47:7, 72:5 suggested [6] - 10:8, 21:22, 41:11, 42:7, 44:9.64:21 suggestion [1] - 47:11 suggests [1] - 35:19 suitable [2] - 78:18, 82:4 SULLY [1] - 97:3 summarize [2] - 19:5, 77:23 supply [1] - 7:20 suppose [2] - 52:8, 93:18 supposed [7] - 18:3, 18:4, 54:9, 54:20, 54:23, 59:7 surprise [1] - 95:16 surprising [1] - 14:19 surrogate [1] - 67:24 suspect [1] - 9:23 swamped [1] - 73:7 sweet [3] - 8:1, 8:5, 8:6 switch [1] - 62:12 switching [2] - 7:20, 71:25 sympathetic [2] -79:3, 79:11 system [8] - 25:2, 29:25, 53:3, 53:4, 70:15, 73:4, 73:7, 78:4 systems [1] - 34:5 Т table [2] - 81:7, 84:21 Tail [2] - 6:23, 56:12 talents [1] - 73:11

talks [3] - 42:19, 61:8, 80:5 tariff [3] - 41:2, 45:18, 54:3 tariffed [1] - 31:16 task [2] - 29:9, 79:1 tax [13] - 35:15, 35:16, 35:20, 36:13, 36:16, 36:20, 51:26, 52:17, 52:23, 57:1, 72:23, 72:25, 79:4 team [2] - 9:4, 86:2 technical [1] - 51:18 technically [1] - 41:16 technology [2] - 3:25, 21:25 teeth [1] - 12:4 telephone [1] - 95:25 temporarily [1] - 91:20 tends [1] - 23:25 tentative [1] - 95:24 term [20] - 11:23, 11:24, 22:7, 22:10, 23:1, 36:8, 37:2, 38:11, 38:12, 38:21, 39:4, 40:23, 43:17, 45:17, 45:25, 54:13, 58:1, 73:13, 73:24, 78:14 terms [9] - 4:14, 30:19, 58:13, 58:16, 58:17, 65:4, 71:2, 72:4, 74:2 test [1] - 31:21 tested [1] - 5:25 testified (5) - 6:4. 11:4, 11:17, 57:15, 57:16 testimony [18] - 3:22, 12:15, 13:3, 17:6, 17:7, 26:19, 30:12, 42:11, 42:17, 61:17, 68:18, 76:19, 76:20, 78:23, 80:4, 82:8, 88:24, 92:23 THE [6] - 1:1, 1:2, 1:4, 1:10, 77:1 theory [1] - 43:7 they've [7] - 4:10, 8:21, 51:18, 57:3, 70:7, 70:19, 93:21 thinking [2] - 81:11, 92:15 thinks [3] - 8:15, 58:4, 65:3 third [3] - 6:1, 33:12, 78:10 third-party [1] - 33:12 thoughts (1) - 81:19 three [5] - 5:20, 14:17,

14:24, 16:7, 16:23 14 threshold [1] - 41:13 throughout [7] -31:20, 32:22, 34:12, 37:14, 47:8, 47:12, 91:11 Thurber [1] - 1:18 tied [1] - 63:21 tired [1] - 65:17 Titan [12] - 18:13, 18:18, 20:12, 47:17, 47:19, 55:5, 74:12, 74:17, 74:25, 75:8, 75:10 TO [1] - 1:5 today [10] - 32:3, 32:14, 35:23, 51:5, 53:5, 61:25, 77:10, 77:24, 91:24, 91:25 together [9] - 9:7, 60:16, 61:2, 65:2, 65:6, 79:17, 82:14, 82:17, 95:10 took [6] - 12:8, 12:10, 19:19, 29:24, 34:2, 97:9 top [3] - 12:24, 62:23, 80:2 total [1] - 85:18 totalling [1] - 81:14 totally [1] - 57:22 touch [1] - 24:12 touchstone [1] - 24:18 towards [3] - 71:10, 86:13, 95:4 tracker [1] - 33:2 trade [2] - 6:18, 62:24 traded [1] - 49:6 tragedies [1] - 26:16 trained [1] - 25:13 Transcript[1] - 1:8 TRANSCRIPT [1] - 2:1 transcription [1] -97:12 transition [1] - 16:20 treat [1] - 25:2 treated [5] - 47:16, 47:19, 48:2, 50:4, 55:7 treating [1] - 50:22 treatment [1] - 72:24 Tree [83] - 1:21, 1:22, 3:5, 3:9, 9:25, 12:10, 12:13, 12:20, 12:22, 15:24, 16:8, 16:14, 16:23, 16:24, 18:14, 18:18, 20:9, 20:10, 20:18, 24:6, 25:10, 25:21, 28:11, 28:21, 28:25, 29:16, 30:6,

30:7, 30:9, 34:18,	type [3] - 46:20, 49:14,	45:12	12:21, 15:24, 16:1,	96:1
35:3, 35:13, 35:16,	68:7	unsupportable [1] -	16:25, 19:9, 20:6,	well-known [1] - 9:7
35:23, 36:4, 37:6,		44:3	20:9, 20:17, 44:22,	whammy [1] - 62:21
37:10, 37:22, 39:9,	U	untrue [1] - 67:3	47:20, 53:19, 53:20	
40:12, 40:14, 42:1,	0	unusual [1] - 68:7		whereby [1] - 12:18
42:7, 43:14, 44:1,			values [2] - 68:12,	whole [9] - 5:17, 8:12,
46:5, 46:9, 47:9,	U.S [1] - 15:9	up [39] - 7:1, 7:21, 8:6,	68:15	8:23, 11:25, 17:21,
	U.S.C [1] - 24:13	8:8, 10:1, 12:3, 13:6,	variable [4] - 27:12,	30:6, 30:8, 85:5,
47:16, 47:18, 47:21,	Uda [18] - 1:21, 3:19,	13:7, 17:20, 19:11,	27:13, 40:6, 62:18	86:13
47:24, 48:2, 49:14,		27:15, 28:19, 32:6,	variations [1] - 11:23	wholesale [1] - 18:17
50:4, 53:21, 54:8,	23:5, 23:16, 26:17,	32:11, 33:20, 34:3,	variety [1] - 9:4	wholly [3] - 16:6,
60:4, 65:8, 65:22,	27:17, 28:5, 28:15,	37:13, 51:3, 51:8,	various [1] - 77:19	19:16, 27:19
66:4, 66:5, 66:6,	29:15, 29:24, 30:10,	54:24, 56:20, 58:15,	vastiy [3] - 26:21,	widely [1] - 10:20
66:7, 66:24, 67:1,	51:11, 59:10, 65:8,	60:19, 62:9, 62:25,	48:25, 49:7	Wiest [1] - 1:13
67:9, 67:15, 69:1,	69:1, 88:18, 93:22,	63:21, 64:12, 69:15,	Veatch [23] - 8:11, 9:2,	willing [10] - 65:1,
72:7, 72:21, 75:25,	95:19	69:20, 73:19, 74:10,	9:6, 10:21, 12:9,	
76:12, 76:15, 78:6,	UDA [26] - 3:20, 23:9,	75:13, 77:10, 86:7,		66:21, 74:15, 81:1,
81:8, 84:2, 86:23,	51:13, 58:21, 59:11,	87:1, 88:10, 88:22,	13:1, 13:8, 13:21,	81:4, 81:13, 81:14,
90:14, 92:4, 92:14,	60:11, 61:11, 62:1,		14:14, 15:4, 15:13,	81:15, 90:14, 90:17
93:14	62:5, 65:15, 65:25,	89:12	15:17, 15:18, 19:24,	wind [10] - 4:7, 8:20,
ree [1] - 39:12	67:3, 67:13, 67:17,	update [1] - 11:20	25:23, 27:23, 56:22,	35:21, 35:25, 61:8,
• •	69:5, 69:21, 69:25,	updated [2] - 20:12,	58:7, 60:16, 63:7,	61:18, 61:19, 70:20,
REE [1] - 1:4	70:4, 84:6, 84:18,	94:19	66:8, 80:10, 91:12	72:19, 73:6
ee's [8] - 11:14,		updating [1] - 41:11	Veatch's [1] - 67:21	Wind [4] - 18:13,
36:6, 40:9, 40:25,	84:22, 92:4, 93:23,	upgrading (1) - 62:16	Ventyx [1] - 58:7	18:18, 20:12, 22:12
41:6, 66:2, 76:19,	95:15, 95:22, 96:8	urged [1] - 34:21	viable [2] - 37:25,	wish(1) - 89:22
79:4	uncertain [1] - 38:12	urges [1] - 44:25	39:18	witness [1] - 44:4
ends [1] - 11:15	uncertainty [2] - 36:9,	uses [1] - 26:23	VICE[1] - 1:11	•••
ied [8] - 8:11, 8:25,	71:4	utilities [5] - 30:17,		witnesses [2] - 33:22,
14:15, 15:13, 54:17,	under (17) - 22:11,	1	view [6] - 5:1, 5:8, 7:2,	33:24
63:16, 71:4, 72:10	22:13, 28:18, 34:15,	45:6, 55:25, 57:15,	47:13, 47:15, 47:23	Wittler [2] - 1:25,
ipling [1] - 14:4	36:3, 39:18, 39:21,	69:17	violate [1] - 38:18	97:18
	40:9, 42:7, 43:1,	Utilities [1] - 21:2	volatility [3] - 13:7,	WITTLER [1] - 97:5
ue (16) - 6:13, 10:8,	43:6, 45:17, 46:19,	UTILITIES [2] - 1:1,	14:10, 14:18	word (2) - 58:15,
28:9, 31:1, 31:21,	52:4, 56:7, 56:8,	1:10	vote [1] - 96:15	87:10
37:21, 37:23, 38:10,	90:11	utility [31] - 4:17,	votes [2] - 96:19,	words [4] - 17:10
38:14, 46:6, 46:7,		12:22, 21:15, 21:16,	96:20	20:13, 24:16, 69:3
49:17, 52:15, 60:21,	underestimated [2] -	22:8, 22:9, 22:15,		works [4] - 95:14,
67:7, 97:11	48:25, 49:8	22:16, 22:19, 24:14,	W	
uly [1] - 31:14	underestimation [2] -	24:16, 30:17, 30:19	V	95:17, 95:18, 95:20
ust [3] - 5:21, 8:24,	26:18, 26:21	30:21, 31:3, 31:23,		world [2] - 71:10
10:23	underestimations [1]	1	wait [2] - 26:5, 90:14	worse [1] - 38:19
y [10] - 6:9, 13:17,	- 22:2	33:2, 37:4, 50:5,	waiting [2] - 3:12, 3:14	wow [1] - 85:6
13:18, 21:14, 23:17,	underperforming [1] -	50:6, 50:8, 50:18,	1	wrestle [1] - 93:15
	55:11	50:23, 52:4, 53:25,	walks [2] - 32:4, 74:11	wrestling [2] - 74:13,
23:18, 24:2, 53:11,	understandable [2] -	55:9, 62:7, 69:1,	wants [2] - 39:14,	77:17
61:1, 63:11	56:1, 86:16	70:22, 71:17, 88:4	57:18	wrongly [1] - 76:9
/ing (1) - 64:5		utility's [3] - 18:5,	Washington [1] - 10:5	
rbines [1] - 59:2	unforeseen [1] - 41:9	36:25, 38:5	watching [1] - 29:17	V
rn [4] - 40:20, 84:2,	unfortunately [2] -	utilize (1) - 43:8	water [1] - 8:14	Y
92:2, 93:13	23:23, 43:8	utilized [2] - 5:25,	Waxman [2] - 57:5,	
rns [2] - 50:10,	unit [2] - 67:24, 88:6	46:11	62:24	year [16] - 9:8, 11:19,
55:10	United [1] - 7:14		Waxman-Markey [2] -	
ice [1] - 9:8	unlike [1] - 95:19	utilizing [2] - 74:1,	57:5, 62:24	15:23, 19:13, 19:14,
o [18] - 13:17,	unnecessary [1] -	80:14		35:15, 43:12, 48:20,
	23:25		ways [2] - 29:13, 94:4	48:22, 52:21, 52:22,
5:25, 16:14, 23:20,		V V	website [1] - 74:2	55:4, 79:10, 80:8,
9:6, 51:22, 55:3,	unneeded [1] - 69:24		Wednesday [5] -	80:20, 80:21
2:15, 68:6, 75:2,	unproved [1] - 41:16		91:21, 92:6, 92:9,	years [22] - 4:19, 9:21,
9:12, 79:23, 80:2,	unrealistic [5] - 16:7,	valid [3] - 12:16,	93:7, 95:8	10:4, 10:6, 10:11,
1:3, 81:11, 86:19,	16:17, 19:16, 19:22,	45:23, 70:5	week [6] - 49:6, 86:5,	13:16, 13:17, 14:17,
86:20, 91:4	27:19	valuable [1] - 8:3	90:9, 90:18, 92:1	14:21, 14:24, 15:23,
o-fold [2] - 51:22,	unreasonable [1] -	Valuation [1] - 15:21	weekend [1] - 86:23	19:17, 20:12, 21:19,
/5:2	14:22	value [17] - 9:21,		
o-step [1] - 15:25	unsuccessful [1] -	10:15, 12:12, 12:20,	weight [1] - 42:5	21:21, 25:22, 50:10,
		····, ····, ······, ·······,	welcome [2] - 84:25,	50:14, 56:21, 71:14,

(<sup>11</sup>)

