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STATE OF MISSOURI  
PUBLIC SERVICE COMMISSION

TRANSCRIPT OF PROCEEDINGS  
Evidentiary Hearing  
March 6, 2015  
Jefferson City, Missouri  
Volume 28

In the Matter of Union )  
Electric Company d/b/a )  
Ameren Missouri's Tariff ) File No. ER-2014-0258  
to Increase Its Revenues )  
for Electric Service )

MORRIS L. WOODRUFF, Presiding,  
CHIEF REGULATORY LAW JUDGE.

STEPHEN M. STOLL,  
SCOTT T. RUPP,  
COMMISSIONERS.

REPORTED BY:  
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1 P R O C E E D I N G S

2 (WHEREUPON, the hearing began at  
3 10:00 a.m.)

4 JUDGE WOODRUFF: All right. Let's go  
5 ahead and get started. We're here for another day  
6 of the Ameren rate case hearing, ER-2014-0258. We  
7 have only one issue to be heard today, which is the  
8 Labadie ESP issue.

9 Before we get started on that next  
10 issue, Ms. Tatro, I understand there's been another  
11 settlement or another one in the works?

12 MS. TATRO: There is. There's a  
13 settlement currently between the company and Office  
14 of Public Counsel, I think Staff, I'm not -- I  
15 think those three parties at least, on FAC issues.  
16 Division of Energy. Anyway, with a group of  
17 parties on the FAC, which would remove most of the  
18 need for most of the witnesses.

19 It doesn't fully resolve the FAC as  
20 between Ameren Missouri and MIEC. So you will  
21 still need to hear Mr. Haro and Mr. Dauphinais.  
22 But I believe that settlement, which has not yet  
23 been filed but should be filed today, will resolve  
24 the rest of those witnesses' issues.

25 JUDGE WOODRUFF: Okay. That's good

1 to know. I'll let the Commissioners know.

2 MS. TATRO: And the fuel one did get  
3 filed yesterday.

4 JUDGE WOODRUFF: Yes. I saw that.  
5 Okay. And just to let the parties know, I'm going  
6 to go ahead and submit those stipulations and  
7 agreements that were filed last Monday for next  
8 week's agenda on the assumption that there won't be  
9 any objections to them. Of course, if there are  
10 objections that are made, we'll vary that practice.  
11 Okay?

12 MS. TATRO: Great.

13 JUDGE WOODRUFF: For the Labadie  
14 ESPs, then, we'll begin with Ameren for mini  
15 openings.

16 MR. MITTEN: If it please the  
17 Commission?

18 In late 2014 Ameren Missouri  
19 completed construction of and placed in service  
20 electrostatic precipitators, commonly known as  
21 ESPs, on Units 1 and 2 at the company's Labadie  
22 Energy Center. These ESPs were required to bring  
23 those units into compliance with federal mercury  
24 and air toxic standards, or MATS, that apply to  
25 existing power plants.

1 Ameren Missouri's MATS compliance  
2 efforts began several years ago, and the company's  
3 plans initially called for the staged installation  
4 of ESPs on all four generating units at Labadie.  
5 And although ESPs will be installed on Labadie  
6 Unit 4 by early 2016, emissions improvements  
7 achieved through the installation of ESPs at  
8 Units 1 and 2 will allow Ameren Missouri to defer  
9 installation of ESPs on Labadie Unit 3.

10 As is the case with any capital  
11 investment a utility seeks to include in rate base  
12 in a general rate case, the Commission must  
13 determine two things: First, whether the cost of  
14 the investment is reasonable, and second, whether  
15 the investment is used and useful in providing  
16 service.

17 With the exception of costs  
18 associated with damaged collector plates, an issue  
19 which the parties resolved as part of a broader  
20 stipulation which has previously been filed with  
21 the Commission, no party contends the amount Ameren  
22 Missouri spent to acquire and install the Labadie  
23 ESPs is unreasonable. And no party contests  
24 Staff's conclusion that the ESPs satisfied all  
25 in-service criteria prior to the December 31st,

1 2014 true-up date and are, therefore, used and  
2 useful.

3 So at least insofar as the  
4 considerations relevant to this rate case are  
5 concerned, there is no question the Commission  
6 should allow the cost of the Labadie ESPs in the  
7 rate base used to set rates in this case.

8 Then why are we hearing this issue?

9 One party, the Sierra Club, argues Ameren  
10 Missouri's investments in the Labadie ESPs was  
11 imprudent, and the basis for Sierra Club's argument  
12 is its contention that the company failed to  
13 justify its investment through evidence  
14 establishing the long-term viability of the Labadie  
15 Energy Center.

16 But Sierra Club's argument is flawed  
17 for at least two reasons. First, a general rate  
18 case is not the proper forum for the Commission to  
19 consider and for the parties to present evidence  
20 regarding the long-term viability of base load  
21 generating units like Labadie.

22 The integrated resource planning, or  
23 IRP, process is the vehicle the Commission has  
24 established for examining what resources a utility  
25 plans to use to meet its service obligations to

1 customers over a 20-year planning horizon.

2 Ameren Missouri made its most recent  
3 triennial IRP filing in October 2014, and that  
4 filing is currently under consideration in  
5 Commission File No. E0-2015-0084. The company's  
6 plan for that Labadie Energy Center over the  
7 relevant planning horizon is thoroughly described  
8 in the company's IRP filing, and Sierra Club is an  
9 intervenor and an active participant in that case.

10 Questions regarding the long-term  
11 viability of Labadie are relevant to and are  
12 already under consideration in the current IRP  
13 case, and they need not be and should not be issues  
14 in this rate case as well.

15 The second flaw in Sierra Club's  
16 argument is the fact its concerns about Labadie are  
17 based on greenhouse gas rules that have not yet  
18 been issued in final form. The EPA has announced  
19 its rules implementing the greenhouse gas  
20 limitations included in the Clean Power Plan will  
21 not be issued in final form until sometime this  
22 summer.

23 Because those rules won't be issued  
24 until weeks and perhaps months after the operation  
25 of law date in this case, it would be virtually



1 impossible for the Commission to consider the  
2 impact on Labadie those rules will have even if it  
3 were inclined to do so.

4 But the Commission should not even be  
5 open to arguments regarding the Labadie ESPs based  
6 upon the Sierra Club's speculation about what the  
7 EPA's final rules will be. Speculation is neither  
8 competent nor substantial evidence.

9 Ameren Missouri's witness on this  
10 issue, Matt Michels, was one of the primary  
11 draftsmen of the company's IRP filing, and his  
12 filed testimony in this case explains how that  
13 filing considers the potential impacts of the EPA's  
14 proposed rules, including its plans for Labadie.

15 I invite you to question Mr. Michels  
16 about that filing, not because the long-term  
17 viability of Labadie is relevant to this rate case,  
18 but because his testimony will show the concerns  
19 expressed by Sierra Club's witness in this case are  
20 unfounded.

21 I'd like to conclude my opening  
22 statement the way I started it. The only issues  
23 regarding the Labadie ESP that are relevant to this  
24 case are whether the amount of Ameren Missouri's  
25 investment is reasonable and whether the

1 precipitators are currently used and useful.  
2 Because there is no evidence in this case that  
3 would justify a negative finding on either of those  
4 issues, the Commission should include the value of  
5 the Labadie ESPs in the rate base used to set rates  
6 in this case.

7 JUDGE WOODRUFF: Commissioners?

8 COMMISSIONER STOLL: No questions.

9 Thank you.

10 COMMISSIONER RUPP: No.

11 JUDGE WOODRUFF: Thank you. Staff  
12 have an opening?

13 MS. MAYFIELD: Your Honor, at this  
14 time there's a quick preliminary matter. I need to  
15 formally enter my appearance in this case on behalf  
16 of Staff counsel. My name is Cydney Mayfield, and  
17 I have provided our court reporter with my  
18 information.

19 Your Honor, at this time Staff is not  
20 contesting this issue. It has been pointed out by  
21 the company, it is part of a settlement that has  
22 been reached both with the company and with other  
23 parties at this time. So really Staff has no  
24 opening on this issue. Are there any questions?

25 COMMISSIONER STOLL: None. Thank

1 you.

2 JUDGE WOODRUFF: Thank you. Public  
3 Counsel?

4 MR. OPITZ: I'll waive opening, your  
5 Honor.

6 JUDGE WOODRUFF: For Sierra Club.

7 MR. CMAR: Good morning. May it  
8 please the Commission? I also need to enter my  
9 appearance in this matter. Thomas Cmar on behalf  
10 of Sierra Club. I provided my information to the  
11 court reporter as well.

12 JUDGE WOODRUFF: Thank you.

13 MR. CMAR: Sierra Club urges the  
14 Commission to find that Ameren has not established  
15 the investments in new electrostatic precipitators,  
16 or ESPs, at Labadie Units 1 and 2 are a prudent use  
17 of ratepayer money.

18 Specifically, Ameren fails to present  
19 a net present value analysis showing that investing  
20 in ESPs at Labadie Units 1 and 2 is a lower cost  
21 option for ratepayers than a retirement alternative  
22 for these units.

23 Ameren's direct testimony barely even  
24 mentions the Labadie ESP projects. When Sierra  
25 Club raised this issue in its testimony, Ameren

1 responded on rebuttal by relying on its recently  
2 filed IRP to try to meet its burden of proof on  
3 this issue.

4           There are a number of deficiencies  
5 and concerns that have now been raised in comments  
6 on the IRP and are more properly addressed in that  
7 docket. But for purposes of this case, there are  
8 two main fatal flaws with Ameren's reliance on its  
9 IRP analysis that cause Ameren to fail to meet its  
10 burden here.

11           First, the IRP does not directly  
12 analyze the prudence of the Labadie Unit 1 and  
13 Unit 2 ESP investments. The IRP includes no  
14 analysis of the possible retirement of individual  
15 units at Labadie. It only looks at retirement of  
16 the plant as a whole, and it only looks at it in  
17 the year 2023 as opposed to the year 2016, which is  
18 the operative year for the investments at issue in  
19 this case.

20           In rebuttal testimony in this case,  
21 Ameren does attempt a kind of back-of-the-envelope  
22 calculation to attempt to make up for this  
23 deficiency, but this does not constitute an apples  
24 to apples comparison of investments in ESPs at  
25 Labadie Units 1 and 2 versus retirement of those

1 units. That is a critical piece of evidence needed  
2 to answer the prudence question in this case, and  
3 Ameren has not provided it to the Commission.

4 Second, Ameren's IRP does not take  
5 into account a reasonable range of risks from  
6 future environmental regulatory requirements,  
7 including greenhouse gas regulations.

8 Even as Ameren claims to be taking  
9 greenhouse gas regulations into account in its IRP,  
10 in fact the company assumes an 85 percent  
11 probability that the Labadie plant will face zero  
12 costs as a result of greenhouse gas regulation,  
13 even as it assumes that other coal-fired power  
14 plants will retire in part as a response to those  
15 same regulations.

16 In other words, Ameren assumes that  
17 other plants will bear all the costs of compliance  
18 leading to the perverse result in the IRP modeling  
19 that Labadie actually benefits from greenhouse gas  
20 regulations by being able to continue to operate  
21 unaffected while other plants bear the costs.

22 This is a huge bias in Ameren's  
23 analysis that throws all of its other numbers into  
24 question. Your Honor, it's quite possible that if  
25 Ameren did an appropriate analysis in this case, we

1 wouldn't be standing here today. We would have had  
2 an opportunity to review Ameren's analysis and  
3 evaluate whether we agreed with it. But we haven't  
4 had that opportunity because Ameren hasn't done the  
5 correct analysis needed to answer the prudence  
6 question in this case.

7                   However you come down on the  
8 specifics of the investments that are at issue  
9 here, we ask that the Commission make clear that  
10 every environmental retrofit of this magnitude  
11 requires a net present value analysis that takes  
12 into account a reasonable range of costs and risks  
13 facing the investment for which recovery is sought.

14                   Without that kind of analysis, there  
15 can be no meaningful transparency and no meaningful  
16 stakeholder participation in the process.  
17 It is up to the utility to provide the Commission  
18 and the parties with sufficient information to  
19 evaluate the prudence of the investments for which  
20 the utility seeks recovery.

21                   Ameren has not done that here, and  
22 the analysis that Ameren has presented is so  
23 fatally flawed that it should not be accepted by  
24 the Commission as meeting American's burden of  
25 proof.

1 That concludes my opening statement.

2 I'm happy to answer any questions you may have.

3 COMMISSIONER STOLL: I have no  
4 questions. Thank you for your opening.

5 JUDGE WOODRUFF: All right. That's  
6 all the parties who are here on this issue. So  
7 we'll begin with our first witness, which is  
8 Mr. Michels. Good morning, Mr. Michels. This is  
9 your first time testifying in this case?

10 THE WITNESS: It is.

11 (Witness sworn.)

12 JUDGE WOODRUFF: Thank you. You may  
13 inquire.

14 (AMERENUE EXHIBIT NOS. 26NP, 26HC AND  
15 27 WERE MARKED FOR IDENTIFICATION.)

16 MATT MICHELS testified as follows:

17 DIRECT EXAMINATION BY MR. MITTEN:

18 **Q. Could you please state your name and**  
19 **business address for the record.**

20 A. My name is Matt Michels, and my  
21 business address is 1901 Chouteau Avenue,  
22 St. Louis, Missouri 63103.

23 **Q. Mr. Michels, where are you employed**  
24 **and what is your current job title?**

25 A. I'm employed by Ameren Missouri as

1 the Senior Manager of Corporate Analysis.

2 **Q. Mr. Michels, did you prepare and**  
3 **cause to be filed in this case rebuttal testimony**  
4 **which has been marked as Exhibits 26HC and NP and**  
5 **surrebuttal testimony which has been marked as**  
6 **Exhibit 27?**

7 A. Yes, I did.

8 **Q. Do you have any changes or**  
9 **corrections you need to make to the prefiled**  
10 **testimony at this time?**

11 A. Yes. I do have one correction to my  
12 rebuttal testimony. On page 12, line 9, where it  
13 says, to allow the plant to continue operating  
14 costs customers \$3.6 billion, it should say, to  
15 allow the plant to continue operating saves  
16 customers \$3.6 billion.

17 **Q. Are there any other changes or**  
18 **corrections you need to make?**

19 A. No.

20 **Q. With that change, if I asked you the**  
21 **questions that are contained in Exhibits 26 and 27**  
22 **today, would your answers be the same as are shown**  
23 **there?**

24 A. Yes, they would.

25 **Q. And is the information in those**



1     **answers true and correct to the best of your**  
2     **knowledge?**

3             A.     Yes, it is.

4             MR. MITTEN:   Your Honor, I have no  
5     further questions for Mr. Michels.  I would offer  
6     Exhibits 26 and 27 into evidence, but I would also  
7     advise the Commission Mr. Michels is scheduled to  
8     testify next week.  So I assume you will be  
9     inclined to defer accepting those exhibits into  
10    evidence until that time.

11            JUDGE WOODRUFF:  26HC and NP have  
12    been offered as well as Exhibit 27.  As indicated  
13    by counsel, we'll defer ruling on those until  
14    Mr. Michels has testified next week.

15            MR. MITTEN:  Mr. Michels is available  
16    for cross-examination.

17            JUDGE WOODRUFF:  Actually, I will ask  
18    Sierra Club if they have any objection to it at  
19    this point.

20            MR. CMAR:  We have no objection, your  
21    Honor.

22            JUDGE WOODRUFF:  Okay.  All right.  
23    For cross-examination, beginning with Staff.

24            MS. MAYFIELD:  No cross, your Honor.

25            JUDGE WOODRUFF:  Public Counsel?

1 MR. OPITZ: No questions, your Honor.

2 JUDGE WOODRUFF: Sierra Club?

3 MR. CMAR: I have a few questions,  
4 your Honor.

5 CROSS-EXAMINATION BY MR. CMAR:

6 Q. Good morning, Mr. Michels.

7 A. Good morning.

8 Q. I have just a few questions for you  
9 about how Ameren Missouri accounted for a potential  
10 future regulation of greenhouse gases in its IRP.

11 A. Okay.

12 Q. Am I correct in understanding that  
13 Ameren Missouri assumed that there is an 85 percent  
14 probability that greenhouse gas regulations would  
15 be indirect as opposed to direct?

16 A. That's correct.

17 Q. And what this means is that the  
18 company assumes that there's an 85 percent  
19 probability of no direct costs facing Labadie  
20 Units 1 and 2 from those regulations; is that  
21 correct?

22 A. What it means is we did not assume a  
23 regulatory regime in which there is a price  
24 established on a ton of carbon dioxide emitted,  
25 that's correct.

1           Q.     So specifically with regard to  
2     dispatch modeling conducted for the IRP, this means  
3     that the company assumes an 85 percent probability  
4     that there will be zero additional variability  
5     costs to Labadie due to greenhouse gas regulations;  
6     is that correct?

7           A.     That's correct.

8           Q.     At the same time, the company also  
9     assumes that other companies will retire some of  
10    their generating units in part in response to  
11    greenhouse gas regulations; is that correct?

12          A.     That's correct.

13          Q.     So essentially isn't it true that  
14    Ameren Missouri's 2014 IRP assumes an 85 percent  
15    probability that the Labadie plant will actually  
16    benefit from greenhouse gas regulation?

17          A.     Yes, that's correct, because what we  
18    included in our assumptions was that under those  
19    85 percent of scenarios where there was no explicit  
20    price on carbon dioxide emissions, that the  
21    regulations would result in anywhere from 80 to 120  
22    gigawatts of retirement of the existing 300-plus  
23    gigawatts of coal generation in the U.S. and that,  
24    in doing so, that would reduce obviously the supply  
25    available to meet load and thus alter the

1 supply/demand balance and result in an uplift in  
2 power prices.

3 **Q. Am I correct in understanding that**  
4 **this assumption of the 85 percent probability is**  
5 **based on the company's qualitative judgment?**

6 A. It's based on a series of discussions  
7 that we had with our own internal experts, which  
8 includes Dan Cole, who is president of Ameren  
9 Services Company, Joe Power, who is vice president  
10 and assistant general counsel, and also Mike Menne,  
11 who was formerly vice president of environmental  
12 services, Ajay Arora, who is currently vice  
13 president of environmental services.

14 And based on all of their  
15 interactions with policymakers, regulators,  
16 legislators -- for instance, Joe Power has frequent  
17 discussions with folks under all of those umbrellas  
18 from his office in Washington, D.C.

19 But based on the series of  
20 discussions that we had with them and what the  
21 likelihood of various forms of carbon policy were  
22 going forward into the future and over the 20-year  
23 planning horizon, what is the probability of the  
24 different mechanisms by which those policies might  
25 be enacted? And then also in the case where there

1 would be a carbon price, what would be the range of  
2 carbon price in those instances? So that's what we  
3 used to base our assumptions for the IRP on.

4 **Q. But this wasn't a quantitative**  
5 **process; is that right?**

6 A. No. I'm not aware of any  
7 quantitative process by which you could come up  
8 with probabilities for what future policies would  
9 be.

10 **Q. So the 85 percent number is**  
11 **essentially a number that the company chose to**  
12 **represent its judgment as to the likelihood of this**  
13 **particular regime coming into effect?**

14 A. It is necessarily a subjective  
15 estimation, which is exactly what the IRP rules  
16 call for.

17 MR. CMAR: No further questions, your  
18 Honor.

19 JUDGE WOODRUFF: Come up for  
20 questions from the Bench. Commissioner Stoll?

21 COMMISSIONER STOLL: I have no  
22 questions.

23 COMMISSIONER RUPP: No.

24 JUDGE WOODRUFF: All right. There  
25 were no questions from the Bench, so no recross.

1 Any redirect?

2 MR. MITTEN: Briefly, your Honor.

3 BY MR. MITTEN:

4 Q. Mr. Michels, Mr. Cmar asked you some  
5 questions about the 85 percent assumption that is  
6 included in Ameren Missouri's current IRP filing  
7 that there will be indirect regulation of carbon  
8 under the rules that the EPA announces to implement  
9 the Clean Power Plan. Do you recall that?

10 A. Yes, I do.

11 Q. Does that mean there will be a  
12 15 percent chance of direct carbon charges?

13 A. That's the way we've included it.  
14 There would be a 15 chance that there would be a  
15 specific price on carbon dioxide emissions through  
16 a carbon tax or a cap and trade regime or something  
17 similar.

18 Q. Could you tell me how you arrived at  
19 those 85 percent/15 percent probabilities for those  
20 two various scenarios?

21 A. Sure. Like I mentioned in response  
22 to Mr. Cmar's question, we relied on our internal  
23 experts, folks that have direct interaction with  
24 regulators and legislators involved in  
25 environmental regulation. And we looked at the

1 possibilities for regulation under existing law,  
2 passage of new law, or even ratification of an  
3 international treaty that would involve carbon  
4 dioxide reductions. And in doing so, they  
5 considered the, for lack of a better term I'll call  
6 it political calculus, what are the chances that  
7 there would be an explicit price on carbon dioxide  
8 going into the future?

9           And so the question would be, is that  
10 available under existing regulations? The  
11 conclusion was that there's not the opportunity to  
12 impose that under existing regulation. And then is  
13 there a chance for new legislation that would  
14 enable regulation that would allow for an explicit  
15 price on carbon dioxide?

16           So when they looked at that and said,  
17 okay, you're going to have to have something that  
18 passes both houses of Congress and is going to be  
19 signed by the president to enact new regulations  
20 that would involve that explicit price, they looked  
21 at that and said there's really only a 15 percent  
22 likelihood that that is going to happen, and that  
23 it would happen at the earliest in 2025.

24           **Q. The greenhouse gas rules that are**  
25 **currently proposed by the EPA, do they have any**

1     **provisions in them at all for the direct carbon tax**  
2     **that you talked about a minute ago?**

3             A.     They do not.   The Clean Power Plan  
4     proposed rule has been promulgated under  
5     Section 111(D) of the Clean Air Act, and in those  
6     proposed rules they provide for specific reductions  
7     in the rate of carbon intensity for each state.

8                     And what that means is they're  
9     expecting a reduction or requiring a reduction in  
10    the amount of CO2 emitted per megawatt hour of  
11    energy generated, and they have various building  
12    blocks that they've used to establish what those  
13    targets could be and also to provide for mechanisms  
14    by which utilities could comply with those  
15    regulations.   That includes increases in power  
16    plant efficiency, increases in natural gas  
17    generation, which under a carbon tax or a cap and  
18    trade regime would incur costs for generating.

19                    In the Clean Power Plan, gas  
20    generation is a solution.   Under a carbon tax, gas  
21    generators would see a cost of continuing to  
22    generate.   And then also expansion of renewable  
23    energy and increases in energy efficiency which  
24    would offset coal generation.

25                    All of those are indirect -- what I



1 would call indirect forms of regulation. Actually,  
2 in the Synapse report which we used as the basis  
3 for our carbon prices, they make the distinction  
4 between the two different forms of regulation.

5 And actually on page 6 of that  
6 report, it says specifically, however, many other  
7 types of climate policies work not by making  
8 polluting more expensive per se, but instead by  
9 requiring firms to use one technology instead of  
10 another or to maintain particular emission  
11 limitations in order to avoid legal repercussions.  
12 For any such non-market policy, there is an  
13 effective price, a market price that if instituted  
14 as an allowance or tax would result in the  
15 identical emission reductions as the non-market  
16 policy.

17 The policies included in the Clean  
18 Power Plan are just these kinds of non-market  
19 policies, and, therefore, the cost of complying  
20 with those, the retirements of existing coal  
21 generation, replacement with other forms of  
22 generation, those are the costs of complying with  
23 this kind of a regulation.

24 So to impose additional costs on  
25 other generators would be a double counting of the

1 costs of complying with those regulations.

2 Q. Mr. Cmar also asked you about whether  
3 or not Ameren Missouri had included in its IRP  
4 filing any analysis regarding the specific effects  
5 of future environmental regulations on Labadie  
6 Units 1 and 2. Do you recall those questions?

7 A. Yes, I do.

8 Q. Is there a reason that Ameren  
9 Missouri did not include a specific analysis for  
10 those units in its IRP filing?

11 MR. CMAR: Your Honor, I object. I  
12 didn't ask that question that is being referenced  
13 here. This is outside the scope of the cross.

14 JUDGE WOODRUFF: Your response?

15 MR. MITTEN: I believe he did ask the  
16 question about a unit-specific analysis for Labadie  
17 Units 1 and 2.

18 MR. CMAR: I did not ask that  
19 question, your Honor.

20 JUDGE WOODRUFF: I don't remember.  
21 If we can go off the record for a moment for the  
22 court reporter to have an opportunity to look back  
23 through the record.

24 (AN OFF-THE-RECORD DISCUSSION WAS  
25 HELD.)

1 JUDGE WOODRUFF: While we were off  
2 the record the court reporter indicated she did not  
3 find that question, but I don't want to make a  
4 ruling based on a review by the court reporter. So  
5 what I'm going to do is defer ruling on the  
6 objection until I've had a chance to review the  
7 transcript, and I'm going to allow the question and  
8 the answer, or I'm going to allow the witness to  
9 answer the question subject to possible ruling in  
10 favor of the objection later in the process. I'll  
11 make that ruling in the context of the Report and  
12 Order.

13 MR. CMAR: Thank you.

14 JUDGE WOODRUFF: So at this point you  
15 can go ahead and answer the question.

16 THE WITNESS: Could you repeat the  
17 question?

18 BY MR. MITTEN:

19 **Q. Did Ameren Missouri include in its**  
20 **current IRP filing a unit-specific analysis of the**  
21 **effect of future environmental regulations on**  
22 **Labadie Units 1 and 2?**

23 A. No, and the reason that we didn't --  
24 well, there's really a couple of reasons. First of  
25 all, Labadie is one of the most cost-effective and

1 efficient coal-fired power stations in the country.  
2 We answered a data request regarding how Labadie  
3 stacks up in terms of production cost against the  
4 other coal units in the country, and it's among the  
5 very lowest cost in terms of production costs,  
6 which includes fuel and variable O&M, and also  
7 because our analysis of retirement of the entire  
8 Labadie Energy Center in 2023 in the IRP indicated  
9 that customers would save \$3.6 billion by investing  
10 money to keep the plant operating.

11           So any of the environmental controls,  
12 any capital expenditures related to continuing to  
13 operate or continuing to maintain safe and reliable  
14 operation of the plant and any operating  
15 expenditures to operate and maintain the plant were  
16 justified by the benefits of continuing to operate  
17 the plant.

18           Those benefits are really based on  
19 the market price forecast that we included based on  
20 the range of scenarios that reflect the  
21 expectations for climate policy in the future as  
22 well as natural gas prices and load growth.

23           So based on that analysis and the  
24 fact that it showed that customers would save  
25 \$3.6 billion by continuing to operate the entire

1 plant, there really wasn't any reason to go down to  
2 a unit-level analysis to determine the kind of  
3 ongoing viability that Sierra Club is suggesting we  
4 need to analyze.

5 **Q. Did Sierra Club or any other party to**  
6 **the current IRP proceeding propose that a**  
7 **unit-specific analysis be included as a special**  
8 **issue in that proceeding?**

9 MR. CMAR: Objection, your Honor.  
10 This goes well outside the scope of the cross.

11 JUDGE WOODRUFF: I'll make the same  
12 ruling as before and defer ruling on that objection  
13 until I've had a chance to review the transcript.

14 THE WITNESS: Yes. Sierra Club did  
15 suggest a special contemporary issue for our 2014  
16 IRP. This was done in September of 2013 in advance  
17 of the IRP work that we did. And the issue that  
18 they suggested be included by the Commission for  
19 our IRP was a unit-by-unit analysis of all of our  
20 coal-fired energy centers and the determination of  
21 how -- the economics of continuing to operate each  
22 unit.

23 The Commission declined based in part  
24 on Ameren Missouri's response to that issue to  
25 include that issue as a special contemporary issue

1 for Ameren Missouri's integrated resource plan.

2 BY MR. MITTEN:

3 Q. Mr. Cmar also asked you some  
4 questions about assumptions that were included in  
5 the IRP filing about other companies retiring their  
6 coal plants in advance of Ameren Missouri's  
7 retirement of Labadie. Do you recall those  
8 questions?

9 A. I believe so, yes.

10 Q. Did you make such assumptions in the  
11 IRP filing?

12 A. The assumptions that we made in the  
13 IRP filing for retirement of existing coal plants  
14 were done based on a review of the relative  
15 deficiency of all of the coal plants in the eastern  
16 interconnect.

17 So we did include assumptions for  
18 explicit retirements of coal generation as part of  
19 the pricing scenarios that we developed to use to  
20 evaluate alternative resource plans in the IRP, and  
21 those retirements included retirements in Missouri,  
22 including Ameren Missouri's Meramec Energy Center,  
23 also units at KCPL's Sibley plant, at Montrose and  
24 at Lake Road.

25 And KCPL has recently announced that

1 it would be retiring most of the same units that we  
2 identified for retirement in the scenarios that we  
3 ran.

4 And then, you know, we've also seen  
5 the results of EPA's analysis of the impact of the  
6 Clean Power Plan and saying that it will result in  
7 approximately 100 gigawatts of coal-fired  
8 retirements. Our scenario said anywhere from 80 to  
9 120 gigawatts, with 100 gigawatts being the most  
10 likely. So that falls well within the range that  
11 we used in our assumptions.

12 There have been other studies by MERA  
13 and the Bipartisan Policy Center that have showed  
14 in the range of 90 to 100 gigawatts of coal  
15 retirements as a result of not just the Clean Power  
16 Plan but also MATS and other environmental  
17 regulations that are being imposed on coal-fired  
18 energy centers.

19 So we believe that our assumptions  
20 for retirements that were used as a basis for our  
21 scenarios in the IRP are entirely consistent with  
22 what we're seeing from other sources and even  
23 consistent with announcements that the utilities  
24 have actually made.

25 MR. MITTEN: Your Honor, I'd like to

1 have a document marked as an exhibit.

2 JUDGE WOODRUFF: Next number is 65.

3 This is shown as HC.

4 MR. MITTEN: It is. The exhibit  
5 itself will have to be HC. I'm not sure that all  
6 of the questions that I'm going to ask Mr. Michels  
7 about the exhibit will need to be asked in-camera.

8 (AMERENUE EXHIBIT NO. 65HC WAS MARKED  
9 FOR IDENTIFICATION BY THE REPORTER.)

10 MR. MITTEN: And I'm sorry, your  
11 Honor. What was the exhibit number on this?

12 JUDGE WOODRUFF: 65HC.

13 BY MR. MITTEN:

14 **Q. Mr. Michels, if possible, without**  
15 **getting into the specific highly confidential**  
16 **information that is shown on Exhibit 65HC, could**  
17 **you generally describe what that exhibit shows?**

18 MR. CMAR: Your Honor, before the  
19 witness answers, I object to questions based on  
20 this exhibit as again outside the scope of anything  
21 that was asked about on cross-examination.

22 JUDGE WOODRUFF: And again I'll defer  
23 ruling on that until I've had a chance to examine  
24 the transcript and make a ruling on it later.

25 THE WITNESS: What this chart



1 shows -- and I can talk to it without getting into  
2 the highly confidential information -- is the  
3 production costs for all of the coal-fired  
4 generators in the United States. Now, the scale of  
5 the chart doesn't capture all the coal generation.  
6 There's over 300 gigawatts of coal generation.  
7 This cuts it off at 250 gigawatts.

8 But what this shows is that the  
9 production costs for Labadie are among the lowest  
10 of all the coal generators in the United States.

11 **Q. And would you expect that coal plants**  
12 **that are less efficient than Labadie to be shut**  
13 **down well in advance of Labadie ceasing operations?**

14 A. Yes, I would.

15 **Q. And why is that?**

16 A. While a review of the production  
17 costs is not a proxy for a full analysis of the  
18 economics of each individual coal unit, it is a  
19 good indicator of the -- of the operating costs and  
20 efficiency of those units. And I would expect that  
21 those units that are more costly to operate would  
22 be more liable to be the ones that would be retired  
23 earlier compared to the very efficient Labadie  
24 units.

25 **Q. I probably should have asked this**

1 question earlier, but is this particular graph that  
2 has been marked as Exhibit 65HC, was that  
3 previously provided to the Sierra Club in response  
4 to a data request?

5 A. Yes. It was provided in response to  
6 Data Request SC-020.

7 MR. MITTEN: Your Honor, I would move  
8 for the admission into evidence of Exhibit 65HC.

9 MR. CMAR: And, your Honor, I have  
10 the same objection that the exhibit is based on  
11 questions that went outside the scope of  
12 cross-examination.

13 JUDGE WOODRUFF: Okay. And again,  
14 I'll defer ruling on that until I've had a chance  
15 to review the transcript.

16 MR. MITTEN: And I have no further  
17 questions for Mr. Michels. Thank you.

18 JUDGE WOODRUFF: Okay. Actually,  
19 that's it then. We are finished.

20 MR. CMAR: We have one piece of  
21 business, your Honor. We haven't formally moved  
22 for the admission of our witness' testimony,  
23 Dr. Ezra Hausman. All of the parties have waived  
24 cross-examination, and so we'd like to move for  
25 admission of his prefiled direct and surrebuttal

1 testimony into evidence in this case.

2 JUDGE WOODRUFF: And that was both HC  
3 and NP versions on both?

4 MR. CMAR: Correct.

5 JUDGE WOODRUFF: So 900 and 901 HC  
6 and NP have been offered. Any objection to their  
7 receipt?

8 MR. MITTEN: No objection.

9 JUDGE WOODRUFF: Hearing none, they  
10 will be received.

11 (SIERRA CLUB EXHIBIT NOS. 900NP/HC  
12 AND 901NP/HC WERE RECEIVED INTO EVIDENCE.)

13 JUDGE WOODRUFF: Anything else on  
14 this issue?

15 Okay. Well, then we are done for  
16 today, and we'll need to address when we want to  
17 come back for on Monday. If a lot of these issues  
18 are resolved, we can probably start later in the  
19 day.

20 MS. TATRO: I think we can.

21 MR. THOMPSON: Looks like we've only  
22 got two witnesses for Monday.

23 JUDGE WOODRUFF: Right. Let's start  
24 at 10 a.m.

25 MS. TATRO: And I will make sure MIEC

1 is aware of that.

2 JUDGE WOODRUFF: Then we are  
3 adjourned.

4 (WHEREUPON, the hearing was recessed  
5 at 10:39 a.m.)

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I N D E X

LABADIE ESPS

Opening Statement by Mr. Mitten	1924
Opening Statement by Ms. Mayfield	1929
Opening Statement by Mr. Cmar	1930

AMERENUE'S EVIDENCE:

MATT MICHELS

Direct Examination by Mr. Mitten	1934
Cross-Examination by Mr. Cmar	1937
Redirect Examination by Mr. Mitten	1941

1  
2  
3  
4  
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12  
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14  
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17  
18  
19  
20  
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23  
24  
25

EXHIBITS INDEX

AMERENUE'S EXHIBITS

MARKED REC'D

EXHIBIT NO. 26NP/HC

Rebuttal Testimony of Matt 1937

EXHIBIT NO. 27

Surrebuttal Testimony of Matt

Michels 1937

EXHIBIT NO. 65HC

Chart - Coal Production Cost

(Fuel and Variable O&M) 1951 \*

SIERRA CLUB'S EXHIBITS

EXHIBIT NO. 900NP/HC

Direct Testimony of Ezra D.

Hausman, Ph.D. 1954

EXHIBIT NO. 901NP/HC

Surrebuttal Testimony of Ezra D.

Hausman, Ph.D. 1954

\*Ruling deferred.

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C E R T I F I C A T E

STATE OF MISSOURI )  
 ) ss.  
COUNTY OF COLE )

I, Kellene K. Feddersen, Certified  
Shorthand Reporter with the firm of Midwest  
Litigation Services, do hereby certify that I was  
personally present at the proceedings had in the  
above-entitled cause at the time and place set  
forth in the caption sheet thereof; that I then and  
there took down in Stenotype the proceedings had;  
and that the foregoing is a full, true and correct  
transcript of such Stenotype notes so made at such  
time and place.

Given at my office in the City of  
Jefferson, County of Cole, State of Missouri.

\_\_\_\_\_  
Kellene K. Feddersen, RPR, CSR, CCR

<b>A</b>	1946:8	1950:5 1952:17	1937:22	1946:4 1947:18
<b>able</b> 1932:20	<b>allowance</b>	<b>analyze</b> 1931:12	<b>assumed</b> 1937:13	1947:19,23
<b>above-entitled</b>	1944:14	1948:4	<b>assumes</b> 1932:10	1948:23
1958:9	<b>alter</b> 1938:25	<b>announced</b>	1932:13,16	1949:14
<b>accepted</b> 1933:23	<b>alternative</b>	1927:18	1937:18 1938:3	1951:19
<b>accepting</b> 1936:9	1930:21	1949:25	1938:9,14	1953:10
<b>account</b> 1932:5,9	1949:20	<b>announcements</b>	<b>assumption</b>	<b>basis</b> 1926:11
1933:12	<b>Ameren</b> 1920:14	1950:23	1924:8 1939:4	1944:2 1950:20
<b>accounted</b>	1921:11 1923:6	<b>announces</b>	1941:5	<b>bear</b> 1932:17,21
1937:9	1923:20	1941:8	<b>assumptions</b>	<b>began</b> 1923:2
<b>achieved</b> 1925:7	1924:14,18	<b>answer</b> 1932:2	1938:18 1940:3	1925:2
<b>acquire</b> 1925:22	1925:1,8,21	1933:5 1934:2	1949:4,10,12	<b>beginning</b>
<b>Act</b> 1943:5	1926:9 1927:2	1946:8,9,15	1949:17	1936:23
<b>active</b> 1927:9	1928:9,24	<b>answered</b> 1947:2	1950:11,19	<b>behalf</b> 1929:15
<b>additional</b>	1930:14,18,25	<b>answers</b> 1935:22	<b>attempt</b> 1931:21	1930:9
1938:4 1944:24	1931:9,21	1936:1 1951:19	1931:22	<b>believe</b> 1923:22
<b>address</b> 1934:19	1932:3,8,16,25	<b>ANTAL</b> 1922:10	<b>Attorney</b> 1921:2	1945:15 1949:9
1934:21	1933:4,21,22	<b>Anyway</b> 1923:16	1921:2,6,12,17	1950:19
1954:16	1934:25 1937:9	<b>appearance</b>	1921:20	<b>Bemiston</b>
<b>addressed</b>	1937:13	1929:15 1930:9	<b>available</b>	1921:13
1931:6	1938:14 1939:8	<b>APPEARANC...</b>	1936:15	<b>Bench</b> 1940:20
<b>adjourned</b>	1941:6 1945:3	1921:1	1938:25	1940:25
1955:3	1945:8 1946:19	<b>apples</b> 1931:23	1942:10	<b>benefit</b> 1938:16
<b>admission</b>	1948:24 1949:1	1931:24	<b>Avenue</b> 1921:4	<b>benefits</b> 1932:19
1953:8,22,25	1949:6,22	<b>apply</b> 1924:24	1934:21	1947:16,18
<b>advance</b> 1948:16	<b>AMERENUE</b>	<b>appropriate</b>	<b>avoid</b> 1944:11	<b>best</b> 1936:1
1949:6 1952:13	1934:14 1951:8	1932:25	<b>aware</b> 1940:6	<b>better</b> 1942:5
<b>advise</b> 1936:7	<b>AMERENUE'S</b>	<b>approximately</b>	1955:1	<b>bias</b> 1932:22
<b>agenda</b> 1924:8	1956:5 1957:2	1950:7	<b>a.m</b> 1923:3	<b>billion</b> 1935:14
<b>ago</b> 1925:2	<b>Ameren's</b>	<b>argues</b> 1926:9	1954:24 1955:5	1935:16 1947:9
1943:2	1930:23 1931:8	<b>argument</b>		1947:25
<b>agreed</b> 1933:3	1932:4,22	1926:11,16	<b>B</b>	<b>Bipartisan</b>
<b>agreements</b>	1933:2	1927:16	<b>B</b> 1921:12,17	1950:13
1924:7	<b>American's</b>	<b>arguments</b>	<b>back</b> 1945:22	<b>blocks</b> 1943:12
<b>ahead</b> 1923:5	1933:24	1928:5	1954:17	<b>BORGMEYER</b>
1924:6 1946:15	<b>amount</b> 1925:21	<b>Arora</b> 1939:12	<b>back-of-the-en...</b>	1922:9
<b>air</b> 1924:24	1928:24	<b>arrived</b> 1941:18	1931:21	<b>Box</b> 1921:3,8
1943:5	1943:10	<b>asked</b> 1935:20	<b>BAKER</b> 1922:2	1922:4,13
<b>Ajay</b> 1939:12	<b>analysis</b> 1930:19	1941:4 1945:2	<b>balance</b> 1939:1	<b>Briefly</b> 1941:2
<b>ALEXANDER</b>	1931:9,14	1949:3 1951:7	<b>Ballwin</b> 1921:16	<b>bring</b> 1924:22
1922:10	1932:23,25	1951:21	<b>barely</b> 1930:23	<b>broader</b> 1925:19
<b>ALLISON</b>	1933:2,5,11,14	1952:25	<b>base</b> 1925:11	<b>Brydon</b> 1921:7
1922:1	1933:22 1935:1	<b>assistant</b> 1922:2	1926:7,20	<b>building</b> 1943:11
<b>allow</b> 1925:8	1945:4,9,16	1922:3 1939:10	1929:5 1940:3	<b>burden</b> 1931:2
1926:6 1935:13	1946:20 1947:7	<b>associated</b>	<b>based</b> 1927:17	1931:10
1935:15	1947:23 1948:2	1925:18	1928:5 1939:5	1933:24
1942:14 1946:7	1948:7,19	<b>assume</b> 1936:8	1939:6,14,19	<b>business</b> 1934:19



1934:21 1953:21	1926:15 1927:6 1947:8 1949:22 1950:13	1953:3 1954:11	1932:3 1933:9 1933:17,24 1936:7 1948:18 1948:23	1927:16 1928:18 1931:5
<b>C</b>	<b>centers</b> 1948:20 1950:18	<b>Club's</b> 1926:11 1926:16 1927:15 1928:6 1928:19 1957:9	<b>Commissioner</b> 1929:8,10,25 1934:3 1940:20 1940:21,23	<b>conclude</b> 1928:21 <b>concludes</b> 1934:1
<b>C</b> 1923:1 1958:1 1958:1	<b>Certified</b> 1958:5	<b>Cmar</b> 1921:20	1929:8,10,25 1934:3 1940:20 1940:21,23	<b>conclusion</b> 1925:24 1942:11
<b>calculation</b> 1931:22	<b>certify</b> 1958:7	1930:7,9,13	<b>Commissioners</b> 1920:21 1924:1 1929:7	<b>conducted</b> 1938:2
<b>calculus</b> 1942:6	<b>chance</b> 1941:12 1941:14	1936:20 1937:3 1937:5 1940:17	<b>commonly</b> 1924:20	<b>confidential</b> 1951:15 1952:2
<b>call</b> 1940:16 1942:5 1944:1	1942:13 1946:6 1948:13	1941:4 1945:2 1945:11,18	<b>companies</b> 1938:9 1949:5	<b>Congress</b> 1942:18
<b>called</b> 1925:3	1951:23	1946:13 1948:9 1949:3 1951:18 1953:9,20	<b>company</b> 1920:13 1921:3 1921:10 1923:13 1926:12 1929:21,22 1932:10 1937:18 1938:3 1938:8 1939:9 1940:11	<b>consider</b> 1926:19 1928:1
<b>cap</b> 1941:16 1943:17	1953:14	1954:4 1956:4 1956:7	<b>company's</b> 1924:21 1925:2 1927:5,8 1928:11 1939:5	<b>consideration</b> 1927:4,12
<b>capital</b> 1925:10 1947:12	<b>chances</b> 1942:6	<b>Cmar's</b> 1941:22	<b>coal</b> 1938:23 1943:24 1944:20 1947:4 1949:6,13,15 1949:18 1950:14 1952:5 1952:6,10,11 1952:18 1957:7	<b>considerations</b> 1926:4
<b>Capitol</b> 1921:7	<b>change</b> 1935:20	<b>coal-fired</b> 1932:13 1947:1 1948:20 1950:7 1950:17 1952:3	<b>coal</b> 1938:23 1943:24 1944:20 1947:4 1949:6,13,15 1949:18 1950:14 1952:5 1952:6,10,11 1952:18 1957:7	<b>considered</b> 1942:5
<b>caption</b> 1958:10	<b>changes</b> 1935:8 1935:17	<b>Cole</b> 1939:8 1958:4,16	<b>collector</b> 1925:18	<b>considers</b> 1928:13
<b>capture</b> 1952:5	<b>charges</b> 1941:12	<b>come</b> 1933:7 1940:7,19 1954:17	<b>collector</b> 1925:18	<b>consistent</b> 1950:21,23
<b>carbon</b> 1937:24 1938:20 1939:21 1940:1 1940:2 1941:7 1941:12,15,16 1942:3,7,15 1943:1,7,17,20 1944:3	<b>chart</b> 1951:25 1952:5 1957:7	<b>coming</b> 1940:13	<b>comments</b> 1931:5	<b>constitute</b> 1931:23
<b>case</b> 1923:6 1925:10,12 1926:4,7,18 1927:9,13,14 1927:25 1928:12,17,19 1928:24 1929:2 1929:6,15 1931:7,19,20 1932:2,25 1933:6 1934:9 1935:3 1939:25 1954:1	<b>Chief</b> 1920:18 1922:8	<b>Commission</b> 1920:3 1922:12 1922:16 1924:17 1925:12,21 1926:5,18,23 1927:5 1928:1 1928:4 1929:4 1930:8,14	<b>company's</b> 1924:21 1925:2 1927:5,8 1928:11 1939:5	<b>construction</b> 1924:19
<b>case</b> 1923:6 1925:10,12 1926:4,7,18 1927:9,13,14 1927:25 1928:12,17,19 1928:24 1929:2 1929:6,15 1931:7,19,20 1932:2,25 1933:6 1934:9 1935:3 1939:25 1954:1	<b>Chouteau</b> 1921:4 1934:21	<b>comments</b> 1931:5	<b>compared</b> 1952:23	<b>contained</b> 1935:21
<b>case</b> 1923:6 1925:10,12 1926:4,7,18 1927:9,13,14 1927:25 1928:12,17,19 1928:24 1929:2 1929:6,15 1931:7,19,20 1932:2,25 1933:6 1934:9 1935:3 1939:25 1954:1	<b>CHRISTINA</b> 1922:2	<b>Commission</b> 1920:3 1922:12 1922:16 1924:17 1925:12,21 1926:5,18,23 1927:5 1928:1 1928:4 1929:4 1930:8,14	<b>comparison</b> 1931:24	<b>contemporary</b> 1948:15,25
<b>cause</b> 1931:9 1935:3 1958:9	<b>City</b> 1920:10 1921:8,15,16 1922:5,14 1958:15	<b>Commission</b> 1920:3 1922:12 1922:16 1924:17 1925:12,21 1926:5,18,23 1927:5 1928:1 1928:4 1929:4 1930:8,14	<b>competent</b> 1928:8	<b>contends</b> 1925:21
<b>CCR</b> 1920:24 1958:19	<b>claims</b> 1932:8	<b>Commission</b> 1920:3 1922:12 1922:16 1924:17 1925:12,21 1926:5,18,23 1927:5 1928:1 1928:4 1929:4 1930:8,14	<b>completed</b> 1924:19	<b>contention</b> 1926:12
<b>ceasing</b> 1952:13	<b>Clayton</b> 1921:13	<b>Commission</b> 1920:3 1922:12 1922:16 1924:17 1925:12,21 1926:5,18,23 1927:5 1928:1 1928:4 1929:4 1930:8,14	<b>compliance</b> 1924:23 1925:1 1932:17	<b>contesting</b> 1929:20
<b>Center</b> 1921:18 1924:22	<b>Clean</b> 1927:20 1941:9 1943:3 1943:5,19 1944:17 1950:6 1950:15	<b>Commission</b> 1920:3 1922:12 1922:16 1924:17 1925:12,21 1926:5,18,23 1927:5 1928:1 1928:4 1929:4 1930:8,14	<b>comply</b> 1943:14	<b>contests</b> 1925:23
	<b>clear</b> 1933:9	<b>Commission</b> 1920:3 1922:12 1922:16 1924:17 1925:12,21 1926:5,18,23 1927:5 1928:1 1928:4 1929:4 1930:8,14	<b>complying</b> 1944:19,22 1945:1	<b>context</b> 1946:11
	<b>climate</b> 1944:7 1947:21	<b>Commission</b> 1920:3 1922:12 1922:16 1924:17 1925:12,21 1926:5,18,23 1927:5 1928:1 1928:4 1929:4 1930:8,14	<b>concerned</b> 1926:5	<b>continue</b> 1932:20 1935:13,15
	<b>Club</b> 1921:23 1926:9 1927:8 1930:6,10,13 1930:25 1936:18 1937:2 1948:3,5,14	<b>Commission</b> 1920:3 1922:12 1922:16 1924:17 1925:12,21 1926:5,18,23 1927:5 1928:1 1928:4 1929:4 1930:8,14	<b>concerns</b>	<b>continuing</b> 1943:21 1947:12,13,16

1947:25	1958:16	1953:4,6	<b>dispatch</b> 1938:2	1930:15
1948:21	<b>couple</b> 1946:24	<b>date</b> 1926:1	<b>distinction</b>	<b>emission</b> 1944:10
<b>controls</b> 1947:11	<b>course</b> 1924:9	1927:25	1944:3	1944:15
<b>Corporate</b>	<b>court</b> 1929:17	<b>Dauphinais</b>	<b>Division</b> 1923:16	<b>emissions</b> 1925:6
1935:1	1930:11	1923:21	<b>docket</b> 1931:7	1938:20
<b>correct</b> 1933:5	1945:22 1946:2	<b>day</b> 1923:5	<b>document</b> 1951:1	1941:15
1936:1 1937:12	1946:4	1954:19	<b>doing</b> 1938:24	<b>emitted</b> 1937:24
1937:16,21,25	<b>CO2</b> 1943:10	<b>December</b>	1942:4	1943:10
1938:6,7,11,12	<b>criteria</b> 1925:25	1925:25	<b>double</b> 1944:25	<b>employed</b>
1938:17 1939:3	<b>critical</b> 1932:1	<b>declined</b> 1948:23	<b>Dr</b> 1953:23	1934:23,25
1954:4 1958:12	<b>cross</b> 1936:24	<b>defer</b> 1925:8	<b>draftsmen</b>	<b>enable</b> 1942:14
<b>correction</b>	1945:13	1936:9,13	1928:11	<b>enact</b> 1942:19
1935:11	1948:10	1946:5 1948:12	<b>due</b> 1938:5	<b>enacted</b> 1939:25
<b>corrections</b>	<b>cross-examinat...</b>	1951:22	<b>DUSTIN</b> 1922:1	<b>energy</b> 1923:16
1935:9,18	1936:16,23	1953:14	<b>D.C</b> 1939:18	1924:22
<b>cost</b> 1925:13	1937:5 1951:21	<b>deferred</b> 1957:14	<b>d/b/a</b> 1920:13	1926:15 1927:6
1926:6 1930:20	1953:12,24	<b>deficiencies</b>	1921:11	1943:11,23,23
1943:21	1956:7	1931:4		1947:8 1948:20
1944:19 1947:3	<b>CSR</b> 1920:24	<b>deficiency</b>	<b>E</b>	1949:22
1947:5 1957:7	1958:19	1931:23	<b>E</b> 1923:1,1	1950:18
<b>costly</b> 1952:21	<b>CULLY</b> 1922:9	1949:15	1956:1 1958:1	<b>England</b> 1921:7
<b>costs</b> 1925:17	<b>current</b> 1927:12	<b>Deputy</b> 1922:8,9	1958:1	<b>enter</b> 1929:15
1932:12,17,21	1934:24 1941:6	<b>describe</b> 1951:17	<b>earlier</b> 1952:23	1930:8
1933:12	1946:20 1948:6	<b>described</b> 1927:7	1953:1	<b>entire</b> 1947:7,25
1935:14	<b>currently</b>	<b>determination</b>	<b>earliest</b> 1942:23	<b>entirely</b> 1950:21
1937:19 1938:5	1923:13 1927:4	1948:20	<b>early</b> 1925:6	<b>environmental</b>
1943:18	1929:1 1939:12	<b>determine</b>	<b>East</b> 1921:7	1921:18 1932:6
1944:22,24	1942:25	1925:13 1948:2	<b>eastern</b> 1949:15	1933:10
1945:1 1947:5	<b>Curtis</b> 1921:12	<b>developed</b>	<b>economics</b>	1939:11,13
1952:3,9,17,19	1921:12	1949:19	1948:21	1941:25 1945:5
<b>cost-effective</b>	<b>customers</b>	<b>different</b> 1939:24	1952:18	1946:21
1946:25	1927:1 1935:14	1944:4	<b>effect</b> 1940:13	1947:11
<b>counsel</b> 1922:1,2	1935:16 1947:9	<b>dioxide</b> 1937:24	1946:21	1950:16
1922:2,3,3,6,8	1947:24	1938:20	<b>effective</b> 1944:13	<b>EPA</b> 1927:18
1922:9,10,10	<b>cuts</b> 1952:7	1941:15 1942:4	<b>effects</b> 1945:4	1941:8 1942:25
1922:11,11,12	<b>Cydney</b> 1922:12	1942:7,15	<b>efficiency</b>	<b>EPA's</b> 1928:7,13
1923:14	1929:16	<b>direct</b> 1930:23	1943:16,23	1950:5
1929:16 1930:3		1934:17	1952:20	<b>ER-2014-0258</b>
1936:13,25	<b>D</b>	1937:15,19	<b>efficient</b> 1947:1	1920:14 1923:6
1939:10	<b>D</b> 1922:2,12	1941:12,23	1952:12,23	<b>ESP</b> 1923:8
<b>Counsel/Electric</b>	1923:1 1956:1	1943:1 1953:25	<b>efforts</b> 1925:2	1928:23
1922:8	1957:10,12	1956:7 1957:10	<b>either</b> 1929:3	1930:24
<b>Counsel/Gas</b>	<b>DALE</b> 1922:9	<b>directly</b> 1931:11	<b>Electric</b> 1920:13	1931:13
1922:9	<b>damaged</b>	<b>DISCUSSION</b>	1920:15 1921:3	<b>ESPs</b> 1924:14,21
<b>counting</b> 1944:25	1925:18	1945:24	1921:10	1924:22 1925:4
<b>country</b> 1947:1,4	<b>Dan</b> 1939:8	<b>discussions</b>	<b>electrostatic</b>	1925:5,7,9,23
<b>County</b> 1958:4	<b>data</b> 1947:2	1939:6,17,20	1924:20	1925:24 1926:6

1926:10 1928:5	<b>existing</b> 1924:25	1958:19	<b>four</b> 1925:4	1943:21
1929:5 1930:16	1938:22 1942:1	<b>federal</b> 1924:23	<b>frequent</b> 1939:16	1944:25 1952:4
1930:20	1942:10,12	<b>File</b> 1920:14	<b>fuel</b> 1924:2	1952:10
1931:24 1956:2	1944:20	1927:5	1947:6 1957:8	<b>getting</b> 1951:15
<b>essentially</b>	1949:13	<b>filed</b> 1923:23,23	<b>full</b> 1952:17	1952:1
1938:13	<b>expansion</b>	1924:3,7	1958:12	<b>gigawatts</b>
1940:11	1943:22	1925:20	<b>fully</b> 1923:19	1938:22,23
<b>establish</b> 1943:12	<b>expect</b> 1952:11	1928:12 1931:2	<b>further</b> 1936:5	1950:7,9,9,14
<b>established</b>	1952:20	1935:3	1940:17	1952:6,7
1926:24	<b>expectations</b>	<b>filing</b> 1927:3,4,8	1953:16	<b>Given</b> 1958:15
1930:14	1947:21	1928:11,13,16	<b>future</b> 1932:6	<b>go</b> 1923:4 1924:6
1937:24	<b>expecting</b> 1943:9	1941:6 1945:4	1937:10	1945:21
<b>establishing</b>	<b>expenditures</b>	1945:10	1939:22 1940:8	1946:15 1948:1
1926:14	1947:12,15	1946:20 1949:5	1942:8 1945:5	<b>goes</b> 1948:10
<b>estimation</b>	<b>expensive</b> 1944:8	1949:11,13	1946:21	<b>going</b> 1924:5
1940:15	<b>experts</b> 1939:7	<b>final</b> 1927:18,21	1947:21	1939:22 1942:8
<b>evaluate</b> 1933:3	1941:23	1928:7		1942:17,18,22
1933:19	<b>explains</b> 1928:12	<b>find</b> 1930:14	<b>G</b>	1946:5,7,8
1949:20	<b>explicit</b> 1938:19	1946:3	<b>G</b> 1923:1	1951:6
<b>evidence</b> 1926:13	1942:7,14,20	<b>finding</b> 1929:3	<b>Garrett</b> 1921:12	<b>good</b> 1923:25
1926:19 1928:8	1949:18	<b>finished</b> 1953:19	<b>gas</b> 1927:17,19	1930:7 1934:8
1929:2 1932:1	<b>expressed</b>	<b>firm</b> 1958:6	1932:7,9,12,19	1937:6,7
1936:6,10	1928:19	<b>firms</b> 1944:9	1937:14 1938:5	1952:19
1953:8 1954:1	<b>Ezra</b> 1953:23	<b>first</b> 1925:13	1938:11,16	<b>graph</b> 1953:1
1954:12 1956:5	1957:10,12	1926:17	1942:24	<b>Great</b> 1921:18
<b>Evidentiary</b>	<b>E0-2015-0084</b>	1931:11 1934:7	1943:16,19,20	1924:12
1920:8	1927:5	1934:9 1946:24	1947:22	<b>greenhouse</b>
<b>exactly</b> 1940:15	<b>F</b>	<b>flaw</b> 1927:15	<b>gases</b> 1937:10	1927:17,19
<b>Examination</b>	<b>F</b> 1958:1	<b>flawed</b> 1926:16	<b>general</b> 1925:12	1932:7,9,12,19
1934:17 1956:7	<b>FAC</b> 1923:15,17	1933:23	1926:17	1937:10,14
1956:8	1923:19	<b>flaws</b> 1931:8	1939:10	1938:5,11,16
<b>examine</b> 1951:23	<b>face</b> 1932:11	<b>folks</b> 1939:17	<b>generally</b>	1942:24
<b>examining</b>	<b>facing</b> 1933:13	1941:23	1951:17	<b>group</b> 1923:16
1926:24	1937:19	<b>follows</b> 1934:16	<b>generate</b> 1943:22	<b>growth</b> 1947:22
<b>exception</b>	<b>fact</b> 1927:16	<b>forecast</b> 1947:19	<b>generated</b>	<b>H</b>
1925:17	1932:10	<b>foregoing</b>	1943:11	<b>happen</b> 1942:22
<b>exhibit</b> 1934:14	1947:24	1958:12	<b>generating</b>	1942:23
1935:6 1936:12	<b>fail</b> 1931:9	<b>form</b> 1927:18,21	1925:4 1926:21	<b>happy</b> 1934:2
1951:1,4,7,8,11	<b>failed</b> 1926:12	<b>formally</b> 1929:15	1938:10	<b>Haro</b> 1923:21
1951:16,17,20	<b>fails</b> 1930:18	1953:21	1943:18	<b>Hausman</b>
1953:2,8,10	<b>falls</b> 1950:10	<b>formerly</b>	<b>generation</b>	1953:23
1954:11 1957:3	<b>fatal</b> 1931:8	1939:11	1938:23	1957:11,13
1957:5,7,10,12	<b>fatally</b> 1933:23	<b>forms</b> 1939:21	1943:17,20,24	<b>HC</b> 1951:3,5
<b>exhibits</b> 1935:4	<b>favor</b> 1946:10	1944:1,4,21	1944:21,22	1954:2,5
1935:21 1936:6	<b>Feddersen</b>	<b>forth</b> 1958:10	1949:18 1952:5	<b>hear</b> 1923:21
1936:9 1957:1	1920:24 1958:5	<b>forum</b> 1926:18	1952:6	<b>heard</b> 1923:7
1957:2,9		<b>forward</b> 1939:22	<b>generators</b>	

<p><b>hearing</b> 1920:8 1923:2,6 1926:8 1954:9 1955:4 <b>Heinz</b> 1921:12 <b>HELD</b> 1945:25 <b>HENRY</b> 1921:17 <b>highly</b> 1951:15 1952:2 <b>Honor</b> 1929:13 1929:19 1930:5 1932:24 1936:4 1936:21,24 1937:1,4 1940:18 1941:2 1945:11,19 1948:9 1950:25 1951:11,18 1953:7,9,21 <b>horizon</b> 1927:1,7 1939:23 <b>hour</b> 1943:10 <b>houses</b> 1942:18 <b>huge</b> 1932:22</p> <hr/> <p style="text-align: center;"><b>I</b></p> <p><b>identical</b> 1944:15 <b>IDENTIFICA...</b> 1934:15 1951:9 <b>identified</b> 1950:2 <b>IL</b> 1921:21 <b>impact</b> 1928:2 1950:5 <b>impacts</b> 1928:13 <b>implement</b> 1941:8 <b>implementing</b> 1927:19 <b>impose</b> 1942:12 1944:24 <b>imposed</b> 1950:17 <b>impossible</b> 1928:1 <b>improvements</b> 1925:6 <b>imprudent</b> 1926:11</p>	<p><b>inclined</b> 1928:3 1936:9 <b>include</b> 1925:11 1929:4 1945:9 1946:19 1948:25 1949:17 <b>included</b> 1927:20 1938:18 1941:6 1941:13 1944:17 1945:3 1947:19 1948:7 1948:18 1949:4 1949:21 <b>includes</b> 1931:13 1939:8 1943:15 1947:6 <b>including</b> 1928:14 1932:7 1949:22 <b>Increase</b> 1920:14 <b>increases</b> 1943:15,16,23 <b>incur</b> 1943:18 <b>INDEX</b> 1957:1 <b>indicated</b> 1936:12 1946:2 1947:8 <b>indicator</b> 1952:19 <b>indirect</b> 1937:15 1941:7 1943:25 1944:1 <b>individual</b> 1931:14 1952:18 <b>information</b> 1929:18 1930:10 1933:18 1935:25 1951:16 1952:2 <b>initially</b> 1925:3 <b>inquire</b> 1934:13 <b>insofar</b> 1926:3 <b>install</b> 1925:22 <b>installation</b></p>	<p>1925:3,7,9 <b>installed</b> 1925:5 <b>instance</b> 1939:16 <b>instances</b> 1940:2 <b>instituted</b> 1944:13 <b>integrated</b> 1926:22 1949:1 <b>intensity</b> 1943:7 <b>interaction</b> 1941:23 <b>interactions</b> 1939:15 <b>interconnect</b> 1949:16 <b>internal</b> 1939:7 1941:22 <b>international</b> 1942:3 <b>intervenor</b> 1927:9 <b>investing</b> 1930:19 1947:9 <b>investment</b> 1925:11,14,15 1926:13 1928:25 1933:13 <b>investments</b> 1926:10 1930:15 1931:13,18,24 1933:8,19 <b>invite</b> 1928:15 <b>involve</b> 1942:3 1942:20 <b>involved</b> 1941:24 <b>in-camera</b> 1951:7 <b>in-service</b> 1925:25 <b>IRP</b> 1926:23 1927:3,8,12 1928:11 1931:2 1931:6,9,11,13 1932:4,9,18 1937:10 1938:2</p>	<p>1938:14 1940:3 1940:15 1941:6 1945:3,10 1946:20 1947:8 1948:6,16,17 1948:19 1949:5 1949:11,13,20 1950:21 <b>issue</b> 1923:7,8,10 1925:18 1926:8 1928:10 1929:20,24 1930:25 1931:3 1931:18 1933:8 1934:6 1948:8 1948:15,17,24 1948:25,25 1954:14 <b>issued</b> 1927:18 1927:21,23 <b>issues</b> 1923:15,24 1927:13 1928:22 1929:4 1954:17</p> <hr/> <p style="text-align: center;"><b>J</b></p> <p><b>JEFF</b> 1922:10 <b>Jefferson</b> 1920:10 1921:8 1922:5,14 1958:16 <b>job</b> 1934:24 <b>Joe</b> 1939:9,16 <b>JOHN</b> 1922:9 <b>JUDGE</b> 1920:18 1923:4,25 1924:4,13 1929:7,11 1930:2,6,12 1934:5,12 1936:11,17,22 1936:25 1937:2 1940:19,24 1945:14,20 1946:1,14 1948:11 1951:2 1951:12,22</p>	<p>1953:13,18 1954:2,5,9,13 1954:23 1955:2 <b>judgment</b> 1939:5 1940:12 <b>justified</b> 1947:16 <b>justify</b> 1926:13 1929:3</p> <hr/> <p style="text-align: center;"><b>K</b></p> <p><b>K</b> 1920:24 1921:2 1958:5 1958:19 <b>KCPL</b> 1949:25 <b>KCPL's</b> 1949:23 <b>keep</b> 1947:10 <b>KEEVIL</b> 1922:10 <b>Kellene</b> 1920:24 1958:5,19 <b>KEVIN</b> 1922:8 <b>kind</b> 1931:21 1933:14 1944:23 1948:2 <b>kinds</b> 1944:18 <b>know</b> 1924:1,1,5 1950:4 <b>knowledge</b> 1936:2 <b>known</b> 1924:20</p> <hr/> <p style="text-align: center;"><b>L</b></p> <p><b>L</b> 1920:18 1921:6 <b>Labadie</b> 1923:8 1924:13,21 1925:4,5,9,22 1926:6,10,14 1926:21 1927:6 1927:11,16 1928:2,5,14,17 1928:23 1929:5 1930:16,20,24 1931:12,15,25 1932:11,19 1937:19 1938:5 1938:15 1945:5 1945:16</p>
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1946:22,25 1947:2,8 1949:7 1952:9 1952:12,13,23 1956:2 <b>lack</b> 1942:5 <b>Lake</b> 1921:21 1949:24 <b>late</b> 1924:18 <b>law</b> 1920:18 1921:2,2,6,12 1921:17,18,20 1927:25 1942:1 1942:2 <b>Lcurtis@lawfi...</b> 1921:14 <b>leading</b> 1932:18 <b>legal</b> 1922:10,11 1922:11 1944:11 <b>legislation</b> 1942:13 <b>legislators</b> 1939:16 1941:24 <b>LELAND</b> 1921:12 <b>Let's</b> 1923:4 1954:23 <b>liable</b> 1952:22 <b>likelihood</b> 1939:21 1940:12 1942:22 <b>limitations</b> 1927:20 1944:11 <b>line</b> 1935:12 <b>Litigation</b> 1920:24 1958:7 <b>load</b> 1926:20 1938:25 1947:22 <b>long-term</b> 1926:14,20 1927:10 1928:16	<b>look</b> 1945:22 <b>looked</b> 1941:25 1942:16,20 <b>looks</b> 1931:15,16 1954:21 <b>lot</b> 1954:17 <b>Louis</b> 1921:4,19 1934:22 <b>lower</b> 1930:20 <b>lowest</b> 1947:5 1952:9 <hr/> <b>M</b> <hr/> <b>M</b> 1920:20 <b>Madison</b> 1922:4 1922:13 <b>magnitude</b> 1933:10 <b>main</b> 1931:8 <b>maintain</b> 1944:10 1947:13,15 <b>making</b> 1944:7 <b>Manager</b> 1935:1 <b>MARC</b> 1922:2 <b>MARCELLA</b> 1922:11 <b>March</b> 1920:9 <b>marked</b> 1934:15 1935:4,5 1951:1,8 1953:2 1957:2 <b>market</b> 1944:13 1947:19 <b>MATS</b> 1924:24 1925:1 1950:16 <b>Matt</b> 1928:10 1934:16,20 1956:6 1957:4 1957:5 <b>matter</b> 1920:13 1929:14 1930:9 <b>MATTHEW</b> 1921:2 <b>Mayfield</b> 1922:12 1929:13,16	1936:24 1956:3 <b>mean</b> 1941:11 <b>meaningful</b> 1933:15,15 <b>means</b> 1937:17 1937:22 1938:2 1943:8 <b>mechanisms</b> 1939:24 1943:13 <b>meet</b> 1926:25 1931:2,9 1938:25 <b>meeting</b> 1933:24 <b>megawatt</b> 1943:10 <b>Menne</b> 1939:10 <b>mentioned</b> 1941:21 <b>mentions</b> 1930:24 <b>MERA</b> 1950:12 <b>Meramec</b> 1949:22 <b>mercury</b> 1924:23 <b>Michels</b> 1928:10 1928:15 1934:8 1934:8,16,20 1934:23 1935:2 1936:5,7,14,15 1937:6 1941:4 1951:6,14 1953:17 1956:6 1957:6 <b>Midwest</b> 1920:24 1958:6 <b>MIEC</b> 1923:20 1954:25 <b>Mike</b> 1939:10 <b>mini</b> 1924:14 <b>minute</b> 1943:2 <b>Missouri</b> 1920:2 1920:10 1921:11 1922:12,15 1923:20 1924:18 1925:8	1925:22 1927:2 1934:22,25 1937:9,13 1945:3,9 1946:19 1949:21 1958:2 1958:16 <b>Missouri's</b> 1920:14 1925:1 1926:10 1928:9 1928:24 1938:14 1941:6 1948:24 1949:1 1949:6,22 <b>Mitten</b> 1921:6 1924:16 1934:17 1936:4 1936:15 1941:2 1941:3 1945:15 1946:18 1949:2 1950:25 1951:4 1951:10,13 1953:7,16 1954:8 1956:3 1956:7,8 <b>MO</b> 1921:4,8,13 1921:19 1922:5 1922:14 <b>modeling</b> 1932:18 1938:2 <b>moment</b> 1945:21 <b>Monday</b> 1924:7 1954:17,22 <b>money</b> 1930:17 1947:10 <b>months</b> 1927:24 <b>Montrose</b> 1949:23 <b>morning</b> 1930:7 1934:8 1937:6 1937:7 <b>MORRIS</b> 1920:18 <b>move</b> 1953:7,24 <b>moved</b> 1953:21 <b>MUETH</b> 1922:11	<hr/> <b>N</b> <hr/> <b>N</b> 1923:1 1956:1 <b>name</b> 1929:16 1934:18,20 <b>NATHAN</b> 1922:8 <b>natural</b> 1943:16 1947:22 <b>necessarily</b> 1940:14 <b>need</b> 1923:18,21 1927:13 1929:14 1930:8 1935:9,18 1948:4 1951:7 1954:16 <b>needed</b> 1932:1 1933:5 <b>negative</b> 1929:3 <b>neither</b> 1928:7 <b>net</b> 1930:19 1933:11 <b>new</b> 1930:15 1942:2,13,19 <b>non-market</b> 1944:12,15,18 <b>NOS</b> 1934:14 1954:11 <b>notes</b> 1958:13 <b>NP</b> 1935:4 1936:11 1954:3 1954:6 <b>number</b> 1931:4 1940:10,11 1951:2,11 <b>numbers</b> 1932:23 <hr/> <b>O</b> <hr/> <b>O</b> 1923:1 <b>Oak</b> 1921:21 <b>object</b> 1945:11 1951:19 <b>objection</b> 1936:18,20 1946:6,10 1948:9,12
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1953:10 1954:6 1954:8 <b>objections</b> 1924:9,10 <b>obligations</b> 1926:25 <b>obviously</b> 1938:24 <b>October</b> 1927:3 <b>offer</b> 1936:5 <b>offered</b> 1936:12 1954:6 <b>office</b> 1922:3,6 1923:13 1939:18 1958:15 <b>offset</b> 1943:24 <b>OFF-THE-RE...</b> 1945:24 <b>okay</b> 1923:25 1924:5,11 1936:22 1937:11 1942:17 1953:13,18 1954:15 <b>Olive</b> 1921:18 <b>ones</b> 1952:22 <b>ongoing</b> 1948:3 <b>open</b> 1928:5 <b>opening</b> 1928:21 1929:12,24 1930:4 1934:1 1934:4 1956:3 1956:3,4 <b>openings</b> 1924:15 <b>operate</b> 1932:20 1947:13,15,16 1947:25 1948:21 1952:21 <b>operating</b> 1935:13,15 1947:10,14 1952:19 <b>operation</b>	1927:24 1947:14 <b>operations</b> 1952:13 <b>operative</b> 1931:18 <b>OPITZ</b> 1922:3 1930:4 1937:1 <b>opportunity</b> 1933:2,4 1942:11 1945:22 <b>opposed</b> 1931:17 1937:15 <b>option</b> 1930:21 <b>order</b> 1944:11 1946:12 <b>outside</b> 1945:13 1948:10 1951:20 1953:11 <b>O&amp;M</b> 1947:6 1957:8 <b>O'Fallon</b> 1921:15 <b>O'Keefe</b> 1921:12 <hr/> <b>P</b> <b>P</b> 1923:1 <b>page</b> 1935:12 1944:5 <b>Park</b> 1921:21 <b>part</b> 1925:19 1929:21 1932:14 1938:10 1948:23 1949:18 <b>participant</b> 1927:9 <b>participation</b> 1933:16 <b>particular</b> 1940:13 1944:10 1953:1 <b>parties</b> 1923:15 1923:17 1924:5	1925:19 1926:19 1929:23 1933:18 1934:6 1953:23 <b>party</b> 1925:21,23 1926:9 1948:5 <b>passage</b> 1942:2 <b>passes</b> 1942:18 <b>PAYNE</b> 1922:11 <b>percent</b> 1932:10 1937:13,18 1938:3,14,19 1939:4 1940:10 1941:5,12,19 1942:21 <b>percent/15</b> 1941:19 <b>personally</b> 1958:8 <b>perverse</b> 1932:18 <b>Ph.D</b> 1957:11,13 <b>piece</b> 1932:1 1953:20 <b>place</b> 1958:9,14 <b>placed</b> 1924:19 <b>plan</b> 1927:6,20 1941:9 1943:3 1943:19 1944:18 1949:1 1950:6,16 <b>planning</b> 1926:22 1927:1 1927:7 1939:23 <b>plans</b> 1925:3 1926:25 1928:14 1949:20 <b>plant</b> 1931:16 1932:11 1935:13,15 1938:15 1943:16 1947:10,14,15 1947:17 1948:1 1949:23 <b>plants</b> 1924:25	1932:14,17,21 1949:6,13,15 1952:11 <b>plates</b> 1925:18 <b>please</b> 1924:16 1930:8 1934:18 <b>point</b> 1936:19 1946:14 <b>pointed</b> 1929:20 <b>policies</b> 1939:24 1940:8 1944:7 1944:17,19 <b>policy</b> 1939:21 1944:12,16 1947:21 1950:13 <b>policymakers</b> 1939:15 <b>political</b> 1942:6 <b>polluting</b> 1944:8 <b>possibilities</b> 1942:1 <b>possible</b> 1931:14 1932:24 1946:9 1951:14 <b>POSTON</b> 1922:2 <b>potential</b> 1928:13 1937:9 <b>power</b> 1924:25 1927:20 1932:13 1939:2 1939:9,16 1941:9 1943:3 1943:15,19 1944:18 1947:1 1950:6,15 <b>practice</b> 1924:10 <b>precipitators</b> 1924:20 1929:1 1930:15 <b>prefiled</b> 1935:9 1953:25 <b>preliminary</b> 1929:14 <b>prepare</b> 1935:2 <b>present</b> 1926:19 1930:18,19	1933:11 1958:8 <b>presented</b> 1933:22 <b>president</b> 1939:8 1939:9,11,13 1942:19 <b>Presiding</b> 1920:18 <b>previously</b> 1925:20 1953:3 <b>price</b> 1937:23 1938:20 1940:1 1940:2 1941:15 1942:7,15,20 1944:13,13 1947:19 <b>prices</b> 1939:2 1944:3 1947:22 <b>pricing</b> 1949:19 <b>primary</b> 1928:10 <b>prior</b> 1925:25 <b>probabilities</b> 1940:8 1941:19 <b>probability</b> 1932:11 1937:14,19 1938:3,15 1939:4,23 <b>probably</b> 1952:25 1954:18 <b>proceeding</b> 1948:6,8 <b>proceedings</b> 1920:7 1958:8 1958:11 <b>process</b> 1926:23 1933:16 1940:5 1940:7 1946:10 <b>production</b> 1947:3,5 1952:3,9,16 1957:7 <b>projects</b> 1930:24 <b>promulgated</b> 1943:4 <b>proof</b> 1931:2
--	--	---	---	---

1933:25	1929:24 1934:2	<b>reasons</b> 1926:17	1932:7,9,15,20	1932:6
<b>proper</b> 1926:18	1934:4 1935:21	1946:24	1937:14,20	<b>requires</b> 1933:11
<b>properly</b> 1931:6	1936:5 1937:1	<b>rebuttal</b> 1931:1	1938:5,11,21	<b>requiring</b> 1943:9
<b>propose</b> 1948:6	1937:3,8	1931:20 1935:3	1942:10,19	1944:9
<b>proposed</b>	1940:17,20,22	1935:12 1957:4	1943:15 1945:1	<b>resolve</b> 1923:19
1928:14	1940:25 1941:5	<b>recall</b> 1941:9	1945:5 1946:21	1923:23
1942:25 1943:4	1945:6 1949:4	1945:6 1949:7	1950:17	<b>resolved</b> 1925:19
1943:6	1949:8 1951:6	<b>receipt</b> 1954:7	<b>regulators</b>	1954:18
<b>provide</b> 1933:17	1951:19	<b>received</b> 1954:10	1939:15	<b>resource</b> 1926:22
1943:6,13	1953:11,17	1954:12	1941:24	1949:1,20
<b>provided</b>	<b>quick</b> 1929:14	<b>recessed</b> 1955:4	<b>regulatory</b>	<b>resources</b>
1929:17	<b>quite</b> 1932:24	<b>record</b> 1934:19	1920:18 1932:6	1926:24
1930:10 1932:3		1945:21,23	1937:23	<b>responded</b>
1953:3,5	<b>R</b>	1946:2	<b>related</b> 1947:12	1931:1
<b>providing</b>	<b>R</b> 1923:1 1958:1	<b>recovery</b> 1933:13	<b>relative</b> 1949:14	<b>response</b> 1932:14
1925:15	<b>raised</b> 1930:25	1933:20	<b>relevant</b> 1926:4	1938:10
<b>provisions</b>	1931:5	<b>recross</b> 1940:25	1927:7,11	1941:21
1943:1	<b>ran</b> 1950:3	<b>REC'D</b> 1957:2	1928:17,23	1945:14
<b>proxy</b> 1952:17	<b>range</b> 1932:5	<b>redirect</b> 1941:1	<b>reliable</b> 1947:13	1948:24 1953:3
<b>prudence</b>	1933:12 1940:1	1956:8	<b>reliance</b> 1931:8	1953:5
1931:12 1932:2	1947:20	<b>reduce</b> 1938:24	<b>relied</b> 1941:22	<b>rest</b> 1923:24
1933:5,19	1950:10,14	<b>reduction</b> 1943:9	<b>relying</b> 1931:1	<b>result</b> 1932:12,18
<b>prudent</b> 1930:16	<b>rate</b> 1923:6	1943:9	<b>remember</b>	1938:21 1939:1
<b>Public</b> 1920:3	1925:11,12	<b>reductions</b>	1945:20	1944:14 1950:6
1922:1,2,2,3,3	1926:4,7,17	1942:4 1943:6	<b>remove</b> 1923:17	1950:15
1922:6,7,12,15	1927:14	1944:15	<b>renewable</b>	<b>results</b> 1950:5
1923:14 1930:2	1928:17 1929:5	<b>referenced</b>	1943:22	<b>retire</b> 1932:14
1936:25	1943:7	1945:12	<b>repeat</b> 1946:16	1938:9
<b>purposes</b> 1931:7	<b>ratepayer</b>	<b>reflect</b> 1947:20	<b>repercussions</b>	<b>retired</b> 1952:22
<b>P.C</b> 1921:7	1930:17	<b>regard</b> 1938:1	1944:11	<b>retirement</b>
<b>P.O</b> 1921:3,8	<b>ratepayers</b>	<b>regarding</b>	<b>replacement</b>	1930:21
1922:4,13	1930:21	1926:20	1944:21	1931:14,15,25
<b>Q</b>	<b>rates</b> 1926:7	1927:10 1928:5	<b>report</b> 1944:2,6	1938:22 1947:7
<b>qualitative</b>	1929:5	1928:23 1945:4	1946:11	1949:7,13
1939:5	<b>ratification</b>	1947:2	<b>REPORTED</b>	1950:2
<b>quantitative</b>	1942:2	<b>regime</b> 1937:23	1920:23	<b>retirements</b>
1940:4,7	<b>reached</b> 1929:22	1940:13	<b>reporter</b> 1929:17	1944:20
<b>question</b> 1926:5	<b>really</b> 1929:23	1941:16	1930:11	1949:18,21,21
1928:15 1932:2	1942:21	1943:18	1945:22 1946:2	1950:8,15,20
1932:24 1933:6	1946:24	<b>regulation</b>	1946:4 1951:9	<b>retiring</b> 1949:5
1941:22 1942:9	1947:18 1948:1	1932:12	1958:6	1950:1
1945:12,16,19	<b>reason</b> 1945:8	1937:10	<b>represent</b>	<b>retrofit</b> 1933:10
1946:3,7,9,15	1946:23 1948:1	1938:16 1941:7	1940:12	<b>Revenues</b>
1946:17 1953:1	<b>reasonable</b>	1941:25 1942:1	<b>request</b> 1947:2	1920:14
<b>questions</b>	1925:14	1942:12,14	1953:4,6	<b>review</b> 1933:2
1927:10 1929:8	1928:25 1932:5	1944:1,4,23	<b>required</b> 1924:22	1946:4,6
	1933:12	<b>regulations</b>	<b>requirements</b>	1948:13

1949:14	<b>scenarios</b>	<b>showing</b> 1930:19	<b>staged</b> 1925:3	1921:21 1922:4
1952:16	1938:19	<b>shown</b> 1935:22	<b>stakeholder</b>	<b>summer</b> 1927:22
1953:15	1941:20	1951:3,16	1933:16	<b>supply</b> 1938:24
<b>right</b> 1923:4	1947:20	<b>shows</b> 1951:17	<b>standards</b>	<b>supply/demand</b>
1934:5 1936:22	1949:19 1950:2	1952:1,8	1924:24	1939:1
1940:5,24	1950:21	<b>shut</b> 1952:12	<b>standing</b> 1933:1	<b>sure</b> 1941:21
1954:23	<b>scheduled</b> 1936:7	<b>Sibley</b> 1949:23	<b>start</b> 1954:18,23	1951:5 1954:25
<b>risks</b> 1932:5	<b>scope</b> 1945:13	<b>Sierra</b> 1921:23	<b>started</b> 1923:5,9	<b>surrebuttal</b>
1933:12	1948:10	1926:9,11,16	1928:22	1935:5 1953:25
<b>Rivers</b> 1921:18	1951:20	1927:8,15	<b>state</b> 1920:2	1957:5,12
<b>rmitten@bryd...</b>	1953:11	1928:6,19	1934:18 1943:7	<b>Swarengen</b>
1921:9	<b>SCOTT</b> 1920:20	1930:6,10,13	1958:2,16	1921:7
<b>Road</b> 1949:24	<b>SC-020</b> 1953:6	1930:24	<b>statement</b>	<b>sworn</b> 1934:11
<b>ROBERTSON</b>	<b>se</b> 1944:8	1936:18 1937:2	1928:22 1934:1	<b>Synapse</b> 1944:2
1921:17	<b>second</b> 1925:14	1948:3,5,14	1956:3,3,4	
<b>RPR</b> 1920:24	1927:15 1932:4	1953:3 1954:11	<b>States</b> 1952:4,10	<b>T</b>
1958:19	<b>Section</b> 1943:5	1957:9	<b>stations</b> 1947:1	<b>T</b> 1920:20 1958:1
<b>rule</b> 1943:4	<b>see</b> 1943:21	<b>signed</b> 1942:19	<b>Stenotype</b>	1958:1
<b>rules</b> 1927:17,19	<b>seeing</b> 1950:22	<b>similar</b> 1941:17	1958:11,13	<b>take</b> 1932:4
1927:23 1928:2	<b>seeks</b> 1925:11	<b>solution</b> 1943:20	<b>STEPHEN</b>	<b>takes</b> 1933:11
1928:7,14	1933:20	<b>sorry</b> 1951:10	1920:20	<b>talk</b> 1952:1
1940:15 1941:8	<b>seen</b> 1950:4	<b>sought</b> 1933:13	<b>stipulation</b>	<b>talked</b> 1943:2
1942:24 1943:6	<b>Senior</b> 1922:2,9	<b>sources</b> 1950:22	1925:20	<b>targets</b> 1943:13
<b>ruling</b> 1936:13	1922:10,12	<b>South</b> 1921:13	<b>stipulations</b>	<b>Tariff</b> 1920:14
1946:4,5,9,11	1935:1	<b>special</b> 1948:7,15	1924:6	<b>Tatro</b> 1921:2
1948:12,12	<b>September</b>	1948:25	<b>Stoll</b> 1920:20	1923:10,12
1951:23,24	1948:16	<b>specific</b> 1941:15	1929:8,25	1924:2,12
1953:14	<b>series</b> 1939:6,19	1943:6 1945:4	1934:3 1940:20	1954:20,25
1957:14	<b>service</b> 1920:3,15	1945:9 1951:15	1940:21	<b>tax</b> 1941:16
<b>RUPP</b> 1920:20	1922:12,16	<b>specifically</b>	<b>Street</b> 1921:18	1943:1,17,20
1929:10	1924:19	1930:18 1938:1	1921:21 1922:4	1944:14
1940:23	1925:16	1944:6	1922:13	<b>tbyrne@amere...</b>
<b>RUSSELL</b>	1926:25	<b>specifics</b> 1933:8	<b>studies</b> 1950:12	1921:5
1921:6	<b>services</b> 1920:24	<b>speculation</b>	<b>subject</b> 1946:9	<b>technology</b>
	1939:9,12,13	1928:6,7	<b>subjective</b>	1944:9
<b>S</b>	1958:7	<b>spent</b> 1925:22	1940:14	<b>tell</b> 1941:18
<b>S</b> 1923:1	<b>set</b> 1926:7 1929:5	<b>ss</b> 1958:3	<b>submit</b> 1924:6	<b>term</b> 1942:5
<b>safe</b> 1947:13	1958:9	<b>St</b> 1921:4,19	<b>substantial</b>	<b>terms</b> 1947:3,5
<b>satisfied</b> 1925:24	<b>settlement</b>	1934:22	1928:8	<b>testified</b> 1934:16
<b>save</b> 1947:9,24	1923:11,13,22	<b>stacks</b> 1947:3	<b>sufficient</b>	1936:14
<b>saves</b> 1935:15	1929:21	<b>Staff</b> 1922:8,12	1933:18	<b>testify</b> 1936:8
<b>saw</b> 1924:4	<b>sheet</b> 1958:10	1922:15	<b>suggest</b> 1948:15	<b>testifying</b> 1934:9
<b>saying</b> 1950:6	<b>Shorthand</b>	1923:14	<b>suggested</b>	<b>testimony</b>
<b>says</b> 1935:13	1958:6	1929:11,16,19	1948:18	1928:12,18
1944:6	<b>show</b> 1928:18	1929:23	<b>suggesting</b>	1930:23,25
<b>scale</b> 1952:4	<b>showed</b> 1947:24	1936:23	1948:3	1931:20 1935:3
<b>scenario</b> 1950:8	1950:13	<b>Staff's</b> 1925:24	<b>Suite</b> 1921:13,18	1935:5,10,12



1953:22 1954:1 1957:4,5,10,12 <b>Thank</b> 1929:9,11 1929:25 1930:2 1930:12 1934:4 1934:12 1946:13 1953:17 <b>thereof</b> 1958:10 <b>things</b> 1925:13 <b>think</b> 1923:14,15 1954:20 <b>Thomas</b> 1921:20 1930:9 <b>THOMPSON</b> 1922:8 1954:21 <b>thoroughly</b> 1927:7 <b>three</b> 1923:15 <b>throws</b> 1932:23 <b>time</b> 1929:14,19 1929:23 1934:9 1935:10 1936:10 1938:8 1958:9,14 <b>TIMOTHY</b> 1922:3 <b>title</b> 1934:24 <b>today</b> 1923:7,23 1933:1 1935:22 1954:16 <b>TOMC</b> 1921:2 <b>ton</b> 1937:24 <b>toxic</b> 1924:24 <b>trade</b> 1941:16 1943:18 <b>transcript</b> 1920:7 1946:7 1948:13 1951:24 1953:15 1958:13 <b>transparency</b> 1933:15 <b>treaty</b> 1942:3 <b>triennial</b> 1927:3 <b>true</b> 1936:1	1938:13 1958:12 <b>true-up</b> 1926:1 <b>try</b> 1931:2 <b>two</b> 1925:13 1926:17 1931:8 1941:20 1944:4 1954:22 <b>types</b> 1944:7 <hr/> <b>U</b> <hr/> <b>umbrellas</b> 1939:17 <b>unaffected</b> 1932:21 <b>understand</b> 1923:10 <b>understanding</b> 1937:12 1939:3 <b>unfounded</b> 1928:20 <b>Union</b> 1920:13 1921:3,10 <b>unit</b> 1925:6,9 1931:12,13 1948:22 1952:18 <b>United</b> 1952:4,10 <b>units</b> 1924:21,23 1925:4,8 1926:21 1930:16,20,22 1931:15,25 1932:1 1937:20 1938:10 1945:6 1945:10,17 1946:22 1947:4 1949:23 1950:1 1952:20,21,24 <b>unit-by-unit</b> 1948:19 <b>unit-level</b> 1948:2 <b>unit-specific</b> 1945:16 1946:20 1948:7 <b>unreasonable</b> 1925:23	<b>uplift</b> 1939:1 <b>urges</b> 1930:13 <b>use</b> 1926:25 1930:16 1944:9 1949:19 <b>useful</b> 1925:15 1926:2 1929:1 <b>utilities</b> 1943:14 1950:23 <b>utility</b> 1925:11 1926:24 1933:17,20 <b>U.S</b> 1938:23 <hr/> <b>V</b> <hr/> <b>value</b> 1929:4 1930:19 1933:11 <b>variability</b> 1938:4 <b>variable</b> 1947:6 1957:8 <b>various</b> 1939:21 1941:20 1943:11 <b>vary</b> 1924:10 <b>vehicle</b> 1926:23 <b>versions</b> 1954:3 <b>versus</b> 1931:25 <b>viability</b> 1926:14 1926:20 1927:11 1928:17 1948:3 <b>vice</b> 1939:9,11,12 <b>virtually</b> 1927:25 <b>Volume</b> 1920:10 <hr/> <b>W</b> <hr/> <b>waive</b> 1930:4 <b>waived</b> 1953:23 <b>want</b> 1946:3 1954:16 <b>Washington</b> 1939:18 <b>wasn't</b> 1940:4 1948:1 <b>way</b> 1928:22	1941:13 <b>week</b> 1936:8,14 <b>weeks</b> 1927:24 <b>week's</b> 1924:8 <b>WENDY</b> 1921:2 <b>went</b> 1953:11 <b>we'll</b> 1924:10,14 1934:7 1936:13 1954:16 <b>we're</b> 1923:5 1950:22 <b>we've</b> 1941:13 1950:4 1954:21 <b>WHITNEY</b> 1922:11 <b>WILLIAMS</b> 1922:8 <b>witness</b> 1928:9 1928:19 1934:7 1934:10,11 1946:8,16 1948:14 1951:19,25 1953:22 <b>witnesses</b> 1923:18,24 1954:22 <b>WOODRUFF</b> 1920:18 1923:4 1923:25 1924:4 1924:13 1929:7 1929:11 1930:2 1930:6,12 1934:5,12 1936:11,17,22 1936:25 1937:2 1940:19,24 1945:14,20 1946:1,14 1948:11 1951:2 1951:12,22 1953:13,18 1954:2,5,9,13 1954:23 1955:2 <b>words</b> 1932:16 <b>work</b> 1944:7 1948:17	<b>works</b> 1923:11 <b>wouldn't</b> 1933:1 <hr/> <b>X</b> <hr/> <b>X</b> 1956:1 <hr/> <b>Y</b> <hr/> <b>year</b> 1931:17,17 1931:18 <b>years</b> 1925:2 <b>yesterday</b> 1924:3 <hr/> <b>Z</b> <hr/> <b>zero</b> 1932:11 1938:4 <hr/> <b>\$</b> <hr/> <b>\$3.6</b> 1935:14,16 1947:9,25 <hr/> <b>1</b> <hr/> <b>1</b> 1924:21 1925:8 1930:16,20 1931:12,25 1937:20 1945:6 1945:17 1946:22 <b>10</b> 1954:24 <b>10:00</b> 1923:3 <b>10:39</b> 1955:5 <b>100</b> 1950:7,9,14 <b>1101</b> 1921:21 <b>111(D)</b> 1943:5 <b>12</b> 1935:12 <b>120</b> 1938:21 1950:9 <b>130</b> 1921:13 <b>15</b> 1941:12,14 1942:21 <b>1901</b> 1921:4 1934:21 <b>1924</b> 1956:3 <b>1929</b> 1956:3 <b>1930</b> 1956:4 <b>1934</b> 1956:7 <b>1937</b> 1956:7 1957:4,6 <b>1941</b> 1956:8
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<p><b>1951</b> 1957:8  <b>1954</b> 1957:11,13</p> <hr/> <p style="text-align: center;"><b>2</b></p> <p><b>2</b> 1924:21 1925:8  1930:16,20  1931:13,25  1937:20 1945:6  1945:17  1946:22  <b>20-year</b> 1927:1  1939:22  <b>200</b> 1921:13  1922:4,13  <b>2013</b> 1948:16  <b>2014</b> 1924:18  1926:1 1927:3  1938:14  1948:15  <b>2015</b> 1920:9  <b>2016</b> 1925:6  1931:17  <b>2023</b> 1931:17  1947:8  <b>2025</b> 1942:23  <b>2230</b> 1922:4  <b>250</b> 1952:7  <b>26</b> 1935:21  1936:6  <b>26HC</b> 1934:14  1935:4 1936:11  <b>26NP</b> 1934:14  <b>26NP/HC</b> 1957:3  <b>27</b> 1934:15  1935:6,21  1936:6,12  1957:5  <b>28</b> 1920:10</p> <hr/> <p style="text-align: center;"><b>3</b></p> <p><b>3</b> 1925:9  <b>300</b> 1952:6  <b>300-plus</b> 1938:22  <b>31st</b> 1925:25  <b>312</b> 1921:7  <b>312)257-9338</b>  1921:22</p>	<p><b>314)231-4181</b>  1921:19  <b>314)554-2237</b>  1921:5  <b>314)725-8788</b>  1921:14  <b>360</b> 1922:13</p> <hr/> <p style="text-align: center;"><b>4</b></p> <p><b>4</b> 1925:6  <b>405B</b> 1921:21  <b>456</b> 1921:8</p> <hr/> <p style="text-align: center;"><b>5</b></p> <p><b>573)635-7166</b>  1921:9  <b>573)751-3234</b>  1922:14  <b>573)751-4857</b>  1922:5</p> <hr/> <p style="text-align: center;"><b>6</b></p> <p><b>6</b> 1920:9 1944:5  <b>60301</b> 1921:21  <b>614</b> 1921:18  <b>63101</b> 1921:19  <b>63103</b> 1921:4  1934:22  <b>63105-1913</b>  1921:13  <b>65</b> 1951:2  <b>65HC</b> 1951:8,12  1951:16 1953:2  1953:8 1957:7  <b>650</b> 1922:4  <b>65102</b> 1922:14  <b>65102-0456</b>  1921:8  <b>65102-2230</b>  1922:5  <b>66149</b> 1921:3</p> <hr/> <p style="text-align: center;"><b>7</b></p> <p><b>705</b> 1921:18</p> <hr/> <p style="text-align: center;"><b>8</b></p> <p><b>80</b> 1938:21  1950:8</p>	<p><b>838</b> 1920:24  <b>85</b> 1932:10  1937:13,18  1938:3,14,19  1939:4 1940:10  1941:5,19</p> <hr/> <p style="text-align: center;"><b>9</b></p> <p><b>9</b> 1935:12  <b>90</b> 1950:14  <b>900</b> 1954:5  <b>900NP/HC</b>  1954:11  1957:10  <b>901</b> 1954:5  <b>901NP/HC</b>  1954:12  1957:12</p>		
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