

STATE OF NORTH DAKOTA  
PUBLIC SERVICE COMMISSION

Otter Tail Corporation :  
Advance Determination of : Case No. PU-06-481  
Prudence Application :

Montana-Dakota Utilities :  
Co., a Division of MDU :  
Resources Group, Inc., :  
Advance Determination of : Case No. PU-06-482  
Prudence Application :

TRANSCRIPT OF  
SUPPLEMENTAL HEARING

(VOLUME I)

Taken At  
State Capitol  
Bismarck, North Dakota  
April 28, 29 & 30, 2008

BEFORE THE HON. AL WAHL  
-- ADMINISTRATIVE LAW JUDGE --

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A P P E A R A N C E S

COMMISSIONERS PRESENT:

COMMISSIONER SUSAN WEFALD, President  
COMMISSIONER TONY CLARK  
COMMISSIONER KEVIN CRAMER

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FOR THE INTERVENORS.

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**A P P E A R A N C E S (Continued)**

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FOR THE PUBLIC SERVICE  
COMMISSION ADVOCACY  
STAFF.

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## C O N T E N T S

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**C O N T E N T S (Continued)**

**OTP EXHIBITS:**

No.	Description	Off'd	Rec'd
112	Prefiled Supplemental Direct Testimony of Ward Uggerud	838	839
112A	Summary of Ward Uggerud	838	839
113	Prefiled Ward Uggerud Exhibit NERC Assessment	838	839
114	Prefiled Ward Uggerud Exhibit Import Dependence on LNG Chart	838	839
115	Prefiled Ward Uggerud Exhibit Cost Estimate Comparison Graph	838	839
116	Prefiled Ward Uggerud Exhibit Graphical Comparison of Three Delivered Fuel Forecasts	838	839
117	Prefiled Supplemental Direct Testimony of Bryan Morlock	1024	1024
117A	Summary of Bryan Morlock	1024	1024
118	Prefiled Bryan Morlock Exhibit Summarized Table Demonstrating Need for BS II	1024	1024
119	Prefiled Rebuttal Testimony of Ward Uggerud	838	839
120	Prefiled Ward Uggerud Exhibit Trade Secret	838	839
121	Prefiled Ward Uggerud Exhibit Trade Secret	838	839
122	Prefiled Rebuttal Testimony of Bryan Morlock	1024	1024
<b>OTP/MDU EXHIBITS</b>			
324	Prefiled Supplemental Direct Testimony of Mark Rolfes	1009	1010

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**C O N T E N T S (Continued)**

No.	Description	Off'd	Rec'd
324A	Summary of Mark Rolfes	1009	1010
326	Prefiled Supplemental Direct Testimony of Jeffrey Greig	1087	1088
326A	Summary of Jeffrey Greig	1087	1088
327	Prefiled Jeffrey Greig Exhibit Updated Economic Evaluation of Baseload Generation Alternatives	1087	1088
335	Prefiled Rebuttal Testimony of Mark Rolfes	1009	1010
336	Prefiled Rebuttal Testimony of Jeffrey Greig	1087	1088

**INTERVENORS EXHIBITS:**

17	NERC 2007 Long-Term Reliability Assessment 2007-2016	873	873
18	Energy Information Administration - State Energy Profile - North Dakota	877	877
19	The Future of Coal	879	
20	Dakota Resource Council and Mark Trechock Data Request No. 33	918	919
21	Data request No. 24	1048	1049

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1                   (The proceedings were continued,  
2                   commencing at 9:01 a.m., Monday, April 28, 2008, as  
3                   follows:)

4                   JUDGE WAHL: Good morning. I am Al Wahl,  
5                   the administrative law judge designated by the  
6                   Office of Administrative Hearings pursuant to the  
7                   request of the North Dakota Public Service  
8                   Commission to act as the hearing officer for the  
9                   supplemental hearings of the Otter Tail Corporation  
10                  and Montana-Dakota Utilities Company advance  
11                  determination of prudence applications for their  
12                  respective participation and ownership interest in  
13                  the Big Stone II Generating Plant.

14                  The application of Otter Tail Corporation  
15                  is Public Service Case No. PU-06-481, and the  
16                  application of Montana-Dakota Utilities Co. is  
17                  Public Service Commission Case No. PU-06-482.

18                  Otter Tail, Montana-Dakota and other  
19                  utilities initially proposed to construct a  
20                  630-megawatt pulverized coal facility located  
21                  adjacent to the existing Big Stone Generating Plant  
22                  in Big Stone City, South Dakota. The companies  
23                  requested that the Commission determine the  
24                  construction of the Big Stone II facility to be  
25                  reasonable and prudent in order to provide the

1 basis for future rate stability proposals the  
2 companies will present to the Commission.

3 A hearing of the companies' applications  
4 was held in June 2007.

5 On September 17, 2007, the companies  
6 notified the Commission that two of the project  
7 co-owners had withdrawn from the project and  
8 requested the Commission to suspend further  
9 consideration of the applications until they  
10 developed a recommendation on how to proceed with  
11 the project. The Commission granted the request.

12 On October 4, 2007, the companies  
13 requested leave to supplement the record of the  
14 hearings, and on December 11, 2007, requested the  
15 Commission to establish a procedural schedule for  
16 supplemental hearings of their applications. Those  
17 requests were each granted, leading to these  
18 supplemental hearings today.

19 Before proceeding with the hearings, I  
20 will ask the Commissioners for their comments and  
21 any directions for the hearings. Commission  
22 President Susan Wefald.

23 COMMISSIONER WEFALD: Good morning. It  
24 seems something like deja vu because, as the  
25 hearing officer has already mentioned, we held a

1 hearing last June and the Commission was working  
2 hard on a final order when we received information  
3 from the applicants about the change in the  
4 application. And so to me it's a very unique  
5 opportunity that the Commission has to become very  
6 well-informed about this project before we make a  
7 final decision, and that's why I'm looking forward  
8 to this hearing today.

9 All the Commissioners have had a chance to  
10 look over the materials that have been provided by  
11 the companies prior to this hearing, and what I  
12 found was that it was easier, you know, to read  
13 these new supplemental materials than it was the  
14 original ones because of my background with this  
15 project and my understanding already of the  
16 project. And so I am looking forward to this  
17 hearing and the ability to make a very  
18 well-informed decision by the time we get to that  
19 point. Thank you.

20 JUDGE WAHL: Commissioner Tony Clark.

21 COMMISSIONER CLARK: Just good morning and  
22 welcome, look forward to a good hearing.

23 JUDGE WAHL: Commissioner Kevin Cramer.

24 COMMISSIONER CRAMER: I would say good  
25 morning and welcome, as well. I have to say,

1 similar to what Commissioner Wefald said, I found  
2 this reading -- reading all of the direct, as well  
3 as the rebuttal testimony -- I'll come up short of  
4 saying it was fun. I said that earlier and Bill  
5 corrected me. It was more interesting. I don't  
6 know it's any more interesting, but it was clearer  
7 to me as I read it, and to consider and to contrast  
8 the economics of 630 megawatts to 580 or 500  
9 megawatts was obviously much easier than it was the  
10 first time around.

11 I will say, I also want to compliment all  
12 of the parties in their prefiled testimony. It was  
13 very thorough, it was very easily understood, and  
14 it was very appropriate, so I think that will make  
15 the rest of this proceeding go easier. It answered  
16 more questions for me than it raised, which is  
17 always encouraging. Sometimes I read these things  
18 and I think, oh, wow, now I'm more confused than I  
19 was before, but that has not been the case in this  
20 particular case. So congratulations to everyone,  
21 including the intervenors, in their good work  
22 leading up to this and look forward to the rest of  
23 the process.

24 JUDGE WAHL: Thank you, Commissioners.  
25 The record will show that it is a little after 9:00

1 a.m., April 28, 2008, the time and date noticed for  
2 the supplemental hearings of the advance  
3 determination of prudence applications of Otter  
4 Tail Corporation and Montana-Dakota Utilities Co.  
5 for their respective participation and ownership  
6 interest in the Big Stone II Generating Plant,  
7 Public Service Commission Case Nos. PU-06-481 and  
8 PU-06-482, respectively.

9 The issues for these supplemental hearings  
10 remain as initially stated by the Commission for  
11 the hearings of these applications. First, whether  
12 the resource addition is reasonable and prudent;  
13 second, whether the applicants have need for  
14 additional generating resources; and, third, what  
15 alternatives exist for meeting additional  
16 generating needs.

17 Mr. Guerrero, will you state your  
18 appearance for the record, please?

19 MR. GUERRERO: Thank you, Your Honor.  
20 Todd Guerrero here on behalf of Otter Tail Power  
21 Company, along with Montana-Dakota Utilities.  
22 That's G-u-e-r-r-e-r-o. I'm with the law firm of  
23 Lindquist & Vennum, Minneapolis.

24 JUDGE WAHL: Mr. Kuntz, please.

25 MR. KUNTZ: Dan Kuntz for the applicant,

1 Montana-Dakota Utilities Co.

2 JUDGE WAHL: Mr. Breen, Ms. La Seur.

3 MR. BREEN: Attorney Jack Breen for  
4 intervenors.

5 MS. LA SEUR: Carrie La Seur for  
6 intervenors Dakota Resource Council and Mark  
7 Trechock. I'm from a nonprofit organization called  
8 Plains Justice headquartered in Cedar Rapids, Iowa.

9 JUDGE WAHL: Mr. Binek, please, and also  
10 identify each member of the Commission staff who  
11 will participate for the hearing.

12 MR. BINEK: My name is William Binek. I'm  
13 counsel for the Public Service Commission, and in  
14 this case I represent the Commission's advocacy  
15 staff. Seated to my right is Terry Deason, the  
16 Commission's expert witness, and to Mr. Deason's  
17 right is Mike Diller, who is a public utility  
18 analyst with the Commission.

19 JUDGE WAHL: All right. Counsel, I think  
20 we have at least by my note two preliminary  
21 matters. First, Mr. Guerrero, do you still  
22 maintain your request to offer certain witness  
23 testimony by telephone?

24 MR. GUERRERO: That's correct, Your Honor.  
25 That would be primarily witnesses Hewson, Klein and

1 Rogelstad for the reasons indicated in the e-mail  
2 that I had forwarded to you, Your Honor, on Friday,  
3 given -- and primarily the reason is that the  
4 Dakota Resource Council had kindly informed the  
5 applicants Friday that they had intended to waive  
6 cross-examination of witnesses Rolfes, Hewson, just  
7 had a few questions for Klein, and they intended to  
8 waive Mr. Rogelstad. Messrs. Hewson and Klein are  
9 coming in from out East, and given the fact that  
10 the Dakota Resource Council has indicated that they  
11 have few or no questions for them, we certainly  
12 want to make those witnesses available to the  
13 Commission and to the advocacy staff, but we're  
14 wondering whether or not it made sense to have  
15 those people -- persons appear by telephone really  
16 for the primary purpose of just saving cost.

17 Both of those witnesses -- or actually all  
18 three of those witnesses, Rogelstad, Klein and  
19 Hewson, are prepared to appear if that is the  
20 Commission and Your Honor's predilection, but  
21 they're also on standby in the event that we get  
22 word this morning.

23 Mr. Rolfes, the project manager, is here  
24 and we intend to present him live notwithstanding  
25 the DRC's waiver of his questioning. Thank you.

1 JUDGE WAHL: Mr. Kuntz, any objection?

2 MR. KUNTZ: No. Montana-Dakota joins in  
3 the request.

4 JUDGE WAHL: Ms. La Seur?

5 MS. LA SEUR: No objection.

6 JUDGE WAHL: Mr. Binek?

7 MR. BINEK: I have no objection.

8 JUDGE WAHL: Does the Commission have any  
9 objection to hearing these witnesses by telephone?

10 COMMISSIONER CRAMER: That's fine.

11 COMMISSIONER WEFALD: No. And we're still  
12 able to ask questions by telephone if we have them;  
13 isn't that correct?

14 JUDGE WAHL: Absolutely.

15 COMMISSIONER WEFALD: Okay.

16 JUDGE WAHL: All right. The request is  
17 granted. Witnesses Rogelstad, Klein and Hewson  
18 will be heard by telephone.

19 MR. GUERRERO: Your Honor, one  
20 clarification question. Does it make sense to try  
21 to schedule those witnesses for a time certain, or  
22 should we just put them on standby given the fact  
23 that they're not here?

24 JUDGE WAHL: You know, I really think you  
25 should advise those witnesses as best you can, but

1 I really think they're going to have to be  
2 available for my call just as if they were present  
3 at the hearing.

4 All right. Counsel, I next have Ms.  
5 La Seur, the intervenors' motion to strike  
6 supplemental prefiled rebuttal testimony of James  
7 Heidell. I have only one question with regard to  
8 your motion, Ms. La Seur, and that is -- I don't  
9 want to split hairs, but my question really is not  
10 whether intervenors had sufficient time to prepare,  
11 but whether they were prejudiced? There may be a  
12 difference. The question -- the issue really is in  
13 my mind, are the intervenors prejudiced by the late  
14 filing?

15 MS. LA SEUR: Well, it's difficult even to  
16 come up with an argument about whether or not we're  
17 prejudiced when we've had about 48 hours while  
18 traveling to the hearing site to take a look at  
19 this post-deadline exhibit. It's really just a  
20 matter of timing. I have no objection to Mr.  
21 Heidell's offering responsive testimony to Mr.  
22 Deason's critique, but it's an undue burden on the  
23 intervenors to attempt to review this information  
24 on such a short timeline and be prepared to  
25 respond.

1           JUDGE WAHL: So your representation is to  
2 me that you're unable to respond because of the  
3 lateness of the filing?

4           MS. LA SEUR: That's right.

5           JUDGE WAHL: Mr. Guerrero.

6           MR. GUERRERO: Actually, Mr. Kuntz is  
7 going to take this matter.

8           JUDGE WAHL: Mr. Kuntz.

9           MR. KUNTZ: Thank you. Just by way of  
10 background, as Ms. Stomberg will testify, after the  
11 withdrawal of the couple of participants, it  
12 provided an opportunity for the company to go back  
13 and revisit this particular project and try to  
14 update its modeling in light of changed conditions,  
15 and one of those conditions was the fact that the  
16 production tax credits are scheduled to expire.  
17 They have not been extended. So in one of the --  
18 we asked when we asked Mr. Heidell to remodel --  
19 rerun the models, that was one of the assumptions.  
20 Before he had assumed that the production tax  
21 credits would extend. We asked him to rerun the  
22 models with the assumption that they were going to  
23 expire, which they're scheduled to do. He reran  
24 the model and the result remained the same as what  
25 it was before when they were extended, that Big

1 Stone II was still an effective project.

2 But that wasn't the only update that was  
3 included in his rerun of the models. Mr. Deason in  
4 his testimony raised the question as to whether, if  
5 you assumed that the production tax credits would  
6 be extended rather than expire, would that change  
7 the result of this second run of models.

8 Intuitively --

9 MS. LA SEUR: Excuse me. Is Mr. Kuntz  
10 testifying?

11 MR. KUNTZ: I'm just providing background  
12 of how we got here, Your Honor, as to why it was  
13 filed when it was filed.

14 JUDGE WAHL: Let him proceed. If it was  
15 an objection, it's overruled.

16 MR. KUNTZ: Intuitively, internally we  
17 believed that based upon the prior modeling that in  
18 itself the expiration of or extension of the PTC  
19 credits would not make a difference in the results  
20 in Mr. Heidell's testimony. Mr. Heidell informed  
21 us, however, that he could not testify to that  
22 without rerunning the models, and basically with  
23 the assumption that the PTCs would be extended.  
24 When we learned that, we asked Mr. Heidell to  
25 reactivate the license for Strategist and run that

1 model.

2 He, however, wasn't able to complete that  
3 in time when we filed the supplemental testimony,  
4 so in the testimony we indicated that we were going  
5 to rerun the model, we would supplement the  
6 testimony, and we did that two days after when we  
7 filed the initial testimony, and the results were  
8 as we -- as at least we believed internally  
9 expected that it didn't make any result.

10 I think that the intervenors clearly have  
11 not been prejudiced because they've indicated to us  
12 previously that they no longer have the license for  
13 Strategist, so it's not like they were going to  
14 rerun the model themselves. They were provided the  
15 outputs. The results are what they are. Mr.  
16 Heidell will testify that that was the only thing  
17 that he changed in this latest testimony. What it  
18 does, it provides a further supplement of the  
19 record, if you will, to make perfectly clear the  
20 fact that in themselves the expiration of these  
21 PTCs, either extended or expired, will not change  
22 the result in terms of Big Stone being the  
23 preferred generation alternative. So it's as we  
24 expected and there is no prejudice to the  
25 intervenors, they know what the results were as we

1 expected.

2           What it does do, frankly, is the  
3 intervenors were complaining about the fact at page  
4 78 of Mr. Schlissel's testimony that we had assumed  
5 the expiration of the PTCs and, therefore,  
6 suggesting the result would have been otherwise.  
7 We've basically taken that argument away, so the  
8 extent that there's a prejudice, that's what it is,  
9 is that we've resolved one more question in this  
10 proceeding. So we would resist the motion and  
11 request that Mr. Heidell's testimony be received  
12 when offered.

13           JUDGE WAHL: All that being true, Mr.  
14 Kuntz, the problem is, this is a, seems to me, a  
15 due-process issue. That is, fundamentally you have  
16 a right to notice and an opportunity to be heard.  
17 You can't be heard if you can't prepare. Whether  
18 or not your view is correct the prejudice to the  
19 intervenors, I'm not sure you're in a position  
20 to -- to evidence that. I'm not -- I don't think  
21 I'm prepared to weigh whether or not the parties --  
22 the intervenors have been prejudiced based on your  
23 representation of what the testimony shows or  
24 doesn't show. I have a problem with missing the  
25 deadline in this case because it raises a due-

1 process question that I don't think I can  
2 adequately evaluate.

3 MR. KUNTZ: Well, I would disagree, Your  
4 Honor. I mean, first of all, this is written  
5 prefiled testimony. It's not like the intervenors  
6 didn't have the opportunity to run their own  
7 models. They had more than an opportunity to do  
8 discovery. They were provided with the output. I  
9 mean, it's unusual in due-process standpoint where  
10 you actually have the person's rebuttal testimony.  
11 It's not unusual in this proceeding -- before this  
12 Commission to have rebuttal given live. We've  
13 offered and agreed to do it by written testimony,  
14 so they not only -- they've had 48 hours more than  
15 they would have had if Mr. Heidell were getting on  
16 the stand giving this rebuttal testimony live,  
17 which is more typical than not with these type of  
18 proceedings. Like I said, they had the  
19 opportunity, if they wanted to run this themselves,  
20 they could have run it to see if there was a  
21 particular difference. So I would beg to differ.

22 I would also remind Your Honor that we are  
23 on a very shortened time schedule here. We knew  
24 that going in that the schedule was going to be  
25 tight. We agreed to a two-day extension at the

1 request of staff to accommodate some additional  
2 time that the staff wanted, which moved everything  
3 back another two days for us. I apologize for the  
4 fact that -- we got it done as quickly as we did.  
5 We filed it as quickly as we could after Mr.  
6 Heidell had the approval to run the license.  
7 Unfortunately, with the tight schedule that meant  
8 that we weren't able to get that out until Friday  
9 afternoon. That is what it is, but I disagree very  
10 strenuously that that's a due-process problem.

11 JUDGE WAHL: Ms. La Seur.

12 MS. LA SEUR: There was a deadline, there  
13 was an extended deadline. We agreed to that in  
14 trying to expedite this proceeding and be  
15 cooperative with other parties. They missed the  
16 deadline. I'm sure if we had submitted, there's  
17 also further scenario, at 2:20 p.m. on Friday, Mr.  
18 Kuntz would be objecting just as strenuously as I  
19 am.

20 JUDGE WAHL: Mr. Kuntz, I have often  
21 stated my reluctance to exclude evidence in  
22 administrative hearings, but the difficulty I have  
23 here is this goes to the question of what I  
24 perceive to be due process for the parties, and  
25 I -- I have a great deal of difficulty reconciling

1 this occurrence with the fundamental requirement of  
2 due process. I have a -- I'm not -- to my mind,  
3 the idea of prefiled testimony was to allow  
4 everybody an opportunity to be able to respond.  
5 That's lost by this late filing in these  
6 circumstances, in my view, and whatever the  
7 circumstances, whatever the reasons, however,  
8 reasonable the late filing was, it still doesn't  
9 address what I see to be the due-process issue.

10 The motion is granted, Mr. Heidell's  
11 rebuttal testimony filed late will be stricken.

12 MR. KUNTZ: Your Honor, I assume that when  
13 we call Mr. Heidell, we'll be able to make an offer  
14 of proof on that supplemental testimony.

15 JUDGE WAHL: Absolutely. All right.  
16 Counsel, anything further preliminarily?

17 MR. GUERRERO: Just two things, Your  
18 Honor. With Mr. Ward Uggerud's testimony,  
19 supplemental rebuttal from April 23rd, Mr. Uggerud  
20 had attached OTP Exhibits 120 and 121, which were  
21 filed as a trade secret request. They were letters  
22 from Otter Tail to the Burlington Northern and then  
23 the letter from the Burlington Northern back to  
24 Otter Tail on behalf of the project. We're going  
25 to withdraw the request for trade secret protection

1 and file those as public documents. We have copies  
2 of those here and available for parties and for the  
3 Commission and we can pass those out now.

4 Then last, Your Honor, I guess --

5 JUDGE WAHL: All right. The record will  
6 be noted for Exhibit OTP 120 and OTP 121, those are  
7 not filed as trade secrets. Next, Mr. Guerrero.

8 MR. GUERRERO: Just to let people in the  
9 hearing room know, we do have extra copies of the  
10 testimony books if anybody would like one to follow  
11 along. So anybody that doesn't have one, we  
12 certainly have extra copies. That's it, Your  
13 Honor.

14 JUDGE WAHL: Anything else, counsel,  
15 preliminarily? If not, Mr. Guerrero, you may  
16 proceed when you're ready.

17 MR. GUERRERO: Thank you, Your Honor. The  
18 applicants would call to the stand Mr. Ward  
19 Uggerud.

20 JUDGE WAHL: You may be seated, Mr.  
21 Uggerud. Mr. Uggerud, you -- or I have personal  
22 knowledge that you have been advised regarding  
23 perjury and you understand, of course, that your  
24 testimony continues under oath and subject to the  
25 penalties of perjury for these supplemental

1 hearings?

2 THE WITNESS: I understand.

3 JUDGE WAHL: Mr. Guerrero.

4 MR. GUERRERO: Thank you, Your Honor.

5 **WARD UGGERUD,**

6 having been previously duly sworn, was examined and  
7 testified as follows:

8 **DIRECT EXAMINATION**

9 **BY MR. GUERRERO:**

10 Q. Please state your name.

11 A. My name is Ward Uggerud.

12 Q. And by whom are you employed and in what  
13 capacity, please?

14 A. Otter Tail Power Company, senior vice  
15 president.

16 Q. How long have you been with Otter Tail?

17 A. 37 years.

18 Q. And what do you do as senior vice  
19 president?

20 A. I'm responsible for the electric power  
21 supply for our customers, our environmental  
22 engineering and our wholesale power marketing.

23 Q. What is your educational background, Mr.  
24 Uggerud?

25 A. I'm an electrical engineer, graduate of

1 North Dakota State University.

2 Q. Did you have occasion to prepare prefiled  
3 testimony and exhibits in this matter?

4 A. Yes, I have.

5 Q. And do you have those up there with you,  
6 Mr. Uggerud?

7 A. Yes, I do.

8 Q. And you have Exhibits -- Otter Tail  
9 Exhibit Nos. 112 through 116 and Otter Tail  
10 Exhibits 119 through 121; is that correct? 112 is  
11 your --

12 A. I have 112 and 119.

13 Q. And I believe the exhibits are attached,  
14 Mr. Uggerud.

15 A. Okay.

16 Q. 112 is your supplemental --

17 A. Yes.

18 Q. -- direct for March 10th, along with  
19 Exhibit 119 is your rebuttal testimony from April  
20 23rd?

21 A. That's right.

22 Q. And did you prepare that testimony and  
23 exhibits?

24 A. Yes, I did.

25 Q. Do you have any corrections or additions?

1           A.     I do not.

2           Q.     And if we were to ask you -- if I were to  
3 ask you those questions today on the stand, would  
4 your answers be substantially the same?

5           A.     They would be.

6           MR. GUERRERO:   Your Honor, we would offer  
7 OTP Exhibits 112, 112A, 113, 114, 115, 116, 119,  
8 120 and 121, all Otter Tail exhibits.

9           JUDGE WAHL:   Let me -- let me check that,  
10 Mr. Guerrero.  112, 112A, 113, 114, 115, 116, 119  
11 and 121?

12          MR. GUERRERO:   Yes.

13          JUDGE WAHL:   Mr. Breen, who's leading?

14          MS. LA SEUR:   I am.

15          JUDGE WAHL:   Ms. La Seur?

16          MS. LA SEUR:   No objection.

17          JUDGE WAHL:   Mr. Binek?

18          MR. BINEK:    I have no objection, but when  
19 you were going through the exhibits, you said 119  
20 and 121.  I think 120 is also included.

21          JUDGE WAHL:   No, I did not include 120.

22                         Is 120 included?

23          MR. GUERRERO:   Oh, I'm sorry.  Yes, 120 is  
24 included.

25          JUDGE WAHL:   All right.  Exhibits 112 --

1 OTP 112, 112A, 113, 114, 115, 116, 119, 120 and 121  
2 are each received.

3 COMMISSIONER WEFALD: I have a question,  
4 please.

5 JUDGE WAHL: Commissioner Wefald.

6 COMMISSIONER WEFALD: Would you just  
7 review for the Commissioners where these exhibits  
8 can be found? Are they already in the materials?  
9 Like 113 I have here. Is that the 113 that you're  
10 referring to?

11 MR. GUERRERO: Yes, OTP 113.

12 COMMISSIONER WEFALD: All right. And 114  
13 has already been given to the Commissioners, as  
14 well. That's the U.S. imports?

15 MR. GUERRERO: Correct.

16 COMMISSIONER WEFALD: All right. And  
17 then -- so 115, 116 we've received then. The new  
18 ones today are -- what is --

19 MR. GUERRERO: 112A is the summary, and  
20 Mr. Uggerud is going to give that here in just a  
21 minute.

22 COMMISSIONER WEFALD: Okay. And then 120  
23 and 121 are new materials for the Commissioners?

24 MR. GUERRERO: That's correct.

25 COMMISSIONER WEFALD: All right. Thank

1 you. Just so I know where to find them.

2 COMMISSIONER CRAMER: And you know that  
3 119 is the -- what was received last week, the  
4 prefiled rebuttal testimony, the other binder that  
5 was received. I think it's the one -- might be  
6 that one right there.

7 MR. GUERRERO: Just a clarifying note --

8 COMMISSIONER CRAMER: That's it.

9 MR. GUERRERO: -- clarifying note, the  
10 binders that were passed out this morning include  
11 the testimony and the exhibits by witness.

12 COMMISSIONER CRAMER: Yes.

13 COMMISSIONER WEFALD: Yes. Okay. Thank  
14 you.

15 JUDGE WAHL: You may proceed, Mr.  
16 Guerrero.

17 MR. GUERRERO: Thank you.

18 Q. (MR. GUERRERO CONTINUING) Mr. Uggerud, do  
19 you have Exhibit -- OTP Exhibit 112a?

20 A. Yes, I do.

21 Q. And that's the summary of your testimony?

22 A. That's correct.

23 Q. Can you please provide a short summary?

24 A. I can. Question. Is there a remote?

25 JUDGE WAHL: Oh, right here.



1 little busy, so if you will allow me, I'll take  
2 some liberties and talk to them. But I think that  
3 probably as a starting point, it's important to put  
4 into context the fact that this application for a  
5 baseload coal-fired power plant is not the only  
6 thing that we are doing as electric utilities. I  
7 would like to talk in the slides that I've got  
8 introducing my testimony about the balance of  
9 things that we are doing to try and meet those  
10 responsibilities.

11 I indicated that Big Stone II is not the  
12 only thing that we're doing, and on behalf of Otter  
13 Tail Power Company, there are other things that we  
14 are doing in addition to Big Stone II. You're well  
15 aware of law that has been passed in Minnesota and  
16 also recently in North Dakota that sets forth some  
17 standards for both renewable energy and  
18 conservation, and that is also a part of the  
19 balance of resources that we intend to utilize in  
20 order to meet our obligations as electric  
21 utilities.

22 The standard in Minnesota is certainly a  
23 very aggressive one, calling for 25 percent  
24 renewable energy by 2025, and for achieving one and  
25 a half percent of conservation efforts as a result

1 of our activities as a utility. Taken together,  
2 meeting those standards and still providing  
3 electricity as reliably and economically and  
4 environmentally responsibly as possible means that  
5 for Otter Tail Power Company, for example, our  
6 resource mix going forward to meet the changes in  
7 load requirements in the upcoming years results in  
8 Otter Tail proposing as a part of our overall plans  
9 to include resources that would add renewable  
10 energy to the amount of 39 percent of our expected  
11 additional needs will come from renewable energy  
12 resources.

13 Because renewable energy is an  
14 intermittent resource, there are things that we  
15 have to do in order to provide continuous electric  
16 service reliably from that resource, and that would  
17 require for Otter Tail that we're proposing to add  
18 about 24 percent of our additional resources going  
19 forward would be natural gas units that would be  
20 there to supplement and facilitate the development  
21 of the renewable energy resources.

22 The baseload portion that we're proposing  
23 and is the basis of our discussion here this  
24 morning represents 23 percent of our resource  
25 additions going forward, and the conservation

1 efforts that we would hope to be able to achieve  
2 would represent about 14 percent of the resource  
3 mix on a going-forward basis. So even then with  
4 the assumptions of significant amounts of renewable  
5 energy and significant amounts of generation  
6 facilities necessary to facilitate the development  
7 of that renewable energy standard, we still show in  
8 the materials that we are presenting to you in this  
9 case that the Big Stone II project is still needed  
10 and justified to be a part of that overall mix.

11 Certainly people are aware of the fact  
12 that there is a discussion on a national basis and  
13 within Minnesota, too, there are issues of concern  
14 with regard to potential carbon legislation and  
15 impacts on generation resources. And our filing  
16 before this Commission demonstrates that we have  
17 considered the impact of a range of possible  
18 implications with regard to carbon, and we show  
19 that Big Stone II is still needed even when we have  
20 made assumptions with regard to ranges of future  
21 carbon costs. For example, we have applied as a  
22 part of our integrated resource planning the  
23 assumption that carbon would be penalized at \$9 per  
24 ton for every ton of emissions. We have witnesses,  
25 Tom Hewson and Dan Klein and Jeff Greig that have

1 provided testimony to provide some context with  
2 regard to the application of the numbers associated  
3 with carbon.

4 COMMISSIONER WEFALD: I have a question  
5 about that. Why are we not striking those numbers  
6 from -- like that \$9 a ton if we're striking all  
7 the specific numbers that are -- have been told to  
8 be stricken from --

9 COMMISSIONER CRAMER: The externality.

10 COMMISSIONER WEFALD: -- the intervenors'  
11 testimony. I don't understand why all of that  
12 information is not being stricken then also from  
13 Otter Tail's.

14 JUDGE WAHL: Because no one has objected,  
15 Commissioner. Now, I recognize that -- I recognize  
16 the provision of the statute that the Commission  
17 may not consider. That being said, however, I  
18 think that so long as there is no objection by any  
19 party, I would allow it for the record.

20 COMMISSIONER WEFALD: Well, then why is  
21 it --

22 JUDGE WAHL: The Commission should follow  
23 the statute for its consideration, however,  
24 obviously.

25 COMMISSIONER WEFALD: Then why was the

1 issue raised by the intervenors -- by the parties  
2 to strike all the information and why was that  
3 granted by the hearing officer? I mean, I saw your  
4 decision about that, and I just don't quite  
5 understand why it's being allowed for one party to  
6 discuss it and not another.

7 JUDGE WAHL: Oh, that's a fair question,  
8 Commissioner, except that it was considered -- I  
9 don't know what the strategy was in -- for the  
10 motion, but I followed the -- I followed the  
11 statute for my consideration of the motion as  
12 seemed to me to be best and in compliance with the  
13 statute. This addition -- this evidence is being  
14 offered, and unless it's objected to, I will  
15 receive it. It's part of the record.

16 COMMISSIONER WEFALD: So does the  
17 Commission objection count for anything or not?

18 JUDGE WAHL: Well, you have an advocacy --  
19 you have advocacy counsel and he is not objecting.  
20 I don't -- and I don't think it's my place,  
21 Commissioner, to exclude the evidence without a  
22 motion by counsel.

23 COMMISSIONER WEFALD: All right. Thank  
24 you.

25 COMMISSIONER CRAMER: If I could ask for

1 clarification then, Your Honor, is it appropriate  
2 to assume that once all of the -- once the record  
3 is closed, the Commission then has the  
4 responsibility to consider things within the  
5 context of the statute, including whether this  
6 information should be included in our decision?

7 JUDGE WAHL: That would be my view, but I  
8 will tell you as someone who has repeatedly  
9 considered that statute, that sometimes the lines  
10 are not so clear as they may seem, and I can only  
11 suggest the Commission needs to be guided by its  
12 counsel.

13 COMMISSIONER CRAMER: Then I would also  
14 ask, is it -- maybe this is a discussion for the  
15 Commissioners, I don't know, but do we need one  
16 more time a primer on externalities 101 and the  
17 difference between potential real costs and, quote,  
18 externalities in the law? And I only pose it as a  
19 hypothetical question -- or a rhetorical question.

20 JUDGE WAHL: Understood. I'm sure counsel  
21 are listening. You may proceed, Mr. Uggerud.

22 THE WITNESS: And perhaps I can put some  
23 context into the numbers that I'm using, too. I  
24 certainly understand and agree that there is a  
25 North Dakota statute that prohibits the

1 consideration of numbers for externalities, and my  
2 purpose here isn't to try and introduce those  
3 numbers as regard to the consideration by North  
4 Dakota of this project. However, the reason that I  
5 have numbers in my summary here is that Otter Tail  
6 operates within the context of a three-state  
7 service territory, and Minnesota does have a  
8 specific consideration for the request of these, so  
9 by reason of putting forth this background  
10 information, I'm just attempting to show that with  
11 regard to planning our resource expansion on an  
12 integrated three-state basis, these are the  
13 considerations that we have put into the analysis  
14 for the purpose of Minnesota, and I would certainly  
15 agree with the Commission that they're not  
16 necessarily relevant for North Dakota other than  
17 for you to know that in submitting a project that  
18 meets the requirements of all three of our state  
19 jurisdictions, that there has been due diligence  
20 applied to the consideration of the numbers.

21           And beyond the aggressive assumptions that  
22 we have put in for those renewables and for  
23 conservation, we have determined that there really  
24 is not a viable alternative to Big Stone II.

25           And, again, to try and put some context

1 around that, we have demonstrated that there is a  
2 need for baseload generation. The alternatives to  
3 baseload generation are really relatively few and  
4 they are simple. I do not think that based on my  
5 experience within the utility industry that it  
6 would be prudent for a utility to come forth before  
7 this Commission or any commission right now asking  
8 for the approval for construction of a nuclear  
9 power plant. That's not to say that nuclear may  
10 not reemerge as an option, but the experience that  
11 utilities have had in the past of building nuclear  
12 is going to suggest that it's going to be sometime  
13 and I think some experience required before people  
14 are comfortable making the commitment to the sums  
15 of money that would be necessary for the  
16 installation of nuclear.

17 Utility scale biomass projects, in order  
18 to displace the need for significant amounts of  
19 baseload generation resources, would require us to  
20 make sacrifices I think for the diversion of land  
21 in order to grow the renewables that would be  
22 necessary for fueling baseload power plants, and I  
23 don't think that that would be feasible.

24 I don't think that there are any  
25 significant amounts of additional hydro generation

1 capable for installation in the United States.  
2 There may be some in Canada, but those are sometime  
3 off and the costs that are emerging for those  
4 projects seem to be relatively high.

5 So I think that, absent the use of  
6 baseload coal-fired generation that one is looking  
7 at, the only remaining alternative would probably  
8 be generation option or options that would require  
9 significant amounts of additional natural gas. And  
10 natural gas is a concern, I think, for purposes of  
11 both price volatility and potential availability of  
12 gas as a resource.

13 We have Witness Klein that will be  
14 discussing before this Commission some of the  
15 significant aspects of natural gas, and I think  
16 that in order to put context into the application  
17 of this project for a baseload coal-fired power  
18 plant, it is appropriate to have information  
19 presented to the Commission and a discussion  
20 surrounding those issues of natural gas price and  
21 availability, and Witness Klein will do that in  
22 detail.

23 The reason that we are continuing this  
24 hearing from last year is to demonstrate before the  
25 Commission that Big Stone II is still an

1 appropriate resource given the fact that there are  
2 now five partners proposing the application of this  
3 project as contrasted to the seven that we had a  
4 year ago. The entire purpose of the testimony in  
5 this round of proceedings is to demonstrate that  
6 the need is still significant and the need is still  
7 adequate in order to consume the entire resource  
8 that we're proposing before you at this time.

9 In addition to the participants that have  
10 withdrawn, there have been several entities that  
11 have approached the project seeking discussion for  
12 the opportunity that might be available to them to  
13 participate in the project. In fact, the amount of  
14 interest shown by those parties that would seek to  
15 be a part of the Big Stone project far exceeds the  
16 amount of participation by those two entities that  
17 have withdrawn.

18 At this point we have not chosen to add a  
19 particular new participant or participants at this  
20 time. The evaluation and due diligence with regard  
21 to the possible selection of an additional partner  
22 is something that is ongoing and there are matters  
23 that we are considering and that they are  
24 considering with regard to whether that makes sense  
25 or not, and it is for that particular reason that

1 we have come forward before this Commission  
2 demonstrating the economics and the feasibility of  
3 either a 500-megawatt project or a 580-megawatt  
4 project.

5 As a part of our appearing before you  
6 today, we're also prepared to address some of the  
7 questions that Witness Deason has proposed, and we  
8 will be discussing that in more detail by Witnesses  
9 Rolfes, Morlock and Greig, but in summary, Otter  
10 Tail continues to agree with the five conditions  
11 that have been recommended by Mr. Deason. Both  
12 Otter Tail and MDU certainly intend to continue to  
13 monitor things that are happening within the  
14 industry, whether it be with regard to construction  
15 costs or emerging federal legislation. We would  
16 certainly expect that we would have continuing  
17 dialogue with the Commission as the project  
18 proceeds as would be expected to be the normal  
19 course of events in anything. It's a project that  
20 we wouldn't -- we wouldn't anticipate that  
21 continuing discussion and dialogue with the  
22 Commission ends with this proceeding, but that it's  
23 a continuing process.

24 With regard to the response to the  
25 intervenor witnesses, the Dakota Resource Council

1 and Dr. Schlissel, I do submit to the Commission  
2 that I think that there is a good deal of concern  
3 that should be present with regard to the future  
4 availability and supply and price volatility with  
5 regard to electric energy.

6           There is no question when one reviews the  
7 information that has been made available by the  
8 North American Electric Reliability Council, the  
9 Department of Energy, a lot of research  
10 organizations all point to the fact that the  
11 surpluses of electricity that we've had for the  
12 past 25 years are diminishing. Credible people  
13 suggest that absent the construction of new  
14 baseload resources, that we do face a time when  
15 electricity can well be expected to be a product in  
16 which the balance between supply and demand is  
17 altered, and when the balance between supply and  
18 demand is altered, there is the real concern and  
19 risk that we could have future price volatility for  
20 electricity that can only be reduced by the  
21 construction of new appropriate electric generation  
22 resources, and so we submit to you we believe that  
23 Big Stone II is a cost-effective way of meeting  
24 those future electric energy needs. And with that  
25 I conclude my summary.

1 JUDGE WAHL: Ms. La Seur.

2 CROSS-EXAMINATION

3 BY MS. LA SEUR:

4 Q. Good morning, Mr. Uggerud. Would you  
5 agree that this Commission -- can you hear me?

6 Would you agree that this Commission  
7 should have the most current, most up-to-date  
8 information about the Big Stone II project when it  
9 makes its decision in this proceeding?

10 A. I would.

11 Q. Is it fair to say that OTP has confidence  
12 in the Big Stone II capital cost estimate presented  
13 in this proceeding by Mr. Rolfes?

14 A. Those numbers are the most current and the  
15 most up-to-date information that we have.

16 Q. Is that a yes?

17 A. That's a yes.

18 Q. And would you agree that OTP has  
19 confidence in the evidence in the rebuttal  
20 testimony presented by Mr. Rolfes in this  
21 proceeding regarding capital costs?

22 A. Yes, I do.

23 Q. I'm going to ask you a series of questions  
24 that I would like just yes or no answers, and your  
25 counsel can ask you to explain on redirect if you

1 want. Is OTP willing to commit to limit its rate  
2 recovery from the Big Stone II project to its share  
3 of the current project capital cost estimate?

4 MR. GUERRERO: I'm going to object on the  
5 basis of relevancy, and I'm not going to allow my  
6 witness to answer yes or no in the event that the  
7 question -- despite counsel's caution to the  
8 contrary. I'm going to object on that question on  
9 the basis of relevancy.

10 JUDGE WAHL: How is that relevant, Ms.  
11 La Seur?

12 MS. LA SEUR: Mr. Uggerud is testifying as  
13 to the prudence of the full application that's been  
14 put before this Commission. If he doesn't have  
15 sufficient confidence to back that up with a  
16 commitment to stand on the figures he's offered to  
17 the Commission, then it's very relevant to the  
18 Commission's consideration of what weight to attach  
19 to those numbers.

20 JUDGE WAHL: I agree. The objection is  
21 overruled.

22 THE WITNESS: It's interesting. I had  
23 written down one question that I thought that I  
24 might expect first, and that was the question that  
25 I've gotten. Unless I'm prohibited from answering

1 other than yes or no, I intend to provide a more  
2 complete response to the question.

3 The information that we have available at  
4 the current time, the information that the  
5 Commission has available at the current time is  
6 that the cost numbers that we now have are the best  
7 cost numbers that are available today. The entire  
8 reason why utilities come before a Commission is to  
9 examine the options available in the light of the  
10 information as we know it now.

11 With regard to the exposure of Otter Tail  
12 Power Company and MDU to nonrecovery of any changes  
13 that might occur relative to those costs by the  
14 time that we would finish construction and put  
15 facilities in service, I would object. And I would  
16 object for the reasons that there's no reassurance  
17 that the alternative costs might not also change.  
18 So this is a joint proceeding. We're coming  
19 forward with the best information that we have  
20 available to us today. That's not to say that  
21 things might not change. But the changes in the  
22 alternatives could even be more far-reaching and  
23 more dramatic than whatever changes would be  
24 potentially possible to occur with the project that  
25 we're proposing.

1 Q. (MS. LA SEUR CONTINUING) Is that a no?

2 A. If the question was, would Otter Tail  
3 agree to the risk of cost recovery should costs  
4 change from those that are in the record today, the  
5 answer is no, we would not agree to that.

6 Q. Is OTP willing to agree to limit its rate  
7 recovery to any set percentage increase above the  
8 current cost estimate?

9 A. Absolutely not, because the alternative of  
10 natural gas could result in the cost of the natural  
11 gas alternative increasing even more, and there is  
12 no utility that would accept the risk of being  
13 denied recovery for a preferred alternative and  
14 then being subjected to not being able to recovery  
15 if the cost changes of a lesser preferred  
16 alternative. Or in the reverse, if the Commission  
17 were to say that there would be a limit as to cost  
18 recovery for the preferred alternative and deny  
19 that, would that mean then that the Commission  
20 would say that the changes that might occur in the  
21 alternative would be costs that would then be  
22 automatically available to be passed through to  
23 customers?

24 This is not a -- this is not a situation  
25 where a determination could be made to put risk in

1 one manner and then be silent with regard to the  
2 risk that you would then introduce with regard to  
3 something else. That's why we come before the  
4 Commission today presenting the information as  
5 clearly and completely as we know it today. That's  
6 why we have a dialog with the Commission with  
7 regard to the public good that results from making  
8 decisions at a point in time based on the  
9 information that's available at that point in time.

10 Q. Does OTP intend to comply with the North  
11 Dakota renewable energy objective that 10 percent  
12 of all retail electricity sold in the state be  
13 obtained from renewable energy and recycled energy  
14 by 2015?

15 A. We do.

16 Q. And what amount of additional renewable  
17 and recycled energy will be necessary on OTP's  
18 system to comply with this objective at a utility  
19 level?

20 A. That is modeled in our integrated resource  
21 planning analysis.

22 Q. But you're not familiar with those  
23 numbers, personally?

24 A. Mr. Morlock -- Witness Morlock is here for  
25 the purpose of discussing the details of that

1 analysis.

2 Q. I refer you to your supplemental rebuttal  
3 testimony at pages 15 and 16.

4 MR. GUERRERO: At March 10th?

5 MS. LA SEUR: I believe so, yes.

6 MR. GUERRERO: Which page?

7 MS. LA SEUR: Let's see. 15 and 16. This  
8 is April 23rd, I'm referring to.

9 THE WITNESS: Yes.

10 Q. (MS. LA SEUR CONTINUING) And I'm looking  
11 specifically with your reference to the testimony  
12 from Witness Hewson. Mr. Hewson has testified on  
13 behalf of the applicants that it is reasonable to  
14 expect that Big Stone II will be allocated free CO2  
15 allowances under a cap-and-trade program; correct?

16 A. That's correct.

17 Q. You testified to the following at page 16,  
18 lines 5 and 6, I think your words are, In other  
19 words, effectively Big Stone II would initially  
20 need to purchase allowances at open market value  
21 for only 35 to 50 percent of its CO2 emissions;  
22 correct?

23 A. That's correct.

24 Q. Can you point to any evidence in the  
25 record aside from Mr. Hewson's speculation that

1 would support this conclusion?

2 A. Well, the purpose of having Mr. Hewson  
3 available as an expert to the project was to  
4 analyze thoroughly the legislation that would  
5 apply, and that's what he has done here and we have  
6 relied on that analysis, believe it to be correct.

7 Q. And I will -- I understand that you have  
8 referenced Mr. Hewson here. My question is if you  
9 can point to any evidence in the record or any  
10 other evidence you relied on to reach this  
11 conclusion.

12 MR. GUERRERO: I think he answered the  
13 question. Asked and answered.

14 MS. LA SEUR: I'm asking about evidence in  
15 the record.

16 JUDGE WAHL: Overruled.

17 THE WITNESS: Well, certainly there are  
18 many others that have been providing analysis with  
19 regard to the various pieces of legislation that  
20 have been suggested. The Lieberman-Warner bill  
21 that has been passed out of committee is one that  
22 has been analyzed. There is discussion of that  
23 legislation that has been made available by the  
24 Edison Electric Institute, by various parties. We  
25 have read that. We know from our own reading of it

1 that that proposed legislation would grant  
2 allowances to new facilities.

3 The entire purpose of the underlying  
4 philosophy of that bill is to encourage to the  
5 extent possible the addition of new resources that  
6 would be more efficient than existing resources.  
7 That's one of the underpinnings of the  
8 Lieberman-Warner bill, is that it is designed in  
9 order to try and move the country toward a more  
10 energy-efficient electrical generation scenario,  
11 and that's the purpose for providing the allowances  
12 that would be made available to new units.

13 A new unit like Big Stone II is going to  
14 be significantly more energy efficient than the  
15 current fleet of electric generation resources in  
16 the country. If you just take a look, for example,  
17 at one of the facilities that Otter Tail has in its  
18 system, it's a 50-year-old unit, the heat rate on  
19 that unit is significantly higher than the heat  
20 rate that would be available from a new unit like  
21 Big Stone II.

22 I drive a 1998 Camry that gets 29 miles to  
23 the gallon. My son just purchased a new Camry  
24 hybrid that gets 35 miles to the gallon. There's a  
25 great effort in this country to encourage people to

1 purchase new vehicles that get more energy  
2 efficiency. The increase in energy efficiency that  
3 we get from going to the older electric generation  
4 plants to the newer ones is the same order of  
5 magnitude as going from an older Camry to a new  
6 Camry hybrid. That is what the Lieberman-Warner  
7 bill is trying to encourage.

8 Q. (MS. LA SEUR CONTINUING) So getting back  
9 to the 35 to 50 percent number, do you have  
10 confidence in that pricing level or that exemption  
11 level for Big Stone II?

12 A. Yes, I do.

13 Q. Who would bear the risk that Mr. Hewson is  
14 wrong and that Big Stone II would not be allocated  
15 any free allowances?

16 MR. GUERRERO: I'm going to object. Calls  
17 for a legal conclusion.

18 JUDGE WAHL: Overruled. I don't think so.  
19 I see where this is going. You may answer the  
20 question.

21 THE WITNESS: Would you repeat the  
22 question, Ms. La Seur?

23 Q. (MS. LA SEUR CONTINUING) Who would bear  
24 the risk that Mr. Hewson is wrong and that Big  
25 Stone II would not be allocated any free

1 allowances?

2 A. Well, again, that's the reason that we're  
3 before the Commission, is that the decision that we  
4 make in this application is based on the  
5 information that's available and known to us today  
6 at a point in time. I would remind everyone that  
7 Lieberman-Warner has not been passed into law.  
8 It's possible there could be changes to the law  
9 before it would be enacted. We're not here, I  
10 don't think, for the purpose of trying to establish  
11 who's going to bear the risk of things that might  
12 change in the future and things that are unknown.  
13 The purpose of this proceeding is to make decisions  
14 on a timely basis based on information that is  
15 known at the time. What we know at the time is  
16 that the leading candidate bill is the  
17 Lieberman-Warner bill, and we have spent  
18 considerable time and expense to analyze the  
19 implications of that bill as completely as possible  
20 for this project to try and set the context before  
21 the Commission of this project relative to the most  
22 likely scenario that exists as of today, and that  
23 is what we have done in this case.

24 MS. LA SEUR: There's something you just  
25 said that I'd like to be sure I understood

1 correctly. Could the court reporter read back the  
2 sentence where I think you said, we are not here to  
3 decide who will bear the risk of future costs?

4 (Record read as requested.)

5 Q. (MS. LA SEUR CONTINUING) Mr. Uggerud,  
6 does that statement apply also to the risk of  
7 increases in capital costs and increases in coal  
8 supply costs?

9 A. Absolutely. As I had indicated in a  
10 previous response, things will change going  
11 forward, and it's entirely possible that the cost  
12 of the construction of Big Stone II might be  
13 different by the time it's completed than what we  
14 would believe it to be the case today. But that's  
15 not to suggest that any of the alternatives would  
16 be free of any risk of changes, as well. I think  
17 that we have been extremely conservative in the  
18 analysis that we have applied to the selection of  
19 Big Stone II. In fact, our testimony indicates  
20 that we have made conservative assumptions with  
21 regard to the cost of the capital construction of  
22 natural gas-fired power plants, we've been  
23 conservative with regard to the pricing of natural  
24 gas as a fuel. We have virtually eliminated from  
25 consideration the costs that would be necessary in

1 order to build the transmission to interconnect the  
2 wind. We have been conservative in our assumptions  
3 in the selection of Big Stone II as a resource by  
4 assuming, at least for Otter Tail's purposes, that  
5 at the time of the completion of Big Stone II that  
6 the PTC would remain in effect. That may not be  
7 the case. There are many assumptions that we have  
8 made for the specific purpose of not to bias the  
9 selection towards Big Stone II, but to prove in the  
10 application of this project before the Commission  
11 that in spite of conservative analysis, that Big  
12 Stone II is still the most prudent resource that we  
13 could identify based on the information that we  
14 know at this time today.

15 Q. But doesn't a prudency finding in this  
16 proceeding expose North Dakota ratepayers to a  
17 level of unknown risk regarding expanded capital  
18 cost, increasing fuel supply and potentially carbon  
19 regulation?

20 MR. GUERRERO: I'm going to object on the  
21 basis of multiple questions, but I'm basically  
22 going to object, Your Honor, that it does call for  
23 a legal conclusion. The effect of the decision in  
24 this case is a legal matter. Mr. Uggerud is an  
25 engineer and a senior vice president. He's not a

1 lawyer, and he's not testifying as to the legal  
2 effect of what decision -- what the Commission's  
3 decision in this case has or doesn't have with  
4 respect to ratepayers or customers.

5 JUDGE WAHL: Objection is overruled.

6 MR. GUERRERO: Well, could you repeat the  
7 question then? There were multiple questions, I  
8 guess.

9 JUDGE WAHL: No, I think it was one  
10 question. The question is -- Mr. Uggerud, do you  
11 understand the question? Do you have the question  
12 in mind?

13 THE WITNESS: I understand the question  
14 and I would repeat, I think that I've answered it  
15 before, but let's just suppose, for example, that  
16 we go where Ms. La Seur would have us go, and that  
17 is that she suggests that the Commission might find  
18 that Big Stone is not a prudent decision based on  
19 the fact that there are things relative to the cost  
20 of Big Stone II that might change by the time we  
21 get the plant built and in service, and I would  
22 suggest in my answer that, yes, that is true, but  
23 the risk of that has to be weighed relative to the  
24 risk of other things that might change, too.

25 We have modeled the price of natural gas,

1 for example. We've identified the price by year.  
2 The price is already forecast by Goldman Sachs for  
3 this upcoming winter season to be nearly \$5 a  
4 million Btu higher than what we have put in our  
5 analysis with regard to the selection of Big Stone  
6 II. So if one is concerned about whether or not  
7 changing economics would alter the decision with  
8 regard to Big Stone II, I would think that it's  
9 also reasonable to expect that the Commission might  
10 be concerned about the cost impact of forcing Otter  
11 Tail and MDU to an alternative where the cost of  
12 that alternative by this winter is expected to be  
13 that much greater than what we have modeled for the  
14 purpose of not trying to introduce a bias in the  
15 selection of Big Stone II.

16 But there certainly isn't anybody with any  
17 experience, whether it be building facilities to  
18 provide electric generation to our customers or  
19 whether it's farmers that are making decisions  
20 relative to whether they're going to plant corn or  
21 wheat or soybeans or sugar beets -- there's changes  
22 all the time and decisions are made at planting  
23 season based on the best available information that  
24 you have at the time, and changes will happen. But  
25 I would submit to you that the risk in terms of the

1 impact on electric customers would be less with the  
2 selection of Big Stone II as a resource than they  
3 would to go to an alternative that would involve  
4 natural gas.

5 Q. (MS. LA SEUR CONTINUING) So getting back  
6 to the question I asked, would a prudency finding  
7 in this proceeding not expose North Dakota  
8 ratepayers to the set I described of significant  
9 unknown risks?

10 MR. GUERRERO: Same objection.

11 JUDGE WAHL: Overruled. You may have a  
12 standing objection, Mr. Guerrero, to this question  
13 of legal versus business decisions. You may answer  
14 the question, Mr. Uggerud.

15 THE WITNESS: Well, of course. And I  
16 think this is the third or fourth time that I've  
17 answered it. Yes, the Commission's decision in  
18 this case carries with it an implication that the  
19 costs for electricity for the customers that we  
20 serve will in fact be implicated -- impacted by  
21 this decision. However, any decision that the  
22 Commission makes in this case will expose our  
23 customers to the risk of things that might change  
24 by the time that these facilities would be put in  
25 service. That's why we're before this Commission,

1 to have a thorough and complete discussion with  
2 regard to the context of providing electric  
3 generation resources for the purpose of serving  
4 electricity to retail customers. Any decision will  
5 have implications with regard to what customers  
6 eventually will be exposed to in terms of cost.

7 Q. (MS. LA SEUR CONTINUING) Getting back to  
8 your testimony that Big Stone II will initially  
9 need to purchase allowances at open market value  
10 for only 35 to 50 percent of its CO2 emissions, is  
11 OTP willing to commit to limit recovery from  
12 ratepayers to only this 35 to 50 percent of  
13 emissions allowances?

14 A. Absolutely not.

15 Q. What reasons did Great River Energy give  
16 the other Big Stone II applicants for withdrawing  
17 from the project?

18 MR. GUERRERO: I'm going to object on the  
19 basis of relevancy. The reasons that Great River  
20 Energy or Southern Minnesota Municipal Power for  
21 withdrawing from this project have no relevance  
22 with respect to Otter Tail Power Company's decision  
23 to move forward with this project.

24 JUDGE WAHL: Ms. La Seur.

25 MS. LA SEUR: I would argue that the

1 answer to the question has a bearing on the  
2 relevance of the question. If they withdrew for  
3 reasons that affect the decision on the overall  
4 prudence of the project, then it's information this  
5 Commission can and should consider.

6 MR. GUERRERO: Your Honor, they have the  
7 opportunity to call Great River Energy into this  
8 proceeding if they wanted to. Mr. Uggerud can't  
9 speak on behalf of Great River Energy.

10 JUDGE WAHL: The objection is overruled.

11 THE WITNESS: Would you repeat the  
12 question?

13 Q. (MS. LA SEUR CONTINUING) The question is,  
14 what reasons did Great River Energy give the other  
15 Big Stone II applicants for withdrawing from the  
16 project?

17 A. If I recall, Great River at the time that  
18 they withdrew made a statement with regard to four  
19 different factors that weighed in their  
20 determination to exit the project. I don't recall  
21 offhand before you today what those four reasons  
22 were, but I think that they're a matter of public  
23 record.

24 Q. Isn't it true that GRE cited concern over  
25 rising construction costs and uncertain

1 environmental compliance costs?

2 MR. GUERRERO: I'm going to object, facts  
3 not in evidence and it calls for speculation, Your  
4 Honor.

5 JUDGE WAHL: Well, if the witness has --  
6 if the witness has personal knowledge, he may  
7 answer the question. That's the long and the short  
8 of it. The objection is overruled.

9 THE WITNESS: As I recall, Ms. La Seur,  
10 those were two of the four reasons that were  
11 articulated. I don't believe that they were the  
12 only reasons that they articulated.

13 Q. (MS. LA SEUR CONTINUING) Going back to  
14 your supplemental direct testimony at page 2, you  
15 testified that the North American Electric  
16 Reliability --

17 MR. GUERRERO: Excuse me. Which -- are we  
18 March 10 or April 23rd?

19 MS. LA SEUR: This would be March 10, the  
20 direct as opposed to the rebuttal.

21 MR. GUERRERO: And page?

22 MS. LA SEUR: Page 2, and at lines 10 and  
23 11, there's a reference to the North American  
24 Electric Reliability Corporation Long-Term  
25 Reliability Assessment, 2007 to 2016.

1 MR. GUERRERO: Thank you.

2 Q. (MS. LA SEUR CONTINUING) And I would like  
3 to distribute some excerpts from that report. And  
4 in referencing this NERC report, you testify that  
5 nationwide our long-term capacity margins remain  
6 inadequate; correct?

7 A. I testified that our nation's long-term  
8 resources are becoming inadequate.

9 Q. I'm referencing lines 12 and 13 on page 2,  
10 "NERC reported that nationwide our long-term  
11 capacity margins remain inadequate." Is that your  
12 testimony?

13 A. Well, it's a matter of semantics. The  
14 projection that the capacity margins in the future  
15 are inadequate. The North American Electric  
16 Reliability Council puts out an annual report.  
17 What they are saying is that their previous  
18 projections with regard to upcoming capacity margin  
19 deficits remains, that they've been -- the North  
20 American Electric Reliability Council has been  
21 making this same statement in previous annual  
22 assessments, so --

23 Q. So you're speaking prospectively because  
24 this is a -- this is a long-term assessment?

25 A. Nothing has changed from the previous NERC

1 annual report that would suggest that the deficits  
2 that they're projecting have gone away; that the  
3 projection of deficits remain.

4 Q. And is the report excerpted before you --  
5 does it appear to be the report that you refer to  
6 in your testimony?

7 A. Well, I referred to the 2007 reliability  
8 assessment, and this appears to be an excerpt from  
9 that, yes.

10 MS. LA SEUR: Okay. I would like to offer  
11 these excerpts from the NERC 2007 Long Term  
12 Reliability Assessment 2007 to 2016 into evidence  
13 as Intervenors' Exhibit 17.

14 JUDGE WAHL: Mr. Guerrero?

15 MR. GUERRERO: No objection.

16 JUDGE WAHL: Mr. Binek?

17 MR. BINEK: No objection.

18 JUDGE WAHL: Intervenors' Exhibit 17 is  
19 received.

20 MR. GUERRERO: Would it be 117?

21 MS. LA SEUR: No. I think we're just,  
22 yeah, straight numbers on ours.

23 MR. GUERRERO: Okay.

24 MS. LA SEUR: It's I 17, so it looks like  
25 117.

1 MR. GUERRERO: Thank you.

2 Q. (MS. LA SEUR CONTINUING) Referencing page  
3 8 in this same report, and you'll have to just look  
4 at the numbers at the bottom of the page because  
5 these are pages taken in order, but with pages  
6 missing between them, so it's actually the second  
7 page in the packet you have. Isn't it true that  
8 this same NERC report reads, at page 8, "Overall  
9 committed capacity margins improved by  
10 approximately two percent in the U.S. over the last  
11 year, but margins in some areas decreased. Several  
12 areas established forward capacity market, which  
13 will be relied upon to provide the necessary, new  
14 resources to maintain reliability." Is that a  
15 correct reading?

16 A. That's a correct reading.

17 Q. And at page 2 of your supplemental direct  
18 testimony from March 10th, you testify that NERC  
19 reports that a high reliance on natural gas in some  
20 parts of the country require special attention to  
21 reduce risks of supply and delivery interruption;  
22 correct?

23 A. Correct.

24 Q. Does the NERC report identify this part of  
25 the country that we are in now as having a high

1 reliance on natural gas such that this special  
2 attention is required?

3 A. I don't know if the NERC report  
4 specifically identifies the Midwest region as being  
5 one of those regions, but I can tell you, based on  
6 my experience in the industry, that we are seeing  
7 that at the margin, without the addition of new  
8 baseload resources, we're becoming increasingly  
9 exposed even in this part of the country to the  
10 pricing effects of electricity at the margin being  
11 priced by natural gas.

12 Q. So this is not NERC's conclusion, but your  
13 own conclusion?

14 A. I don't think that NERC would -- I don't  
15 think that the NERC report would refute what I've  
16 just said. I'm just saying, Ms. La Seur, that I  
17 don't think that -- based on a more complete  
18 reading of the assessment, I'm not sure that NERC  
19 was speaking specifically with regard to this part  
20 of the region with regard to that statement on page  
21 8.

22 Q. Do you know what percentage of electricity  
23 consumed in North Dakota is produced by coal  
24 combustion?

25 A. If you take a look -- and, again, I'm not

1 sure that the point that you're trying to make.  
2 Certainly, if you take a look at the amount of  
3 generation produced in North Dakota, the amount of  
4 generation produced in North Dakota far exceeds the  
5 load in North Dakota. So if you take a look at an  
6 average statistic on a statewide basis, you're  
7 going to get a very misleading answer. I can tell  
8 you that the amount of electric load served by  
9 Otter Tail Power Company in North Dakota does not  
10 include that same high percentage as coming from  
11 coal. Otter Tail Power Company is going deficit.  
12 And the amount of energy that we are acquiring for  
13 the purpose of serving our load in North Dakota is  
14 becoming increasingly dependent on purchases that  
15 we have to make from other utilities in order to  
16 provide our load. That's why we are proposing this  
17 project.

18 MDU could respond relative to their own  
19 situation, but I believe that it's similar to Otter  
20 Tail's, and that is neither Otter Tail or MDU  
21 currently have the generation resources installed  
22 to provide electric service to all of our  
23 customers. We are dependent on what is happening  
24 around us with regard to the need for procuring  
25 resources to serve our electric customers.

1 MS. LA SEUR: I'd like to distribute the  
2 Energy Information Administration's most recent  
3 State Energy Profile for North Dakota updated April  
4 17th, 2008.

5 Q. (MS. LA SEUR CONTINUING) Mr. Uggerud, are  
6 you familiar with the EIA's State Energy Profile?

7 A. Generally.

8 Q. And does this appear to be a State Energy  
9 Profile for North Dakota updated April 17th, 2008?

10 A. That's what it appears to be.

11 MS. LA SEUR: I'd like to offer this EIA  
12 State Energy Profile for North Dakota as  
13 Intervenors' Exhibit 18.

14 JUDGE WAHL: Mr. Guerrero?

15 MR. GUERRERO: No objection.

16 JUDGE WAHL: Mr. Binek?

17 MR. BINEK: No objection.

18 JUDGE WAHL: Exhibit I 18 is received.

19 Q. (MS. LA SEUR CONTINUING) And, Mr.  
20 Uggerud, if you would turn to the 2006 part of --  
21 that represents coal-fired electricity  
22 consumption -- or production nationwide,  
23 approximately what percentage of national  
24 generation?

25 MR. GUERRERO: I'm sorry, counsel. Where

1 are we at?

2 MS. LA SEUR: Let's see.

3 JUDGE WAHL: Maybe this is a good time to  
4 recess for 10 minutes, Ms. La Seur.

5 MS. LA SEUR: Thank you.

6 JUDGE WAHL: We'll be in recess until  
7 10:35.

8 (Recess taken at 10:24 a.m. to 10:35 a.m.)

9 JUDGE WAHL: All right. Ms. La Seur, you  
10 may continue when you're ready.

11 MS. LA SEUR: Thank you. To keep my  
12 questions in order, I would like to go ahead and  
13 offer the first page of the executive summary of  
14 The Future of Coal Report recently released by the  
15 Massachusetts Institute of Technology, which is a  
16 couple of pages.

17 COMMISSIONER WEFALD: Is the previous  
18 question that was asked not going to be asked then  
19 that related to the EIA information?

20 JUDGE WAHL: Apparently not at this point.

21 COMMISSIONER WEFALD: All right. Thank  
22 you.

23 MS. LA SEUR: I'll sort it out in just a  
24 minute.

25 COMMISSIONER CRAMER: I did not get a copy

1 of the most recent one.

2 COMMISSIONER WEFALD: Oh, here. Here's  
3 your copy.

4 COMMISSIONER CRAMER: Thank you.

5 COMMISSIONER WEFALD: Sorry about that.

6 MS. LA SEUR: And I had asked one question  
7 just prior to the break referring to the EIA  
8 report. I actually wanted to ask that question in  
9 reference to the exhibit I have just passed out, so  
10 I'll ask a few questions about that and we can get  
11 back on track and should move smoothly from there  
12 on.

13 Q. (MS. LA SEUR CONTINUING) Mr. Uggerud,  
14 does this appear to be the front page -- the list  
15 of study participants in the first page of the  
16 executive summary of a report titled The Future of  
17 Coal?

18 A. It appears to be.

19 MS. LA SEUR: I would like to offer these  
20 three pages of The Future of Coal report as  
21 Intervenors' Exhibit I 19.

22 JUDGE WAHL: Exhibit I 19, Mr. Guerrero?

23 MR. GUERRERO: Well, I'm going to object.  
24 I don't know what purpose it's being offered for at  
25 this point.

1 JUDGE WAHL: Ms. La Seur? Fair enough.

2 MS. LA SEUR: I'm offering this just to  
3 provide an easy reference of some of the -- some of  
4 the statistics regarding fossil fuel resources and  
5 consumption in the U.S. and abroad. There's a  
6 table on this first page of the executive summary  
7 that will help us to -- help me just to ask some  
8 summary questions without having to force us to dig  
9 through a lot of background data.

10 JUDGE WAHL: Mr. Guerrero.

11 MR. GUERRERO: Well, can I voir dire Mr.  
12 Uggerud with respect to this document?

13 JUDGE WAHL: All right.

14 MR. GUERRERO: Mr. Uggerud, is this the  
15 first time you've seen The Future of Coal?

16 THE WITNESS: Yes, it is.

17 MR. GUERRERO: Did you prepare it?

18 THE WITNESS: No, I did not.

19 MR. GUERRERO: Are you familiar with any  
20 of the information in it.

21 THE WITNESS: Not other than what I've  
22 just been scanning now as we sit here.

23 MR. GUERRERO: I guess, Your Honor, we  
24 would object. This person has no personal  
25 knowledge of this particular document. If Ms.

1 La Seur thought it was important to introduce, I  
2 guess she could have done it through her own  
3 witness. So we would object at this point. She  
4 certainly can ask questions about it.

5 JUDGE WAHL: Yeah, I agree. That's the  
6 problem. You're asking to put this into evidence  
7 without a foundation, Ms. La Seur, so without a  
8 foundation --

9 MS. LA SEUR: We can certainly establish  
10 foundation for this later. I just wanted to create  
11 an easy reference for Mr. Uggerud.

12 JUDGE WAHL: I think you can question the  
13 witness without offering the exhibit.

14 MS. LA SEUR: That's fine. Then I'll do  
15 that.

16 Q. (MS. LA SEUR CONTINUING) Mr. Uggerud, are  
17 you familiar with the percentage of electricity  
18 produced by coal combustion nationwide?

19 A. Generally.

20 Q. And approximately what is that percentage?

21 A. Nationwide it's about 50 percent.

22 Q. And turning back to the EIA state report  
23 for North Dakota, if you turn to the top of the  
24 second page in the -- let's see -- probably best to  
25 call it the fourth page since these are printed

1 back to back. It's the page that has a paragraph  
2 at the top and the word "data" in the middle.

3 A. Right.

4 Q. And would you please read into the record  
5 the second sentence in the blocked paragraph at the  
6 top of the page?

7 A. The one that starts "coal-fired"?

8 Q. That's the one.

9 A. "Coal-fired plants provide nearly all of  
10 North Dakota's electricity generation."

11 Q. Right. And turning now to -- if you keep  
12 turning through these in the order they're stapled  
13 in, you come to "capacity" in the middle of the  
14 sixth page, and under "capacity" in the middle of  
15 the page are crude oil refinery capacity of  
16 electric power industry net summer capability, that  
17 list.

18 A. Right.

19 Q. Okay. And what is the total electric  
20 power industry net summer capability in North  
21 Dakota, according to this document?

22 A. 4,839 megawatts.

23 Q. And of that what is the total net  
24 electricity generation, according to this document?

25 A. 2,843,000 megawatt hours.

1           Q.     Or rather 2,843 -- it's written  
2     confusingly, but I see what you mean, so it would  
3     be 2,843,000.

4                     And of that total net electricity  
5     generation for the State of North Dakota, what  
6     wattage is coal fired?

7           A.     Wattage would be the incorrect term,  
8     but --

9           Q.     Megawatt-hours.

10          A.     -- the portion of generation from coal  
11     would be 2,669,000 megawatt-hours.

12          Q.     And what portion is natural gas fired?

13          A.     1,000 -- or 1 million megawatt-hours.

14          Q.     Is it 1,000 or 1 million?

15          A.     I guess it says 1,000.

16          Q.     And what proportion is hydroelectric  
17     power?

18          A.     115,000 megawatt-hours.

19          Q.     And what proportion is represented by all  
20     other renewables?

21          A.     45,000.

22          Q.     Okay. Turning to the -- let's see. This  
23     would be the eighth page that has figures on  
24     consumption per capita.

25          A.     Yes.

1 Q. For electricity generation, what amount of  
2 natural gas is consumed in North Dakota per capita  
3 annually?

4 A. 8 million cubic feet.

5 Q. And that constitutes what rank in the  
6 United States of U.S. consumption?

7 MR. GUERRERO: Your Honor, I don't intend  
8 to disrupt Ms. La Seur's questioning, but this  
9 document is in the record.

10 JUDGE WAHL: It is and we're not going to  
11 argue, Ms. La Seur. We're going to brief. So you  
12 have this evidence all in the record. If you're  
13 leading up to a question, fine.

14 MS. LA SEUR: I'm coming to a conclusion  
15 here, yes.

16 JUDGE WAHL: That's fine. We could up the  
17 pace.

18 Q. (MS. LA SEUR CONTINUING) Based on the  
19 numbers represented here, Mr. Uggerud, is North  
20 Dakota natural gas consumption for home heating  
21 well below the national average?

22 A. I'm not sure that one can draw that  
23 conclusion from this report. If you're talking  
24 about the total amount of natural gas consumed for  
25 home heating in North Dakota, it could well be low,

1 but North Dakota is not a very populous state. If  
2 you're talking about the amount of natural gas  
3 consumed per residence that uses natural gas for  
4 home heating, I don't think you could make that  
5 conclusion, so I'm not sure that you can draw a  
6 conclusion from this report.

7 Q. If you would turn to the next page that  
8 starts with the line "for home heating (share of  
9 households)".

10 A. Right.

11 Q. Do those figures shed any light on North  
12 Dakota natural gas consumption for home heating as  
13 compared to the U.S. average?

14 MR. GUERRERO: I guess same objection.  
15 This document is in the record already. If Ms.  
16 La Seur wants to argue or brief information based  
17 on this, she can certainly do that.

18 JUDGE WAHL: Ms. La Seur, is there going  
19 to be a following question or are you simply  
20 getting the information before the Commission?

21 MS. LA SEUR: Reviewing some of the  
22 relevant numbers, then I have some questions based  
23 on them.

24 JUDGE WAHL: Let's do that. Mr. Guerrero,  
25 let Ms. La Seur proceed as she is. The objection

1 is overruled.

2 Q. (MS. LA SEUR CONTINUING) So the original  
3 question is, is North Dakota natural gas  
4 consumption for home heating well below the  
5 national average?

6 A. I don't think that you can draw that  
7 conclusion, Ms. La Seur. In fact, if you take a  
8 look at that 43 compared to 51 percent, I don't  
9 think that that's significantly below. I mean, I  
10 won't reach that personal conclusion.

11 Q. Is OTP concerned about overreliance on  
12 natural gas for electricity generation in North  
13 Dakota?

14 A. Yes.

15 Q. Your Exhibit 114 regarding U.S. imports of  
16 gas, let's just turn to that for a moment. It  
17 would be fair to say that these -- this import  
18 trend for the United States does not reflect the  
19 trend in North Dakota?

20 MR. GUERRERO: I guess I would object, no  
21 foundation for that particular question.

22 JUDGE WAHL: She's asking the question.  
23 You can answer it. The objection is overruled.

24 THE WITNESS: Can you refer me to where in  
25 my testimony you're referring right now, Ms.

1 La Seur?

2 MS. LA SEUR: Exhibit 114.

3 MR. GUERRERO: Mr. Uggerud, that would be  
4 an exhibit to your March 10th supplemental direct  
5 testimony.

6 THE WITNESS: Okay. And the conclusion.

7 Q. (MS. LA SEUR CONTINUING) It's labeled net  
8 U.S. Imports of Natural Gas by Source, 1990 to  
9 2030, if that helps. And this exhibit represents a  
10 sharp increase in overseas LNG by 2030; correct?

11 A. That's correct.

12 Q. Would it be fair to say that this trend is  
13 not representative of any trends currently apparent  
14 in North Dakota?

15 A. No, I wouldn't agree with that -- with  
16 that characterization. I think to the extent that  
17 natural gas as a fuel is made up of various sources  
18 of that as a fuel, that the trends relative to the  
19 increasing share of LNG relative to a declining  
20 share of Canadian natural gas would suggest to the  
21 extent that North Dakota uses natural gas, that  
22 it's exposed to the same trends with regard to  
23 diminishing imports of Canadian natural gas versus  
24 imported liquefied natural gas. That's all I think  
25 that one can draw a conclusion from from this

1 information.

2 Q. North Dakota typically produces about 1  
3 percent of the nation's annual natural gas  
4 production; correct?

5 A. I won't dispute that. I don't know that  
6 for a fact, but I won't dispute it.

7 Q. And North Dakota is also one of only two  
8 states that produce synthetic gas; correct?

9 A. I won't dispute that.

10 Q. And North Dakota's consumption of natural  
11 gas for electricity production equates to 0.0  
12 percent of natural generation for natural gas;  
13 correct?

14 A. In terms of the electricity produced in  
15 North Dakota from natural gas, that statistic might  
16 be correct. That's not the same as saying what the  
17 exposure of customers relative to the usage of  
18 natural gas for producing electricity might be.

19 Q. And North Dakota's consumption of natural  
20 gas for home heating is below the national average;  
21 correct?

22 A. Not significantly. It looked to me like  
23 we were looking at 49 percent versus 43 percent  
24 versus 51 percent or something like that. I  
25 wouldn't say it's significantly less.

1 Q. My question was, is it below?

2 A. Well, it would appear that on average it  
3 might be below, but I think that in this case  
4 you've got a clear example of where averages might  
5 be misleading.

6 Q. Your testimony doesn't include any  
7 information on North Dakota consumption or  
8 production of natural gas; is that correct?

9 A. My testimony does not, no.

10 Q. Doesn't include any state-specific trends  
11 on natural gas; is that right?

12 A. Because I don't think they can be drawn.  
13 They wouldn't be -- they wouldn't be useful if they  
14 could be.

15 Q. Looking back to the NERC report at page 14  
16 -- no, I don't seem to have the right page. I'll  
17 have to come back to that question.

18 Does North Dakota's production of  
19 synthetic gas mitigate against its exposure to the  
20 risks of the open LNG market?

21 A. I don't think so. Not -- I don't think it  
22 does, no.

23 Q. Does OTP consider fuel diversification an  
24 important strategy to keep electrical rates down?

25 A. As I indicated in my opening summary, yes.

1 That's why we are proposing this project as a part  
2 of a balance of portfolio of resources.

3 Q. And does this project increase or decrease  
4 OTP's fuel diversity?

5 A. I would say that this project attempts to  
6 increase our fuel diversity.

7 Q. Will OTP's system consumption of coal  
8 increase or decrease as a result of this project as  
9 an overall proportion of generation?

10 A. Our consumption of coal as a result of our  
11 overall mix will increase. Our consumption of  
12 natural gas as a part of our overall mix will  
13 decrease.

14 Q. So in what way does increasing dependence  
15 on coal, when you already have a majority of  
16 dependence of coal, increase diversification?

17 A. As I indicated in my answer, it decreases  
18 our reliance on natural gas. Our purchases from  
19 the market, which are an increasingly significant  
20 part of our resource mix, is in large part an  
21 exposure to the natural gas generation resources.  
22 This project would reduce our reliance on that  
23 aspect of our resource mix.

24 Q. How do you define "fuel diversity," Mr.  
25 Uggerud?

1           A.     Fuel diversity is just the amount of fuels  
2     that would be used to produce the various portions  
3     of the supply that you provide to your customers.

4           Q.     You testify again at page 2 of your March  
5     10th testimony that the NERC report states that  
6     integration of wind, solar and nuclear resources  
7     will require special consideration in planning,  
8     design and operation; correct?

9           MR. GUERRERO:   What page and line?  I'm  
10    sorry.

11          MS. LA SEUR:   Page 2.  Let me get the line  
12    for you.  Would be lines 13 and 14 on page 2 of the  
13    supplemental direct testimony, March 10th.

14          THE WITNESS:   That's correct.

15          Q.     (MS. LA SEUR CONTINUING)  Isn't it true  
16    that the NERC report also calls for maximizing the  
17    potential of wind, solar and nuclear resources to  
18    meet resource requirements and reduce greenhouse  
19    gas emissions?

20          A.     Yeah.  That's not inconsistent with the  
21    need to do that within the context of the special  
22    considerations necessary in the planning, design  
23    and operation in order to do just that.

24          Q.     Are you familiar with NERC's  
25    recommendation in this report with regard to

1 integration of expanded wind, solar and nuclear  
2 resources?

3 A. Can you point me to it?

4 Q. Point you back to page 14, the NERC  
5 recommendations and conclusions and the NERC  
6 actions.

7 MR. GUERRERO: I'm sorry, counsel. Could  
8 you repeat the question?

9 MS. LA SEUR: The question was, is Mr.  
10 Uggerud familiar with NERC's recommendation  
11 regarding expanding wind, solar and nuclear.

12 THE WITNESS: At page 14 --

13 MS. LA SEUR: At page 14.

14 THE WITNESS: -- NERC is suggesting that  
15 there is work to be done to identify the  
16 operational requirements to reliably integrate.

17 Q. (MS. LA SEUR CONTINUING) And one of the  
18 recommendations -- actually, the first and central  
19 recommendation is that mandates for aggressive RPS  
20 must be accompanied by active support for the  
21 development of and investment in the transmission  
22 infrastructure required to reliably integrate those  
23 resources into the bulk power system; correct?

24 A. I don't think that you read it as I read  
25 it, but I don't generally disagree with what you

1 said.

2 Q. Didn't read it as you read it. How so?

3 A. Would you read it again?

4 Q. Well, if you would like to read it into  
5 the record, that would be fine.

6 A. Well, you said the first bullet point. I  
7 think you were reading from the second. So that's  
8 why I wasn't sure where you were coming from.

9 Q. Referring to the recommendations and the  
10 conclusions at the center of the page.

11 A. Okay. I see that.

12 Q. And does OTP support an aggressive  
13 renewable portfolio standard?

14 A. We have testified that that's what we are  
15 including as a part of our long-range generation  
16 expansion plan, yes.

17 Q. What are you including specifically?

18 A. As I indicated in my summary of comments,  
19 I think that Otter Tail's long-range resource  
20 expansion plan includes 39 percent of our future  
21 resource needs to come from renewable energy  
22 resources.

23 Q. And so is that a yes, you do support an  
24 aggressive RPS?

25 A. That would suggest a pretty aggressive

1 expansion of renewable energy resources, yes.

2 Q. When I say an RPS, that's generally a  
3 legislative enactment, is it not?

4 A. Yes, in all three states.

5 Q. A standard as opposed to a voluntary act?

6 A. In Minnesota it's a standard. In North  
7 Dakota and South Dakota it's an objective.

8 Q. And would OTP support a mandatory standard  
9 as opposed to an objective?

10 MR. GUERRERO: I'm going to object on the  
11 basis of relevancy and capacity.

12 JUDGE WAHL: Sustained.

13 MS. LA SEUR: My question is to do with  
14 whether the conclusions of the NERC report are  
15 accepted and endorsed only selectively and where  
16 they suit the applicants or if they are endorsed  
17 globally, and so this key recommendation on  
18 alternative resources seems like an important  
19 point.

20 JUDGE WAHL: Not to me, Ms. La Seur.

21 Q. (MS. LA SEUR CONTINUING) Has OTP  
22 conducted -- oh, let's start with this one.

23 Does OTP accept NERC's analysis only to  
24 the extent that it supports OTP's plan to invest in  
25 Big Stone II and the associated transmission, or

1 does it accept this further step that transmission  
2 infrastructure for wind, solar and nuclear must  
3 also be expanded extensively?

4 MR. GUERRERO: I'm going to object based  
5 on relevancy and the question is vague.

6 MS. LA SEUR: I'm asking whether or not  
7 this report is endorsed fully by OTP or if it's  
8 only bits and pieces that support the application.

9 JUDGE WAHL: Overruled.

10 THE WITNESS: Well, Ms. La Seur, I think  
11 that you're reading the recommendation and  
12 conclusion incorrectly. I think what the  
13 recommendation and conclusion is saying is that the  
14 mandates for an aggressive RPS must be accompanied  
15 by additional things. So to the extent that there  
16 are mandates out there that would require  
17 significant amounts of additional renewable energy,  
18 those must be accompanied by support for the  
19 development of additional transmission, and I agree  
20 with that. I've testified to that.

21 Q. (MS. LA SEUR CONTINUING) At page 3 of  
22 your direct testimony, you testify with regard to  
23 reserve margins. This is, let's see, starting with  
24 "clearly" at the end of line 6 through lines 7, 8,  
25 "Clearly something needs to be done, and quickly,

1 to address these looming deficits or the  
2 reliability of electric service to consumers and  
3 businesses in this region will be impaired."

4 My question is, the NERC report states at  
5 page 27 -- if you just turn this over, you get to  
6 page 27, the MRO section. The NERC report states,  
7 does it not, that "For the 2007 to 2016 period  
8 projected capacity margins are expected to be  
9 higher than reported by the regional entity to NERC  
10 based on past experience and the contractual  
11 enforcement mechanism for reserves within a large  
12 part of the MRO region"; correct?

13 A. That's what it says on page 27 of the NERC  
14 report.

15 Q. And on the same page, the NERC report also  
16 states, doesn't it, "In this assessment, MRO  
17 projects only include committed generation projects  
18 (from Load and Capacity reports) that have a  
19 reasonable amount of certainty. Using only  
20 committed projects may lead to conservative  
21 predictions of reserve margin/criteria, especially  
22 in years six through ten. Historically MRO members  
23 have consistently met their reserve margins." Is  
24 that a correct reading?

25 A. That is correct.

1           Q.     And so when you say that something needs  
2     to be done, and quickly, to address these looming  
3     deficits or reliability will be impaired, that's  
4     inconsistent, isn't it, with what NERC is saying?

5           A.     Not at all.  What NERC is saying is that  
6     historically utilities have provided additional  
7     resources over a period of time from those which  
8     might have been assumed to be in a particular  
9     annual assessment.  Because there are projections  
10    for deficits, utilities do what is necessary to  
11    install additional resources to deal with those  
12    deficits.  Historically that had been the case.  
13    What we're at risk here is that there are projects  
14    such as this one which are assumed in the NERC  
15    assessment that if they don't happen to be would  
16    actually exacerbate and make the deficits that are  
17    in the forecasts now even worse.

18          Q.     Actually, the NERC -- the MRO projects  
19    only include committed generation projects;  
20    correct?  Is this project at a stage where it would  
21    be considered a committed project?

22          A.     Well, it's a committed project as far as  
23    Otter Tail and MDU are concerned.

24          Q.     Have you signed any contracts?

25          A.     We have not, but we're assuming that

1 within the context of our long-range planning.  
2 This is our plan to meet our projected deficits.

3 Q. Can you say with any certainty that this  
4 is the kind of project that is considered by MRO in  
5 its projections of reserve margin capacity?

6 A. You know, I would have to check and see  
7 what is in the MRO data, and that would take me  
8 some time, but I think that that's beside the point  
9 because we're here today establishing that Otter  
10 Tail and MDU have a need in the future, and we're  
11 proposing this project to deal with that foreseen  
12 need that we have.

13 Q. And so NERC is saying that the projections  
14 of available capacity margins in your Exhibit 113  
15 from your March 10th testimony for summer seasons  
16 are in fact conservative; correct?

17 A. They're saying that based on past  
18 experience and the contract enforcement mechanisms  
19 that we have for reserves, that NERC is saying that  
20 they would anticipate that there might be  
21 additional resources brought on line in recognition  
22 of the forecasts of those impending deficits.

23 Q. And also on page 27 of the NERC report --  
24 let's see, looking for the sentence that begins,  
25 "In the six- to ten-year time frame, the location

1 and magnitude of future generation is less certain  
2 as lead times are short for a number of generation  
3 types, including wind and gas turbines."

4 MR. GUERRERO: Which paragraph? I'm  
5 sorry.

6 MS. LA SEUR: This is at the end of the  
7 second paragraph under MRO.

8 Q. (MS. LA SEUR CONTINUING) With reference  
9 to that sentence, is it the case then that wind or  
10 natural gas could be added to the OTP system  
11 relatively quickly, much more quickly than a coal  
12 plant if concern increased about maintaining  
13 adequate reserve margins?

14 A. Generally, yes. Historically it takes  
15 less time to develop a natural gas-fired power  
16 plant than a coal-fired power plant. That says  
17 nothing about whether that would be the least-cost  
18 way of providing for future generation resources,  
19 however.

20 Q. Right. But we won't just all wake up in  
21 2013 and find that we flick the switch and nothing  
22 happens?

23 A. I would hope not.

24 Q. And turning to page 48 again in the NERC  
25 report, I think you just turn -- it looks like

1 there's one out of order. If you turn a couple  
2 pages over, you come to 48.

3 This report also analyzes the impacts of  
4 adding additional wind, demand-response and  
5 nuclear; correct?

6 A. It appears to be.

7 Q. And would you please read for the record  
8 the first sentence of the last paragraph on page  
9 48, the one starting, "A significant amount"?

10 A. "A significant amount of demand response  
11 resources may reduce" --

12 MR. GUERRERO: I'm sorry. Sorry to  
13 interrupt. I don't have a page 48.

14 JUDGE WAHL: Two pages ahead.

15 MS. LA SEUR: Yeah, 49 and 48 are flipped.  
16 I'm sorry.

17 THE WITNESS: Okay. That paragraph reads,  
18 and I'm quoting, "A significant amount of demand  
19 response resources may reduce the need for planning  
20 and operating generation capacity margins,  
21 increases bulk power system flexibility, reduces  
22 the impact of fuel supply and delivery  
23 interruptions, and can be used to enhance renewable  
24 integration."

25 Q. (MS. LA SEUR CONTINUING) So expanded

1 demand response would also counterbalance concerns  
2 about reserve margin; correct?

3 A. That's what it says.

4 Q. Turning -- this is not forward, but back  
5 to page 49 in the NERC report, and the conclusion  
6 that the bulk power system will require changes in  
7 system design, operating margins and ancillary  
8 service requirements to maintain reliability -- and  
9 that is under conclusion midway down the page -- to  
10 accommodate a shift in resource allocation  
11 resulting from CO2 legislation. Is it OTP's  
12 position that this NERC recommendation doesn't  
13 apply to OTP?

14 A. I think you're at risk here of taking some  
15 things out of context. It simply says that if  
16 there is going to be resulting CO2 legislation,  
17 that in order to accommodate that shift, other  
18 things would have to be done, and I don't think  
19 that there's anybody that would disagree with it if  
20 that comes to pass, that there would be required  
21 changes that would be necessary in system design.

22 Q. Then turning to your testimony at pages 6  
23 through 10 of the supplemental direct from May  
24 10th -- March 10th where you discuss coal supply  
25 costs. Is OTP at this time willing to take any of

1 the risk of unexpected coal supply price increases  
2 on itself rather than shifting the entire risk to  
3 consumers?

4 MR. GUERRERO: I'm going to object on the  
5 basis it calls for --

6 JUDGE WAHL: Overruled.

7 THE WITNESS: And my answer is as I  
8 previously gave, no, Otter Tail won't accept those  
9 risks because there's risks associated with  
10 everything that we do. And the alternative is to  
11 shift a significant risk to consumers with regard  
12 to the price increase, the volatility of prices,  
13 and I would suggest even the availability of the  
14 alternatives that might be available out there.  
15 That's why we have proceedings like this, to sit  
16 down and explore with our regulatory commissions  
17 the matter of the record that establishes the  
18 recommendation with regard to resources based on  
19 the information that's available today. The  
20 information that's available today suggests that  
21 the risks of the alternatives are significantly  
22 higher than the risks of the proposal.

23 Q. (MS. LA SEUR CONTINUING) Has OTP analyzed  
24 the comparative economic impact on the North Dakota  
25 economy of buying into this share of Big Stone II

1 versus buying into any of the proposed North Dakota  
2 generation facilities?

3 A. I think that that's a vague question. Of  
4 course, this entire proceeding is about evaluating  
5 the metrics associated with the whole range of  
6 possible alternative solutions to our energy needs.

7 Q. Well, you did quite a bit of analysis of  
8 rate impact and energy needs, but my question is  
9 about economic impact in a broader sense from  
10 siting a generation facility out of state versus in  
11 state.

12 A. Well, keep in mind that what we're dealing  
13 with here is evaluating the resource options for  
14 the purpose of supplying electricity to our  
15 consumers. Okay. We're not doing anything more  
16 than that. And our consumers, whether they be  
17 North Dakota consumers or Montana consumers or  
18 South Dakota consumers or Minnesota consumers, need  
19 additional electric generation resources, and we're  
20 proposing as a part of our testimony in this case  
21 that the Big Stone II project is the project that  
22 minimizes the impact on electricity consumers  
23 associated with this recommended resource  
24 expansion.

25 Q. Okay. So that's a no, no analysis of in-

1 state economic development impact?

2 A. We're not doing economic development  
3 analysis. We're doing analysis with regard to the  
4 least-cost way to provide electricity to the  
5 customers in North Dakota, South Dakota, Minnesota  
6 and Montana.

7 Q. Okay. So not your job, anyway. That's  
8 fine.

9 You testify at page 12 again of your  
10 direct testimony that the L.E. Peabody forecast at  
11 your Exhibit 116 is lower than the OTP and MDU  
12 forecast and you, therefore, characterize the  
13 OTP/MDU forecast as conservative; correct?

14 A. That's correct.

15 Q. But isn't it true that the L.E. Peabody  
16 forecast is lower in later years because it assumes  
17 a decrease in demand for coal due to carbon  
18 regulation?

19 A. Tom Crowley will be here, and I would  
20 suggest that the reasons for his forecast could be  
21 better addressed by Mr. Crowley. We have used  
22 them. To the extent that you want to get into what  
23 he was considering and why, I would suggest that  
24 you might ask Mr. Crowley directly.

25 Q. Do you know the answer?

1           A.    I don't.  We relied on the forecast of  
2 Hill & Associates and L.E. Peabody.  I think that  
3 that's a detail that you would have to explore with  
4 him.

5           Q.    Looking at your rebuttal testimony at page  
6 13, there's a discussion of pitting shareholders  
7 against customers by trying to allocate risks out  
8 of proportion, and my question again to you is, is  
9 OTP willing to make a commitment on this particular  
10 risk that shareholders, and not consumers, will  
11 bear the risk of any future carbon regulation costs  
12 for BS II?

13           MR. GUERRERO:  I'm going to object.  I  
14 believe this question has been asked and answered  
15 at length, Your Honor.

16           JUDGE WAHL:  Overruled.

17           THE WITNESS:  Well, I should have been  
18 keeping a tally here because I agree with Mr.  
19 Guerrero.  I think this is maybe the fifth or sixth  
20 time that I've answered that question.

21           Q.    (MS. LA SEUR CONTINUING)  And, actually,  
22 I've been referring to a separate risk that's being  
23 laid entirely on ratepayers every single time.  
24 This is another one.

25           A.    Well, you seem to ignore the fact that

1 anything we do puts risk on our customers. Okay.  
2 And I've indicated in every one of my previous  
3 responses that, yes, of course, things can change,  
4 and to the extent that they change, at the end of  
5 the day, there's no free lunch, customers pay for  
6 the cost to do it. That's why it's our job to come  
7 up with the most reasonable, the most prudent  
8 resource selection that we can to minimize those  
9 risks. We have never testified, nobody has ever  
10 testified, and no business in this country would  
11 ever say that they are going to absolve customers  
12 from any and all risk. This is about minimizing  
13 risk, and we're suggesting that, yes, we  
14 acknowledge that there's a risk that things could  
15 change with regard to electricity generation and  
16 supply. There's no question about that. We're not  
17 denying it. What we're suggesting, however, in our  
18 proposal in this project is that we believe that  
19 this project minimizes the risk to customers and  
20 that makes it the prudent thing to do.

21 Q. Wouldn't it be unfair for the PSC to  
22 assign North Dakota consumers a blank-check  
23 responsibility for future carbon regulation costs  
24 attached to generation at Big Stone II when  
25 relevant evidence on those costs has been stricken

1 from the record at applicants' request?

2 MR. GUERRERO: Objection, argumentative  
3 and calls for a legal conclusion.

4 JUDGE WAHL: I don't know that it calls  
5 for a legal conclusion, but I think it's  
6 argumentative, so you certainly have that argument,  
7 Ms. La Seur, in spades.

8 Q. (MS. LA SEUR CONTINUING) In applying the  
9 \$9-per-ton assumption that you just testified  
10 about, were OTP's assumptions regarding carbon cost  
11 lower or higher than those of other parties in the  
12 Minnesota proceeding, including the equivalent of  
13 the advocacy staff in Minnesota?

14 MR. GUERRERO: I'm to object, relevancy.

15 JUDGE WAHL: What's the relevance?

16 MS. LA SEUR: We're in a prudency  
17 proceeding. We're talking about the calculations  
18 that have been made in comparison to those made by  
19 other parties in a similar proceeding in another  
20 state. We're not allowed to talk about cost. He  
21 raised the question of cost and how they considered  
22 \$9. I think I deserve a little latitude to probe  
23 that.

24 MR. GUERRERO: May I respond, Your Honor?

25 JUDGE WAHL: You may.

1           MR. GUERRERO: This is a difficult  
2 question, as Commissioner Wefald raised earlier.  
3 We responded in our testimony not knowing exactly  
4 how the \$9 question or any other environmental cost  
5 value is going to be addressed. If -- we would be  
6 happy to withdraw any reference to the \$9 or the 4  
7 to \$30 if that's the predilection of this Court.  
8 We struck -- we moved to strike Mr. Schlissel's  
9 testimony because the statute in North Dakota  
10 clearly suggests -- clearly requires that in the  
11 context of resource planning and evaluation of  
12 acquisition of resources, that those values cannot  
13 be used. We have a situation where we have  
14 prefiled testimony, we don't know what a ruling is  
15 going to be ultimately, and so with respect to  
16 information in the record that the applicants have  
17 put forward, as Your Honor correctly noted earlier,  
18 the reason it's still in the record is because the  
19 intervenors haven't filed a motion to strike it.  
20 And so there it lies. But I think that your ruling  
21 on our motion suggested that at the end of the day  
22 the Commission has to follow what the statute  
23 requires, and the statute requires that no  
24 consideration be given to an evaluation of  
25 environmental cost or externalities. Merely

1 because Mr. Uggerud raised this issue prior to a  
2 ruling by Your Honor of a \$9 or a 4 to \$30, or any  
3 other number, does not give Ms. La Seur license to  
4 inquire about this entire subject matter. And so,  
5 you know, we will object to, you know, an unlimited  
6 amount of questions with respect to this particular  
7 question.

8 JUDGE WAHL: Well, let me say, Mr.  
9 Guerrero, that I understand the difficulty of  
10 trying to mesh the considerations of three separate  
11 jurisdictions. I understand that this proposal  
12 depends in part as to how the rest of the  
13 jurisdictions perceive it and treat it and how it  
14 will do business in all of these jurisdictions. I  
15 also point out again that it was my intention to  
16 apply the statute strictly because I'm not sure  
17 what decision the Commission may make in the course  
18 with the advice of its staff and counsel. So I do  
19 not think that clearly as to an objection that the  
20 parties can talk about specific numbers and what  
21 quantitative values, whatever the statute is as it  
22 comes to mind. But the subject is here. It's the  
23 elephant in the room. And I think to that extent  
24 the parties should be granted some leeway to make  
25 the record so that whatever the Commission's

1 ultimate determination is, whatever they will  
2 decide the statute requires them to do, that they  
3 have the record.

4 So there's no point in getting into  
5 specific numbers and values because I don't think  
6 there's any question about that. But the numbers  
7 that we do have in the record are the numbers, as I  
8 understand it, that Minnesota is using and that the  
9 applicants used for the proceedings in Minnesota.  
10 So by the same token, I would allow the intervenors  
11 to address this question for what it may be worth  
12 to the Commission in the end.

13 So with all of that, the objection is  
14 overruled and, Ms. La Seur, you may proceed  
15 carefully.

16 Q. (MS. LA SEUR CONTINUING) The question --  
17 would you like the question again?

18 A. Absolutely.

19 Q. Yeah. Okay. In applying the \$9-per-ton  
20 assumption, were OTP's assumptions regarding carbon  
21 cost lower or higher than those of other parties in  
22 the Minnesota proceeding, including advocacy staff?

23 A. Well, you've got numbers here and there  
24 and everywhere, and what we were trying to  
25 demonstrate with regard to our testimony in

1 Minnesota, and because Otter Tail operates in  
2 multiple-state jurisdictions, some of that is  
3 spilled over and is being discussed here, too, it  
4 was fully bedded in Minnesota. But it was a good-  
5 faith effort on the part of Otter Tail and the  
6 other project applicants in Minnesota to establish  
7 analysis that would suggest what the impact of  
8 various numbers might be to the selection of a  
9 particular resource, in this case Big Stone II.

10 I think it's appropriate to put a little  
11 bit of background, and so what we did and how we  
12 did it. At the time that we were preparing the  
13 filing of our testimony, the only information that  
14 we had available to us was some anecdotal  
15 information that the Minnesota Department of  
16 Commerce was supporting the use of \$9 a ton as a  
17 proxy for carbon values, and that was what we set  
18 out then to use in our Minnesota integrated  
19 resource plan development. We applied that as if  
20 it applied to every ton of emissions. It was vague  
21 as to how it should be applied, but certainly  
22 that's a conservative way to apply it, to apply it  
23 on every megawatt-hour of electricity produced from  
24 a coal-fired power plant.

25 Between the time that we submitted our

1 written testimony and the time that we had the  
2 public hearings, there was a hearing before the  
3 Commission in Minnesota on another matter relating  
4 to the range of values that should be used for the  
5 consideration of carbon. And in the meeting in  
6 front of the Commission with regard to the adoption  
7 of values, there was discussion among the  
8 Commission as to what should be used. Some were  
9 arguing that we should use the \$9. Intervenors  
10 were there suggesting that, no, the number should  
11 be higher. Values considerably higher were  
12 suggested. But there were also those that were  
13 advocating that numbers considerably less should be  
14 used because of the impact that those resultant  
15 numbers might have on the cost of resource  
16 selection.

17 At the end of that hearing the Minnesota  
18 Commission established that it would probably be  
19 most proper for them to adopt a position that a  
20 range of numbers should be used, and the range of  
21 numbers that they then settled on was 4 to \$30 per  
22 ton. We applied both -- at that point in time we  
23 had already run our complete IRPs assuming the \$9 a  
24 ton, so at that late date what we did then was  
25 applied sensitivity analysis around the range of

1 numbers. And, again, to be very conservative we  
2 applied -- for the purpose of that Minnesota  
3 analysis we applied the range of numbers and the  
4 impact that that would have on the selection  
5 process of resources, the 4 to \$30 a ton. We did  
6 the sensitivity analysis. Jeff Greig from Burns &  
7 McDonnell is here today and can discuss that in  
8 more detail. But I think that what's relevant is  
9 that the manner in which the parties evaluated the  
10 cost of carbon had the effect, when applied against  
11 the most likely legislative vehicle, the manner in  
12 which we analyze those by applying them to every  
13 ton of -- of every megawatt-hour of emissions had  
14 the impact of making the effective range -- instead  
15 of 4 to \$30 a ton, it had the impact of making the  
16 range that we effectively studied from 8 to \$60 a  
17 ton. I would suggest that even the \$30 number,  
18 which was at the high end of the range, was within  
19 the midpoint of intervenor testimony. Certainly  
20 the \$60 that we have effectively considered is  
21 clearly something that would, I think, pass what  
22 was intended in terms of an examination of this  
23 value. But in terms of what we have done, that's  
24 what we have done, that's how we have done it, and  
25 I think that the results speak for themselves in

1 that in spite of that, the resource selection that  
2 we have made results in Big Stone II being the  
3 least-cost resource.

4 And I would further point out how  
5 important it is for this Commission to know that in  
6 applying those numbers, we still used conservative  
7 estimates for the specific purpose of not biasing  
8 the decision toward Big Stone II. We used natural  
9 gas prices that were significantly lower than what  
10 they are today. We assumed construction costs for  
11 gas-fired generation that is lower than what one  
12 could build projects for today. We assumed the  
13 continuation through the entire planning period of  
14 the continuance of the production tax credit. We  
15 assumed costs of wind that are significantly below  
16 what the cost of wind is today, and we assumed that  
17 there would be no cost associated for the  
18 transmission.

19 So all in all, I absolutely categorically  
20 and unequivocally stand by the analysis we've done  
21 as being reasonable and prudent and definitely not  
22 intended for the purpose of trying to bias the  
23 selection toward resource -- of Big Stone II as a  
24 resource. In fact, we have done it to provide  
25 reassurance to this Commission and the Minnesota

1 Commission and the South Dakota Commission, our  
2 boards of directors and our customers that the  
3 project that we are proposing is reasonable and  
4 prudent and deliberately -- and in good faith it is  
5 what it is.

6 Q. Thank you for that speech, Mr. Uggerud.  
7 You still haven't answered my question. Was the  
8 \$9-per-ton assumption lower or higher than those  
9 made by other parties, including the advocacy  
10 staff?

11 A. The \$9 a ton as we applied it was within  
12 the range of what was recommended by advocacy  
13 staff, and, furthermore, the sensitivity that we  
14 did around it definitely encompassed the range of  
15 numbers that were proposed by others.

16 Q. Lower or higher?

17 A. Within the range, I indicated.

18 Q. Did you include any inflation adder in  
19 your \$9-a-ton calculation?

20 A. No.

21 Q. You just assumed \$9 a ton annually for the  
22 life of the plant; correct?

23 A. I believe that to be the case.

24 Q. Did you assume no inflation for the life  
25 of the plant for any other recurring costs

1 associated with operation of Big Stone II?

2 MR. GUERRERO: Your Honor, I guess I'm  
3 going to risk an objection. My batting average  
4 isn't that good this morning. But my comment  
5 earlier was, and I think that you generally agreed  
6 with me is that there would be a limited  
7 opportunity to get into this issue. My sense is  
8 that the questioning now has sort of gone beyond  
9 any sort of limited analysis and we get into  
10 basically retrying the Minnesota case. And so I'm  
11 going to object on the basis of relevancy again.

12 MS. LA SEUR: It's the last question with  
13 regard to this \$9-ton number.

14 JUDGE WAHL: Overruled. That was really  
15 what I was getting, we've really done it.  
16 Overruled. Let's proceed to an end.

17 THE WITNESS: Well, Ms. La Seur, it would  
18 be one thing if we had rules and regulations that  
19 we could follow, and one of the things that I find  
20 to be almost amusing relative to the debate with  
21 regard to carbon is that there are no rules and  
22 regulations that a project sponsor can follow.  
23 What we're engaged in is a debate that's purely  
24 speculation as to what those rules and regulations  
25 might be at some time in the future. So to the

1 extent that there are others that would want to  
2 hypothesize that there's going to be a different  
3 standard in the future than what we have assumed,  
4 that's an entirely legitimate thing to speculate  
5 on, but it's just that, it's pure speculation. At  
6 this point we do not have rules and regulation that  
7 provide guidance to parties. All we have got is an  
8 emotional debate about what those rules and  
9 regulations might become.

10 Q. (MS. LA SEUR CONTINUING) The question  
11 was, did you assume no inflation for any other  
12 recurring costs associated with operation of Big  
13 Stone II?

14 A. We assumed escalation for the other costs.

15 Q. Would you please describe, and a list is  
16 sufficient, the North Dakota energy efficiency  
17 programs that OTP modeled as part of the resource  
18 planning that led to proposing Big Stone II?

19 A. I will ask that you cover those with Mr.  
20 Morlock, who has the responsibility within our  
21 company to evaluate and analyze those in detail.

22 Q. Well, you did testify at page 17 of your  
23 direct testimony, Mr. Uggerud, that OTP is pursuing  
24 conservation aggressively. On what basis do you  
25 make that statement?

1 MR. GUERRERO: I'm sorry. What line?

2 MS. LA SEUR: This is line 3, "Otter Tail  
3 will pursue conservation aggressively."

4 MR. GUERRERO: Of the March 10?

5 THE WITNESS: March 10?

6 MS. LA SEUR: March 10, page 17.

7 THE WITNESS: What page?

8 MS. LA SEUR: Page 17, line 3.

9 THE WITNESS: Yes, I see that.

10 Q. (MS. LA SEUR CONTINUING) And my question  
11 was, on what basis do you make this statement that  
12 Otter Tail will pursue conservation aggressively?

13 A. Well, it's a matter of fact. In the  
14 selection of Big Stone II as a resource, we are  
15 assuming compliance with Minnesota conservation  
16 standards and we're also working with the States of  
17 North Dakota and South Dakota to implement cost-  
18 effective demand side management activities within  
19 our system. That's a statement of fact.

20 MS. LA SEUR: I'm distributing applicants'  
21 response to intervenors' data request number 33.  
22 This is Intervenors' Exhibit No. 20, I believe,  
23 that I would like to offer.

24 JUDGE WAHL: Mr. Guerrero?

25 MR. GUERRERO: No objection.

1 JUDGE WAHL: Mr. Binek?

2 MR. BINEK: No objection.

3 JUDGE WAHL: Exhibit I 20 is received.

4 Q. (MS. LA SEUR CONTINUING) This is a  
5 response to a question about the anticipated cost  
6 per avoided kilowatt-hour of any energy efficiency  
7 programs modeled for OTP's North Dakota service  
8 area. Mr. Uggerud, it is the case, is it not, that  
9 OTP has not modeled any specific energy efficiency  
10 programs for North Dakota?

11 A. Is the key word there "specific"? I think  
12 that the response which was prepared by Kim  
13 Pederson from our conservation department, she  
14 indicates that we have provided, and I think in her  
15 words, generic conservation impacts for North  
16 Dakota.

17 Q. So these are conservation impacts based on  
18 no specific program. Could you explain how that  
19 works, how you get a generic response when you  
20 don't know what program you're talking about?

21 A. You have to get an answer from Ms.  
22 Peterson on that, but I do know that Otter Tail has  
23 considered conservation impacts and opportunities  
24 within North Dakota. I think that the key word was  
25 in your question, are they specific programs or as

1     this answer applies, are they generic programs?  
2     We've worked with North Dakota in the development  
3     of conservation programs. To the extent that Otter  
4     Tail develops conservation programs for use in our  
5     system on a general basis, they're available to  
6     customers in all three of our service territories.  
7     We've been involved in a direct load management  
8     control program for decades. The impacts of that  
9     are known and they're as available in North Dakota  
10    as they are throughout our entire three-state  
11    service territory.

12           Q.     Actually, Mr. Uggerud, the question says  
13    any energy efficiency programs, and "specific" is  
14    the word used by the OTP staffer in the response,  
15    just to clarify. But the follow-up question is,  
16    will -- does OTP plan to pursue conservation  
17    programs aggressively independently, or would that  
18    be dependent on an order coming from this PSC to do  
19    so?

20           A.     Well, we've always applied them  
21    independently. Conservation is not something that  
22    we've required an order. That's why I indicated  
23    for decades we've had a direct load control  
24    program, which is a conservation program. We've  
25    got a program that we have applied within North

1 Dakota as well as Minnesota and South Dakota with  
2 regard to the use of demand controllers, where  
3 customers can make elections with regard to their  
4 rate structure. They can -- by setting the demand  
5 within their own homes and controlling their load,  
6 they're eligible for rate reductions based on that  
7 program. So, of course, we've done that  
8 electively, but probably even more importantly,  
9 we've done it electively within the context of  
10 working collaboratively with the North Dakota  
11 Commission and our North Dakota customers in the  
12 development of those programs.

13 Q. It isn't really possible, is it, to know  
14 what could be achieved by a specific energy  
15 efficiency program without analyzing that specific  
16 program?

17 A. Well, I suppose specific programs in order  
18 to develop the cost metrics associated with those  
19 programs would have to be analyzed as individual  
20 components, but it's certainly true that what Otter  
21 Tail has done is provided significant demand side  
22 management and conservation programs available.  
23 We've got work that we do with our customers in  
24 terms of looking at energy efficiency  
25 opportunities. We've got programs, as I mentioned,

1 for direct load control, residential demand  
2 controllers. We've got a whole department and  
3 staff of people who work with our industrial and  
4 large commercial customers. We've got people that  
5 are available to work with our residential  
6 customers. We sponsor trade shows where we meet  
7 with contractors, and all of those things are done  
8 for the specific purpose of influencing and  
9 encouraging demand-side programs. Taken  
10 collectively, we've got the results of our  
11 experience in doing that, it is modeled, and as  
12 this answer indicates, as generic responses to  
13 those activities wherein our future load  
14 requirements are affected by the results that are  
15 achieved from those things that we have done  
16 relative to conservation and demand-side  
17 management.

18 Q. Going back to your analogy of the less  
19 fuel-efficient car and the more fuel-efficient car  
20 and based on, too, perhaps performing the role of a  
21 more efficient part of the generation resources and  
22 thereby constituting some form of carbon  
23 mitigation. OTP and MDU are subject to MISO  
24 governance of available capacity; correct?

25 A. Right.

1           Q.     So neither utility would have the  
2 prerogative to decide independently to decrease use  
3 of any existing generation facility; is that right?

4           A.     If you mean is the output level of the  
5 specific generator set by the MISO dispatch  
6 protocol, the answer would be the specific output  
7 of our generators at a given point in time is set  
8 by the MISO generation dispatch rules.

9           Q.     That's the question. So it's not really  
10 your decision to make, is it, whether you'll run  
11 Big Stone II all the time and the others less or  
12 not at all?

13          A.     That's right. They're dispatched by MISO.

14          Q.     And if your projections of load are  
15 correct, there will not be excess capacity on the  
16 system that could be shut down; correct?

17          A.     That was one confusing question.

18          Q.     If there is as much load as you say there  
19 will be over the life of the plant, there won't be  
20 extra generation to shut down? That's the  
21 question.

22          A.     Well, certainly I think that the output of  
23 the low-cost coal-fired power plants will be  
24 influenced by the MISO dispatch protocol. And to  
25 the extent that our reserves are dwindling, I don't

1 think that conservation programs on the part of MDU  
2 and Otter Tail Power Company would in and of  
3 themselves change the amount of hours that  
4 coal-fired power plants are run. They will be  
5 running in response to the load and the cost of  
6 providing the resources to that load on a  
7 regionwide basis.

8 Q. How do you know that when you haven't  
9 modeled any specific programs?

10 A. Well, it's a relatively simple and  
11 intuitive thing to come up with. If you've got  
12 coal-fired power plants that can produce  
13 electricity at \$15 a megawatt-hour and the cost at  
14 the margin in the MISO pool -- I didn't check  
15 today, but on Friday it was in the \$70-a-megawatt-  
16 hour range, MISO is going to choose to dispatch the  
17 \$15-per-megawatt-hour generating units irregardless  
18 of the load on Otter Tail and MDU system at a given  
19 point in time.

20 Q. Has OTP modeled the anticipated cost per  
21 avoided kilowatt-hour of any energy efficiency  
22 programs?

23 A. Otter Tail -- we've got, like I said, a  
24 staff of people that models the cost of many of our  
25 programs, all of our programs. That's a part of

1       what the people do that are responsible for  
2       developing conservation programs and the deployment  
3       of those conservation programs.

4           Q.     So when we asked in this data request  
5       number 33 for OTP to state -- well, for the  
6       applicants to state the anticipated cost per  
7       avoided kilowatt-hour of any energy efficiency  
8       programs modeled for OTP's North Dakota service  
9       area, why didn't we get that number?

10           MR. GUERRERO:  Objection calls for  
11       speculation.

12           JUDGE WAHL:  Overruled.  He's the CEO.

13           MR. GUERRERO:  Your Honor, he's not the  
14       CEO.

15           JUDGE WAHL:  Whatever.

16           MR. GUERRERO:  Well, you've overruled me,  
17       so --

18           THE WITNESS:  Well, there's a difference  
19       here between modeling generic conservation  
20       opportunities and impacts within an integrated  
21       resource planning model versus deploying those  
22       conservation programs in consultation and  
23       cooperation with the customers that would choose to  
24       implement.  So, for example, if we make rebates  
25       available to our customers for the purpose of

1 installing high-efficiency appliances, if we make  
2 assumptions with regard to the rate rebates that we  
3 will give to people that employ residential demand  
4 controllers, to the extent that we have dual fuel  
5 rates, to the extent that we have interruptible  
6 rates, the cost impacts and the implications are  
7 known on a case-by-case basis.

8 That's not the same, though, as saying  
9 that for the purpose of doing long-range resource  
10 planning that we will aggregate our collective and  
11 historical experience with those things in a  
12 generic basis for the purpose of defining the North  
13 Dakota portion of our system resource expansion  
14 requirements. The integrated resource planning  
15 models don't include the detail on a load-by-load,  
16 customer-by-customer basis. Those are things that  
17 are aggregated and modeled for the purpose of  
18 establishing total system load and the response to  
19 conservation programs. But the answer isn't in --  
20 the modeling is not inconsistent with the -- with  
21 the specific answer to the question.

22 Q. (MS. LA SEUR CONTINUING) Look again at  
23 your Exhibit 113. This is the MRO-U.S. Available  
24 Capacity Margins Forecast Summer Seasons out of the  
25 NERC report, and it shows decreasing available

1 capacity margins forecast for summer seasons in the  
2 coming decade; correct?

3 A. Right.

4 Q. And North Dakota is a winter-peaking  
5 state; correct?

6 MR. KUNTZ: Hm-mmm.

7 THE WITNESS: And, again, this is where  
8 averages can get you in trouble. Currently Otter  
9 Tail is probably winter peaking. I would guess  
10 that MDU, and they can testify to this, is probably  
11 summer peaking. But within the time range that we  
12 are looking at here, I would guess that one would  
13 probably find that Otter Tail becomes a summer-  
14 peaking utility. But I think that it would be  
15 impossible to draw a conclusion as to whether or  
16 not that's even relevant to the thing that we're  
17 trying to depict with regard to this graph.

18 Q. (MS. LA SEUR CONTINUING) So the question  
19 about North Dakota being a winter-peaking state,  
20 are you not able to answer that or you're just able  
21 to speak on a system basis?

22 A. Well -- and, again, there's been a lot  
23 that you've tried to introduce relative to what  
24 North Dakota is, but what North Dakota is is  
25 irrelevant with regard to what Otter Tail and MDU

1 are.

2 MR. GUERRERO: Your Honor, I would also  
3 proffer that Mr. Morlock is here, he's available,  
4 he has testified on this issue and he is available  
5 to answer this particular question under the best  
6 evidence rule.

7 MS. LA SEUR: This is Mr. Uggerud's chart.

8 JUDGE WAHL: Yeah, it is, Mr. Guerrero.

9 MR. GUERRERO: I believe he's answered the  
10 question.

11 Q. (MS. LA SEUR CONTINUING) The question I'm  
12 getting to is if indeed North Dakota is a winter-  
13 peaking state -- and I'm sure we can find some  
14 explicit information about that before the end of  
15 this hearing -- would you say that North Dakota --  
16 that --

17 MR. GUERRERO: It's a hypothetical.

18 JUDGE WAHL: Let her finish the question,  
19 to begin with.

20 Q. (MS. LA SEUR CONTINUING) Taking subject  
21 to check that North Dakota is a winter-peaking  
22 state, would that mean that these summer capacity  
23 margin projections are less of a concern for North  
24 Dakota than for MRO's summer-peaking states?

25 A. Well, our concern here is for the

1 customers of Otter Tail Power Company and  
2 Montana-Dakota Utilities, so it's irrelevant as to  
3 what the numbers may or may not be for North Dakota  
4 as a state.

5 Q. Mr. Uggerud, has OTP identified an  
6 alternative to this proposal if the Minnesota  
7 application is rejected?

8 A. Well, I think that my testimony indicates  
9 that if the Big Stone II project doesn't go  
10 forward, that the most likely alternative would be  
11 natural gas or a combination of wind and natural  
12 gas.

13 Q. And OTP engages in ongoing research  
14 resource planning; correct?

15 A. Yes, we do.

16 Q. So between now and 2013 there will be  
17 opportunities to adjust the course along the way as  
18 new information becomes available and admissible?

19 A. Well, I think that you were the one that  
20 indicated that we won't let the lights go out, so  
21 it's possible that our resource expansion plans  
22 might change depending on what we can or cannot do,  
23 but that does not necessarily then mean that  
24 whatever alternatives that we might be forced to  
25 make would necessarily be the most cost-effective,

1 most prudent options that we could have otherwise  
2 followed had we gone through the deliberative  
3 process of trying to optimize what those future  
4 resources might and should be.

5 Q. Turning to your rebuttal testimony, this  
6 is the April 23rd, at page 2, lines 1 and 2, "Otter  
7 Tail intends to implement significant amounts of  
8 renewable energy and energy conservation in the  
9 coming years." Is OTP willing to make a commitment  
10 to pursue the same level of energy efficiency  
11 investment in North Dakota as it will make in  
12 Minnesota in the next five years as a proportion as  
13 a condition for approval of Big Stone II?

14 MR. GUERRERO: Same objection, Your Honor.

15 JUDGE WAHL: Overruled.

16 THE WITNESS: Well, I think that our  
17 testimony has been that we will abide by the policy  
18 that exists in our various state jurisdictions, and  
19 I don't think that it's a policy requirement now  
20 that North Dakota would have us do the same as what  
21 Minnesota is having us do. I think that it's also  
22 important to point out that the -- while Minnesota  
23 has a mandate, the legislative enactment of that  
24 mandate does have a condition precedent in there  
25 that says that those still have to be cost

1 effective, and so it would be -- it would be  
2 absolutely erroneous to reach a conclusion today  
3 that a 25 percent penetration of renewables is the  
4 standard that people would have to follow without  
5 any further review and consideration of whether  
6 that is prudent or not.

7 But in terms of your question, if you're  
8 suggesting that for some reason that North Dakota  
9 should impose the Minnesota requirement upon us,  
10 that would be outside of the present law and  
11 regulation within North Dakota to make that sort of  
12 a condition.

13 Q. (MS. LA SEUR CONTINUING) My question is,  
14 would OTP agree voluntarily --

15 A. Of course not. We work with North Dakota.

16 Q. -- to -- I'm not done with my question,  
17 and it wasn't about renewable energy. It was about  
18 energy efficiency. -- to making the same  
19 proportional investment in energy efficiency in  
20 North Dakota as it will make in Minnesota as a  
21 condition for approval of Big Stone II?

22 A. Not unilaterally and independently. Of  
23 course not. The goal of -- whether it be renewable  
24 energy or whether it be conservation, the goal  
25 would be that we achieve those things that are cost

1 effective. We will certainly work with the North  
2 Dakota Commission to adopt and implement those  
3 programs that are cost effective, but we would be  
4 irresponsible to make a unilateral commitment to  
5 say that whether those thing are cost effective and  
6 prudent or not, we're still going to do them and  
7 then come to the North Dakota Commission and ask  
8 for approval to do so. That would be  
9 inappropriate.

10 Q. Subject to a cost-effectiveness review,  
11 would you consider that a reasonable condition?

12 A. To the extent that they're cost effective,  
13 I propose that we would probably do them. I mean,  
14 that would be -- that would be what any utility  
15 would do. To the extent that they're cost  
16 effective, we will. But what's cost effective has  
17 not yet been ascertained with regard to the  
18 penetration that Minnesota by statute is going to  
19 try and implement. But even within Minnesota, and  
20 that's why I pointed out in my answer that even  
21 within Minnesota those are not absolutely  
22 requirements absent passing muster with regard to  
23 whether even in Minnesota they're cost effective or  
24 not.

25 Q. Go to your rebuttal at page 2, same page

1 we were just looking at. You refer to a --

2 MR. GUERRERO: Which page?

3 MS. LA SEUR: Page 2 of the rebuttal  
4 testimony.

5 Q. (MS. LA SEUR CONTINUING) And down at line  
6 20 you state that Otter Tail has performed in other  
7 jurisdictions a reasonable assessment of the  
8 possible impact that future carbon dioxide  
9 regulation may have on decisions regarding the  
10 selection of future resources. What do you  
11 consider a reasonable assessment of those impacts?

12 A. I think that it was reasonable in this  
13 case to apply the values as determined by the  
14 Minnesota Public Utilities Commission, and that's  
15 what we applied.

16 Q. And do you claim that the assessment done  
17 by OTP in other jurisdictions is consistent with  
18 any legislation currently under consideration by  
19 Congress?

20 A. I think that the determination of the  
21 values that the Commission in Minnesota determined  
22 that we should evaluate was done in careful  
23 deliberation and consideration of those things that  
24 are being discussed in Congress. That arrival by  
25 Minnesota of establishing the range in a hearing

1 before the Commission certainly included testimony  
2 with regard to what is being considered on a  
3 federal level, and so I think that it was  
4 incorporated by reference into the determination of  
5 the Minnesota Commission.

6 Q. Also with reference to regulation, has --  
7 have the applicants performed any analysis of cost  
8 increases that will flow from more stringent  
9 mercury regulation subsequent to the recent  
10 vacating of the Clean Air Mercury Rule by the U.S.  
11 Court of Appeals for the D.C. Circuit?

12 MR. KUNTZ: I'm going to impose an  
13 objection because the question went to the  
14 applicants, and this witness is testifying on  
15 behalf of Otter Tail Power when it becomes their  
16 individual modeling.

17 MS. LA SEUR: I would be happy to make it  
18 OTP specific.

19 MR. GUERRERO: Again, I would just let you  
20 know that Mr. Rolfes is here. He's the best person  
21 to answer this particular question. I don't see it  
22 anywhere in Mr. Uggerud's testimony.

23 JUDGE WAHL: If that was an objection, Mr.  
24 Guerrero, it's overruled. Your advice is  
25 appreciated and counsel might note it.

1 Q. (MS. LA SEUR CONTINUING) It's merely a  
2 question as to whether the analysis has been  
3 performed.

4 A. In spite of the vacating of the Clean Air  
5 Mercury Rule, the project participants still  
6 propose to utilize the mercury reduction design  
7 features that we had previously proposed. Again,  
8 it falls into the matter of we could have  
9 discussion at length with regard to speculation of  
10 what might be. What we have right now is an  
11 absence of a mercury protocol. We believe that  
12 it's a good-faith effort to assume the mercury  
13 reduction protocol that we had previously proposed.  
14 There is nothing else that would provide any  
15 guidance as to what we should do that would be  
16 different than that. There's no discussion on a  
17 federal level that would give us any more guidance  
18 than what we are proposing to do.

19 Q. Do you acknowledge that the Clean Area  
20 Mercury Rule was vacated as being too lax a form of  
21 regulation of mercury?

22 A. Well, while the -- and, again, I'm not the  
23 witness that can respond in detail to that, but  
24 whether or not the Clean Air Mercury Rule was  
25 abandoned because it was too lax doesn't

1 necessarily mean that the proposal that we're  
2 offering in this case would not be consistent and  
3 in concert with what the goals of mercury  
4 production would be. It might have been relaxed  
5 because it was relaxed for other projects in other  
6 places. It might not have gone far enough with  
7 regard to application for existing units in other  
8 places. But in terms of what we have proposed, I  
9 would find it hard to imagine that what we're  
10 proposing would be inconsistent with what might  
11 evolve as a regulatory protocol for mercury.

12 Q. Going to your rebuttal testimony at page  
13 9, you refer to Mr. Schlissel and DRC and critique  
14 the failure to submit a detailed proposal for  
15 alternative generation options to this Commission,  
16 correct, where, when facilities would be, how to  
17 handle variability in natural gas supply, that  
18 level of detail? Is that a correct summary? Is  
19 that a correct summary of your criticism?

20 A. That's the essence of my criticism.

21 Q. Okay. Can you point to any evidence in  
22 the record describing how OTP considered the wind/  
23 gas alternative at this level of detail?

24 A. Was your question can I point in the  
25 record?

1 Q. Right. Anything in the formal record?

2 A. Well, our integrated resource planning  
3 process was all about establishing the analytics  
4 associated with that. We evaluated -- in fact,  
5 when you do a computerized model of the resource  
6 expansion process, all of your resource options are  
7 available in the model, and there are hundreds and  
8 thousands of scenarios that are considered within  
9 the context of performing those analysis, and the  
10 resultant conclusion of those analysis was what we  
11 have proposed in this application. But all  
12 combinations of all other resources were available  
13 in this selection of Big Stone II.

14 Q. So your argument is then that intervenors  
15 should have filed a full alternative resource plan,  
16 complete with detailed proposals for specific  
17 resource generation alternatives?

18 A. All I'm saying is that none has been  
19 found, whether by us or by the intervenors. Nobody  
20 has set forth an alternative that would be a more  
21 prudent alternative because none exists. And what  
22 we're saying is that you can come forward and  
23 criticize us for not having proposed something  
24 that's better, and nobody has because there isn't  
25 anything better.

1           Q.     Would you acknowledge that the purpose of  
2     the prudency proceeding before this Commission is  
3     to consider all relevant evidence to decide if the  
4     resource addition is reasonable and prudent to  
5     ensure reliable electric service to North Dakota  
6     consumers?

7           A.     Exactly.

8           Q.     And that burden of proof lies on the  
9     applicant; correct?

10           MR. GUERRERO:  I'm going to object, calls  
11     for a legal conclusion.

12           JUDGE WAHL:  Sure, it does, but he knows  
13     as well as all of us do the answer to that  
14     question.  It's a fact, and you don't need to be a  
15     lawyer to come to know that fact.  The objection is  
16     overruled, but you have your argument, nonetheless.

17           THE WITNESS:  And, again, my frustration  
18     is that, of course, we have analyzed all  
19     combinations and we haven't found one.  That's why  
20     we've not testified.  And we've said, okay, if  
21     people disagree with us, they can show us where  
22     we're wrong, and nobody has come forward and  
23     saying, ah, you know, we found one that was better  
24     than what you proposed.  Nobody has.  People are  
25     criticizing us that we haven't identified the most

1 cost-effective option, but nobody has offered a  
2 better one, and our analysis, which makes all  
3 resources available in all combinations, was  
4 available to our modeling to select and it doesn't  
5 select it.

6 But having said that, maybe for the  
7 purpose of discussion with the Commission, you  
8 know, it's not irresponsible for engineers to be  
9 familiar enough with what they do to be able to  
10 provide intuitive responses to some of these  
11 things, too, and so let me just do that for the  
12 purpose of maybe clarifying the record. Okay?

13 You know, you can build a natural gas-  
14 fired power plant as an alternative to Big Stone.  
15 Okay. And I don't know if you build a natural gas  
16 combined cycle power plant and have an all-in cost,  
17 you're probably going to have \$1,200 a kW  
18 associated with that. In fact, I think that MDU --  
19 Mr. Heidell has testified to that, Mr. Morlock has  
20 testified to that. If you spread that cost on a  
21 levelized fixed charge basis over the life of the  
22 project to your customers, you can compute what the  
23 capital cost component of that resource would be  
24 and now you've still got to provide the energy from  
25 that resource to provide your customer load, and

1 you can pick a natural gas price, you can, you  
2 know, give it to me and you can calculate then an  
3 energy component. And if you build a natural gas  
4 alternative to Big Stone II and add the capital  
5 cost of the gas plant and add the energy that comes  
6 from it, you get a cost that's higher than Big  
7 Stone. You can do the same with the wind/gas  
8 alternative. You've got the cost of the wind,  
9 you've got the cost of the gas backup, you can  
10 probably go with simple cycle peaking and lower  
11 your capital cost and then you can come up with a  
12 combined energy cost with -- let's just say  
13 intuitively that half of the energy might come from  
14 the wind and half from the gas backup, and, again,  
15 you just add up your investment component and your  
16 energy component, you get a resultant number and  
17 you compare that to Big Stone. We've done that,  
18 but simple cycle peaking and wind together is going  
19 to be \$3,000 a kW, significantly higher than Big  
20 Stone. Half of the energy is going to be free,  
21 half of it's going to be at -- again, you pick the  
22 natural gas price and you can tell me, but let's  
23 just say that at today's price at \$10 per million  
24 Btu, half of the energy is going to be \$50 a  
25 megawatt-hour, it's a relatively simple matter.

1 Now you've got -- now you've got a \$3,000-per-kW  
2 installed resource with energy at \$25 a megawatt-  
3 hour. That just happens to be more expensive than  
4 \$2,500 per kW of capacity with \$15-per-megawatt-  
5 hour energy. It's not -- it's not any more  
6 complicated than that. And every analysis that we  
7 have done shows that when you apply the rigor -- I  
8 gave you a back of the envelope, but when you apply  
9 the rigor to that analysis, what we're submitting  
10 as testimony in this record is that Big Stone II is  
11 the least-cost resource expansion plan, and it was  
12 deliberately done and carefully done within  
13 standards that are accepted within the industry of  
14 how you do it. That's why we hired other people to  
15 come in and help us. Our job is to provide  
16 electricity to our customers as reliably and as  
17 economically as possible. Okay? And we have done  
18 that.

19 Q. Do you recall the original question, Mr.  
20 Uggerud?

21 JUDGE WAHL: All right. Let's not go  
22 there. Let's recess. We're past the noon hour.  
23 This seems to me to be an appropriate place to  
24 recess until one o'clock. You can begin your  
25 testimony then and maybe get back on track.

1 MS. LA SEUR: Or my cross-examination.

2 JUDGE WAHL: I'm sorry.

3 MS. LA SEUR: I'll try not to testify.

4 JUDGE WAHL: We'll be in recess until one  
5 o'clock.

6 (Recess taken at 12:08 p.m. to 1:03 p.m.)

7 JUDGE WAHL: All right. Ms. La Seur, with  
8 you.

9 MS. LA SEUR: I have one other exhibit I'd  
10 like to offer. There is a settlement agreement on  
11 the Big Stone project from August 31st of 2007  
12 entered into by Minnesota Department of Commerce  
13 and the Big Stone partners in the certificate of  
14 need proceeding before the Minnesota Public  
15 Utilities Commission, and we had some discussion  
16 about this exhibit with Mr. Guerrero. Mr. Kuntz, I  
17 think, has an objection to having it entered. We  
18 propose it as evidence of commitments made by the  
19 applicants in other jurisdictions that may have  
20 bearing on the prudence or the terms of the project  
21 going forward in this jurisdiction.

22 JUDGE WAHL: Mr. Guerrero. Well, we  
23 should identify it. This will be I 21?

24 MS. LA SEUR: Yes.

25 JUDGE WAHL: Mr. Guerrero.

1           MR. GUERRERO: Your Honor, thank you. I  
2 don't think I have an objection. It's a public  
3 document. We actually filed a copy of this for  
4 informational purposes with the North Dakota  
5 Commission some time ago. I question its  
6 relevancy, but I'm not going to object.

7           JUDGE WAHL: Mr. Kuntz.

8           MR. KUNTZ: From our standpoint, Mr.  
9 Hearing Officer, this is cross-examination of Mr.  
10 Uggerud. It's got nothing to do, from what I can  
11 see, to any cross-examination. The intervenors are  
12 attempting just to offer a document. I understand  
13 that Montana-Dakota may have been a signatory to  
14 the settlement agreement, but, as you know,  
15 Montana-Dakota doesn't sell electricity to  
16 Minnesota. It has little, if any, application to  
17 this proceeding or Montana-Dakota's position in  
18 this proceeding. I don't see the relevance. I  
19 don't think any's even tried to be laid for this  
20 exhibit. So we would object with respect to our  
21 application.

22           JUDGE WAHL: Mr. Binek.

23           MR. BINEK: I have no position on it.

24           JUDGE WAHL: Well, what if I receive the  
25 exhibit with regard to the application of Otter

1 Tail Power, Ms. La Seur?

2 MS. LA SEUR: We would note that the  
3 settlement agreement is signed by the president of  
4 Otter Tail Power and by the chief executive officer  
5 of MDU, and we are offering it for its value as  
6 evidence of an agreement entered into by the Big  
7 Stone partners.

8 JUDGE WAHL: And you say it bears on the  
9 prudence of the project -- as their commitments  
10 made for the project? That is, this agreement is  
11 still -- still controlling for the Big Stone  
12 project as it moves forward?

13 MS. LA SEUR: If and when it moves  
14 forward, this agreement is relevant. And it  
15 details terms and conditions on which the project  
16 may move forward.

17 JUDGE WAHL: And it's binding on Otter  
18 Tail and MDU?

19 MS. LA SEUR: Correct.

20 MR. GUERRERO: Well, if I could comment on  
21 that, it's a little bit more complicated than that,  
22 unfortunately. The settlement agreement was  
23 entered into last fall with the Minnesota  
24 Department of Commerce. Since the withdrawal of  
25 the two partners, Great River Energy and Southern

1 Minnesota Municipal Power Agency, the Minnesota  
2 Department of Commerce has indicated that they  
3 have -- that their position is -- the settlement  
4 agreement has been put on the table or been set  
5 aside, in their words, and so the question of its  
6 legality and whether or not it's enforceable  
7 against either Otter Tail or Montana-Dakota or any  
8 of the other parties, including the Department of  
9 Commerce, remains somewhat of an open question at  
10 this point.

11 And so, again, this is a settlement  
12 agreement that was offered for purposes of  
13 settlement. Typically settlement agreements are  
14 not included as evidence in a case. I question the  
15 relevance, but just so that the Commission is aware  
16 that it's not as simple as the position -- the  
17 simple position that Ms. La Seur puts forward.  
18 Again, we don't have -- the Commission has it.  
19 It's a public document.

20 MR. KUNTZ: Your Honor, I might make a  
21 comment here that this is the same party that has  
22 filed an objection to us submitting supplemental  
23 testimony last Friday on a question that was  
24 specifically directed to us regarding our  
25 participation in this project. Now we're coming --

1 if this is an exhibit that they want to offer, it  
2 should have been offered a long time ago. It  
3 wasn't offered. This isn't proper  
4 cross-examination. It seems like we've got two  
5 sets of standards here as to when evidence is going  
6 to be offered. I did not have a chance to review  
7 this. I don't know that I've ever reviewed it. I  
8 don't know what it provides for Montana-Dakota  
9 under that settlement agreement, so I have no idea  
10 what the relevance would be to this particular  
11 proceeding. If our testimony can't come in, then I  
12 don't see any reason that this should come in,  
13 either.

14 JUDGE WAHL: Well, this is not quite the  
15 same thing.

16 MR. KUNTZ: It's exactly the same thing.

17 MS. LA SEUR: Okay. Couple of things. I  
18 thing Mr. Guerrero's clarification --

19 JUDGE WAHL: You know, let me ask first,  
20 what has this got to do with the cross-examination  
21 of Mr. Uggerud? Is --

22 MS. LA SEUR: This is being offered while  
23 Mr. Uggerud is on the stand because it is a  
24 corporate level, a chief executive level commitment  
25 made by the corporation he's here representing. We

1 are not offering questions based on this exhibit.  
2 We just want the exhibit marked so that it's part  
3 of the formal record in spite of the fact that it  
4 was mailed to the PSC for consideration as a piece  
5 of information in this docket about nine months  
6 ago. This is not new information. It has been  
7 fully available to the public and to all parties  
8 for at least nine months. It is not a settlement  
9 offer. It is a settlement agreement signed by the  
10 parties.

11 JUDGE WAHL: Was this document docketed by  
12 the Commission?

13 MS. LA SEUR: I don't think. We're unable  
14 to find it on the site, which is why I'm a little  
15 puzzled by its status and I would like to have it  
16 marked and available.

17 MR. GUERRERO: My understanding, Your  
18 Honor, is that it's not been docketed as a piece of  
19 evidence.

20 JUDGE WAHL: How is it part of the  
21 Commission's record then?

22 MR. BREEN: May I address that?

23 JUDGE WAHL: No.

24 MR. GUERRERO: No, it's not part of the  
25 Commission's records. The applicants filed it with

1 the Commission for informational purposes only, not  
2 to make it as a part of the record. In fact, I  
3 don't think it was mailed as part of this case. It  
4 was mailed just separately for informational  
5 purposes.

6 JUDGE WAHL: Are you going to use this  
7 document for cross-examining -- further  
8 cross-examination of Mr. Uggerud?

9 MS. LA SEUR: I plan to use it in my  
10 briefing.

11 JUDGE WAHL: Fine. Let's postpone this.  
12 Let's proceed with Mr. Uggerud's testimony while  
13 we're working on that. Let's -- let's -- after  
14 we've -- after we've finished up today, let's talk  
15 about this -- that document some more --

16 MS. LA SEUR: That's fine.

17 JUDGE WAHL: -- and then I'll consider it  
18 then. So let's proceed with Mr. Uggerud's  
19 cross-examination.

20 MS. LA SEUR: I have no further questions  
21 for Mr. Uggerud.

22 JUDGE WAHL: Mr. Binek.

23 MR. BINEK: Mr. Uggerud will probably be  
24 happy to hear I've stricken -- or crossed out most  
25 of the questions that I have, but I do have a

1 couple.

2

**CROSS-EXAMINATION**

3

**BY MR. BINEK:**

4 Q. There was -- in Mr. Schlissel's prefiled  
5 testimony he talked about the Midwest Reliability  
6 Organization and talked about -- or basically, I  
7 think, suggested that the MRO was expected to lower  
8 the 15 percent reserve margin. Do you -- is it  
9 your opinion that that reserve margin will be  
10 lowered, and if so, to what degree will it be  
11 lowered?

12 A. I would recommend that perhaps that's a  
13 question that you could address with Mr. Morlock  
14 who represents Otter Tail Power Company with regard  
15 to the reserve requirements task forces.

16 Q. Again in Mr. Schlissel's testimony he  
17 recommended that Otter Tail and MDU should  
18 implement portfolio alternatives to the Big Stone  
19 II project that would include energy efficiency,  
20 more renewable resources, and to the most limited  
21 extent necessary the addition of new gas-fired  
22 capacity. If Mr. Schlissel's recommendation was  
23 followed, how much new gas-fired capacity would be  
24 required?

25 A. I think that I offered as a part of my

1 summary comments that Otter Tail -- and I'm  
2 speaking now for Otter Tail -- proposes as a part  
3 of our capacity expansion a portfolio of resources  
4 that include renewables in the amount of 39 percent  
5 gas, for the purpose of backing up and standing by  
6 for the renewables in the amount of 24 percent,  
7 coal in the amount of 23 percent, and improvements  
8 through conservation and demand side management of  
9 14 percent.

10 Q. Okay. Now, that's going forward, is what  
11 you're recommending; right?

12 A. Right.

13 Q. Okay. But this -- as I understood his  
14 testimony, he's talking about you would not build  
15 Big Stone II; you would use other alternatives. He  
16 talked about energy efficiency, more renewable  
17 resources, and to the most limited extent  
18 necessary, the addition of the new gas-fired  
19 capacity. So I think he's talking about no Big  
20 Stone II. If that -- if that's the case --

21 A. That's correct. So the 23 percent that we  
22 have indicated would be our resource mix associated  
23 with building Big Stone II -- that 23 percent  
24 component would have to be replaced with an  
25 additional component of the wind and the gas.

1           Q.     Okay.  And my question was, if you can  
2 answer it, how much new gas-fired capacity would be  
3 required to meet Mr. Schlissel's recommendation?

4           A.     Well, that's one of the issues we've had  
5 with Mr. Schlissel's recommendation is that he  
6 doesn't offer a specific proposal.  He generically  
7 indicates that we should do more of something else,  
8 and it appears that he's suggesting more wind/gas,  
9 but I would submit that if you're relying on an  
10 alternative now to be a replacement for your  
11 baseload component, when Big Stone's a baseload,  
12 and if you're going to replace baseload with now an  
13 alternative that includes wind and gas, since wind  
14 is an intermittent resource that you can't call  
15 upon just at any time you want to, I would suggest  
16 that the amount of natural gas capacity that you  
17 would have to add would probably be equivalent to  
18 the amount of wind that you would have to add.

19                     So now there's the possibility that you  
20 could get some capacity credits in the Midwest  
21 Reliability Organization for the wind, but if you  
22 did, it would probably be limited to about ten  
23 percent.  So in the best-case scenario you would  
24 have to install -- at least 90 percent of the  
25 amount of wind would have to be installed as an

1 equivalent amount of natural gas, and then the  
2 energy distribution between the wind resource and  
3 the natural gas for backup is a little bit more  
4 complicated to calculate, but if you get a 40  
5 percent capacity factor out of the wind, you would  
6 be relying on 60 percent capacity factor from the  
7 gas portion of the alternative.

8           So that hypothetical combination would be,  
9 for all practical purposes, equal amounts of  
10 capacity of wind and equal amounts of capacity of  
11 natural gas with the energy mix being about 40  
12 percent from the gas and 60 percent from the wind.

13           MR. GUERRERO: I think it would be --

14           THE WITNESS: I'm sorry. 40 percent from  
15 the wind and 60 percent from the gas.

16           Q. (MR. BINEK CONTINUING) So -- okay. We're  
17 using the 500 megawatt Big Stone II Plant. So what  
18 size natural gas-fired generation plant would you  
19 need?

20           A. 500.

21           Q. On page six of your rebuttal testimony,  
22 beginning at line 11, you criticized Mr.  
23 Schlissel's use of MRO capacity charts to make a  
24 comparison. You say that the real story is energy  
25 and the real story is what the charts would look

1 like on an energy and cost basis. Would you please  
2 explain that statement a little bit more fully?

3 A. If you'll allow me to just read that for  
4 my memory here.

5 MR. GUERRERO: Is this from the April  
6 23rd?

7 MR. BINEK: It's the rebuttal.

8 MR. GUERRERO: Thanks.

9 MS. LA SEUR: Is that page 11?

10 MR. BINEK: I have line 11, page 6.

11 THE WITNESS: Okay. What I'm suggesting  
12 in my testimony here is that in order to evaluate  
13 the cost impacts of what Mr. Schlissel is  
14 suggesting is that we replace Big Stone capacity  
15 with capacity of another sort. The cost to the  
16 customers is really a function of the cost of the  
17 capacity and the cost of the associated energy that  
18 comes from the resource mix that you propose.

19 If one just looks at a curve showing  
20 capacity numbers, you have not evaluated or taken  
21 into consideration what the resultant cost of  
22 energy that would result from that mix of different  
23 resources.

24 So, for example -- and again, this is  
25 probably an answer in its simplistic form, but if

1 one were just talking capacity only, you could  
2 reduce the cost of providing the capacity to meet  
3 our customer load by going from \$2500 a kw down to  
4 a thousand dollars a kw, \$900 a kw to build a  
5 simple-cycle peaking unit, but that's not the whole  
6 story because now you've saved some money on your  
7 installed capacity costs, but the energy that  
8 results from that with gas at \$10 per million Btu  
9 in a simple-cycle peaking unit with a 10,000 Btu  
10 per kilowatt heat rate is going to be \$100 a  
11 megawatt hour for the energy.

12 So it's the combined cost of the capacity  
13 and the resultant energy that really has to be  
14 factored into the rates that you recover from your  
15 customers to pay for that, and so that's what I'm  
16 suggesting here, is that one has to look at the  
17 combined effects of both the capacity and the  
18 energy, which I'm suggesting that Mr. Schlissel was  
19 just overlooking.

20 Q. Would the potential long-term contract  
21 with BNSF as discussed in Exhibit OTP-120  
22 materially change the forecasted price of coal used  
23 to determine Big Stone II's busbar cost?

24 A. Well, and again, we don't have a long-term  
25 contract in place or ready for signature, and

1 that's one of the issues that we've been discussing  
2 here, but in our previous discussions with the  
3 Burlington Northern they have indicated a  
4 willingness to at least consider a long-term  
5 contract that would be based on the current tariff  
6 rates indexed to some sort of a -- of an  
7 inflationary adjustment factor, and what we have in  
8 the past discussed with BNSF relative to their  
9 willingness to do is precisely the manner in which  
10 we have forecasted our freight rates going forward.

11 So there's essentially, in my opinion, no  
12 difference between what we are forecasting through  
13 future freight rates and that which I think we  
14 might be able to achieve if we were to negotiate a  
15 contract with the BNSF. The question becomes  
16 whether or not that is the -- provides for the  
17 lowest cost expectation of freight transportation  
18 cost going forward, and there are two possibilities  
19 there.

20 One is without something going forward, I  
21 suppose it's possible that the BNSF could raise the  
22 rates to Big Stone. Another possibility is that  
23 something might change that would afford the Big  
24 Stone participants an opportunity to arrive at  
25 lower freight rates going forward than what a

1 contract indexed calculation might provide.

2 Certainly this Commission is aware of the  
3 issues and the complications surrounding rail  
4 freight transportation, and there has been example  
5 for sure of things we had wished were otherwise  
6 with regard to freight transportation rates, but  
7 that's not to say that we don't have some  
8 protections in place for unreasonable freight  
9 rates.

10 One of the dynamics that has change, I  
11 think even since last June when we were out here,  
12 is that the railroads are now showing in their  
13 annual calculation of revenue adequacy that they  
14 are now revenue adequate, and so one of the  
15 arguments that the railroads have used for I'll  
16 call light-handed treatment by the Surface  
17 Transportation Board in the regulation of rates is  
18 that because they were revenue inadequate, that  
19 they were therefore entitled to some great  
20 flexibility on their part in setting rates. That  
21 dynamic might change with regard to a revenue  
22 adequacy determination.

23 So -- but we're not unwilling to work with  
24 the Commission in North Dakota with regard to the  
25 best way to deal with rail transportation going

1 forward. The options are relatively simple. We  
2 could rely on tariffs and the challenge of tariffs  
3 if they're unreasonable, or we could take a look at  
4 what long-term contracts might be and make a  
5 determination as to which is the more advisable  
6 approach, but from my perspective I think that our  
7 experience with the tariff rates have been that  
8 while we're paying higher rates than what would be  
9 paid if you were looking at just purely the cost of  
10 service, they have not escalated disproportionately  
11 to the change in other costs that we have for  
12 producing electricity.

13 MR. BINEK: I have no further questions.

14 JUDGE WAHL: Do the Commissioners have any  
15 questions? Commissioner Wefald.

16 **EXAMINATION**

17 **BY COMMISSIONER WEFALD:**

18 Q. In looking at the State law, 49-05-16,  
19 advance determination of prudence, under 1(a) it  
20 says, The public utility files with its application  
21 a projectional cost to the date of the anticipated  
22 commercial operation of the electric resource  
23 addition, and then under 2 it says -- excuse me,  
24 under four it says, The Commission's order  
25 determining prudence of the resource adjustment is

1 binding for ratemaking purposes.

2 JUDGE WAHL: I don't think your mike is  
3 on, Commissioner.

4 COMMISSIONER WEFALD: It is.

5 JUDGE WAHL: I'm sorry.

6 COMMISSIONER WEFALD: But maybe my mike  
7 isn't picking up. Okay. I thought they had a  
8 wider angle.

9 JUDGE WAHL: There, I'm going to give you  
10 some more juice.

11 Q. (COMMISSIONER WEFALD CONTINUING) All  
12 right. My question is: Given those two sections  
13 of law, why wouldn't Otter Tail -- is Otter Tail  
14 asking the Commission -- when you file the  
15 projections of costs that you have to the  
16 Commission in your application, is this -- is this  
17 projectional costs, the ones that you want the  
18 Commission to approve as prudent?

19 A. Well, again, it's a question that I think  
20 requires a legal response, and I'm not sure that  
21 I'm the one that's prepared to offer that, but from  
22 a practical standpoint let me try this: I don't  
23 think that it's our intention that we're coming  
24 before the Commission today and saying that these  
25 are the costs that we would propose for setting now

1 to be the basis of future rate recovery. Whether  
2 or not the words in the statute are somewhat  
3 unclear, I don't know, but what we're coming before  
4 the Commission to say is that based on our -- our  
5 belief at this point as to what those costs would  
6 be, these are what we believe that the costs of  
7 building a power plant for commercial installation  
8 in 2013 would be, and what we're looking for is a  
9 determination from the Commission today that based  
10 on that information that it would be prudent to  
11 continue the work of then going out for the bids  
12 for the specific components, for the negotiation of  
13 the contracts, and there would be many of them.

14 It's going to take us some time and  
15 considerable expense in order to come closer to a  
16 final answer. The final cost of the plant probably  
17 won't be determined until construction is complete,  
18 but I don't think that what we're coming before you  
19 today is saying that this is what we believe the  
20 full and complete and only cost of the project will  
21 be.

22 We're saying rather that based on our  
23 analysis at this point in time, this is the  
24 magnitude -- the order of magnitude of the costs  
25 that we think are representative of what this kind

1 of a project will cost, and in order for us to  
2 proceed further, we want to make sure that we've  
3 looked at the facts and the information together  
4 and deliberatively, and in order for us to get  
5 closer to final numbers, it's going to take -- it's  
6 going to take the passage of time, but it is the  
7 best information that's available to us today.

8 Q. And I remember in the 1980s in a case in  
9 Illinois when they were building a nuclear plant,  
10 one of their utilities, that at some point in the  
11 process their Commission said, you know, the cost  
12 overruns for this project are just overwhelming and  
13 we're going to make the shareholders pay for the  
14 remainder of the costs in this -- in this  
15 situation. Do you have any thoughts on that to  
16 give reassurance to the Commission that that --  
17 what Otter Tail -- do you have any thoughts you'd  
18 like to share with the Commission as I consider  
19 that scenario?

20 A. Well, in fact, I think that it's the  
21 experience that we had with some of those nuclear  
22 projects back then that leads us to believe that  
23 the right thing to do is to sit down with the  
24 Commission and review mutually the cost information  
25 data to have a determination -- we would like to

1 have you sit with us as we review the business  
2 judgments and decisions to be made at this time.

3 One of us has got to make the  
4 determination if this is a prudent course of action  
5 to follow, and it was our belief that it was a  
6 better thing to do to make that as a joint and  
7 deliberative review, you know.

8 The Texas Utilities Comanche Peak project,  
9 the Shorem project on Long Island, those were  
10 expensive projects, and I think that it was  
11 customary back then for utilities to commence  
12 expensive capital intensive projects and then come  
13 back to the commissions later.

14 And as I've testified earlier this  
15 morning, things will change, and with the benefit  
16 of hindsight back then, people looked at those  
17 decisions to begin projects and then there was  
18 second-guessing as to whether those were reasonable  
19 projects to have undertaken or not, and what we're  
20 saying to you is that we think that it is more  
21 prudent, it's in the best interests of our  
22 customers, it's in the best interests of our  
23 shareholders to be forthcoming with regard to a  
24 sharing of all of the information and saying that  
25 based on what we know today, we are not in

1 disagreement as what would be the appropriate  
2 business judgment today.

3 That's not to say that things might not  
4 change, but what we are asking for is a mutual  
5 determination today as to whether -- does this seem  
6 like a reasonable and prudent course of action to  
7 be following?

8 Q. Now, if there would be -- let's say that  
9 you put out those bids and your costs came in --  
10 some came in lower, some came in higher, but let's  
11 say some came in considerably higher -- and then  
12 I'm looking at Section 5 of 49-05-16, If at any  
13 time following an initial Commission order, the  
14 Commission following a subsequent hearing  
15 determines that continuation of a project is no  
16 longer prudent or that its prior order should be  
17 modified, the public utility may recover in its  
18 rates in a timely manner consistent with the public  
19 utility's financial obligations the amounts the  
20 public utility already has expensed, incurred, or  
21 obligated on a project, including interest expense  
22 and return on equity, okay, et cetera.

23 So would -- if a number of costs came in  
24 considerably higher and let's say that the company  
25 was -- shared those then with the Commission at

1 that time, it's my understanding then that the  
2 Commission's -- and let's say the Commission at  
3 that point determined the project was no longer  
4 prudent, then it's my understanding that all of the  
5 costs up to that point -- forgetting all those bids  
6 and forgetting all of that information and  
7 presenting those more accurate information to the  
8 Commission -- would be passed through to  
9 ratepayers; is that your understanding?

10 A. That -- and again, I'm not a lawyer and  
11 we're getting into a legal issue now, but that is  
12 my understanding of this Section 5, as well, and  
13 that's one of the reasons why we propose to make  
14 this a mutual review at this point in time. To the  
15 best of our knowledge, this is the best project to  
16 proceed with now.

17 As a part of this advanced determination  
18 of prudence we're, I think, both reading and  
19 interpreting this the same way; that if at some  
20 point based on new information that's available to  
21 both of us, if we decide otherwise, then the costs  
22 that had been incurred to this -- to that then new  
23 point were costs that would have been reasonably  
24 incurred. We had met, as we are today, based on  
25 the evidence in April of 2008; this seems like the

1 best project to proceed with. If in November of  
2 2008 with refreshed bids and cost estimates we make  
3 a determination that, no, things have just gotten  
4 out of control and we no longer feel that this is  
5 the best kind of a project to go forward with, then  
6 I do think that what this suggests is that the  
7 costs that we spend between now and finding out  
8 that new information in November was not  
9 unreasonably expended money. That based on where  
10 we're at today, we think it's reasonable to  
11 proceed.

12 If it's reasonable to proceed today and we  
13 find out new information that tells us in the long  
14 run otherwise, that doesn't mean that the cost that  
15 we spent between now and November was unreasonable  
16 cost. It is reasonable today in our opinion.

17 MR. GUERRERO: Mr. Uggerud, would you pull  
18 the microphone just a little bit closer, please?

19 THE WITNESS: Sure.

20 Q. (COMMISSIONER WEFALD CONTINUING) Going on  
21 to another topic, on your slide presentation and in  
22 your -- in your slides you referred to nuclear --  
23 I'm looking for it -- it says -- I think it's slide  
24 page four, New nuclear plants are prohibited by  
25 Minnesota law.

1           A.     Right.

2           Q.     If that's the case, how is Xcel able to  
3 come to the Commission and tell us that they're  
4 updating and adding nuclear facilities to their  
5 fleet?

6           A.     Well, Xcel is --

7           Q.     And what implication would this have for  
8 North Dakota that new nuclear plants are prohibited  
9 by Minnesota law? So I have two questions.

10          A.     Well, new nuclear plants are prohibited by  
11 Minnesota law. Xcel has gone before the Minnesota  
12 Commission and I suppose before you people, too,  
13 with the request for relicensing their current  
14 plants for operating those for a longer period of  
15 time, but as it currently stands, Minnesota statute  
16 would prevent the construction of a new nuclear  
17 plant in Minnesota. Now, Xcel has gone on record  
18 as saying they propose a change in the legislative  
19 standard. They are now advocating for the ability  
20 to proceed with new nuclear plants in the future,  
21 but that would require a new Minnesota statute to  
22 allow that.

23          Q.     That's interesting. And then why -- but  
24 what pertinence does that a new nuclear plant is  
25 prohibited by Minnesota law -- is that only in

1 Minnesota, or could you build a nuclear plant in  
2 North Dakota and have it work for your North Dakota  
3 customers?

4 A. Well, I --

5 Q. And as well --

6 A. I'm not aware of any North Dakota law that  
7 would prevent you from building a nuclear plant in  
8 North Dakota.

9 Q. And so that's why I wondered whether your  
10 whole -- your whole concept that you haven't  
11 considered any nuclear is pertinent in this case.

12 A. Well, I think that it is because, you  
13 know, heretofore Otter Tail has tried to come up  
14 with a resource expansion alternative that's  
15 acceptable in all three of our state jurisdictions.  
16 We've not previously proposed that we would build  
17 one set of resources to serve loads in North Dakota  
18 and then a different set to serve loads in  
19 Minnesota. We've tried to provide for the  
20 optimization that would come from planning our  
21 system as an entirety.

22 Q. But I wondered whether a new nuclear  
23 plant, if it was located in North Dakota, would be  
24 prohibited by Minnesota law?

25 A. Well, and again, that would probably

1     require a legal interpretation, but I think that if  
2     we were to as an electric utility seek to recover  
3     rates from our Minnesota customers to pay for a new  
4     nuclear plant -- and I could well be wrong on  
5     this -- but my interpretation as an engineer and a  
6     layperson relative to the law is that we probably  
7     would face some difficulty in getting approval to  
8     recover an electric plant -- or a nuclear plant in  
9     rates in Minnesota if we built it in a different  
10    state. I don't know. It's an interesting thought.

11           But aside from the law, as a -- and this  
12    is just purely a personal opinion, I think that the  
13    risk of building a nuclear power plant today would  
14    still be beyond my personal risk tolerance. The  
15    cost run-up associated with the last round of  
16    nuclear expansion was -- it was significant. I  
17    think Comanche Peak, by the time it went online,  
18    was over \$5,000 a kw. That was back in 1987.

19           You see people that are suggesting that  
20    maybe the nuclear option should be revisited, and  
21    I've seen numbers for nuclear generation maybe down  
22    in the 3,000 to \$3500 per kw range, but yet I've  
23    seen others come forward and suggest that they  
24    think that nuclear might be in the range of \$5,000  
25    a kw, \$6,000 a kw.

1           The point is nobody knows. We haven't  
2 built a nuclear power plant in this country for  
3 over 20 years, and what the cost of one would be  
4 will only follow after someone tries to do one, and  
5 the permitting issues associated with that could be  
6 very timely. I don't think that there's any  
7 jurisdiction in the country where you could just  
8 propose one and get a pass on the review that comes  
9 from the permitting process. We don't have a  
10 federal nuclear waste repository site.

11           I think all of the issues with nuclear  
12 that were present in the 1980s might likely emerge  
13 again as still being issues, and I don't think  
14 we've got costs that have been refined to the point  
15 where you've got an EPC contractor out there that  
16 is willing to commit to building one at a fixed  
17 price.

18           Q.     So those are the reasons you didn't  
19 include that as a resource option in your mix?

20           A.     Yeah. I -- and again, it's a judgment  
21 call, but I think that the cost and the  
22 uncertainties of nuclear, I think, are still there.  
23 I mean, companies -- companies came to the brink of  
24 bankruptcy when they last tried to build nuclear  
25 power plants, and I'm not sure that that would be a

1 prudent thing for our companies that are small  
2 companies, and nuclear power plants cost a lot of  
3 money, and it could drive us into a situation of  
4 not being able to remain financially solvent if we  
5 had the same experience now as we did 20 years ago.

6 COMMISSIONER WEFALD: That's all the  
7 questions I have right now.

8 JUDGE WAHL: Any further questions?  
9 Commissioner Clark.

10 COMMISSIONER CLARK: Just a few.

11 **EXAMINATION**

12 **BY COMMISSIONER CLARK:**

13 Q. My -- as I sit here today, I realize that  
14 we could pick apart any sort of fuel source, and we  
15 could spend all day criticizing wind or gas or coal  
16 or nuclear or anything else and at the end of the  
17 date haven't built any new plants, and at some  
18 point you just have to make a decision. So my  
19 questions are geared with that in mind, that at  
20 some point the Commission's job is to as best we  
21 can, I think, look at all of the available  
22 resources and then decide if given the alternatives  
23 what the company is proposing is a reasonable  
24 thing.

25 You went to some effort in your submitted

1 testimony to draw a distinction between cap and  
2 trade carbon regulation and just a simple carbon  
3 tax, and I was wondering why that distinction?  
4 Because in my mind it's maybe a little bit of a  
5 distinction without a difference from a consumer  
6 standpoint, but you did draw that and I'm wondering  
7 why.

8 A. Well, the primary reason was that in a  
9 carbon tax scenario we're assuming then that the  
10 most likely situation would be that all carbon  
11 emissions are taxed at the same rate, so every  
12 megawatt-hour produced would be subject to the same  
13 price point. Whereas in a cap and trade the  
14 protocols would be slightly different specifically  
15 with regard to McCain -- or with Lieberman-Warner.

16 That's a cap and trade mechanism wherein  
17 the right to emit carbon dioxide is given based on  
18 a formulate approach; whereas -- and I think in our  
19 testimony we indicated roughly half of the  
20 allowances would be given. And so the outcome of  
21 that is, is that, yes, there is still a value that  
22 is applied to the carbon emissions, but they only  
23 apply to the portion for which you don't have the  
24 underlying allowances. That's not unlike the  
25 program that we have currently in place for the

1 sulfur dioxide.

2 Q. But at the end of the day isn't it the  
3 same thing that happens as far as a cost of fuel  
4 regardless of where you set the emissions limits --

5 A. Right.

6 Q. -- and so on and so forth? The idea is  
7 that you're imposing costs in the future on  
8 something that's free today.

9 A. I agree with you. And the point that I  
10 was making was much more the very simple and subtle  
11 one, and that is that the -- in order to apply the  
12 metrics to what a carbon constraint would have on  
13 Big Stone, one has to make a fairly simple  
14 determination as how will the carbon values be  
15 applied.

16 Now, if the carbon values are applied as a  
17 tax applying to every ton, that's what we analyze.  
18 That's the simplest approach to do, is to take that  
19 and apply it to every megawatt-hour used. If,  
20 however, you take the same value and say we wind up  
21 with a cap and trade and carbon emissions are now  
22 priced at the same dollars per megawatt-hour, the  
23 impact on customers will be different if half of  
24 the emissions are granted by the receipt of free  
25 allowances. So that's the only point that I was --

1           Q.     But it could be lower if the carbon tax  
2     were lower than what the market clearing price of  
3     carbon would be, too; right? I mean, it's all a  
4     function of whatever Congress decides to either cap  
5     it at or to tax it at.

6           A.     Exactly. And that's another important  
7     point. Under a cap and trade you would be free to  
8     capture credits in terms of reduction of CO2  
9     emissions, and it could be that. As contrasted to  
10    a carbon tax where your tax is based on a  
11    megawatt-hour of output, in a cap and trade program  
12    what you're really dealing with there is paying for  
13    the actual emissions and you've got the alternative  
14    of reducing emissions for a credit, and that's  
15    wherein I think that there's a certain amount of  
16    appeal in a cap and trade program.

17                    So, for example, land management  
18    practices, the capture of landfill gas, the methane  
19    to produce electric generation, there are ways that  
20    one can offset carbon dioxide emissions that might  
21    come at a lower cost.

22                    The cap and trade program has as one of  
23    the underlying elements associated with it is let  
24    entrepreneurs and markets come up with ways that  
25    are alternatives to just pricing a value against

1 every megawatt-hour produced, and the experience  
2 has been that there are, in fact, other ways of  
3 reducing carbon emissions and the resultant being  
4 that you've achieved the same goal but at a  
5 different price.

6 Q. Just as an editorial comment really on cap  
7 and trade, I mean, I personally believe that the  
8 bureaucracy that would have to be set up to track  
9 just what you're talking about is far worse than --  
10 I mean, carbon taxes are bad enough, but the type  
11 of bureaucracy that you'll have to set up to  
12 monitor and track the type of cap and trade system  
13 that EEI and some of the utility industries seem to  
14 be tracking to, I think, is the bigger concern for  
15 me.

16 Questions were asked about nuclear, but I  
17 would just encourage the utilities in North Dakota  
18 to keep in touch and discuss with the Commission  
19 nuclear. I mean, and it seems to me if we're  
20 talking about a carbon-constrained environment,  
21 nuclear has to be on the table, and I understand  
22 that the time frames may not be such that at this  
23 time the utility companies are looking at nuclear,  
24 but I'd certainly encourage the conversation be  
25 kept up.

1           In our last hearing there was some  
2 discussion of carbon sequestration capabilities at  
3 Big Stone II. Have there been any further studies  
4 between then and now regarding any potential carbon  
5 sequestration capability in that area?

6           A. Not specific to Big Stone II. There has  
7 been additional analyses and commentary with regard  
8 to the state of the art relative to carbon capture  
9 and sequestration but nothing that we've done  
10 independently for Big Stone II.

11          Q. Did -- when GRE dropped out and the Big  
12 Stone II was downsized, was there any internal  
13 attempt to go back and look at Big Stone II versus  
14 other coal-producing facilities? I'm thinking  
15 about specifically, say, Coyote Station here in  
16 North Dakota. I notice that a lot of the testimony  
17 focuses in on Big Stone II versus a wind/gas combo.  
18 Was there any attempt to go back and look at now  
19 Big Stone II versus other potential coal plants?

20          A. Well -- and again, as long as I qualify my  
21 response as being an Otter Tail only response, and  
22 maybe I can qualify it even further and say that  
23 it's a Ward Uggerud response, if I take that  
24 literally, my thought was always that if we are not  
25 able to -- if we're not able to permit and recover

1 the investment in Minnesota for a coal-fired power  
2 plant because of the carbon issue, I've always  
3 thought that it's going to be a difficult thing for  
4 Otter Tail to recover its share of the costs  
5 associated with any coal plant. So that's why in  
6 my testimony I've indicated that the most likely  
7 alternative would be a wind/gas. A coal plant is  
8 going to have the same kind of carbon emissions as  
9 another coal plant, and if we get in trouble with  
10 Minnesota on the basis of carbon, any project is  
11 going to be --

12 Q. Right. But my question isn't so much  
13 Minnesota rate recovery. My question is: If you  
14 now looked at Big Stone II 500 or 530 megawatts  
15 versus what you would build here in North Dakota,  
16 how do those two plants compare from a cost  
17 standpoint?

18 A. Well, from a cost standpoint -- and, of  
19 course, our evaluation of the resource selection  
20 all along has included the costs of a typical North  
21 Dakota project, and what comes with a typical North  
22 Dakota project is going to be -- you're going to  
23 have a lower heating value fuel, so you'll have a  
24 poorer heat rate, and you're further from the load  
25 centers, so the amount of transmission that will

1 have to be constructed is going to be greater.

2           So that, you know, Otter Tail and MDU have  
3 never lost sight of the costs of an alternative  
4 that would involve North Dakota generation. It's  
5 just that when you -- and there's a lot of  
6 advantages to building in North Dakota. I mean,  
7 there are advantages of dealing with a climate that  
8 is more conducive to working with utilities for  
9 investments, but at the end of the day there are  
10 just costs associated in building in North Dakota  
11 that aren't there at the Big Stone site.

12           And the Big Stone site, if I might go back  
13 in history, was selected primarily not to avoid the  
14 burning of North Dakota lignite. In fact, if you  
15 will recall, we burnt North Dakota lignite there  
16 for 20 years. The primary reason for the selection  
17 of that site was because it was located  
18 geographically in such a way that it enhanced the  
19 operation of the entire regional system.

20           And the analogy that I like to use is that  
21 if you built a clothesline from North Dakota to  
22 Minneapolis and tried to hang clothes on it, you'd  
23 be limited as to how many clothes you could hang by  
24 the sag in the middle of the line. If you put  
25 another clothesline pole in the middle of the line,

1 you can hang more clothes along the entire length  
2 of the line, and that was the original rationale  
3 behind a power plant at that location, is it was  
4 midway between western North Dakota and Minneapolis  
5 and --

6 Q. Right. And that's why I asked about the  
7 dropping out of GRE, though, because with GRE  
8 dropping out, I suspect if you kind of looked at  
9 the load profile, Big Stone II was about at the  
10 center of the load profile geographically before.  
11 You now have a project which as far as the weight  
12 of the consumers that will be using it, it's a more  
13 northwesterly centered project with MDU and Otter  
14 Tail proportionately being a larger share of that  
15 project. Does GRE dropping out, having a smaller  
16 plant, merit re-looking at facilities in this part  
17 of the region as opposed to still there?

18 A. GRE and SMMPA dropping out don't alter the  
19 fundamental delivery of power from generation to  
20 consumers. We still have a significant bias from  
21 northwest to southeast. So all electrons are  
22 moving toward the southeast, and GRE and SMMPA  
23 dropping out doesn't alter that. You've got  
24 roughly 5,000 megawatts of generation in North  
25 Dakota and North Dakota's load is only about half

1 of that. So you've just got a prevailing flow from  
2 west to east, and those two partners dropping out  
3 with their relative 160 megawatt share won't alter  
4 the fundamental flow of power in any way. It's  
5 still going to move towards the southeast.

6 Q. And just to clarify, the -- you'd  
7 mentioned North Dakota coal burns a lower Btu,  
8 which we all realize, but at the same time that --  
9 and to emphasize, that wasn't why you chose to go  
10 this other route, was it? I mean, the Coyote plant  
11 is, at worst, competent with -- as far as cost what  
12 other plants in the region produce, in fact,  
13 probably below what other plants produce?

14 A. The energy cost is, you're right, below,  
15 but the total cost of a project includes the cost  
16 of producing the energy, the cost of building a  
17 plant, and the cost of building a transmission to  
18 interconnect the plant to the system. So you have  
19 to add up all three of those components and then  
20 factor them in over the entire megawatt-hours  
21 produced over the lifetime of the project.

22 Q. And you believe that today, even with the  
23 smaller plant, Big Stone II is a lower total cost  
24 than looking at a Coyote site?

25 A. Yes. And, in fact, that's the essence of

1 coming back before you with the supplemental  
2 testimony now, is to make a demonstration as to  
3 what the economics are of a smaller plant, and  
4 we're evaluating both 500 and 580, but the worst  
5 case would be 500, and that is, in essence, the  
6 primary purpose of coming back before you now, is  
7 to demonstrate for you that, yes, when you look at  
8 that specific option of a smaller plant with fewer  
9 economies of scale at Big Stone, it's still  
10 competitive as compared to a project in western  
11 North Dakota with the associated additional  
12 transmission that would be required.

13 Q. Okay. And then just one last question:  
14 The -- you had mentioned in response to some  
15 questions that Mr. Binek had the 60/40 split  
16 assuming a 40 percent capacity factor for wind.  
17 Is -- one of the things that I've heard wind  
18 proponents talk about is that that's not a fair  
19 representation of how to run the cost model on it  
20 because wind tends to blow -- you know, it's not  
21 blowing as much at night when the load profile is  
22 much lower. It may blow during the day or some of  
23 the peak hours. Could you talk a little bit about  
24 that? Is it fair to just do a 60/40 split and run  
25 the costs as such or does it make sense to have a

1 more, I don't know, sophisticated model where  
2 you're tempting to figure out exactly when the wind  
3 is blowing for a given area and compare that with  
4 the load profile?

5 A. And I apologize for my simplistic answer  
6 because, you know, you raise a good point. The  
7 converse is also true, though, in that wind tends  
8 to blow more in the spring and the fall when the  
9 loads are lower, so -- and at time of peak, whether  
10 it's extreme winter peaking or extreme summer  
11 peaking, those are the times when you would expect  
12 the very least amount of wind output.

13 So, yeah, you're right, Commissioner  
14 Clark, it is more simplistic than my 60/40, but at  
15 the end of the day it's my personal viewpoint that  
16 an analysis of when the wind is blowing relative to  
17 the need and the price, that the answer is not  
18 going to come out in favor of wind as a result of  
19 that additional adjustment.

20 COMMISSIONER CLARK: Okay. Thanks, that's  
21 all I have.

22 JUDGE WAHL: Commissioner Cramer.

23 COMMISSIONER CRAMER: I have just a few,  
24 and forgive me if the answer is embedded somewhere  
25 in either this morning's testimony or in your

1 previous testimony. I'll try to get it as simple  
2 as I can.

3 **EXAMINATION**

4 **BY COMMISSIONER CRAMER:**

5 Q. There was considerable cross-examination  
6 and discussion about the absence of specific  
7 conservation or efficiency programs in an effort to  
8 reduce the need for baseload or I guess it was  
9 maybe even more specific to those margins --  
10 reliability margin, but is there any most  
11 optimistic application, theoretical or otherwise,  
12 of efficiency -- efficiency or conservation  
13 programs that would make Big Stone II imprudent?

14 A. No. And, in fact, I think that there's a  
15 lot of potential for changes and improvements in  
16 conservation practices, but I would just offer that  
17 I think that conservation is going to be driven in  
18 large part by customers. Customers will engage in  
19 conservation activities and programs that save them  
20 the most money, and it's my belief and opinion that  
21 they're more likely to save at times of higher cost  
22 and higher demand, and when prices are relatively  
23 low, there's less incentive for customers to save.  
24 The end result of all of that is that extremely  
25 effective conservation programs will just increase

1 the need for the baseload resources, and it will  
2 diminish the need for the peaking resources.

3 Q. Three-dollar-a-gallon gasoline forced me  
4 to trade in my Suburban for an Impala, I can tell  
5 you that. I want to get to the transportation --  
6 the rail transportation just a little bit more  
7 because to me that still is the most troubling  
8 uncertainty in all of this, for me personally, and  
9 I appreciate the exhibits with regard to the  
10 correspondence with the railroad, although I think  
11 it only supports what your testimony was as it  
12 results -- is it relates to the -- to a long-term  
13 contract that would include normal rail inflation  
14 adjuster and then the train fuel surcharge.

15 In analyzing going-forward transportation  
16 costs, has -- have the partners considered \$200-a-  
17 barrel oil or more? In other words, is there some  
18 analysis or is there some number, is there some  
19 cost -- some fuel surcharge cost at which suddenly  
20 it is imprudent to rail PRB coal to Big Stone II?

21 A. Well, I think, Commissioner Cramer, that  
22 whether or not we were to pursue coal delivery  
23 under a contract or under a tariff, I think that  
24 either mechanism would include a fuel surcharge as  
25 a component. I can't imagine that the railroad

1 would offer us a contract that doesn't have a  
2 portion of the contract indexed to the price of  
3 fuel. So I think that whether it's tariff or  
4 whether it's contract, the issue of the volatility  
5 of the transportation fuel is going to be a part of  
6 either.

7 Q. And I'm not suggesting that they should.  
8 I'm just suggesting that does -- even a year ago  
9 did we have any idea that fuel prices would be what  
10 they were today? And is it fair to say we have no  
11 idea where they will be a year from now or the  
12 future? That uncertainty continues to haunt me a  
13 little bit.

14 Another question along those same lines:  
15 Would the approval of this application for pre-  
16 prudence, as well as approval of other required  
17 permits for Big Stone II, should they all be  
18 approved, prior to entering into a long-term  
19 contract with the railroad, put the partners at a  
20 disadvantage in negotiating what that long-term  
21 contract might look like?

22 A. And again, right now we're uncertain as to  
23 the manner in which -- let's just suppose that we  
24 were directed to enter into a long-term contract  
25 with the BN. An order requiring us to do that, I

1 think, arguably could reduce our leverage in front  
2 of the BNSF. A mutual commitment to ask for a  
3 contract and then make a joint and deliberate  
4 decision with regard to whether that's prudent  
5 might give us more leverage.

6           You know, there's certainly a lot of  
7 unknowns with regard to that aspect, but I -- you  
8 know, as I testified last year in June, I do think  
9 that one element that is there -- and how much  
10 comfort it gives anybody, I don't know -- but we do  
11 have a regulatory body that is supposed to look  
12 after the reasonable development of fuel  
13 transportation rates.

14           I think that there is some growing concern  
15 in Congress with regard to the past that railroads  
16 have had. I think some of that dynamic is  
17 changing. Whether -- you know, I'm not suggesting  
18 that I'm 100 percent certain myself as to which the  
19 best approach going forward is, but I do know that  
20 captive shippers pay a disproportionate share of  
21 the freight, and there are guidelines that are  
22 supposed to protect captive shippers, and I'd be  
23 the first to offer that I would -- I mean, I was  
24 involved in the forming of the Alliance for Rail  
25 Competition to get some more, and it hasn't

1 happened to the degree that I would like, but at  
2 the same time I think the transportation, I think  
3 electricity and energy are important to the economy  
4 in this country, and I can't see us abandoning  
5 long-standing protocols with regard to protecting  
6 the underlying consumer, and I would have at least  
7 some reason for optimism that rail transportation  
8 rates won't get out of control.

9 Q. I don't know that I'd characterize your  
10 characterization as growing optimism, but at least  
11 it's a diminishing pessimism in the effectiveness  
12 of the Surface Transportation Board, so I find that  
13 somewhat encouraging.

14 COMMISSIONER CLARK: Could I just  
15 follow up on that real quickly --

16 COMMISSIONER CRAMER: Go ahead. Sure.

17 COMMISSIONER CLARK: -- because I wasn't  
18 sure I understood the response. You'd said that  
19 you thought you might have more leverage if the  
20 Commission approved the project but then just said,  
21 you know, go ahead and work with the BN on a  
22 contract as opposed to saying the project isn't  
23 approved until you get something in writing that we  
24 approve of. How does -- how is that more leverage?

25 THE WITNESS: And again, it would depend

1 on the specific order of this Commission, but if,  
2 for example, the Commission said we won't approve  
3 the construction of Big Stone II without a  
4 long-term contract, then we're kind of in a  
5 position with the Burlington Northern where they  
6 know we've got to have one, and if that's the only  
7 requirement of the Commission is that they have  
8 one, I think we've got less negotiating leverage  
9 than if the response would be that the Burlington  
10 Northern has got to come up with a contract and we  
11 don't have to take it if collectively we don't  
12 think that it would be in the best interests of our  
13 customers. So it's a fine point but I think that  
14 if we were ordered --

15 COMMISSIONER CLARK: But you have to have  
16 coal; right? I mean, you're not going to build a  
17 plant --

18 THE WITNESS: Well, we don't need a  
19 contract for the coal. We can always rely on the  
20 tariff and we can always rely on whatever  
21 protections there might be relative to the pricing  
22 of the tariff. So that's our option. Now, if on  
23 the other hand we were told that we can't have a  
24 plant without a long-term contract, now if that --  
25 if it were to be that simply put, now the railroad

1 would know that, hey, these guys are over a barrel,  
2 they've got to have a long-term contract or they  
3 can't build a plant, then I think we lose a little  
4 bit of negotiating leverage.

5 COMMISSIONER CLARK: But don't they have  
6 the skin in the game there, too, then? I mean,  
7 they have an incentive to want to serve it, don't  
8 they?

9 THE WITNESS: We believe so, but, you  
10 know, I suppose that they would take a look at  
11 what's their projection of natural gas prices going  
12 forward, and they might be --

13 COMMISSIONER CRAMER: That's the problem.

14 COMMISSIONER CLARK: I mean, therein lies  
15 the concern; that if the clearing price is natural  
16 gas, then what advantage do we have in a coal plant  
17 if they can always charge up to the natural gas  
18 price?

19 THE WITNESS: And that's why I said that  
20 if someone had the opinion that they could always  
21 charge up to the clearing price of natural gas,  
22 then we're in a bind, and that's why I say at some  
23 point you say can they do that, and I'm not so sure  
24 that they can do that. I'm not so sure they can  
25 price on a tariff basis up to the clearing price of

1 natural gas because we have to have the coal rate  
2 guidelines in place, and I think that that would  
3 set some sort of bounds on their ability to just  
4 unilaterally charge whatever they think that  
5 natural gas prices will be.

6 COMMISSIONER CLARK: Okay. Thanks for  
7 letting me butt in.

8 COMMISSIONER CRAMER: That's fine. Thank  
9 you.

10 Q. (COMMISSIONER CRAMER CONTINUING) I have a  
11 couple more questions related to this discussion  
12 about natural gas versus coal, and I'm going to  
13 save some of my more specific natural gas  
14 questions, I think, for future witnesses, but a  
15 couple of real basic ones I have that you can  
16 probably answer given your experience. First of  
17 all, I think it's embedded again in your previous  
18 testimony, but does natural gas emit CO2?

19 A. Yes, it does.

20 Q. Okay. Which natural resource is in more  
21 abundance in the United States, natural gas or  
22 coal?

23 A. Coal.

24 Q. Do you think it's time for North Dakota  
25 utilities to have North Dakota specific IRPs?

1           A.    Well, again speaking -- this is clearly  
2 speaking from me, and my boss --

3           Q.    Do I have to ask every witness?

4           A.    -- my boss is sitting over there, and I  
5 don't know what his answer would be.  You know, I  
6 think that we have in good faith tried to come up  
7 with a single resource expansion plant that meets  
8 the goals of all of the states that we serve.  
9 That's wherein you get the economies of scale.

10                   My goodness, you know, it seems to me that  
11 when you get right down to it, we should as a  
12 country all have the same goals and interests and  
13 concerns, but I'll be the first to say that I'm  
14 thinking that Minnesota pushes us toward separating  
15 our resource planning by state jurisdiction, and we  
16 selected some software that would allow us in the  
17 future to maybe move towards that.

18                   But there's no question that the public  
19 policy goals as articulated in Minnesota are  
20 different than those of North Dakota and South  
21 Dakota right now, and I'm not going to apologize to  
22 anybody when I say that I think that Minnesota is  
23 coming perilously close to exposing Minnesota  
24 customers to future prices for energy that might be  
25 unintended, and if that would be the case, I think

1 before we would expose our customers in all of our  
2 jurisdictions to the consequences of Minnesota  
3 policy, that we would have to consider bifurcating  
4 our integrated resource planning because we  
5 wouldn't want to come to you people and say, well,  
6 you have to approve this plan because it's what  
7 Minnesota requires if that's not in the best  
8 interests of our North Dakota customers.

9 Q. One other question. Is there any  
10 advantage to the shareholders of Otter Tail Power,  
11 or anyone else, for that matter, to proposing the  
12 second-most prudent or third-most prudent project  
13 that you've been able to analyze and come up with?

14 A. You know, that's the irony of all of this.  
15 If our only concern in all of this were our  
16 shareholders and if we were planning resource  
17 expansion alternatives purely for the recovery of  
18 the revenue associated with them and only had to  
19 pass muster with regard to political correctness,  
20 it would probably be far easier to make investments  
21 that would protect the shareholders' interests.  
22 You know, I think that that would be an easier task  
23 to make investments that would protect the  
24 shareholder interest, but that's different than  
25 protecting the customer interest.

1           And there are days upon days upon days  
2 when I feel that the greatest burden that I  
3 shoulder is to try and resist the temptation to  
4 come up with the easy thing to do on the behalf of  
5 our shareholders and take stands that might not  
6 always be politically correct, but at the same time  
7 based on my experience in the industry, I believe,  
8 are those very things that are necessary in order  
9 to protect our customers' interests in the  
10 long-term.

11           COMMISSIONER CRAMER: Well, with that I  
12 would just add my editorial comment relating to  
13 consideration of nuclear, and, of course, with the  
14 renewed interest in uranium mining in North Dakota,  
15 we're advocating mine mouth. That's all I have.  
16 Thank you.

17           JUDGE WAHL: Commissioner Wefald.

18           COMMISSIONER WEFALD: Yes.

19   **FURTHER EXAMINATION**

20           **BY COMMISSIONER WEFALD:**

21           Q.    This relates to the percentages you gave  
22 earlier regarding your new resources that you need  
23 across all the different conservation renewables  
24 and natural gas and new coal, and you said that 23  
25 percent of your new resource is coal. How many

1 megawatts is that when you were figuring that? 130  
2 or 123 or --

3 A. Or 170. I'm not sure. The percentages  
4 are correct, and I would have to -- I would have to  
5 go back and check my calculation to see if the 24  
6 percent was based on 120 megawatts or 170 megawatts  
7 of coal.

8 Q. Do you want to come back to the Commission  
9 during this hearing and tell us that information or  
10 would you like that to be a late-filed exhibit?

11 A. You know, what I would propose that we  
12 could do is just offer that in Mr. Morlock's  
13 testimony later. I know the percentages are right,  
14 and I just -- I just -- I don't have the numbers in  
15 front of me to recall whether that calculation was  
16 based on 123 or 170.

17 Q. I'll accept that from Mr. Morlock, and  
18 then -- but do you have this answer: Then over  
19 what time period is that? Because let's say it's  
20 130 megawatts and that's -- 23 percent is just  
21 about one-quarter, that would be 520 megawatts that  
22 you're saying that Otter Tail needs?

23 A. That would be --

24 Q. So over what time period?

25 A. That would be within the time frame of our

1 integrated resource plan, which is a 2007 to 2022  
2 time frame.

3 Q. 2007 --

4 A. And again, I'll defer that to Mr. Morlock  
5 for confirmation, but that's within the planning  
6 horizon, which I believe we deemed to be our  
7 resource planning horizon. We file -- biennially  
8 we file a 15-year resource plan.

9 COMMISSIONER WEFALD: Thank you.

10 JUDGE WAHL: Any further questions from  
11 the Commission? Mr. Guerrero, followup?

12 MR. GUERRERO: Thank you, Your Honor.

13 **REDIRECT EXAMINATION**

14 **BY MR. GUERRERO:**

15 Q. Mr. Uggerud, earlier this morning Ms. La  
16 Seur was asking you questions about the Midwest  
17 Reliability Organization.

18 A. That's correct.

19 Q. I believe one of the questions she asked  
20 you is whether or not you knew whether the MRO had  
21 considered the Big Stone II as a committed resource  
22 for purposes of their assessments?

23 A. Right.

24 Q. Did you have the occasion to check that?

25 A. Yes, I did.

1 Q. And do you know whether or not the MRO  
2 has --

3 A. Yes. Big Stone is considered in the  
4 reporting of the MRO to NERC. I indicated in my  
5 answer this morning I knew that Otter Tail had  
6 considered it as committed resource with regard to  
7 our filings before the MRO. It has also been  
8 accepted as committed resources by the MRO, so it's  
9 in the MRO and the NERC numbers.

10 Q. What does that mean when you say it's in  
11 the numbers?

12 A. It means that Big Stone II as a proposed  
13 resource is included in the numbers that the MRO  
14 and the North American Electric Reliability Council  
15 are utilizing in making their forecasted  
16 projections.

17 Q. So without Big Stone II the capacity  
18 deficits would -- predicted capacity deficits would  
19 be worse?

20 A. Right.

21 Q. Ms. La Seur also asked you questions, Mr.  
22 Uggerud, regarding NERC, that's the National  
23 Electric Reliability Council?

24 A. North American.

25 Q. Excuse me. North American. And regarding

1 their long-term assessment. Are you familiar with  
2 that organization?

3 A. Yes, I am.

4 Q. And how are you familiar with that  
5 organization?

6 A. I actually served as chairman of the  
7 operating committee of the North American Electric  
8 Reliability Council from 1988 to 1990.

9 Q. And have you continued to stay involved  
10 with that organization?

11 A. Yes, I have.

12 Q. Do you know whether or not NERC, N-E-R-C,  
13 gets involved in pricing of different generation  
14 resources?

15 A. Not -- no, they do not. The pricing of  
16 the resources are a function of the market  
17 established by the Midwest Independent System  
18 Operator. The North American Electric Reliability  
19 Council is the reliability organization. They are  
20 also the organization that is charged with  
21 performing an annual reliability assessment of the  
22 nation's electric infrastructure.

23 Q. You were asked a couple of questions by  
24 the Commissioners with respect to nuclear power.  
25 Do you have any opinion about when we might be able

1 to see with any reasonable degree of certainty cost  
2 information for new nuclear power?

3 A. Not with any degree of certainty. It's --  
4 there's certainly a discussion with regard to  
5 nuclear, but I don't have an opinion how long it  
6 will be. You know, we're probably going to see  
7 estimates sooner than we're going to see actuals,  
8 and that was one of the dilemmas that we had with  
9 Comanche Peak. You know, it took them ten years to  
10 build it and cost increases of some 500 percent  
11 during the period of construction.

12 So if you're asking when we might see an  
13 original, initial projection of costs, we might see  
14 one in the next year or two or three, but it's  
15 going to be, I would suggest, ten years before we  
16 have the opportunity to observe what the actual  
17 cost will have been.

18 Q. Ms. La Seur asked you a question something  
19 along the lines -- my notes reflect, Mr. Uggerud,  
20 don't you have simply time to readjust as the  
21 information develops? Do you recall that question?

22 A. I do.

23 Q. And what's -- what's your -- can you give  
24 me a response to that? Why can't you just sort of  
25 do more study?



1 Q. And 133 shows MRO-U.S. available capacity  
2 margins for summer; correct?

3 A. Right.

4 Q. And this would be the capacity margin data  
5 that includes Big Stone II; correct?

6 A. That's right.

7 Q. If you would flip over to the charts on  
8 page 134, these are MRO-Canada available capacity  
9 margins for the winter peaking side of the system;  
10 correct?

11 A. That's correct.

12 Q. This paints a very different picture from  
13 the summer peaking capacity margins, does it not?

14 A. No. I don't think one could draw that  
15 conclusion.

16 Q. One goes up and one goes down; correct?

17 A. Well, yeah. That's correct. But it  
18 doesn't necessarily draw a different conclusion  
19 with regard to the situation that utilities in the  
20 United States would face themselves in. I think  
21 what it suggests is an opportunity on the part of  
22 the Canadian utilities as to what the value of  
23 their Canadian energy products might be. The  
24 pricing that Canada utilities are going to extract  
25 are going to be a function of what you see in the

1 middle of page 133. It's not going to be a  
2 function of what you see on page 134.

3 Q. Page 134 indicates significant additional  
4 available capacity up to 2015 on the MRO-Canada  
5 system at the winter peak; correct?

6 A. Sure. And if I'm a Canadian utility, I'm  
7 going to say, my goodness, what an opportunity I  
8 have because I'm going to sell it into that United  
9 States market on page 133.

10 Q. Thank you. Would he turn back one page to  
11 129? And I'd refer you to the last paragraph on  
12 that page. Would you please read the first  
13 sentence of the last paragraph into the record?

14 A. "Queued projects for wind generation total  
15 several thousands of megawatts."

16 Q. And what area is this in, according to the  
17 heading in the middle of the page?

18 A. The Dakotas area.

19 Q. The Dakotas area. And would you please  
20 also read into the record the last sentence in that  
21 last paragraph on page 129?

22 A. "Wind generation typically has a very fast  
23 planning and construction period, and it is  
24 anticipated that wind generation will continue to  
25 be installed in the Dakotas at 100 to 200 megawatts

1 per year."

2 MS. LA SEUR: Thank you. Nothing further.

3 JUDGE WAHL: Mr. Binek, anything further?

4 MR. BINEK: No.

5 JUDGE WAHL: Commissioners, anything  
6 further for this witness?

7 COMMISSIONER WEFALD: No.

8 COMMISSIONER CLARK: No.

9 JUDGE WAHL: Mr. Guerrero, any followup?

10 MR. GUERRERO: Just one, Your Honor.

11 **REDIRECT EXAMINATION**

12 **BY MR. GUERRERO:**

13 Q. With respect to page 129, Mr. Uggerud,  
14 toward that --

15 COMMISSIONER WEFALD: Which report?

16 MR. GUERRERO: I'm sorry. The --

17 JUDGE WAHL: Exhibit 17.

18 MR. GUERRERO: Intervenor's Exhibit 17,  
19 the NERC assessment, second to the last paragraph.

20 THE WITNESS: Mm-hmm.

21 Q. (MR. GUERRERO CONTINUING) Where it  
22 references "Additional facilities in the Dakotas  
23 areas associated with new planned generation will  
24 consist of 230 and 345 kv additions from the coal  
25 fields of North Dakota to the Red River Valley in

1 western Minnesota and 345 and 230 kv additions in  
2 South Dakota to southwestern Minnesota." Did I  
3 read that correctly?

4 A. Yes, you did.

5 Q. Do you know what that 345 kv and 230 kv  
6 additions in South Dakota to southwestern Minnesota  
7 refers to?

8 A. That's the Big Stone generation outlet.  
9 Big Stone II generation outlet.

10 MR. GUERRERO: No further questions, Your  
11 Honor.

12 JUDGE WAHL: Followup, Ms. La Seur?

13 **RE-CROSS-EXAMINATION**

14 **BY MS. LA SEUR:**

15 Q. Is it possible to build this transmission  
16 out of western South Dakota without building Big  
17 Stone II, as well?

18 A. Well, we've been involved with entities  
19 that have been looking for opportunities to expand  
20 wind generation throughout our service territory,  
21 and every project developer that we've talked to  
22 said that the constraining factor in their ability  
23 to build additional wind is how do you build the  
24 transmission associated with it, because they found  
25 that the cost feasibility, the economics of their

1 proposed projects fall apart when they -- when they  
2 have to be responsible for building the wind -- or  
3 building the transmission to interconnect the wind.

4           So what we have done in the development of  
5 the Big Stone II proposal is we've said because of  
6 the work that we have done with local economic  
7 development authorities and other parties, is we've  
8 got an opportunity to build some additional  
9 transmission associated with Big Stone II for the  
10 purpose of enhancing wind generation development.  
11 Yes, it would be possible to build the transmission  
12 outlet facilities associated with Big Stone II, but  
13 it would not be possible to do them and have the  
14 ratepayers of the Big Stone II participants agree  
15 to pay for them.

16           Q.    And at the rate of wind construction  
17 anticipated by page 129, this 100 to 200 megawatts  
18 annually in the Dakotas, what amount of wind  
19 generation is anticipated by 2015 in this area --  
20 new generation?

21           A.    I can't speak for the entire region, but  
22 again, throughout the morning and this afternoon  
23 it's been repeatedly emphasized that in order to  
24 build those amounts of additional wind generation  
25 resources, that's going to have to be done

1 consistent with the examination of other things  
2 that will also have to be done in order to  
3 integrate those amounts of wind generation.

4 Just because there are proposals out there  
5 to have those significant amounts of wind doesn't  
6 mean that there are other considerations with  
7 regard to the necessary installation, and that's  
8 why page 129 is what 129 is. Other things will  
9 have to be done.

10 Those plans will not just appear and be  
11 realized without significant other projects that  
12 are going to be necessary that will come before  
13 this Commission at other points in time asking for  
14 approvals necessary to fund the capital associated  
15 with doing other things in order to achieve those  
16 wind numbers.

17 Q. Was that -- is it that you're unable to  
18 calculate a number by 2015 or you just don't wish  
19 to?

20 A. What number do you want me to calculate?  
21 The amount of wind that will be proposed to be  
22 installed by 2015? I have no idea. I mean,  
23 there's thousands of megawatts in the queue, but  
24 they're not all going to be built. So I don't know  
25 what you're asking me to speculate on. Are you

1 asking me to speculate how much of that I think  
2 will be built? I have no idea how much will be  
3 built. I know there's thousands out there trying.  
4 They won't all happen.

5 Q. All right. Turning back to page 129, last  
6 sentence, wind generation -- "it is anticipated  
7 that wind generation will continue to be installed  
8 in the Dakotas at 100 to 200 megawatts per year."  
9 This is NERC talking. Do you disagree?

10 MR. GUERRERO: I'm going to object. This  
11 goes beyond the scope of my redirect. I asked  
12 about one specific line on page 129, and it wasn't  
13 that line.

14 JUDGE WAHL: Overruled.

15 THE WITNESS: Well, 100 to 200 megawatts a  
16 year doesn't add up to 8,000 megawatts in the time  
17 frame that we're looking at, so I won't disagree  
18 with the 100 to 200 a year, but that's far less  
19 than the amount that's in the queue.

20 Q. (MS. LA SEUR CONTINUING) So you're in  
21 agreement then that this 100 to 200 megawatts per  
22 year in the Dakotas is realistic?

23 A. I said I would agree with the statement  
24 that it's anticipated that wind generation in those  
25 amounts may happen.

1 Q. Well, it doesn't say "may happen." It  
2 says "will continue to be installed."

3 A. And it also says "anticipated," and I'll  
4 agree with the anticipated.

5 MS. LA SEUR: Okay. As everything in the  
6 future can only be anticipated. Thank you.  
7 Nothing further.

8 JUDGE WAHL: Mr. Binek.

9 MR. BINEK: Nothing.

10 JUDGE WAHL: Any follow-up questions from  
11 the Commission? Mr. Guerrero?

12 MR. GUERRERO: No, thank you.

13 JUDGE WAHL: Thank you very much, Mr.  
14 Uggerud. We'll be in recess for ten minutes  
15 until -- or not quite. Let's say until 2:40.

16 (Recess taken.)

17 JUDGE WAHL: All right. Mr. Guerrero,  
18 when you're ready.

19 MR. GUERRERO: Thank you. We would call  
20 Mr. Mark Rolfes.

21 JUDGE WAHL: Mr. Rolfes, I recall your  
22 testimony at the previous hearing for this matter  
23 in June and have personal knowledge that you have  
24 been advised regarding perjury. Accordingly, I'm  
25 sure you understand, Mr. Rolfes, your testimony

1 continues under oath and subject to penalties of  
2 perjury.

3 MR. ROLFES: I do.

4 JUDGE WAHL: Mr. Guerrero.

5 **MARK ROLFES,**  
6 having been previously duly sworn, was examined and  
7 testified further as follows:

8 **DIRECT EXAMINATION**

9 **BY MR. GUERRERO:**

10 Q. Please state your name.

11 A. Mark Rolfes.

12 Q. And by whom are you employed?

13 A. I'm employed by Otter Tail Power Company.

14 Q. What is your current position again?

15 A. I am the project manager of the Big Stone  
16 II project.

17 Q. And what does that entail?

18 A. That entails the overall management and  
19 direction of the effort to make Big Stone II a  
20 reality.

21 Q. And what's your employment history, Mr.  
22 Rolfes?

23 A. I've been employed for almost 31 years by  
24 Otter Tail Power Company in different positions in  
25 the energy generation area. Most of them center

1 around the Big Stone facility.

2 Q. Did you --

3 JUDGE WAHL: I'm sorry, Mr. Guerrero.  
4 Just a minute. I have a technical problem, I  
5 guess. I don't show that I'm recording. Pat?

6 (Off the record.)

7 JUDGE WAHL: What's the procedure? Does  
8 the Commission require a recording in the  
9 circumstances?

10 COMMISSIONER WEFALD: I think as long as  
11 we have a court reporter present that we can go  
12 ahead, and then when we're able to start the  
13 recording again, we will.

14 COMMISSIONER CRAMER: That's certainly  
15 acceptable to me.

16 JUDGE WAHL: All right. You may proceed,  
17 Mr. Guerrero.

18 MR. GUERRERO: Thank you.

19 Q. (MR. GUERRERO CONTINUING) Did you have --  
20 Mr. Rolfes, did you prepare or have occasion to  
21 prepare and file prefiled written testimony in this  
22 matter?

23 A. Yes, I did.

24 Q. Do you have those documents up there with  
25 you?

1           A.     Yes, I do.

2           Q.     Could you identify them by exhibit number  
3 for the record, please?

4           A.     Exhibit 324 and Exhibit 335.

5           Q.     324 is your supplemental direct testimony  
6 and 335 is your supplemental rebuttal testimony?

7           A.     That's correct.

8           Q.     And if I asked you the same questions  
9 today as set forth in those written documents,  
10 would your answers be the same?

11          A.     I would like to make one clarification  
12 just so there's no misunderstanding. In the March  
13 10th direct testimony, at the end of the testimony,  
14 updated the status of the current permitting, and  
15 of course this testimony is two months old now and  
16 some things have changed, so this --

17          Q.     Excuse me, Mr. Rolfes. Let's go to that  
18 particular page. That would be OTP/MDU Exhibit  
19 324.

20          A.     And it would be on page ten. It begins  
21 with line 13, "What is the current status of the  
22 permitting for the Big Stone Plant?" There have  
23 been really two changes in the South Dakota air  
24 permit, sometimes referred to as the PSD. We have  
25 had the scheduling conference, and because of some

1 conflicts, we now expect that decision to be either  
2 late into the third quarter or early fourth quarter  
3 this year; and the other one in the federal  
4 environmental impact statement, that schedule has  
5 slipped approximately one month since this was  
6 written. Other than that, the testimony is the  
7 same and correct.

8 Q. Okay. Mr. Rolfes, with respect to the  
9 final report record of the decision of the EIS,  
10 would that still be within the third quarter of  
11 2008?

12 A. Probably the first month of the fourth  
13 quarter. It was scheduled for September; now it's  
14 scheduled for October.

15 Q. Any other corrections or additions?

16 A. None that I'm aware of.

17 Q. Do you also have in front of you, Mr.  
18 Rolfes, OTP/MDU Exhibit 324A?

19 A. Yes, I do.

20 Q. And that's a summary of your testimony?

21 A. Yes, it is.

22 MR. GUERRERO: Your Honor, we would offer  
23 OTP/MDU Exhibits 324, 324A, and OTP/MDU 335 at this  
24 time.

25 JUDGE WAHL: 3325?

1 MR. KUNTZ: 335.

2 MR. GUERRERO: 335. 324, 324A, and 335,  
3 all OTP/MDU exhibits to signify that Mr. Rolfes is  
4 testifying as a joint witness.

5 JUDGE WAHL: Ms. La Seur?

6 MS. LA SEUR: No objection.

7 JUDGE WAHL: Mr. Binek?

8 MR. BINEK: No objection.

9 JUDGE WAHL: Exhibits 324, 324A, and 335  
10 are each received.

11 Q. (MR. GUERRERO CONTINUING) Mr. Rolfes,  
12 could you provide a brief summary of your  
13 testimony?

14 A. Yes, I will. When we were here last June,  
15 our cost proposal was based on a 630 megawatt  
16 nominal unit. Since that time because of the exit  
17 of the two participants, we have prepared cost  
18 estimates for a 580 megawatt unit and a 500  
19 megawatt unit. I believe that Otter Tail and MDU  
20 use the 500 megawatt numbers in their modeling.  
21 The 500 is a more conservative or more costly on a  
22 per megawatt basis.

23 My testimony relates that the efficiency  
24 of these units in this size is the same, so we are  
25 not giving up any efficiency by looking at a

1 smaller-sized unit, and the emissions rates, the  
2 pounds per megawatt-hour, will be unaffected. Of  
3 course, there will be less emissions -- total  
4 emissions for a smaller unit than a large unit, but  
5 the emission rate does not change.

6           Currently we expect commercial operation  
7 in the fall of 2013. That assumes the current  
8 permitting schedule, and, of course, the project  
9 schedule is still subject to permitting delays.  
10 This is still beyond our control.

11           The cost estimate for the 500 megawatt  
12 unit is 1.272 billion or just over \$2500 per  
13 kilowatt. That number was arrived at through a  
14 number of calculations, but the most important one  
15 to note is we used an EPRI, Electric Power Research  
16 Institute, formula for scaling of the cost from the  
17 630 megawatt size down to the 580 and the 500.  
18 That's a common industry practice, and the EPRI  
19 formula is just verification that it is current and  
20 accurate. And we still have the biggest, potential  
21 cost increase would be due to delays for the  
22 project.

23           In my testimony I do make a brief comment  
24 on the concern for escalating costs for power plant  
25 construction. There's a lot of testimony on both

1 sides about this phenomena, but we all have to  
2 remember that this is in effect a function of our  
3 industry because of the pool, because of load  
4 sharing, resource sharing. We basically do  
5 everything we can possible to defer the  
6 construction of new facilities, and what this tends  
7 to lead to is that everyone needs facilities at the  
8 same time. So the competition for labor and  
9 materials, whether it's to build Big Stone or  
10 natural gas-fired units or wind generation, all of  
11 it tends to come at the same time. So some of the  
12 concern for escalating cost is the nature of our  
13 business with peaks and valleys by deferring  
14 construction. We can't build a plant when it's the  
15 most inexpensive to build. We have to build it  
16 when it's truly needed.

17 And, finally, on my testimony I briefly  
18 touch on the mercury control issue that was asked  
19 of Mr. Uggerud. The plans and cost estimates that  
20 have been used include both capital and O&M costs  
21 for mercury control that we believe will meet or  
22 exceed any of the potential future standards.

23 And that concludes my summary.

24 MR. GUERRERO: Thank you, Mr. Rolfes. We  
25 would tender Mr. Rolfes for examination.

1 JUDGE WAHL: Ms. La Seur?

2 MS. LA SEUR: We have no questions for  
3 this witness.

4 JUDGE WAHL: Mr. Binek.

5 MR. BINEK: I just have a few questions.

6 CROSS-EXAMINATION

7 BY MR. BINEK:

8 Q. When I read Mr. Schlissel's testimony, he  
9 was critical of your cost estimates and questioned  
10 whether your cost estimates were current or out of  
11 date. Is Mr. Schlissel's criticism primarily your  
12 estimate that the cost -- of the cost escalation of  
13 the six percent per year?

14 A. I think that's probably a fair  
15 characterization, but I guess he would have to  
16 elaborate on that. I think that's probably the  
17 easiest to take exception to, is the escalation  
18 rate that we used. However, from the information  
19 we have, from monitoring other projects, from  
20 looking at things that can easily be quantified,  
21 and that's commodities, we believe the six percent  
22 escalation rate is very valid for what we are  
23 seeing in the industry at this time.

24 Q. You mention labor as one of the costs you  
25 think may moderate. Is labor cost the primary

1 factor that you think will keep costs within the  
2 six percent escalation rate range?

3 A. Labor is probably the primary, but there  
4 are others. I mentioned commodities, and so far  
5 the commodities, steel, pipe, wire, those things  
6 have been running under our escalation. We were  
7 using eight percent rate for commodities. We talk  
8 about a six percent for the overall project and  
9 that's made up of a number of components, but our  
10 estimates used eight percent for commodities. For  
11 the last couple years they have been running closer  
12 to six percent.

13 Labor is also the one that I think will  
14 potentially moderate. Labor is very much tied to  
15 other projects and the economy, and as the economy  
16 worsens, the labor situation probably improves for  
17 the project.

18 So I think the purchased equipment is more  
19 of a worldwide phenomena and will somewhat follow  
20 the trends in the world economy, but we still see  
21 high, robust demand for that equipment but nothing  
22 changing since this project was first estimated in  
23 2006.

24 Q. You state that the six percent escalation  
25 rate is the rate for the entire project and that

1 escalation rate for commodities in the Black &  
2 Veatch analysis is eight percent, and then you go  
3 on to say that six of the eight commodities have  
4 been below eight percent for the time period of  
5 March 2006 through February 2008, and the only two  
6 that are above, one at 9.44 percent and the other  
7 at 13.67 percent. What commodity has the 13.6  
8 percent rate and which one is at 9.44 percent?

9 A. I believe the 13 percent escalation is  
10 nickel, and that number has been slowly coming down  
11 in the last two years, and the one that's at nine,  
12 I believe, is copper, and copper has been somewhat  
13 volatile, but it has also been trending down from  
14 the high escalations that it saw in 2006.

15 Q. What percentage of the overall commodity  
16 cost is represented by each of these two  
17 commodities and what is the percentage of each, if  
18 you can tell me?

19 A. I'm sorry, I can't.

20 Q. Okay. In your testimony regarding mercury  
21 control equipment, you believe that that -- that  
22 the mercury emission controls plan for both units  
23 will satisfy the federal requirements; is that  
24 correct?

25 A. Yes, we do. The project has made a

1       commitment -- I should maybe step back. In the  
2       original technology selection for the unit we  
3       picked a bank house and a wet scrubber, and this is  
4       the very best known technology today or equipment  
5       today to facilitate mercury removal. It's a better  
6       combination than dry scrubbers or electrostatic  
7       precipitators. So that alone gives us an advantage  
8       over most other units, but we have committed to  
9       install the technology that we believe will remove  
10      90 percent of the mercury, which we feel is going  
11      to meet any possible maximum achievable control  
12      technology standard out there. So we're very  
13      comfortable that we have a good handle on mercury  
14      control.

15           Q.     Now, I'd like to refer you to page two of  
16      your rebuttal testimony and looking at your answer  
17      on lines 12 through 15. The question there at line  
18      10 is: "Have you made any additional estimates for  
19      the capital cost of a 500 megawatt pulverized coal  
20      plant since you submitted testimony on March 10,  
21      2008?" And my question is: From the answer that  
22      you've given, I assume you have not priced specific  
23      components for the downsized version of Big Stone  
24      II.

25           A.     That's correct.

1 Q. When will you determine the prices and  
2 availability of these components?

3 A. The first critical decision is what size  
4 the eventual plant will be. As Mr. Uggerud  
5 testified, we are investigating the possibility and  
6 talking to potential partners, and that will --  
7 those discussions and the other permitting will  
8 determine whether we build -- move forward with a  
9 500 megawatt plant, a 520, or 580 megawatt plant.  
10 So we have to know the size before we can get  
11 specific quotes on the actual equipment.

12 Q. What will happen if the prices are  
13 significantly higher than would be expected from  
14 the EPRI formula?

15 A. To begin with, we don't think they will  
16 be, but if they are, it comes back to a business  
17 decision that, you know, is this still a prudent  
18 project if the prices are not in within what we  
19 expect them to be.

20 Q. Is the contingency factor still set at  
21 13.5 percent?

22 A. That's correct.

23 Q. Is this still appropriate?

24 A. Just a little bit of background, when we  
25 began the project with Black & Veatch in the

1 original cost estimate, they used what I believe is  
2 their standard practice of 10 percent. As we move  
3 forward in the volatile arena that we are, we  
4 increase it to 13-and-a-half percent as another  
5 contingency or conservative assumption, and we  
6 continue to use that 13-and-a-half percent  
7 contingency in our estimates.

8 MR. BINEK: Okay. I have no further  
9 questions.

10 JUDGE WAHL: Any questions from the  
11 Commissioners? Commissioner Wefald.

12 **EXAMINATION**

13 **BY COMMISSIONER WEFALD:**

14 Q. Mr. Schlissel in his testimony listed a  
15 number of coal plants that have been canceled. I  
16 understand from your testimony that there are quite  
17 a number of coal plants that are being built around  
18 the world. Does the fact that a number of coal  
19 plants have been canceled in the United States --  
20 will that -- will that help the cost of this  
21 particular plant? Will perhaps equipment costs or  
22 labor costs be less because of fewer plants being  
23 built in the United States if this one goes  
24 forward?

25 A. There still are a large number of coal-

1 fired plants that are being planned and in the  
2 pipeline in the United States. Yes, there have  
3 been a number of them canceled, but there are still  
4 an awful lot of them that are being planned. So it  
5 somewhat will depend upon if there is additional  
6 changes and if those plants are in this vicinity, I  
7 mean, what area are we competing for labor. So it  
8 may improve our labor situation, but we have not  
9 taken -- we've kept the original conservative  
10 estimates and have not assumed that we can do  
11 better because of those, and there are still many,  
12 many coal-fired units still moving forward in this  
13 country.

14 Q. Are you the person who we're supposed to  
15 ask questions about the cost of bonds, et cetera,  
16 or is that another witness later in the  
17 presentations?

18 A. I'm afraid I don't have any information on  
19 the cost of financing.

20 COMMISSIONER WEFALD: All right. Thank  
21 you.

22 JUDGE WAHL: Any other questions from the  
23 Commission? Commissioner Clark.

24

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**EXAMINATION**

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**BY COMMISSIONER CLARK:**

Q. Is -- are the -- are the project participants still in the process of seeking other utilities who may wish to come into Big Stone?

A. We are still in discussions with other interested parties. We're not -- the other owners are not out seeking additional interested parties. We have a number of parties that we have ongoing discussions with.

Q. Okay. With regard to this question of some coal plants around the country that have been scrapped, is it your understanding that the reason that those have been pulled off -- well, let me ask this: Why have they been put off? Is it something with the technology or is it fear of Washington, D.C., and what may happen there, is it something else?

A. Well, to begin with, all I can do is give you my opinion.

Q. Right. If you look back a year, year-and-a-half ago, there were I think 150 projects -- coal projects being proposed, and to begin with, I don't think anybody thought they were all going to become successful. So some have just

1 fallen off because of the normal progression.

2 I think some utilities are becoming more  
3 conservative and seeing if they can wait -- you  
4 know, if you're in a position where you can defer a  
5 judgment, that might be the thing to do. I believe  
6 for Otter Tail, MDU, and the other partners, that  
7 they need this power. They don't have the option  
8 to defer. Some of them may be conservative, seeing  
9 what happens in Washington, and if you have the  
10 luxury of waiting, you probably will, but there are  
11 still a number of them that are going forward?

12 COMMISSIONER CLARK: Thanks.

13 JUDGE WAHL: Any further questions from  
14 the Commission? Mr. Guerrero, followup?

15 MR. GUERRERO: No, thank you.

16 JUDGE WAHL: Ms. La Seur, anything  
17 further?

18 MS. LA SEUR: No, thank you.

19 JUDGE WAHL: Mr. Binek?

20 MR. BINEK: Nothing further.

21 JUDGE WAHL: Thank you very much, Mr.  
22 Rolfes. Mr. Guerrero.

23 MR. GUERRERO: Now we're moving. We would  
24 call, Your Honor, Mr. Bryan Morlock.

25 JUDGE WAHL: Mr. Morlock, I recall that

1 you testified for the previous hearings for this  
2 matter, and I have personal knowledge that you are  
3 advised and informed regarding perjury, and  
4 accordingly, Mr. Morlock, you understand, of  
5 course, that your testimony continues under oath  
6 and subject to penalties of perjury.

7 THE WITNESS: Yes, I do.

8 JUDGE WAHL: Mr. Guerrero.

9 **BRYAN MORLOCK,**

10 having been previously duly sworn, was examined and  
11 testified further as follows:

12 **DIRECT EXAMINATION**

13 **BY MR. GUERRERO:**

14 Q. Thank you. Please state your name.

15 A. Bryan Morlock, M-o-r-l-o-c-k.

16 Q. By whom are you employed and in what  
17 capacity?

18 A. Otter Tail Power Company. I am just  
19 currently transitioning from manager of resource  
20 planning to planning consultant at Otter Tail  
21 Power.

22 Q. How long have you been in resource  
23 planning for Otter Tail?

24 A. Since 1986.

25 Q. And did you have an occasion to prepare

1 prefiled written testimony and exhibits in this  
2 case?

3 A. Yes, I did.

4 Q. Do you have those before you, Mr. Morlock?

5 A. That I do. Exhibits 117 and 122.

6 Q. Exhibit 117 -- OTP Exhibit 117 also has  
7 exhibits attached to that, I believe, 117A -- oh,  
8 excuse me. That's your summary. Do you have that  
9 in front of you?

10 A. Yes, I do.

11 Q. Exhibit 118, that's an exhibit?

12 A. Yes, I have that.

13 Q. Okay. And what is 118?

14 A. 118 is a table that shows the summary of  
15 the resource planning modeling results of all the  
16 participants in the Big Stone project.

17 Q. Okay. And 122 is your April 23rd rebuttal  
18 testimony?

19 A. Yes, it is.

20 Q. And if I asked you the same questions that  
21 are set forth in OTP 117 and 122, would your  
22 answers be the same?

23 A. Yes, they would. However, I would like to  
24 strike one question and answer in OTP Exhibit 122.

25 Q. Okay. Why don't we go there, Mr. Morlock,

1 and tell people where you're at.

2 A. Right away on page number one, on lines  
3 eight three ten my prefiled rebuttal testimony went  
4 out with a blank there after OTP exhibit numbers.  
5 Those can -- that question and answer can just be  
6 struck because those exhibit numbers are identified  
7 in my prefiled written testimony that was submitted  
8 on March 10th. So it's really unnecessary.

9 Q. Okay. Any other corrections that you'd  
10 like to make to your testimony, Mr. Morlock?

11 A. None that I'm aware of.

12 MR. GUERRERO: Your Honor, we would offer  
13 OTP 117, 118, 117A, and 122.

14 JUDGE WAHL: Ms. La Seur?

15 MS. LA SEUR: No objection.

16 JUDGE WAHL: Mr. Binek?

17 MR. BINEK: No objection.

18 JUDGE WAHL: Exhibits OTP 117, 117A, 118,  
19 and 122 are each received.

20 MR. GUERRERO: Thank you.

21 Q. (MR. GUERRERO CONTINUING) Please provide  
22 a brief summary of your testimony, Mr. Morlock.

23 A. Yes, I will. As a result of a number of  
24 factors, including the change in the participants  
25 in the project, we conducted updated analysis.

1 Based on the change in participants, which as Mr.  
2 Rolfes testified, had some effect on the changes in  
3 the plant size, the options, the cost, and the  
4 in-service date of the project.

5 Since our earlier analysis, the State of  
6 Minnesota had also passed a couple of statutes.  
7 One was increasing the amount of renewables  
8 required in the State of Minnesota. The second one  
9 was approving a very aggressive energy conservation  
10 goal. Those were incorporated in the new analysis.  
11 We also had available to us an updated long-range  
12 load forecast developed by a regulatory services  
13 department. That was included in the model. And  
14 then to the extent we had information on updated  
15 alternative costs, those were rolled into the  
16 model, as well.

17 We then used the IRP-Manager model to  
18 develop an optimized plan just as before, and that  
19 optimized plan is one component of the whole  
20 process of taking a look at Big Stone II and  
21 developing a resource plan.

22 In response to the Dakota Resource Council  
23 and Mr. Schlissel, Mr. Schlissel has criticized the  
24 IRP-Manager model as being obsolete, and from an  
25 input/output perspective I wholeheartedly agree.

1 It is not Excel compatible. In just some work I  
2 did this week I had to input about 1200 values by  
3 hand rather than being able to cut and paste those  
4 in.

5 The key component, the analysis module,  
6 the financial module, the core components of that  
7 model are still valid and are in use in another  
8 model known as EnerPrise currently available on the  
9 market. The model is valid. It's difficult to  
10 use, but it still provides good results. We did  
11 both the modeling with the IRP-Manager, and Mr.  
12 Greig also provided the Big Stone participants with  
13 some levelized cost analyses, and so forth, as part  
14 of his work.

15 Throughout our modeling we've used very  
16 conservative values. Mr. Rolfes has just testified  
17 that the project costs include a 13-and-a-half  
18 percent contingency margin. We included some  
19 sensitivity analyses that looked at a 10 percent  
20 cost increase, as well as a 10 percent increase in  
21 that contingency result. We updated fuel costs for  
22 Big Stone II project, and in the Minnesota docket  
23 we took a look at the impact of carbon and the high  
24 externality values that are required in the State  
25 of Minnesota and the impact on those.

1           The conclusion is over time the dockets in  
2 Minnesota and North Dakota have been going on for  
3 over two years, and in all the analyses we've done,  
4 all the runs, taking a look at all these different  
5 variables, the one thing that has been consistent  
6 in all of them is Big Stone II project has been a  
7 component of the results coming out of the modeling  
8 and the planning.

9           Mr. Deason asked us for some  
10 clarifications about a number of things, including  
11 the wind federal PTC in the impact. Our analysis  
12 concluded the PTC being available through the year  
13 2013, which means any wind plant put -- that became  
14 operational before January 1, 2014, would include  
15 the federal production tax credit.

16           We chose that date, number one, because it  
17 came after the in-service date of Big Stone II.  
18 Number two, AWEA was very confident -- the American  
19 Wind Energy Association -- at that of the  
20 possibility of a five-year extension but possibly  
21 nothing after that or something that would be  
22 drastically different. We also touched base with  
23 some of our legislative staff, from our  
24 Congressmen, North Dakota, Minnesota, and touched  
25 base with them to see what their impressions were

1 at the time.

2 We used capital cost assumptions. Mr.  
3 Deason asked for an explanation of differences  
4 between the capital costs MDU used and Otter Tail  
5 used. In our resource plan analysis we actually  
6 gave the model for combined cycle gas turbine  
7 facilities that it could evaluate. We chose four  
8 because they use different sizes, from roughly 50  
9 megawatts up to 145 megawatts, approximately,  
10 winter rating.

11 Some of them had more efficient  
12 technologies incorporated, some less efficient  
13 technologies, but we let the model pick which it  
14 felt would be the appropriate mix.

15 Mr. Deason asked whether or not we had  
16 included consideration of AFUDC in the model.  
17 IRP-Manager is a very sophisticated financial  
18 model. In fact, we used to use it for financial  
19 planning analysis at Otter Tail up through much of  
20 the Nineties. We now have a separate financial  
21 model tool, but it does all those calculations  
22 internally. It calculates all the interest during  
23 construction; it calculates the tax impact; flows  
24 all those through the income statements, the  
25 balance sheets, the whole works. So one great

1 benefit of IRP-Manager is we don't have to make  
2 those calculations externally. The model will do  
3 those.

4 In conclusion, the modeling results showed  
5 that Otter Tail could use up to 170 megawatts of  
6 the Big Stone II project and the associated energy,  
7 and that's in combination with complying with the  
8 Minnesota renewables requirements, the North Dakota  
9 and South Dakota renewable energy objectivity,  
10 compliance with the aggressive Minnesota  
11 conservation goal, as well as incorporating  
12 conservation efforts in North Dakota and South  
13 Dakota service territories.

14 In general, we took a look at the 500  
15 megawatt size of Big Stone II as the worst case  
16 analysis, and the model continued to show that that  
17 was the economic thing to do, and so we did not do  
18 a 580 megawatt analysis. Right now total baseload  
19 need of all the five Big Stone II project  
20 participants is in the range of 516 to 556  
21 megawatts.

22 And that concludes my summary.

23 MR. GUERRERO: Thank you, Mr. Morlock.  
24 Before I tender him for examination, just as a --  
25 this is probably obvious, but this would be the

1 witness to ask questions about the Otter Tail  
2 resource plan, how many megawatts of coal, how many  
3 megawatts of wind, et cetera, conservation. We'd  
4 tender Mr. Morlock.

5 JUDGE WAHL: Ms. La Seur.

6 **CROSS-EXAMINATION**

7 **BY MS. LA SEUR:**

8 Q. Good afternoon, Mr. Morlock.

9 A. Good afternoon.

10 Q. Let's see. Just since you've already  
11 given some initial testimony regarding the  
12 IRP-Manager model, to be clear, is it your  
13 testimony that IRP-Manager is adequate for  
14 determining whether participation in Big Stone II  
15 is prudent?

16 A. Yes, it is my testimony.

17 Q. And are you able to name any other  
18 utilities that still use this modeling software?

19 A. No, I can't, but I haven't gone out and  
20 surveyed to find out whether or not anybody is.

21 Q. Turn to pages two and three of your  
22 supplemental direct testimony, and I'm looking  
23 specifically for the discussion of the proposed  
24 Tharaldson Ethanol plant.

25 MR. GUERRERO: That's Exhibit 117?

1 MS. LA SEUR: Yes.

2 MR. GUERRERO: Page three?

3 Q. (MS. LA SEUR CONTINUING) Yeah. Beginning  
4 on page two with the very last sentence -- well,  
5 taking into account the full response to the  
6 question at lines 22 and 23 on page two, the  
7 discussion of the Tharaldson plant. With regard to  
8 your testimony about the proposed Tharaldson  
9 Ethanol project, has OTP explored any form of  
10 co-generation or combined heat and power system as  
11 an alternative form of generation at the site?

12 A. Could you repeat the question, please?

13 Q. Yes. With regard to the Tharaldson  
14 project has OTP explored any form of co-generation  
15 or combined heat and power system as an alternative  
16 form of generation at the site?

17 A. At that site specifically, no. In the  
18 past we have taken a look at doing such with other  
19 ethanol plants, one on the southern part of our  
20 system that is currently under discussion. It  
21 would likely not be a good, suitable site for  
22 natural gas-fired co-generation facilities because  
23 there's really not much available in that site for  
24 natural gas. So then we'd be talking about a coal-  
25 fired facility.

1           There is such a facility under  
2 construction in North Dakota, but the electrical  
3 output that's being proposed by that type of  
4 facility is far below what we're looking at for  
5 output from the Big Stone II project, just even  
6 Otter Tail's share.

7           Q.     And has OTP performed any analysis of the  
8 potential energy savings that might be realized  
9 through a co-generation alternative for Tharaldson?

10          A.     I'm not sure what you mean by "energy  
11 savings."

12          Q.     Well, let me put it to you this way and  
13 I'll get back to that question again: Does the 22  
14 megawatt estimate for the Tharaldson plant take  
15 into account, for example, line loss from South  
16 Dakota if that is indeed a proposed source of power  
17 generation for Tharaldson?

18          A.     Well, the power will come from wherever,  
19 the whole mix of resource not just --

20          Q.     Free-range electrons, right. I know.

21          A.     Yeah. It will come from all of our  
22 resources. We have not even evaluated that at a  
23 level of 22 megawatts. It was only included at a  
24 level of 14. Have we looked in specific detail at  
25 that? No, we have not. Not with this project. We

1 are already supplying steam to one ethanol plant  
2 off one of our facilities. We have worked with  
3 Otter Tail Ag -- or Otter Ag Enterprises, another  
4 ethanol plant. Just started operation outside  
5 Fergus Falls, taken a look at providing them steam,  
6 as well, versus using natural gas and running on  
7 their own. It takes two to tango, and sometimes  
8 they decide no because they want to do their own  
9 thing.

10 Q. In the big picture has there been any  
11 system level analysis of what kinds of efficiencies  
12 or demand reduction could be achieved through  
13 aggressively pursuing co-generation at biofuels  
14 facilities?

15 A. It's a catch-twenty -- it's much more  
16 complicated than that, and I'll use the example of  
17 the one we've looked at in detail within my area,  
18 which is one in southern Minnesota where actually  
19 as part of the project an IPP would build a  
20 co-generation facility that would provide the steam  
21 necessary for the ethanol plant and Otter Tail  
22 Power would take the electricity from the facility.

23 The thermal demand drives the operation of  
24 the facility, and for us to participate in that  
25 facility meant we would have had to take power 24

1 hours a day off almost 100 megawatts of simple  
2 cycle combustion turbines whether or not it was  
3 economic in order to make that project viable.  
4 That would have severe negative impacts on the rest  
5 of the system and our other generation when we're  
6 backing down cheaper generation because such a  
7 facility would have to run at full load all the  
8 time in order to supply the demands of the ethanol  
9 plant.

10 Q. So understanding that there are challenges  
11 involved in any given project, has there been any  
12 systemic approach, strategic approach to pursuing  
13 co-generation more aggressively for biofuels  
14 facilities?

15 A. I thought I'd already answered it. We  
16 have dealt with a number of ethanol plants in their  
17 analysis process. Some of them, such as  
18 Tharaldson, hit the track running, and they're  
19 going to be on line within 14 months, 15 months  
20 from the date we hear about it. There is no time  
21 in those situations to say -- to take a look at  
22 that project specifically, but we have been  
23 involved in more than a handful of these proposals  
24 up front where we take a look at them, and, yes, we  
25 have one that has worked because they located at

1 our site, but a lot of times they may choose a site  
2 that just does not work or they have other issues  
3 that they want to deal with.

4 So, yes, we have taken a look at these, we  
5 have some experience in that area, but you cannot  
6 say blanket, yes, it's a good deal, no, it's a good  
7 deal, because almost every situation is unique.

8 Q. Okay. Let me take one more run at this.

9 A. Okay.

10 Q. We're talking about modeling alternatives.  
11 We're talking about the future, not what's been  
12 done in the past --

13 A. Yes.

14 Q. -- but strategic approaches, ways of doing  
15 business that might have some impact on the overall  
16 load growth or the overall ability to manage demand  
17 on a going-forward basis. Has there been any  
18 strategic approach considered to expanding  
19 co-generation as a way to slow load growth or to  
20 manage demand?

21 MR. GUERRERO: I'm going to object. It's  
22 been asked and answered.

23 JUDGE WAHL: It really hasn't. The key  
24 word is "strategic," I think. The objection is  
25 overruled.

1           THE WITNESS: What I am struggling with  
2 here is your question about doing these in order to  
3 control demand. As an electric utility with an  
4 obligation from a liability perspective, it doesn't  
5 matter where the power to serve that load is coming  
6 from. It is still a load, it is still an  
7 obligation, and it's something we still have to  
8 carry reserves on. It does not matter whether it's  
9 at the site or whether it's at Big Stone II.

10           Now, even if we did a co-generation  
11 facility at the site, that facility can't run 100  
12 percent of the time. So you still need all the  
13 transmission investment to the site to bring in  
14 power from outside, and that's why I'm struggling  
15 with your question.

16           You seem -- I'm hearing you relate it as  
17 to some type of reducing demand and load growth,  
18 but in reality on paper and our obligations to the  
19 reliability council and to the power pool, it still  
20 gets chalked up on paper as our load.

21           Q. (MS. LA SEUR CONTINUING) Okay. Would you  
22 acknowledge that if you generate electricity for a  
23 load right next-door to the generation source, you  
24 have an economy that exists because you are not  
25 forced to transport that electricity over lines?

1           A.     You may have some economy, but you are  
2     also going to lose significant economy.  If you  
3     build a power plant to serve a 22 megawatt load,  
4     you're going to suffer a substantial loss of  
5     economy of scale due to the small size of the  
6     facility.  So it's not just a question -- yes, you  
7     can probably save five percent or something of  
8     losses on the transmission side, but you're going  
9     to incur significant other costs elsewhere with  
10    such a project.

11                 And to get to your question, each one of  
12    those is going to be site specific because of the  
13    transmission characteristics.  So from a total  
14    perspective, looking at a generic thing, no, we  
15    haven't, but we have looked at a number of very  
16    site-specific situations.

17           Q.     Would you acknowledge that some of the  
18    nation's largest biofuels facilities have gone to  
19    co-generation as a way to prop up the marginal  
20    economics of these facilities?

21                 MR. GUERRERO:  I guess I'm going to  
22    object.  Facts not in evidence, calls for  
23    speculation.

24                 MS. LA SEUR:  I'm asking if he knows.

25                 JUDGE WAHL:  Overruled.  I agree.  The

1 question is, does he know.

2 THE WITNESS: I'm aware of an ethanol  
3 plant at Little Falls, Minnesota, that is gasifying  
4 waste to provide synthetic gas for some of their  
5 processes. I don't know that they are generating  
6 electricity there.

7 We have worked with the new ethanol plant  
8 right there in Fergus Falls on -- they haven't done  
9 it yet and they may not do it, but we've worked  
10 with them on a research project and AURI, which is  
11 an agricultural research facility, on using some of  
12 their waste byproducts to create synthetic gas and  
13 generate electricity onsite. We even ran a pilot  
14 project right there at Fergus Falls.

15 I don't have -- I can't cite a whole  
16 litany of plants that I know it's happening, but at  
17 our Big Stone Plant we're providing steam right  
18 there to an ethanol plant. So, yes, I know it's  
19 happening and I know of a couple instances where  
20 it's taking place.

21 Q. And has OTP done any due diligence on the  
22 viability of the Tharaldson proposal?

23 A. What proposal?

24 Q. The proposal for an ethanol plant.

25 A. If I understand your question right, I

1 don't know that it's up to Otter Tail to decide  
2 whether or not Tharaldson builds an ethanol plant.

3 Q. But when Otter Tail is asked to provide  
4 electricity for a certain new load and includes the  
5 fact of that projected load as part of its  
6 application to this Commission, does OTP then do  
7 any due diligence as to whether that load will, in  
8 fact, materialize?

9 A. The load that's under construction will be  
10 operational by October 1st of this year.

11 Q. So your original testimony was --

12 A. They -- they had already broken ground  
13 before we even found out it was going to be an  
14 Otter Tail load.

15 Q. Okay. And turning to page five, lines 11  
16 through 12, where you say that Otter Tail is  
17 expecting to implement more North Dakota  
18 conservation programs in the future, are these  
19 programs that you're able to name?

20 A. Off the top of my head, we have not looked  
21 at specific programs in the North Dakota service  
22 territory, but we have been running programs for  
23 many years in Minnesota. We used to run programs  
24 in North Dakota. We have been working with the  
25 South Dakota Commission for over a year to

1       implement programs in South Dakota.

2               In discussions with Kim Pederson, our  
3       manager of the market planning area that handles  
4       our conservation efforts, it is our expectation  
5       that in the near future we will be approaching the  
6       Commission to implement specific conservation  
7       programs again in the State of North Dakota.

8               Q.     So is this a firm commitment to  
9       implementing certain programs or is this a general  
10       hope that this will happen?

11              A.     Well, any time you do anything with a  
12       retail customer, it's subject to Commission  
13       jurisdiction.  So it's going to be -- have to be  
14       combined with participation of the Commission and  
15       the Commission staff.  It's not something Otter  
16       Tail can just arbitrarily do on its own since it  
17       involves either rebates to the customer or charging  
18       the customer some money.

19              Typically, we have been criticized in the  
20       past for not going through the Commission in other  
21       states.  So we will work with the Commission.  So  
22       it's not a commitment I can make until we've  
23       actually had discussions with the Commission.

24              Q.     And is OTP planning to submit a proposal  
25       to this Commission or would the Commission have to

1 request a proposal as to specific programs?

2 A. I don't know that I could answer that.  
3 That would fall within somebody else's area of  
4 planning.

5 Q. Getting back to your testimony at pages  
6 five and six, and I'm look now at the testimony  
7 from lines 22 and 23 at page five, turning over  
8 onto page six, discussion of modeling energy  
9 efficiency gains. To make sure I understand, .5  
10 percent of annual retail sales in kilowatt-hour  
11 savings are what you believe you might be able to  
12 achieve in North Dakota if you were to implement  
13 these programs that you have not yet identified?

14 A. I wouldn't characterize it that way. I  
15 would characterize it as based off a short estimate  
16 of what might take place. It's an estimate of what  
17 might be a result of programs that we file with the  
18 North Dakota Commission based on our experience in  
19 our service territory in Minnesota.

20 To say whether that's an optimized amount  
21 or that's a maximum we could expect, I can't say  
22 that because while we have done a DSM potential  
23 study across our entire system, it's now a number  
24 of years old, but it's -- there are a lot of  
25 factors that go into what customers will choose to

1 participate in and what they won't. It's just  
2 based on what we have experienced in Minnesota with  
3 the conservation programs we've implemented there.

4 Q. And is OTP making a firm commitment to  
5 this .5 percent reduction or is this again  
6 speculative?

7 A. This is again just an estimate based on  
8 what our manager of market planning thought might  
9 take place if we do comparable to what we're  
10 working on with the State of South Dakota.

11 Q. In this same testimony you say that OTP  
12 has historically achieved energy efficiency savings  
13 of .6 to .7 percent of annual Minnesota  
14 kilowatt-hour sales; correct?

15 A. Yes.

16 Q. But you speculated that only .5 percent  
17 reduction can be achieved in North Dakota?

18 A. All of the -- not all of the conservation  
19 savings in Minnesota are cost effective. Some are  
20 mandated as low-income programs. There's no  
21 consideration for cost effectiveness. So if you  
22 take those out of the mix and you look at what  
23 we're doing that's cost effective, you're much  
24 closer to that .5 percent than you are to .6.

25 Q. Have you submitted any data to support

1 this conclusion in this docket?

2 A. I have not, no.

3 Q. And you believe that North Dakotans cannot  
4 achieve the 1.5 percent savings that Minnesotans  
5 are going to get under their new plan?

6 A. My impression is right now we are  
7 struggling mightily with trying to figure out how  
8 we are going to do it in Minnesota. There's a  
9 great deal of concern and discussion going on as to  
10 how we are even going to be able to accomplish the  
11 one-and-a-half percent in Minnesota, and most  
12 people involved in that think we're going to have  
13 trouble getting to one-and-a-half percent in  
14 Minnesota, and that includes the fact that in  
15 Minnesota only one percent needs to actually come  
16 from customer conservation.

17 The other half percent can come from  
18 system improvements, voltage conversions,  
19 reconductoring lines, whatever you can do to reduce  
20 losses on the system, and there's still a great  
21 deal of concern whether or not we can meet the  
22 one-and-a-half percent in Minnesota, but I can't  
23 say, no, we can't make it in North Dakota, but it's  
24 a matter of what's going to be economic, and I have  
25 not been involved in the detailed analysis of what

1 we're looking at to comply with that new Minnesota  
2 law.

3 Q. Okay. I'm going to refer you to  
4 Intervenor's Exhibit 17. It's the NERC long-term  
5 reliability assessment. I might need to hand it to  
6 you.

7 MR. GUERRERO: Do you have a copy for him?

8 Q. (MS. LA SEUR CONTINUING) And if you would  
9 turn to -- well, let me ask you first: Are you  
10 familiar with this report that Mr. Uggerud relied  
11 on in preparing his testimony?

12 A. I don't believe I've read this specific  
13 one, but I am familiar with the NERC assessment  
14 since resource planning over the years has been  
15 responsible for supplying data to MAPP, the MRO,  
16 and to MISO, which then after being processed by  
17 committees gets moved up to the NERC level.

18 Q. So you -- do you consider this a reliable  
19 source of information?

20 A. I don't know that I'd use the word  
21 "reliable source." It is a source of information,  
22 but it is a very high level, very grainy look  
23 because of the process you go through to get  
24 through issues people deal with locally up to a  
25 national level.

1 Q. Okay. I'm going to direct you to page 65,  
2 and this is excerpted, so you'll have to page  
3 through to find 65. When you've got it, I'd direct  
4 you to the third paragraph that begins, "The FERC  
5 suggests."

6 A. Yes.

7 Q. Okay. And would you please read into the  
8 record the statement at the third paragraph by the  
9 Federal Energy Regulatory Commission quoted in this  
10 NERC report beginning with "the potential"?

11 A. "The potential immediate reduction in peak  
12 electric demand that could be achieved from  
13 existing demand resources is between three and  
14 seven percent of peak demand in most regions. This  
15 represents a significant resource for meeting  
16 demand. Expanding the penetration of these  
17 programs or designing new ones may result in an  
18 even greater resource impact."

19 Q. And do you consider demand resources a  
20 part of the ongoing strategy for managing load  
21 growth within OTP's system?

22 A. We've actually been involved with it since  
23 the 1940s. The MAPP region, of which Otter Tail is  
24 a member, has been one of the most forward areas in  
25 the country in terms of demand resource. We have

1 procedures for accrediting it in the power pool and  
2 counting it toward your demand reduction. We've  
3 been a leader. We have significant amount of  
4 megawatts of demand side resources that have  
5 already been implemented within the MAPP power  
6 pool.

7 Q. And do you see potential for increasing  
8 those resources?

9 A. I see limited potential. On the Otter  
10 Tail system we already have sufficient capability  
11 where we can flatten our load curve for 16 hours  
12 over the winter peak, and that -- we are at the  
13 point where that causes operational problems  
14 because you need at some point to reestablish these  
15 loads, and we are able to control so well, we can't  
16 find hours to bring some of these loads back on  
17 without the risk of setting a new peak in the  
18 middle of the night that we therefore have to add  
19 capacity for.

20 Q. Let's turn to natural gas. Would you  
21 acknowledge that natural gas-fired electrical  
22 generation capacity in North Dakota is currently a  
23 tiny fraction of the national average?

24 A. If you're talking the physical location of  
25 natural gas-fired facilities, yes, I would agree

1 with that.

2 Q. And so you would make some sort of  
3 stipulation as to natural gas located elsewhere but  
4 used on the North Dakota system?

5 A. Both the natural gas and electric  
6 infrastructures are regional systems. They are not  
7 the state-border-by-state-border system. The  
8 energy we serve our North Dakota customers comes  
9 from facilities we have located in Minnesota, South  
10 Dakota, and North Dakota. We have our natural gas-  
11 fired facilities located in Minnesota, but it is  
12 used to meet North Dakota load.

13 Q. Well, you point out electrons go where  
14 they will, but if the electrons produced in North  
15 Dakota are 94 percent coal-fired, that will tend to  
16 be what serves the North Dakota load, isn't it?

17 A. From a purely physical -- or physics  
18 perspective, yes. From a ratemaking cost  
19 perspective, no. That's a total different --  
20 that's an allocation methodology that doesn't  
21 necessarily follow the electrons from plant to the  
22 meter.

23 Q. So North Dakotans might, in fact, wind up  
24 paying for more expensive natural gas generation  
25 produced out of state in spite of the fact that the

1 generation actually produced in state would be in a  
2 very high proportion coal-fired?

3 A. The customers of Otter Tail Power are  
4 served by the resources of Otter Tail Power and the  
5 spot market energy and the firm power we buy off  
6 the market. So it's -- just because Basin Electric  
7 or somebody else has coal-fired generation in North  
8 Dakota, that doesn't give us the right to use it  
9 and bill our customers accordingly unless they sell  
10 it to us.

11 Q. Let's see. I'd like to distribute  
12 applicant's response to intervenor's data request  
13 number 34. Okay. You were the author of this  
14 response to data request; right, Mr. Morlock?

15 A. Yes, I am.

16 Q. And this is applicant's response to data  
17 request number 34. I'd like to mark it as  
18 Intervenor's Exhibit No. -- are we up to 21 since  
19 we're still discussing the settlement agreement?

20 JUDGE WAHL: That's my number.

21 MS. LA SEUR: Okay. And I'd like to offer  
22 this as Exhibit 21.

23 JUDGE WAHL: Mr. Guerrero?

24 MR. GUERRERO: We don't have any  
25 objection.

1 JUDGE WAHL: Mr. Binek?

2 MR. BINEK: I have no objection, but what  
3 is the number of the exhibit?

4 JUDGE WAHL: I 21. I 21 is received.

5 Q. (MS. LA SEUR CONTINUING) And in this  
6 response, Mr. Morlock, you state that because of  
7 Minnesota law requiring the consideration of  
8 environmental costs, and I think your phrase is --  
9 this is the last sentence of the first page of the  
10 response, Exhibit 21, as a result of Minnesota's  
11 use of environmental costs or externality values,  
12 you say in the last sentence, "there is a high  
13 degree of probability that in the future Otter Tail  
14 will have resources that are fully allocated to  
15 only one jurisdiction." Is that your testimony?

16 A. Yes.

17 Q. Would that jurisdiction be one of the  
18 Dakotas or one -- North Dakota specifically?

19 A. It could be Minnesota, it could be North  
20 Dakota and South Dakota.

21 Q. So resources that would meet Minnesota's  
22 goals for renewable energy, for example, might be  
23 allocated to that jurisdiction?

24 A. If through the use of environmental  
25 externalities and a carbon cost regulatory adder

1 Minnesota says you should build this unit and under  
2 North Dakota law we evaluate it without carbon  
3 costs and without externalities and it is not an  
4 economic resource, it would be up to the North  
5 Dakota Commission to decide, yes, you can go ahead  
6 and use that resource to serve North Dakota load,  
7 or no, depending on how they interpret the statute,  
8 but it's quite possible we could get ordered or  
9 required to build something in the State of  
10 Minnesota that the State of North Dakota would not  
11 allow to be used to serve North Dakota ratepayers,  
12 and the vice versa is true. It could be that  
13 Minnesota will not allow us to build the most  
14 economic resource because it's only economic if you  
15 don't use all these other adders, yet North Dakota  
16 might say, yes, that is the proper thing to do.

17 Q. Okay. So in the scenario that certain  
18 renewable energy resources on the system have been  
19 allocated to Minnesota because of state law, would  
20 that then result in more fossil fuel generation  
21 being allocated to serve the North Dakota load?

22 A. I don't know that I would agree with that.  
23 We are transitioning to the Strategist model and  
24 actually breaking the Otter Tail system down into  
25 two systems within the model. So it will

1 simultaneously develop a resource plan that works  
2 for North Dakota and South Dakota as well as a  
3 resource plan that works for Minnesota with the  
4 renewable energy requirements with the requirements  
5 for the use or non-use of environmental  
6 externalities, and it will develop a resource plan  
7 for the two jurisdictions.

8           Where those two mesh or overlap, we can  
9 continue to have resources that will be used  
10 systemwide to serve all customers, not just one  
11 jurisdiction, but in those cases where it selects  
12 the resource only in Minnesota and not the Dakotas,  
13 then we are facing the issue where it can only be  
14 used in that jurisdiction, but that does not  
15 necessarily mean that all the other resources that  
16 are out there used to serve the joint system are  
17 suddenly somehow going to change and be  
18 reallocated, if that's what you're saying.

19           Q.    No.  What I'm getting at and what I'm  
20 concerned about is that I wonder if it's possible  
21 due to this jurisdictional allocation that carbon  
22 costs that Minnesota has rejected could be  
23 allocated to North Dakota ratepayers.

24           A.    Only if that energy is used to serve North  
25 Dakota ratepayers.  If you don't use it to

1 generate, you aren't going to incur any carbon  
2 costs. So it has to go to serve some load before  
3 you're going to incur carbon costs, and if it is  
4 used to serve North Dakota load, then that's part  
5 of the costs of serving North Dakota load, but just  
6 arbitrarily having a resource dedicated to  
7 Minnesota isn't suddenly going to shift other costs  
8 to North Dakota that -- from energy that wasn't  
9 used to serve North Dakota. It's all cost-based.

10 Q. So there are scenarios, possible, if I'm  
11 understanding correctly, where North Dakota  
12 ratepayers risk exposure not only to their pro rata  
13 share of and carbon costs for this coal-fired  
14 generation investment but also potentially to an  
15 increased allocation of coal-fired power on the OTP  
16 system so that Minnesota's statutory requirements  
17 can be met?

18 A. No, that is incorrect. If we sell a  
19 million kilowatt-hours in North Dakota, just  
20 because now we have some resource that's dedicated  
21 to Minnesota, that doesn't change the number of  
22 kilowatt-hours in North Dakota. The costs that get  
23 allocated to North Dakota are the costs to develop  
24 that one million kilowatt-hours, nothing more,  
25 nothing less.



1 state that new load forecasts for Otter Tail have  
2 increased energy requirements and that demand  
3 forecasts have increased, and then you mentioned  
4 that the Tharaldson Ethanol plant is one of the  
5 large, new loads. Have there been any other new  
6 loads of any particular significance?

7 A. Between the time of our previous forecast  
8 and this new forecast there were four very large  
9 loads that suddenly appeared and are coming on the  
10 system late 2007 and in 2008. In some of our prior  
11 analyses we had incorporated those four new, large  
12 loads on top of the previous load forecast. Those  
13 are now incorporated into the new forecast. The  
14 Tharaldson Enterprise's installation had not been.

15 Q. Okay. On page 12 --

16 COMMISSIONER WEFALD: What page was that  
17 previous question referring to?

18 MR. BINEK: I --

19 COMMISSIONER WEFALD: You don't know.

20 MR. BINEK: I didn't jot down the page  
21 number.

22 COMMISSIONER WEFALD: Okay. Thank you.

23 MR. GUERRERO: Page three.

24 COMMISSIONER WEFALD: Page three. All  
25 right. Thank you.

1 Q. (MR. BINEK CONTINUING) Okay. In your  
2 direct testimony, page 12, lines 1 through 3, your  
3 modeling showed that up to 170 megawatts at Big  
4 Stone II is the most economic baseload alternative.  
5 Why is Otter Tail asking for only 120 to 130  
6 megawatts at Big Stone II?

7 A. That's not a question I can respond to.  
8 That was evidently something decided at the  
9 executive level.

10 Q. Okay. Is there someone here who can give  
11 us that answer?

12 MR. GUERRERO: Mr. Uggerud.

13 THE WITNESS: I would presume Mr. Uggerud.

14 Q. (MR. BINEK CONTINUING) You stated that in  
15 the latest modeling the wind restriction was  
16 removed and replaced by estimated transmission  
17 costs of approximately \$200 per kilowatt, I  
18 believe.

19 A. Yes.

20 Q. I'm really confused by the testimony in  
21 this proceeding concerning transmission costs for  
22 wind power. Some testimony talks about the  
23 difficulty in estimating transmission costs and  
24 consequently transmission costs aren't included in  
25 the cost of wind energy. Here you have -- you

1 factored in transmission costs. What -- can you  
2 explain what transmission costs you're factoring in  
3 here, this \$200 transmission cost? Is that -- is  
4 that from the wind facility to get the power onto  
5 the grid or is it for updates to the transmission  
6 system? What is it?

7 A. It's a combination of things. I'll use  
8 the Langdon Wind Farm as an example. That project  
9 included the need to construct some 115 kv  
10 facilities, just as a matter of having sufficient  
11 outlet capability from the wind farm to get the  
12 power off the site. The second component of that  
13 is now you've got the transmission there to get it  
14 off the site, but you may cause constraints  
15 elsewhere on the system. You've got the high  
16 voltage substation transformer that becomes  
17 overloaded or you get another line segment that  
18 becomes overloaded, and now you have to re-conductor  
19 it, that type of thing.

20 That is the situation I'm trying to model  
21 within IRP-Manager. The other situation that Mr.  
22 Uggerud testified earlier regarding the Big Stone  
23 II project transmission and building that  
24 transmission without the plant just to support wind  
25 generation where you're trying to build whole new

1 high-voltage 230, 345 facilities. Just to support  
2 wind generation the cost per kilowatt is going to  
3 be much higher.

4 Now, at Edgeley and at Langdon and  
5 hopefully other spots we can identify on our  
6 system, we've been able to add wind generation of  
7 significant amounts without triggering that massive  
8 230, 345 kv transmission construction, but we  
9 aren't going to get off Scott free. We still have  
10 some stuff at the lower voltage levels and some  
11 constraints we have to make sure are taken care of,  
12 and so I believe Langdon came in somewhere close to  
13 that \$200 kilowatt range, and that -- you know,  
14 that was from -- from the perspective of the size  
15 of that wind farm, that was minimal transmission  
16 investment.

17 MR. BINEK: I have no further questions.

18 JUDGE WAHL: Commissioner Wefald.

19 **EXAMINATION**

20 **BY COMMISSIONER WEFALD:**

21 Q. I heard a statement recently at a  
22 conference I attended that there's the possibility  
23 the production tax credit wouldn't be extended,  
24 let's say, five years from now because if carbon --  
25 if a carbon tax or cap and trade program is put in

1 place, that there would no longer need to be a  
2 production tax credit in place because wind would  
3 compare favorably to other resources. Do you have  
4 a comment on that?

5 A. I have not heard that. Everything I've  
6 seen has been couched in terms of a federal  
7 renewable portfolio standard. That if such a  
8 standard is implemented, then there really isn't  
9 need for the federal PTC. I have not seen anything  
10 about -- equivalent of the same effect being caused  
11 by having a carbon tax or a cap and trade system.

12 Q. Okay. On -- then I'm interested in the  
13 numbers from Ward Uggerud that he presented this  
14 morning orally in his report, and then I was asked,  
15 if I had questions, to go over those with you. So  
16 do you know those by heart or should I go over  
17 those again?

18 A. Commissioner, if you could ask me your  
19 questions again, I'll answer the best I can.

20 Q. Okay. He had said this morning that of  
21 the new resources that are needed -- and I added up  
22 his numbers and they came to 100 percent. Okay.  
23 He said 14 percent would be from conservation,  
24 39 -- I'm going to ask you about these numbers, so  
25 if you want to write them down -- 39 percent from

1 renewables.

2 A. Okay.

3 Q. 14 percent from conservation, 39 percent  
4 from renewables, 24 percent from natural gas, and  
5 23 percent of new resources would come from coal.

6 A. Yes.

7 Q. And when I asked him, he said that  
8 reflected plants from 2007 to 2022.

9 A. 2020.

10 Q. 2020.

11 A. Yes.

12 Q. And this is my question that I had for him  
13 this morning: Is the 23 percent of new resources,  
14 which are coal, does that reflect 123, 130, or 170  
15 megawatts of coal?

16 A. The 23 percent would be the 170 level.

17 Q. 170 level. All right. So then when I did  
18 some math, let's say that's approximately 25  
19 percent of new resources that are needed -- so are  
20 you anticipating 680 megawatts of new -- 680 new  
21 megawatts of capacity will be needed in the -- by  
22 2020?

23 A. Commissioner, I believe -- and I'm going  
24 off the top of my head here, but I believe that by  
25 2020 the number is closer to 400 megawatts, and

1 that includes within the plan the retirement of 145  
2 megawatts of coal. Now, we have not made --

3 Q. Okay. So just say that again slowly so I  
4 can write that down.

5 A. The number is about 400 megawatts,  
6 roughly, based on the summer peak through 2020.

7 Q. And that's based on -- how do you get to  
8 that then from the -- is it because -- if you said  
9 that 23 percent of your new resources need to be  
10 coal, then how do you get from 680 megawatts down  
11 to 400 that are needed? Because that's 280  
12 megawatts less.

13 A. I'm not sure how you got to the 600.

14 Q. If 23 percent of your new resources needed  
15 are coal and that's 170 megawatts of capacity, I  
16 did simple math and multiplied it by four. Did I  
17 do the math wrong?

18 A. No, you did the math right. The  
19 difference is the nameplate rating of wind versus  
20 the accredited rating of wind. We've --

21 Q. All right.

22 A. Okay. The graph that you're seeing that  
23 shows 39 percent renewable, this is based off the  
24 nameplate rating of wind.

25 Q. So that nameplate rating of wind is --

1 that would be 40 percent of that total number, 680.

2 A. It's 200 -- if you go in the Minnesota  
3 plan, I think it's 280 megawatts. If you go with  
4 the North Dakota plan, it's 220 or 240 megawatts  
5 nameplate of wind. The 400 megawatt number I said  
6 is the accredited capability that we need or the  
7 reduced capability; and wind generally on our  
8 system we can count about 20 percent of nameplate  
9 for the winter capacity and about 15 percent for  
10 the summer under the current MAPP rules.

11 Q. You have different numbers for that, too,  
12 as we've heard through this because sometimes today  
13 you've talked about 10 percent for MAPP or  
14 whatever, but now you're saying 20.

15 A. Yes. Based on our experience, 15 percent  
16 summer, 20 percent winter.

17 Q. And so is the 130 megawatts -- let's say  
18 the -- again, it was 24 percent of natural gas. So  
19 that would be about 170 megawatts of natural gas  
20 that would be needed then to supplement that?

21 A. I believe roughly that's right, yes.

22 Q. And then the 14 percent of conservation,  
23 is that demand only then when we're talking about  
24 capacity, demand response? Because I know there's  
25 a difference between energy conservation, which is

1 energy, and demand response, which relates to  
2 capacity, but I'm not too far beyond that.

3 A. Yes, Commissioner. In the model we  
4 actually model the energy conservation, the amount  
5 of kilowatt-hours we need to conserve annually, but  
6 that is applied to a curve that's based off the  
7 estimated conservation savings we've gotten through  
8 the programs we've been running. So that curve  
9 then inside the model develops an estimated demand  
10 reduction as a result of the energy conservation,  
11 and I think that 14 percent was pretty close,  
12 including the reserve impacts to about 100  
13 megawatts due to conservation by 2020.

14 Q. And so does that conservation -- I just  
15 need to ask that one more time to help me  
16 understand that. Does that reflect 100 megawatts  
17 then of demand reduction?

18 A. Yes. Demand and reserve requirements.

19 Q. Demand and reserve requirements.

20 A. Yes. So if you're carrying a 15 percent  
21 reserve, it might be about 88 megawatts of energy  
22 reduction -- or demand reduction directly plus then  
23 the 15 percent reserve margin would get you to  
24 about 100 megawatts.

25 Q. When you responded -- when Otter Tail

1       responded to the request for information from  
2       Dakota Resource Council regarding -- let's see. It  
3       was Exhibit No. -- the one that was asking  
4       questions about energy conservation, what number  
5       was that?

6                 JUDGE WAHL: 20. Exhibit No. 20.

7                 Q. (COMMISSIONER WEFALD CONTINUING) Number  
8       20. Did they ask -- they didn't ask you about  
9       demand response. They only asked about energy  
10      conservation.

11                A. I believe there was one question about  
12      demand response as a result of the NERC  
13      publication.

14                MR. GUERRERO: I have it.

15                Q. (COMMISSIONER WEFALD CONTINUING) I'm  
16      referring to Intervenor's Exhibit No. 20. "Please  
17      state the anticipated cost per avoided kilowatt of  
18      any energy efficiency program modeled for Otter  
19      Tail Power's North Dakota service area." So those  
20      only related to energy conservation programs, is  
21      that the way you answered this, versus -- I know it  
22      wasn't you. It was Kim Pederson, but since you're  
23      in charge of integrated resource planning --

24                A. Yes.

25                Q. If they had asked the question, please

1 state the anticipated cost of any demand side  
2 management program, would you have been able to  
3 answer that differently?

4 A. No, we would not, because as of yet we  
5 have not looked at what specific programs we might  
6 implement in North Dakota. We certainly have cost  
7 information for the programs we've implemented in  
8 Minnesota, and what we're planning to do in South  
9 Dakota we have estimated for that, but in our  
10 modeling for the resource plan, all we did was put  
11 in the conservation savings. We did not include  
12 any costs for those since we do not know yet what  
13 those specific programs would be.

14 Q. However, but this morning Mr. Uggerud  
15 responded that we already have demand side  
16 management programs in place in North Dakota. We  
17 don't have as many energy conservation programs,  
18 but we have demand side management programs in  
19 place in North Dakota, and he went through and  
20 listed some of them. Don't you know what the costs  
21 are for those?

22 A. No, I don't. I work on analyzing future  
23 resources. That's a resource that's been in place  
24 for 25 years. So it's modeled -- when we take the  
25 load forecast that goes into the planning model, we

1 actually go through and we pre-manage the demand  
2 forecast for the capability of the load management  
3 system, which includes the North Dakota service  
4 territory.

5 Q. So you're looking at new -- if you were to  
6 answer this, it would be for new demand side  
7 management instead of existing?

8 A. Yes.

9 Q. All right. And then another question I  
10 have is: As of yet -- and tell me if I need to ask  
11 this of other person -- what -- when we were here  
12 for the last round of these hearings, the  
13 Commission received specific information of how --  
14 what the cost is per kilowatt-hour of the new  
15 plant, and I haven't heard that number yet, and  
16 when I read through the testimony, tell me -- maybe  
17 I didn't find it, but where is it? The cost per  
18 kilowatt-hour of the energy produced with the new  
19 size plant, both at 500 and 580.

20 A. Mr. Greig may be able to answer that.  
21 That's not a number or a calculation we do in using  
22 an integrated resource plan. You put the resource  
23 in and let the model determine how it wants to use  
24 the resource. You can determine a levelized cost,  
25 but that's not a component of the process that I

1 do, but I believe Mr. Greig's analysis was done on  
2 that.

3 Q. But I'm interested in as a commissioner  
4 knowing what energy conservation programs could be  
5 put into place that are equal to or at less cost  
6 than the cost of the plant. So that number is  
7 important to me.

8 A. I understand that, but the caveat to that,  
9 Commissioner, is conservation is an orange, Big  
10 Stone Power Plant is an apple.

11 Q. But I thought you're putting both in,  
12 capacity and energy, and that you need both.

13 A. You are. But if you take a look at a  
14 cents per kilowatt-hour basis, the Big Stone Plant  
15 is going to give you X amount of capacity. For  
16 that same -- if they cost exactly the same, the  
17 cents per kilowatt-hour for the conservation is  
18 going to give you an entirely different amount of  
19 capacity benefit. So there are some differences  
20 you have to recognize. If you're putting it in  
21 terms of a cent per kilowatt-hour basis, you have  
22 information there on the energy aspect. You do not  
23 have information there on the capacity aspect  
24 resource.

25 Q. No, but I thought that some of your

1 programs are energy only. That's what energy  
2 conservation is versus demand response, which is  
3 another group of programs. So why wouldn't I be  
4 able to ask you for the cost per kilowatt-hour for  
5 energy and then ask you to submit to me programs  
6 for energy conservation that are equal to or under  
7 that? I didn't quite get it. You need to go  
8 through it one more time.

9 A. I lost your question. Could you ask it  
10 again, please, Commissioner?

11 Q. I understand that demand side management  
12 programs relate to capacity costs, but I'm asking  
13 for an energy cost of how much it would cost per  
14 kilowatt-hour for customers for the Big Stone Plant  
15 at 500 and 580. Because what I want to be able to  
16 do then is ask for energy conservation programs  
17 that are equal to that cost or less that could be  
18 developed in North Dakota. That's why it's  
19 important to me. So can you do that for me, give  
20 me those programs -- energy conservation programs  
21 that are -- if we can get that number of what it  
22 costs per kilowatt-hour for the --

23 A. I'm sure that we could get you numbers,  
24 but again, you need to understand the difference  
25 between the two. Most energy conservation programs

1 will also result in a demand reduction, not all.  
2 Street lighting will not for Otter Tail. But most  
3 conservation programs will result in some capacity  
4 benefit.

5 Q. But some of them don't because they could  
6 be used at night.

7 A. Well, some of them will only give you a  
8 partial benefit compared to the same cost on the  
9 Big Stone II unit. A Big Stone II unit -- just  
10 arbitrarily let's say at seven cents -- is going to  
11 give you that energy at seven cents, but it's also  
12 going to give you that equivalent capacity benefit  
13 for your reliability requirements.

14 If you take a look at a seven-cent  
15 conservation number, it's going to give you the  
16 energy benefit, but it may only give you a third or  
17 a fourth or a half of the capacity benefit that the  
18 Big Stone Plant will give you, and then you're  
19 going to have to do something else on top of  
20 that --

21 Q. A little more math.

22 A. -- to get the same amount of capacity  
23 benefit. The energy works out the same, but the  
24 capacity will not likely.

25 Q. Okay. At least I've got an idea.



1 COMMISSIONER CRAMER: Thank you.

2 COMMISSIONER WEFALD: I have one more  
3 question.

4 JUDGE WAHL: Commissioner Wefald.

5 **FURTHER EXAMINATION**  
6 **BY COMMISSIONER WEFALD:**

7 Q. And what is your present number of  
8 megawatts that you have to serve your North Dakota,  
9 South Dakota, and Minnesota load?

10 A. Would you like me to include the load  
11 management system and --

12 Q. I'm looking at Jerry.

13 A. Roughly -- and it varies by time of year  
14 because especially --

15 Q. Okay. Let's say winter peak.

16 A. Winter peak. I just did some  
17 calculations. We own over the winter peak about  
18 695 megawatts of generating capability. On top of  
19 that we purchase 50 megawatts from Manitoba Hydro,  
20 we get 2 from Minnkota, we get about 5-and-a-half  
21 from WAPA. That's part of the Native American  
22 allocation. We've got any number of customer-owned  
23 diesels, probably 12 to 15 megawatts that we have  
24 under contract in all three states, and then on top  
25 of that we have a number of short-term capacity

1 purchases where we're buying from other utilities,  
2 and that's part of what Mr. Uggerud referenced, is  
3 we buy the capacity from others and then we're  
4 buying, you know, to the extent we have to the spot  
5 market energy off the pool.

6 In total I don't know exactly the number  
7 off the top of my head. Including load management  
8 and everything, I think we have the capability of  
9 meeting load plus 15 percent reserves of somewhere  
10 about 840 megawatts.

11 Q. Okay. Thank you.

12 A. But that would result in actual loads  
13 somewhere of 730 or 750, somewhere in that range.

14 Q. So you're anticipating, when you said you  
15 need about 400 megawatts by 2020, about a 50  
16 percent increase?

17 A. Well, the 400 megawatts also includes  
18 retiring 145 megawatts of generation, so --

19 Q. Okay.

20 A. -- it's not all load growth.

21 COMMISSIONER WEFALD: Thank you.

22 JUDGE WAHL: Any further questions from  
23 the Commission? Mr. Guerrero, followup?

24 MR. GUERRERO: I'll try to be brief.

25 Thank you, Your Honor.

**REDIRECT EXAMINATION**

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**BY MR. GUERRERO:**

Q. Mr. Morlock, Mr. Binek asked you a question about the Tharaldson Ethanol plant and then four other new, large loads. I wasn't sure I understood that answer. Could you clarify that for me?

A. Mr. Binek asked about other large loads we've had come on. I'm not aware of any at this time since being informed of the Tharaldson Ethanol Plant, but prior to that we'd received notification of four other large load additions; two of them are ethanol plants, one is an agricultural processing facility, one is a pipeline expansion. But those four load additions were incorporated into the new load forecast already that we used in the most recent analysis.

Q. Okay. Thank you. Mr. Binek -- you had a discussion with Mr. Binek about the cost per kilowatt for transmission associated with wind development. Do you remember that discussion?

A. Yes.

Q. And I think you said the cost per kw for wind is higher than for thermal resources; do you recall that?

1           A.    No, I did not.  If I said that, that was  
2 incorrect.

3           Q.    Okay.  Well, is the cost per kw for  
4 transmission associated with wind more expensive  
5 than for a thermal resource; do you know?

6           A.    It would depend on the situation you're  
7 looking at.  In our case we're working very hard to  
8 try and find situations where we can add wind  
9 resources without being required to do full-blown  
10 transmission additions.  Trying to find places  
11 where we can use what's there to the maximum extent  
12 possible.  For wind we use \$200 per kilowatt as a  
13 rough estimate.  For most of our thermal resources,  
14 combustion, turbines, and other things, we use \$250  
15 a kilowatt, with the exception of the Big Stone  
16 Plant.  That one is substantially more than that.  
17 I don't recall the number, but --

18          Q.    Well, it's true, isn't it, Mr. Morlock, in  
19 order to get the same amount of capacity on a wind  
20 resource, which has a lower capacity factor, versus  
21 a thermal resource, which has a higher capacity  
22 factor, all else being equal, if you want to get  
23 the same amount of output, you're going to need to  
24 build more transmission; is that correct?

25          A.    Yes, you are, assuming you want to avoid

1 curtailments.

2 Q. Yes. Now, I'm going to ask you a couple  
3 of questions about the 14 to 39 percent. In your  
4 own words, could you tell the Commission how many  
5 megawatts -- what does your resource plan look like  
6 from 2007 to 2020 under an assumption where you're  
7 including 120 megawatts of Big Stone II? What's  
8 the remainder of the resource plan look like?

9 A. Under 120 megawatts I have a hole. The  
10 resource plan that I laid out has 160 megawatts  
11 nameplate of wind that's going in as we speak. 60  
12 megawatts just came on line as part of the Langdon  
13 wind farm. We have possibly another dozen projects  
14 all the way from a single, small turbine up to 50,  
15 60 megawatt wind farm components that are being  
16 worked on that, you know, will help to fill that  
17 160 megawatts, which we're trying to get in place  
18 as soon as possible because of the risks of losing  
19 the PTC. The next major component is the Big Stone  
20 II addition in 2013.

21 Q. Just to clarify, Mr. Morlock, 160  
22 megawatts of wind between now -- 2008 and 2020, is  
23 that --

24 A. No. That 160 is now from as soon as we  
25 can get it in.

1 Q. Okay. So between now and 2020 --

2 A. There's more.

3 Q. And how much?

4 A. I was trying to go in sequence --

5 Q. Okay. Sorry.

6 A. -- through the plan. So in 2013 is the  
7 Big Stone Plant, and in the analysis or resource  
8 plan laid out by the model, that was at 170  
9 megawatts. On top of that in 2013 in the North  
10 Dakota analysis, the model also selected another 40  
11 megawatts of wind -- nameplate wind generation.

12 The next component of addition would take  
13 place about 2017 and 2018, and that would be all  
14 natural gas combustion turbines partially as a  
15 replacement for Big Stone -- or for Hoot Lake  
16 retirement, partially to back up the wind. Also to  
17 ensure that we had sufficient renewable resources  
18 in the model to comply with Minnesota renewable  
19 energy standard and the renewable energy objectives  
20 in North Dakota and South Dakota, I had forced in  
21 another 20 megawatts of wind in 2018, which  
22 wouldn't be needed since the model did pick more  
23 wind in 2013, but that's essentially the components  
24 of it.

25 I think the natural gas in 2017, 2018, if

1 you -- it really varies, depending whether you're  
2 talking winter rating, summer rating, in the range  
3 of 174, 175 megawatts, I believe.

4 Q. Okay. So approximately 200 to 280  
5 megawatts of wind; is that about right?

6 A. In the North Dakota plan without carbon  
7 and externalities I believe there's a total of 220  
8 megawatts of wind in the resource plan. In the  
9 Minnesota one, which we did, assuming all of Otter  
10 Tail was in Minnesota with the carbon, with the  
11 externalities, there's 280 megawatts of wind, and  
12 there are differences in the CT technology.  
13 Otherwise the resource plans are the same.

14 Q. And 170 megawatts of natural gas,  
15 approximately?

16 A. Roughly, yes.

17 Q. And roughly 120-30 megawatts thereabouts  
18 of coal?

19 A. Yes.

20 Q. And the rest is conservation?

21 A. The rest is conservation.

22 Q. Thank you. If you could turn to page six  
23 of your March 10th, testimony, Mr. Morlock, there  
24 was some questions about -- from Ms. La Seur about  
25 your energy savings. The top of page six, would

1 you describe or explain what it is that you did  
2 with energy conservation in North Dakota as part of  
3 your integrated resource planning model?

4 A. What we did was we took -- we have a  
5 separate energy forecast for Minnesota compared to  
6 the total system. So we took the Minnesota portion  
7 and calculated what the requirements would be  
8 annually to meet the Minnesota conservation  
9 requirement. We also took the remaining portion of  
10 the load, which is North Dakota, South Dakota, and  
11 assumed about half a percent of that energy would  
12 be handled through conservation. Now, within the  
13 IRP-Manager model, itself, we took that total  
14 amount of annual energy conservation and those were  
15 manually entered into the model.

16 Now, the model also includes a curve  
17 shape, it's actually 48 curves, four per month, one  
18 for a peak day, one for near peak, one for a low  
19 weekday, and one for weekends, and that's based off  
20 actual conservation analyses from the programs  
21 we've done in Minnesota, and we overlaid this new  
22 manager conservation amount on top of that curve so  
23 that the model would use that curve to shape it,  
24 but it would be at a magnitude to meet the one-and-  
25 a-half percent in Minnesota and the half a percent

1 in North Dakota and South Dakota.

2 Q. So if I understand, the model is assuming,  
3 regardless of whether it's cost effective -- that  
4 it's assuming that you will -- Otter Tail will  
5 achieve approximately .5 percent energy savings  
6 going forward in North Dakota.

7 A. Yes.

8 Q. And with those savings the model's still  
9 picking additional amounts of thermal and other  
10 resources.

11 A. Yes, it is.

12 Q. How long has Otter Tail been doing  
13 conservation in Minnesota?

14 A. This would be a guess, but I'm assuming  
15 since about 1988 is when -- sometime in there when  
16 some of the official CIP process in Minnesota got  
17 going.

18 Q. Has Otter Tail won awards for its  
19 conservation in Minnesota?

20 A. That I don't know.

21 Q. Do you know whether or not Otter Tail's  
22 conservation in Minnesota is considered robust  
23 vis-a-vis other utilities' conservation efforts?

24 A. I would be speculating. I don't know.

25 COMMISSIONER WEFALD: How does that apply

1 to North Dakota?

2 MR. GUERRERO: I'll try to get there.

3 Q. (MR. GUERRERO CONTINUING) What was your  
4 answer?

5 A. I guess I don't know. I mean, the  
6 conservation stuff is handled through market  
7 planning area.

8 Q. Okay. You've been doing it since the  
9 Eighties, and you're at about .6 to .7 percent;  
10 correct?

11 A. Yes.

12 Q. And would you agree that the Minnesota  
13 Commission, as well as the Department of Commerce,  
14 has been fairly active in your conservation  
15 programs?

16 A. Absolutely.

17 MR. GUERRERO: No further questions, Your  
18 Honor.

19 JUDGE WAHL: Ms. La Seur.

20 **RE CROSS-EXAMINATION**

21 **BY MS. LA SEUR:**

22 Q. Mr. Morlock, was I correct to understand  
23 that you do not have any knowledge of the cost of  
24 existing DSM programs on the North Dakota system  
25 for OTP?

1           A.     When you say "North Dakota system," I can  
2 say no because we don't -- let me back up. Are you  
3 saying for load management or are you saying for  
4 conservation?

5           Q.     In this case I'm talking about DSM.

6           A.     DSM includes both load management and  
7 conservation.

8           Q.     That's not how I've heard it defined.  
9 Let's say we're talking about load management.

10          A.     Load management, no. Off the top of my  
11 head, I have no idea of the costs.

12          Q.     Okay. And would you know the costs of  
13 conservation?

14          A.     A rough rule of thumb that I've heard  
15 might be in the range of three cents a  
16 kilowatt-hour for short-term programs, I believe.

17          Q.     In deciding what new load management will  
18 be cost effective, wouldn't it be helpful to know  
19 what existing load management programs cost?

20          A.     Yes. And those are evaluated in our  
21 market planning department, not in the resource  
22 planning department. We provide them the outputs  
23 from the IRP-Manager model in terms of avoided  
24 capacity and energy costs and hourly load patterns,  
25 which they then import into the DS manager program,

1 and that is used for all of the conservation and  
2 load management evaluations.

3 Q. But you don't use any inputs in your  
4 modeling to do with what's been successful or cost  
5 effective in the past?

6 A. What they come back with me -- as a result  
7 of their analysis, they provide me with the impacts  
8 and those are incorporated into the model. I  
9 don't -- when I model those types of impacts, I  
10 don't put costs associated with those because those  
11 costs are already embedded within the financial sub  
12 model, which has been bench-marked against the  
13 expense budget, capital budget, and so forth. So  
14 it's -- if I was to incorporate it as a separate  
15 component, it would get double-counted in the  
16 model.

17 Q. Do you recall Commissioner Wefald asking  
18 you in last year's hearing about the cost  
19 effectiveness of DSM programs?

20 A. I don't recall that. It may have taken  
21 place.

22 Q. Would you accept, subject to check, that  
23 the transcript from the June 26th, '07, hearing in  
24 this matter reflects a question by Commissioner  
25 Wefald to you asking for a late-filed exhibit

1 listing which DSM programs under consideration by  
2 OTP would be under the cost of Big Stone II?

3 A. I don't recall that. I'll have to accept.

4 Q. Do you recall being asked for a late-filed  
5 exhibit on that subject?

6 A. It's not an exhibit I would file. It  
7 would come from someone else at Otter Tail.

8 Q. So you did not file that exhibit?

9 A. I don't know. It's -- I can't answer that  
10 because that's out of my area of responsibility.

11 Q. And you have not then performed any  
12 analysis of which DSM programs under consideration  
13 by OTP would be under the cost of Big Stone II?

14 MR. GUERRERO: Well, I guess I'm going to  
15 object. The exhibit was prepared and was filed.  
16 So I'm not sure if the question is intended to be  
17 misleading or it's just accidentally misleading.

18 MS. LA SEUR: Well, the question was about  
19 being asked pretty much the same question in  
20 repeated hearings and apparently not having gained  
21 knowledge from the process we've all been through  
22 over the last year.

23 MR. GUERRERO: I think what he said,  
24 counsel, was that he didn't prepare the exhibit.

25 JUDGE WAHL: And he doesn't know.

1 MS. LA SEUR: That's all.

2 JUDGE WAHL: Mr. Binek, followup?

3 MR. BINEK: I have no questions.

4 JUDGE WAHL: Any followup from the  
5 Commission?

6 COMMISSIONER CLARK: Nope.

7 JUDGE WAHL: Mr. Guerrero, anything  
8 further?

9 MR. GUERRERO: No, thank you.

10 JUDGE WAHL: All right. Thank you very  
11 much, Mr. Morlock.

12 COMMISSIONER WEFALD: Oh, should I ask him  
13 then if I want the exhibit again the next time? I  
14 do.

15 JUDGE WAHL: Well, the representation is  
16 that it's filed.

17 COMMISSIONER WEFALD: Well, no. There's a  
18 new exhibit that's needed because there's new costs  
19 now. There's new cost for -- we don't know what it  
20 is yet -- for the per kilowatt-hour cost of this  
21 new plant. Someone's going to tell us what that  
22 is, but that means I need a new exhibit filed now  
23 from both MDU and Otter Tail that tells me what --  
24 what -- the same thing I asked for last year only  
25 under the new costs for this new plant, because

1 otherwise I'll have dated information and it won't  
2 be correct on the record.

3 MR. GUERRERO: If I could, Your Honor?

4 JUDGE WAHL: Please.

5 MR. GUERRERO: To clarify the cost, I  
6 believe Mr. Greig does have the levelized-cost  
7 figure. The cost has actually gone up a little  
8 bit.

9 COMMISSIONER WEFALD: I wouldn't be  
10 surprised.

11 MR. GUERRERO: And so to the extent that  
12 there was information that showed it was under the  
13 previous per kilowatt-hour price of the plant, that  
14 information probably would still be valid given the  
15 fact that the plant cost has gone up slightly.

16 COMMISSIONER WEFALD: However, there could  
17 be additional programs that would fall under the  
18 cost if this cost has gone up that the Commission  
19 may want to take -- at least be aware of that  
20 would --

21 MR. GUERRERO: That's certainly possible.  
22 Whatever you want.

23 JUDGE WAHL: So is that going to be  
24 resolved with the testimony of a further witness or  
25 not, is the question, Mr. Guerrero.

1           COMMISSIONER WEFALD: I don't believe so.  
2 I believe this is the witness I would ask for that  
3 exhibit to be filed.

4           JUDGE WAHL: All right.

5           COMMISSIONER WEFALD: But I need my staff  
6 to help me with what exactly we want. So is it  
7 okay if I --

8           JUDGE WAHL: It is. Why don't you --

9           COMMISSIONER WEFALD: -- delay?

10          JUDGE WAHL: Why don't you prepare a  
11 request, Commissioner, and at some opportunity,  
12 either at the beginning -- at any opportunity just  
13 raise that question. All right. Mr. Guerrero.

14          MR. GUERRERO: May we proceed?

15          JUDGE WAHL: You may. We would call Mr.  
16 Jeff Greig to the stand, please.

17          MR. GUERRERO: Please state your name.

18          JUDGE WAHL: Just a minute. Mr. Greig,  
19 you'll have to refresh my recollection. Have you  
20 testified previously for the hearings in this -- of  
21 this matter?

22          THE WITNESS: I did by telephone last  
23 June.

24          JUDGE WAHL: Oh, that was it. All right.  
25 Well, in any case, Mr. Greig, I have personal

1 knowledge that you are advised and informed  
2 regarding perjury, and do you understand, sir, that  
3 your testimony continues under oath and subject to  
4 the penalties of perjury?

5 MR. GREIG: I do.

6 JUDGE WAHL: Mr. Guerrero.

7 MR. GUERRERO: Thank you.

8 **JEFFREY J. GREIG,**  
9 having been previously duly sworn, was examined and  
10 testified further as follows:

11 **DIRECT EXAMINATION**

12 **BY MR. GUERRERO:**

13 Q. Please state your name.

14 A. Jeff Greig, G-r-e-i-g.

15 Q. By whom are you employed and in what  
16 capacity?

17 A. Burns & McDonnell Engineering Company. I  
18 am the general manager of the business and  
19 technology services division.

20 Q. And what do you do in that capacity?

21 A. Burns & McDonnell is a design engineering  
22 and construction firm. The business and technology  
23 services division is the consulting arm of the  
24 company. As general manager I manage a staff of  
25 about 100 professionals in areas including resource

1 planning, transmission planning, feasibility  
2 studies, rates, and information technology  
3 consulting.

4 Q. And did you have an occasion to prepare or  
5 cause to be prepared direct and rebuttal testimony  
6 in this matter?

7 A. Yes.

8 Q. And is that marked as OTP/MDU Exhibit 326  
9 with Exhibit 327, also OTP/MDU 336 and OTP/MDU  
10 Exhibit 326A, which is your summary?

11 A. Yes.

12 Q. And you have all those before you?

13 A. Yes.

14 Q. And if I asked you the same questions as  
15 are directed in that testimony, would your answers  
16 be the same?

17 A. Yes.

18 Q. And do you have any corrections or  
19 clarifications?

20 A. No.

21 MR. GUERRERO: Your Honor, we would offer  
22 what's been premarked as OTP/MDU Exhibits 326,  
23 326A, 327 and 336.

24 THE WITNESS: I would note that my copy of  
25 the summary is labeled 362A.

1 MR. GUERRERO: If you could make that  
2 correction manually, Mr. Greig. Thank you.

3 JUDGE WAHL: Ms. La Seur?

4 MS. LA SEUR: No objection.

5 JUDGE WAHL: Mr. Binek?

6 MR. BINEK: No objection.

7 JUDGE WAHL: All right. Let's be sure I  
8 have this for the record. Exhibits OTP/MDU 326,  
9 326A, 327, and 336 are received. Is that correct,  
10 Mr. Guerrero?

11 MR. GUERRERO: That's correct.

12 Q. (MR. GUERRERO CONTINUING) Mr. Greig,  
13 could you give a brief summary of your testimony,  
14 please?

15 A. Yes. Good afternoon, Commissioners.  
16 Burns & McDonnell has been engaged by the  
17 applicants to prepare various economic comparisons  
18 of baseload generation alternatives, and we have  
19 updated those analyses periodically as significant  
20 changes have occurred in the project structure.

21 My direct testimony, which is included in  
22 Exhibit 326, and Exhibit 327 is from November of  
23 2007, and the purpose of that update was due to two  
24 of the participants withdrawing from the project.  
25 We updated our economic evaluation. We focused on

1 six different baseload generation alternatives, the  
2 original 630 megawatts Big Stone Unit II, as well  
3 as two smaller sizes of 500 and 580 megawatts  
4 reflecting the withdrawal of the two partners. We  
5 also compared the economics against a gas-fired  
6 combined cycle unit with a nominal rating of 500  
7 megawatts, and a combination of that gas-fired  
8 combined cycle unit with purchases of non-firm wind  
9 energy.

10 The exhibits in my direct testimony  
11 primarily focused on the 500 megawatt size since  
12 that represents the highest cost alternative due to  
13 a decline in the economies of scale as the size of  
14 the project is decreased.

15 Some of the assumptions that have changed  
16 since I appeared before the Commission in June of  
17 last year were new capital costs were developed for  
18 these new two project-size alternatives. As Mr.  
19 Rolfes has testified to, we've continued to model  
20 wind as a purchased, non-firm resource within the  
21 analysis.

22 We've continued to evaluate the cost of  
23 wind both with and without the production tax  
24 credits since today it is due to expire at the end  
25 of this year, and it's not known with certainty

1 whether or not it will continue to be available in  
2 the future to lower the cost of wind.

3           Within the most recent -- or within the  
4 2007 study we did evaluate the cost of the  
5 different alternatives with no carbon cost  
6 included, as well as a carbon cost of nine dollars  
7 per ton for all CO2 emissions, and that was as a  
8 result of direction from the Department of Commerce  
9 in Minnesota as part of that filing.

10           Other than that, most of the other basic  
11 assumptions in the analysis remain the same as when  
12 I appeared before the Commission in June of '06.

13           There was a subsequent update, which is  
14 covered in my rebuttal testimony, which is included  
15 in Exhibit 336, and the changes that I was  
16 addressing in that were to do some further  
17 evaluation of potential carbon costs, and the  
18 reason for that was because since the time of the  
19 November 2007 study, the Minnesota Commission  
20 adopted a range for CO2 cost values of 4 to \$30 per  
21 ton as opposed to the single \$9 per ton value.

22           I've also tried to clarify some questions  
23 requested by staff witness, Mr. Deason, as well as  
24 provide some rebuttal to some issues raised by  
25 intervenor witness Mr. Schlissel.

1           Within the 2008 update, which is included  
2 in my rebuttal testimony, the same six alternatives  
3 are being compared. As I noted across a range,  
4 with no carbon tax, as well as a carbon cost of 4  
5 to \$30 per ton. We have applied those costs to all  
6 emissions, and that's been a subject of discussion  
7 this morning as to whether or not a project such as  
8 Big Stone would receive some no-cost allocations,  
9 but in the analysis I presented before you we're  
10 applying those costs to 100 percent of the CO2  
11 emissions.

12           Again, we've carried forward to the  
13 assumptions with and without the production tax  
14 credit, since that's such a significant driver in  
15 the overall cost of wind energy, and within my  
16 rebuttal testimony we ran some scenarios around the  
17 wind cases of low market -- or low-cost case, a  
18 market case, and including transmission costs.

19           Overall conclusions from both the November  
20 2007 study, as well as the updates we ran in 2008  
21 and are included in my rebuttal testimony, is that  
22 Big Stone II remains a low cost of baseload  
23 resource on a levelized cost basis. That is true  
24 with no carbon costs. When carbon costs are  
25 included, if the production tax credit is not

1 extended, that remains true even for carbon cost  
2 values as high as \$30 a ton applied to all CO2  
3 emissions from the project. And if the production  
4 tax credit is extended on wind, we found that there  
5 was a break-even point between the cost of the Big  
6 Stone II Unit and the next best alternative, which  
7 was the combined gas-fired combined cycle wind  
8 purchase case of about \$17 per ton, but I will note  
9 that there are a number of conservative assumptions  
10 which were incorporated throughout the analysis,  
11 and that break-even cost only holds if all five of  
12 those conservative assumptions remain true. If any  
13 of those do not prove out to be true, then the  
14 break-even cost between Big Stone II and a gas/wind  
15 case goes up.

16 That concludes my summary.

17 MR. GUERRERO: Thank you. We'd tender Mr.  
18 Greig.

19 JUDGE WAHL: Ms. La Seur?

20 MS. LA SEUR: I have no questions.

21 JUDGE WAHL: Mr. Binek.

22 MR. BINEK: My notes say probably no  
23 questions.

24 JUDGE WAHL: Commissioners?

25 COMMISSIONER WEFALD: I have a question on

1 that last page.

2 JUDGE WAHL: Commissioner Wefald.

3 **EXAMINATION**

4 **BY COMMISSIONER WEFALD:**

5 Q. Just go over your last statement in just a  
6 little more detail for me. If every one of five  
7 conservative assumptions -- what are those five  
8 conservative assumptions? Show me again where they  
9 are in your testimony so I can just find them.

10 A. Okay. If you would turn to Exhibit 326.

11 Q. That's in your original testimony?

12 A. Correct.

13 Q. Page?

14 A. I'm sorry. I apologize. It would be in  
15 my rebuttal testimony in Exhibit 336, on page 14.  
16 The five major assumptions that drive that result  
17 of the break-even cost being \$17 a ton are, first  
18 of all, that that would apply to 100 percent of the  
19 emissions as has been discussed. Secondly, my  
20 analysis has been focused on a busbar cost basis,  
21 so I have not -- I've been comparing the generation  
22 alternatives, basically the plant substation, not  
23 including potential transmission cost impacts. And  
24 then the three additional assumptions are listed  
25 here on page 14 and the top of page 15, which would

1 be that we've assumed that the wind capacity factor  
2 that is included in the purchases is 40 percent,  
3 which is a conservative assumption.

4 Within the gas cost forecast that we  
5 utilized in terms of putting together the overall  
6 cost of the combined cycle case, we've reflected a  
7 transportation cost on the gas of about 40 cents  
8 per million Btu, which is significantly below what  
9 utilities generally pay for gas transportation.

10 And then, finally, at the top of page 15,  
11 in our most recent analysis we're actually using an  
12 escalation rate on the cost of coal of  
13 three-and-a-half percent compared to a lower  
14 escalation rate of three percent for natural gas.

15 So we've been conservative in terms of the  
16 assumptions that we've used in the analysis, and to  
17 the extent that if you change any of these  
18 assumptions to more realistic or more market-based  
19 assumptions compared to where we're at today, that  
20 break-even cost would go up.

21 Q. So when you're using the word  
22 "conservative," you mean that, for example, on  
23 number one on page 14 -- at the bottom of page 14,  
24 if you used a net capacity factor of 32 percent for  
25 the wind resource, are you saying that 40 percent

1 is a more conservative factor than 32? I just need  
2 to know what conservative means.

3 A. Yes. If you go to the --

4 COMMISSIONER CRAMER: I think it's a great  
5 question.

6 THE WITNESS: If you go to the question, I  
7 outlined that in a little more detail. When I use  
8 the word "conservative" on line 14 of page 14,  
9 conservative in favor of the combined cycle plus  
10 wind case. So we've tried to put together a case  
11 that's robust and fair and possibly overly fair to  
12 a gas plus wind case being selected.

13 Q. (COMMISSIONER WEFALD CONTINUING) I just  
14 have to think about that for a minute. All right.  
15 So you think that a 40 percent capacity factor for  
16 wind is almost the best that could be there?

17 A. It is higher than most operating wind  
18 farms have. Now, moving forward, there will be a  
19 couple of factors coming into play. One is that as  
20 wind farms generally try to pursue the best wind  
21 sites that they can now and as more and more wind  
22 gets added and the best sites are taken, you're  
23 going to have to move to more marginal sites, so  
24 the wind capacity factor would tend to decline.

25 Counterbalancing that is the technology

1 has been improving in wind turbines themselves, and  
2 so for lower wind speeds you're able to get a  
3 little higher capacity factor, but overall I  
4 believe that this is a conservative number from the  
5 standpoint of historically the wind farms that  
6 are -- most of the wind farms that are in  
7 production do not achieve this level.

8 Q. And then the next one, for example, number  
9 two on page 14, 40 cents per MMBtu, that translates  
10 into a -- I usually use therms, so would it be  
11 about four dollars a therm?

12 A. No. A million Btus is approximately a  
13 decatherm, so it would be about 40 cents a  
14 decatherm.

15 Q. 40 cents a decatherm?

16 A. Correct.

17 Q. And so that would be about four dollars --  
18 compare it to the price of natural gas that we have  
19 right now in MDU territory, which is about nine  
20 dollars a decatherm; isn't that right? All right.  
21 So this is using a price of 40 percent a decatherm?

22 A. Well, the delivered cost of gas is a  
23 function of two cost components, the commodity  
24 cost, the supply, and then the transportation cost.  
25 What we've got in our analysis in November of 2007

1 when we updated it, the NYMEX futures price for the  
2 supply component of natural gas was about \$7.90.  
3 On top of that we added a transportation component  
4 of 40 cents to arrive at a total cost of about  
5 \$8.31.

6 Q. Okay. So this is just for the  
7 transportation.

8 A. Just for the transportation.

9 Q. All right. Okay. So that's 40 cents on  
10 top of the --

11 A. The supply piece.

12 COMMISSIONER WEFALD: -- supply cost.  
13 Okay. Thank you. I needed to have help with that.  
14 And then -- all right. And then my other question  
15 related to -- I'm going to wait on that one. I'm  
16 going to wait on that one because I think I  
17 understand it a little better than I did yesterday  
18 when I first read it. So I'll stop for now.

19 JUDGE WAHL: Commissioner Clark.

20 **EXAMINATION**

21 **BY COMMISSIONER CLARK:**

22 Q. Just quickly, your assumption of the gas/  
23 wind combination, \$17 a ton carbon cost break-even  
24 point, does that take into consideration gas also  
25 being allocated, some form of carbon cost to it?

1 A. Yes, it does.

2 COMMISSIONER CLARK: Okay. Thanks.

3 That's all I have.

4 COMMISSIONER CRAMER: I don't have any  
5 questions, but I do think Commissioner Wefald's  
6 question is instructive in terms of understanding  
7 what the applicants' witnesses all mean when they  
8 say "conservative," because it can be confusing. I  
9 early on was confused and before I realized  
10 whenever they've said conservative, what they're  
11 referring to is it's conservative toward the favor  
12 of a gas or a gas/wind, and so it doesn't  
13 necessarily mean it's a conservative estimate of  
14 wind productivity, for example.

15 COMMISSIONER WEFALD: I'm going to ask Pat  
16 Fahn to just help me with this question.

17 JUDGE WAHL: You may.

18 COMMISSIONER WEFALD: Pat, would you just  
19 ask this question for me? Thank you.

20 **EXAMINATION**

21 **BY MR. FAHN:**

22 Q. Mr. Greig, on page 11 of your testimony,  
23 of the direct, you show the prices -- or the cost  
24 for -- levelized busbar cost for a 580 megawatt  
25 unit and a 500 megawatt unit.

1           A.     Correct.

2           Q.     Commissioner Wefald is interested in  
3 comparing the cost of demand side management  
4 programs to the cost of this alternative -- of a  
5 500 megawatt plant. Is this the cost number that  
6 she should be comparing the demand side management  
7 programs to?

8           A.     This is the all-in costs of both the  
9 capital and the operating costs. So if you're  
10 talking about an energy efficiency program, you  
11 would not compare that to this. You would compare  
12 it more to the system energy costs of the utility,  
13 not the all-in cost of this plant alternative.

14          Q.     Aren't we trading off a kilowatt of plant  
15 for a kilowatt of conservation --

16          A.     If it --

17          Q.     -- or kilowatt-hour or megawatt-hour?

18          A.     Again, it goes to the issue of you can  
19 think about demand side management programs in two  
20 contexts. One is to reduce peak demand, and that  
21 would be directed at what is the utility's avoided  
22 capacity cost, because that's what you save. If  
23 there's a kilowatt less demand, then there's a  
24 kilowatt less of installed capacity that needs to  
25 be put in; or you can think about it in terms of

1 energy efficiency projects, which reduce  
2 kilowatt-hours, and for a kilowatt-hour savings  
3 from an energy efficiency program, you're going to  
4 reduce generation or power purchases by one  
5 kilowatt-hour.

6 This has got both of those components  
7 within it. So it might be applicable to certain  
8 types of programs that offer both capacity and  
9 energy savings, but it wouldn't be applicable if  
10 you were only thinking about energy on one hand or  
11 only thinking about capacity on the other hand.

12 Q. Well, could they convert -- for each of  
13 their programs -- each of their demand side  
14 management programs, could they convert the cost of  
15 that program into one of these megawatt-hour --  
16 cost per megawatt-hour numbers?

17 A. In general, yes. A utility should be able  
18 to define in terms of the costs of a program in  
19 terms of either energy savings or capacity savings  
20 and what the avoided costs are from that.

21 MR. FAHN: And I think that's what  
22 Commissioner Wefald is looking for for late-filed  
23 exhibits.

24 COMMISSIONER WEFALD: Yes, it is. And  
25 this is the number that I was looking for, right,

1 from --

2 MR. FAHN: It's similar to what we had  
3 before.

4 COMMISSIONER WEFALD: But this is slightly  
5 different. It's a different number than what we  
6 had before. All right. Thank you.

7 JUDGE WAHL: All right. Let's deal with  
8 this now, Mr. Guerrero.

9 MR. KUNTZ: Maybe I'm the only one who's  
10 not sure here what we're supposed to do with the  
11 late-filed exhibit, but I'll question Mr. Greig.  
12 Can we tell from your testimony, if we were to  
13 break these out by capacity and energy, what the  
14 levelized busbar cost is for both of those?

15 THE WITNESS: Yes. I guess another way of  
16 expressing the question would be that, yes, in my  
17 analysis I could also break this number down into  
18 an energy component and a capacity component. I  
19 don't have those figures with me. I've not done  
20 that in any of my filings, but I would be happy to  
21 do that as a supplement.

22 COMMISSIONER CLARK: That would be  
23 helpful. And then how do you tell us how we  
24 combine them?

25 THE WITNESS: They would be additive.

1 There's -- the overall busbar cost has both a  
2 capacity feature and an energy feature that would  
3 add back up to this number.

4 MR. KUNTZ: I'm thinking we may need that  
5 calculated if the Commissioner is asking us to  
6 prepare a late-filed exhibit for those pieces. I'm  
7 not certain, but it strikes me that if that's to be  
8 the benchmark we're supposed to provide for, I  
9 don't know that we know those benchmarks without  
10 Mr. Greig's providing those to us.

11 THE WITNESS: And one point of  
12 clarification. When a utility looks at those types  
13 of programs, they're looking at their overall  
14 system costs, not a specific project cost. For  
15 example, an energy efficiency program, you know,  
16 would be unlikely to offset coal-fired generation  
17 out of a highly efficient unit like Big Stone II,  
18 but it still might be beneficial to offset power  
19 purchase costs or gas-fired costs. So while I can  
20 give you the corresponding capacity and energy  
21 values for the Big Stone II project, I guess I'm  
22 still not sure that that's where you're headed with  
23 your question.

24 COMMISSIONER CLARK: All right. I'll keep  
25 thinking about it then, but those numbers, I think,

1 would be helpful to supply to the Commission.

2 JUDGE WAHL: All right. So what? What  
3 are we -- have we now defined a late-filed exhibit?

4 COMMISSIONER WEFALD: One. One late-filed  
5 exhibit, but there will be another request for  
6 another still tomorrow from me.

7 JUDGE WAHL: So this is going to be --  
8 help me, counsel -- OTP/MDU what, maybe 351?

9 MR. KUNTZ: There will probably be two  
10 late-filed exhibits, one for each company.

11 MR. GUERRERO: Let me see if I can take a  
12 stab at what I understand will be filed.

13 JUDGE WAHL: Listen, I don't want to take  
14 the time to do this like this. Let's do it this  
15 way: Let's -- counsel, why don't you work with Mr.  
16 Greig and define what it is that you -- and Mr.  
17 Fahn and define what you propose to offer, and then  
18 let's bring it forward tomorrow, whenever.

19 COMMISSIONER WEFALD: Fine.

20 JUDGE WAHL: In fact, why don't you go  
21 ahead and review it with Commissioner Wefald, and  
22 then when you've settled on what you've got, let's  
23 just offer it as a late-filed exhibit, and then we  
24 can -- the record -- we won't have to wonder what  
25 the record says. Is that acceptable --

1 COMMISSIONER WEFALD: And also Ms. La  
2 Seur?

3 JUDGE WAHL: Well, certainly. She'll have  
4 a -- Ms. La Seur and Mr. Binek will have a look at  
5 it, but let's get it defined first and then it can  
6 be offered as any other exhibit. Ms. La Seur is  
7 not going to object.

8 MS. LA SEUR: No.

9 JUDGE WAHL: All right. Further questions  
10 from the Commission?

11 COMMISSIONER CLARK: I just have --

12 JUDGE WAHL: Commissioner Clark. Yes.  
13 I'm sorry.

14 COMMISSIONER CLARK: I just have one as a  
15 followup to this.

16 **FURTHER EXAMINATION**

17 **BY COMMISSIONER CLARK:**

18 Q. So I understand when we get this  
19 information, whatever it is exactly, as I  
20 understand it's going to be something along the  
21 lines of what the cost of demand side management  
22 and/or conservation programs cost compared to costs  
23 of the new plant. Would it be an appropriate or  
24 inappropriate use of that to then say, well, if you  
25 can save X number of -- you know, three megawatts

1 through a demand side management program, that you  
2 then knock down by three megawatts the amounts that  
3 either Otter Tail or MDU should be allowed to  
4 build? Would that be an inappropriate use for it?

5 A. Well, again --

6 Q. And the reason I ask you is because you  
7 made the statement along the lines of something  
8 that you can't compare it to efficient coal-based  
9 units, and maybe you could talk a little bit about  
10 the difference between baseload and -- I just want  
11 to be able to use this once we get it.

12 A. What I can provide is for these  
13 alternatives, which I've evaluated, the six  
14 alternatives. I can break these all-in busbar  
15 costs down into the capacity or fixed cost  
16 component and the energy or variable cost component  
17 and provide that to the Commission. The utilities  
18 will have to generate what their costs for their  
19 programs are. I don't have that information.

20 But then I made the further comment that  
21 those costs of the program ought to be compared not  
22 just to Big Stone but to the total system cost,  
23 because, for example, Big Stone will be a very low  
24 variable-cost unit and it will be a very low -- it  
25 will be a difficult benchmark for any energy

1 efficiency program to offset generation out of a  
2 unit like this. That's why it should be a system  
3 comparison.

4 Q. Sure. As compared to natural gas or oil  
5 peaking.

6 A. Correct. Right.

7 COMMISSIONER CLARK: Thank you.

8 COMMISSIONER CRAMER: And this is  
9 consistent, as I recall, from this same discussion  
10 last year. It was more an area of interest in how  
11 we manage going forward with our utilities than it  
12 was, well, comparing it to Big Stone II, but it was  
13 an opportunity to raise this issue, as I recall,  
14 and it seems like we're at the same place again.

15 JUDGE WAHL: Any further questions from  
16 the Commission? Mr. Guerrero, followup?

17 MR. GUERRERO: No. I just have one -- I  
18 don't know if it would be helpful for Commissioner  
19 Wefald, but there is a graph in Mr. Greig's Exhibit  
20 327 -- OTP/MDU 327 where there is on a per  
21 megawatt-hour basis cost for each -- on a levelized  
22 cost basis for each of the different resource  
23 alternatives examined, and if she was looking for a  
24 place for informational purposes to have that, I  
25 just wanted to point that out in the event she

1 hasn't seen that. No further questions.

2 COMMISSIONER WEFALD: Thank you.

3 JUDGE WAHL: Ms. La Seur?

4 MS. LA SEUR: Nothing further.

5 JUDGE WAHL: Mr. Binek?

6 MR. BINEK: Nothing.

7 JUDGE WAHL: Thank you very much, Mr.  
8 Greig. Mr. Guerrero?

9 MR. KUNTZ: Well, we would call Ms.  
10 Stomberg. Are we going to do that this evening?

11 JUDGE WAHL: I really don't think so  
12 unless -- no. The answer is no.

13 MR. KUNTZ: Okay. That's where we're at.

14 COMMISSIONER CRAMER: Good answer.

15 JUDGE WAHL: All right. Very good.  
16 Counsel -- I want to see counsel. Let's deal with  
17 this exhibit, Ms. La Seur, but it's not necessary  
18 for the Commission to be present for that. So  
19 we'll be in recess until what, nine o'clock  
20 tomorrow morning?

21 MR. KUNTZ: Or 8:30?

22 COMMISSIONER CLARK: 8:45 would be better  
23 for me.

24 COMMISSIONER WEFALD: All right. Then  
25 just make it nine then.

1 JUDGE WAHL: Nine o'clock.

2 MR. BINEK: Your Honor, did you want Pat  
3 Fahn here for this discussion?

4 JUDGE WAHL: No, I don't think so. I  
5 don't think I need staff. I don't see this as a  
6 staffing witness question. I think this exhibit is  
7 a matter for the lawyers.

8 MR. KUNTZ: Except I need -- I certainly  
9 need staff people because I need --

10 JUDGE WAHL: Well, they're welcome.

11 MR. KUNTZ: -- to make sure that we're  
12 communicating here.

13 JUDGE WAHL: No, no, no. I'm not saying  
14 staff can't be here. I'm saying it's not for my  
15 point of view.

16 MR. BINEK: Because Pat was helping with  
17 formulating this thing, that's why I'm wondering if  
18 he should be present.

19 JUDGE WAHL: All right.

20 (Recess taken.)

21 JUDGE WAHL: All right. For the record,  
22 let's -- let's identify what we're talking about.  
23 I'm going to mark this as -- this will be Exhibit I  
24 22. Ms. La Seur, tell me about this again, please.

25 MS. LA SEUR: This is the settlement

1 agreement made between the Minnesota --

2 JUDGE WAHL: -- Department of Commerce.

3 MS. LA SEUR: Right. And the project  
4 applicants back in August, and, of course, there's  
5 a lot of water under the bridge since then, and as  
6 Mr. Guerrero rightly states, there is some question  
7 as to the ongoing binding nature of this agreement,  
8 and so we're offering it for briefing purposes and  
9 as evidence of terms and conditions that may still  
10 apply to the project as a whole in one applicable  
11 jurisdiction.

12 JUDGE WAHL: Which go to its prudence.

13 MS. LA SEUR: Yes.

14 JUDGE WAHL: And OTP has no objection?

15 MR. GUERRERO: (Shakes head.)

16 JUDGE WAHL: And MDU's objection, Mr.  
17 Kuntz?

18 MR. KUNTZ: It wasn't timely. If she was  
19 offering it as an exhibit, it should have been  
20 offered with her original testimony for the same  
21 reason she sought to exclude our supplemental  
22 testimony, which was relevance. I'm not sure what  
23 the relevance here even is as it relates to MDU.  
24 There's been no connection to this agreement to MDU  
25 in this proceeding, and it's --

1           JUDGE WAHL: Well, except MDU was a  
2 signatory, for whatever that means.

3           MR. KUNTZ: Well, but it hasn't been  
4 offered through any of your witnesses. Just  
5 because we're a signatory to a document, what's the  
6 relevance to an issue in this case?

7           JUDGE WAHL: Well, I -- to the extent that  
8 any term binds MDU and to the extent that any term  
9 goes to the question of the prudence of the project  
10 it seems to me it's relevant.

11          MR. KUNTZ: And what term is that that  
12 she's saying it's relevant? She hasn't laid the  
13 foundation for it, she didn't offer it when she was  
14 supposed to as part of her original case in chief.  
15 Now it's being dumped into the record. It's not  
16 proper cross-examination. It's not a proper  
17 witness.

18          JUDGE WAHL: No. She's not offering it  
19 for cross-examination. She hasn't used it for  
20 cross-examination.

21          MR. KUNTZ: Well, that's my point. Then  
22 it should have been offered as part of her original  
23 case when she was supposed to submit her testimony  
24 and exhibits back two weeks ago. So to the same  
25 extent that she can contend that she was prejudiced

1 by receiving our supplemental testimony last  
2 Friday, how am I not prejudiced when this was  
3 dumped in my lap today?

4 JUDGE WAHL: Well, because this is what it  
5 is. I mean, this document is a done deal. It's  
6 not anybody's --

7 MR. KUNTZ: But the point is --

8 JUDGE WAHL: It's not anybody's testimony.  
9 It's not anybody's analysis. It is what it is.

10 MR. KUNTZ: But the point is --

11 JUDGE WAHL: That's the difference.

12 MR. KUNTZ: -- if we had timelines and  
13 Your Honor was saying that we had timelines and  
14 therefore she was prejudiced, the timelines apply  
15 to both parties and --

16 JUDGE WAHL: Well, I agree with that.

17 MR. KUNTZ: -- this should have been  
18 submitted.

19 JUDGE WAHL: So should this -- I guess  
20 what I wasn't clear about, is this under the  
21 timelines -- let me talk to you, Mr. Kuntz. Under  
22 the procedures was the idea that this would have  
23 been part of a witness's testimony, or at least  
24 what, just submitted as a document, I suppose.

25 MR. KUNTZ: Something in support of her

1 case presumably --

2 JUDGE WAHL: That should have been pre --

3 MR. KUNTZ: -- that should have been  
4 prefiled. If she thought it was relevant to the  
5 position she was taking -- our witnesses haven't  
6 even had a chance to address what's in there  
7 because we don't know what it is she contends it's  
8 relevant to. Ordinarily I wouldn't have a problem  
9 with this, Your Honor, but I'm a little irritated  
10 with the position that counsel took this morning  
11 that she was prejudiced by a simple, one-page piece  
12 of supplemental testimony, and I'm making my point  
13 in that regard. To say that somehow she was  
14 prejudiced by that and we're not prejudiced when  
15 she can come in the day of the hearing and bring  
16 this in, to me I see is a distinction without a  
17 difference.

18 JUDGE WAHL: Maybe. So your contention is  
19 that if -- if the intervenors were going to offer  
20 this evidence, it should have been offered as part  
21 of prefiled testimony.

22 MR. KUNTZ: That's correct.

23 JUDGE WAHL: Ms. La Seur?

24 MS. LA SEUR: Judge, there was not an  
25 appropriate place in prefiled testimony to offer

1 this kind of exhibit. It's the applicant's own  
2 document. They sent it freely to the PSC nine  
3 months ago, and we offered it while Mr. Uggerud was  
4 on the stand. Because his boss is one of the  
5 signatories, he is able to identify it as the  
6 agreement to which his employer is a party.

7 JUDGE WAHL: So I guess I don't know if it  
8 makes any difference or not. So where does this  
9 document come from? Can somebody tell me that?  
10 How does this document -- this document was  
11 obviously made by the Big Stone partners and  
12 Minnesota Department of Commerce, of course, how  
13 does this come to the North Dakota Public Service  
14 Commission?

15 MR. GUERRERO: As I indicated earlier,  
16 Your Honor, I believe the -- I'd have to go back,  
17 subject to check, but I believe we filed it as an  
18 update just to keep the Commission informed of the  
19 status and progress with respect to the case in  
20 Minnesota as it may affect the matter in North  
21 Dakota. I can't recall whether or not we actually  
22 filed it under this docket number. In fact, I  
23 believe we did not.

24 But I do agree with Mr. Kuntz's statements  
25 that if she thought it was relevant, she should

1 have had a witness testify to it in her case in  
2 chief. There's lots of documents out there that  
3 are related in some fashion to this case that if  
4 they were relevant, they should have been made a  
5 part of the record, and they weren't, and how are  
6 we to judge what is supposed to be relevant at the  
7 time this comes in in her brief apparently? So --

8 MR. KUNTZ: Your Honor, if I might --

9 JUDGE WAHL: You know, I guess I'm kind of  
10 shifting. I'm beginning to get a better  
11 understanding, Ms. La Seur. I think I'm inclined  
12 to agree with that argument and with Mr. Kuntz;  
13 that is, the idea is we're going to put this in the  
14 record without any advance notice to the parties as  
15 to the purpose of the evidence, and then besides  
16 that we're not going to tell them what the purpose  
17 is. They get to find out in your brief, and  
18 then -- and then I'm inclined to agree with Mr.  
19 Kuntz. This -- what's sauce for the gander is  
20 sauce for the goose. That is, we are then -- I  
21 will then put the applicants in the same position  
22 that I was unwilling to put the intervenors in.  
23 That is, had you -- had you filed this with -- in  
24 connection with some witness or at least filed it  
25 with a statement that said, here's Exhibit X, and

1 the reason for this exhibit is because it shows  
2 that the project is imprudent as a result of this,  
3 that, and the other thing, then I -- then I  
4 wouldn't have any problem with it, but I guess  
5 unless you can show me otherwise, I -- I'm agreeing  
6 with Mr. Kuntz that I'm putting him in exactly the  
7 same position I wouldn't put you in earlier.

8 MS. LA SEUR: The document was -- was  
9 already before the PSC in some capacity and we just  
10 hadn't really defined what the status of the  
11 document was, and so when I went back to look for  
12 it in the docket, assuming it was there, because I  
13 had a copy of it in my file, it had been served in  
14 some way -- perhaps not formally served -- it  
15 looked as if it should be part of the record, I  
16 wanted to make sure it was formal and that there  
17 was some sort of formal status for the document.

18 Mr. Breen tells me, and I wasn't aware of  
19 this, that he had made a request to cross-examine  
20 the signatories of this document at the time it was  
21 originally distributed and that hearing didn't take  
22 place. So there has been -- there has been an  
23 attempt to formalize the status of this document  
24 that seems to have just fallen through the cracks  
25 and we hadn't made a fuss about that.

1           We'd like to -- we'd like to brief it. It  
2 is the applicant's own document. It is well aged.  
3 It is not a surprise to anybody. Its content is  
4 not a surprise to anybody.

5           JUDGE WAHL: No. But it's purposes are.  
6 Here's the problem. I think Mr. Kuntz's argument  
7 is well made, and I -- and I just -- in the  
8 circumstances I -- it's nobody's fault, but for the  
9 same reason that -- for the issue of due process,  
10 it makes no difference how justified the delay was,  
11 it makes no difference how reasonable, it makes no  
12 difference as to the urgency. The point is that  
13 due process is denied, and I think we have exactly  
14 the same situation here. If I just put this in the  
15 record and then allow you or anybody to make  
16 whatever use of it occurs to them as they -- as  
17 they prepare their brief for the hearing, I've done  
18 exactly the same thing I wouldn't do this morning.

19           MS. LA SEUR: But then my question would  
20 be: What is the prejudice to the applicants in  
21 having this public document that they themselves  
22 signed made part of this record?

23           JUDGE WAHL: Because they don't know what  
24 purpose you're putting it to. They haven't had a  
25 chance to consider that, to review that with the

1 people that have to deal with -- that are dealing  
2 with this project.

3 MR. KUNTZ: Our --

4 JUDGE WAHL: It makes no difference that  
5 the document is in existence or even that it's  
6 their document. It's the purpose that you're going  
7 to put it to. I rather suspect you're not in a  
8 position to tell me right now what purpose you're  
9 going to put this document to.

10 MS. LA SEUR: Well, I could read through  
11 the terms and conditions one by one.

12 JUDGE WAHL: Well, you see, there you are.  
13 You're too late.

14 MR. KUNTZ: Your Honor, the thing, too, is  
15 this was signed before the two participants  
16 withdrew. I don't even know and I'm not sure  
17 anybody knows what the status of that particular  
18 agreement is anymore in light of the fact that  
19 those two participants withdrew from it. I'm not  
20 even sure it's binding. So now, like I said, I  
21 have the sense that it's being used for something,  
22 but I'm not sure what because I'm not even sure  
23 what that agreement means myself anymore and none  
24 of the witnesses were asked what it means.

25 JUDGE WAHL: Exhibit I 22 is denied.

1 Anything further for the record, Ms. La Seur?

2 MS. LA SEUR: No, thank you.

3 JUDGE WAHL: Anything further for the  
4 record, Mr. Guerrero?

5 MR. GUERRERO: No. Do we want to talk  
6 about the late-filed exhibit tonight? Okay. We'll  
7 do that off record.

8 JUDGE WAHL: Anything further for the  
9 record, Mr. Kuntz?

10 MR. KUNTZ: No.

11 JUDGE WAHL: All right. The record will  
12 be closed. We'll be in recess until nine o'clock  
13 tomorrow morning.

14 (Recessed at 5:13 p.m., Monday, the 28th  
15 day of April, 2008.)

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