



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  
HEARING

(VOLUME III)

Taken At  
State Capitol  
Bismarck, North Dakota  
June 26, 27 & 28, 2007

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

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Public Service Commission

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1 Prefiled Direct Testimony  
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1           (The proceedings continued, commencing at  
2 8:00 a.m., Thursday, June 28, 2007, as follows:)

3           JUDGE WAHL: We are on the record,  
4 counsel. The record will show that it is eight  
5 o'clock, June 28, 2007, the date for the  
6 continued -- or further hearings of Otter Tail  
7 Corporation and Montana-Dakota Utilities Co.  
8 advance determination of prudence applications for  
9 their respective participation and ownership  
10 interest in the Big Stone II Generating Plant, the  
11 application of Otter Tail Corporation being Public  
12 Service Commission Case No. PU-06-481, and the  
13 application of Montana-Dakota Utilities Co. being  
14 Public Service Commission Case No. PU-06-482.

15           Mr. Kuntz, with you, I think, yet.

16           MR. KUNTZ: Thank you, Your Honor. We  
17 would call Duane Steen.

18           JUDGE WAHL: Mr. Steen, as you are  
19 doubtless aware, your testimony is required to be  
20 under oath and in North Dakota I am required by law  
21 to advise you regarding perjury before  
22 administering the oath. Perjury is a false  
23 statement of material fact which you do not believe  
24 to be true, in other words, generally speaking, a  
25 lie. In North Dakota perjury is a Class C felony,

1 punishable by a fine up to \$5,000, imprisonment for  
2 a period of up to five years, or both. Will you  
3 raise your right hand, please?

4 (Witness sworn.)

5 JUDGE WAHL: Mr. Kuntz.

6 **DUANE STEEN,**

7 being first duly sworn, was examined and testified  
8 as follows:

9 **DIRECT EXAMINATION**

10 **BY MR. KUNTZ:**

11 Q. State your name and business address,  
12 please.

13 A. My name is Duane Steen. I'm employed at  
14 400 North Fourth Street, Bismarck, North Dakota  
15 58501.

16 Q. Who is your employer?

17 A. My employer is Montana-Dakota Utilities.

18 Q. What's your position with Montana-Dakota?

19 A. I am -- my title is [REDACTED]  
20 [REDACTED]

21 Q. What are your responsibilities for that  
22 position?

23 A. I'm responsible to track new generation  
24 technologies, as well as being responsible for  
25 development of those -- of new resources to meet

1 our capacity and energy needs for new generation to  
2 meet our customers' demand.

3 Q. What's your educational background, Mr.  
4 Steen?

5 A. I have a bachelor of science degree from  
6 North Dakota State University.

7 Q. And your employment background?

8 A. My employment background, I have been with  
9 Montana-Dakota Utilities in various positions,  
10 starting with plant engineer up through my current  
11 position, and that's taken me 33 years with MDU.

12 Q. Have you caused to be prepared prefiled  
13 testimony and exhibits in this proceeding?

14 A. I have.

15 Q. I'm showing you what should be in front of  
16 you marked as Exhibit MDU-204 and 205. Do you have  
17 those exhibits there?

18 A. I do.

19 Q. And are those copies of your prefiled  
20 direct testimony and accompanying exhibit?

21 A. That's correct.

22 Q. Do you have any corrections or changes to  
23 make to those exhibits?

24 A. I do not.

25 Q. And if I were to ask you the same

1 questions that appear in Exhibit MDU-204, would  
2 your answers be the same as they appear in that  
3 exhibit?

4 A. They would be.

5 MR. KUNTZ: We would offer MDU Exhibits  
6 204 and 205.

7 JUDGE WAHL: Mr. Breen.

8 MR. BREEN: No objection.

9 JUDGE WAHL: Mr. Binek.

10 MR. BINEK: No objection.

11 JUDGE WAHL: MDU Exhibits -- or Exhibits  
12 MDU-204 and 205 are each received.

13 Q. (MR. KUNTZ CONTINUING) Mr. Steen, could  
14 you provide the Commission with a summary of your  
15 direct testimony, please, at this time?

16 A. I can. Basically my testimony covers our  
17 activities to review alternative generation sources  
18 which led us to BSPII participation, which is, we  
19 believe, the most cost-effective future resource.

20 As indicated by Ms. Stomberg earlier, our  
21 primary need for baseload power supply was the loss  
22 of our 66 megawatt baseload purchase agreement with  
23 Basin Electric Power Cooperative. In addition to  
24 that, of course, we want to cover our future load  
25 growth for our customers.

1           Our energy marketing department indicated  
2 that we are entering into a market capacity  
3 deficient time period. This is exactly as  
4 indicated by Mr. Uggerud in his prior testimony.

5           Like Otter Tail Power, MDU visited with a  
6 number of regional utilities, including various IPP  
7 groups that came to us about available capacity and  
8 energy. At that point we were unable to find any  
9 match for our needs. Knowing that baseload  
10 coal-fired opportunities don't come along very  
11 often, when Big Stone did present itself, we looked  
12 at it. But that being said, we wanted to test the  
13 waters further, so we issued an RFP both in 2004  
14 and again in 2006 to cover our baseload needs. The  
15 responses to that -- to both those RFPs were  
16 minimal, but about 50 percent of the responses did  
17 come from -- from IPPs, so we did test that market.  
18 But, again, none of those -- none of those actually  
19 matched what we were looking for for baseload  
20 requirements.

21           In addition to issuing two RFPs, we also  
22 participated in the Lignite Vision 21 Program. The  
23 Lignite Vision 21 Program is an unprecedented  
24 partnership between the State of North Dakota and  
25 individual utilities. There were four individual

1 entities that asked for funding in the Vision 21  
2 Program. One of those four was Westmoreland Coal,  
3 who was looking at exactly the same site that we  
4 identified, which was Gascoyne, North Dakota. The  
5 Industrial Commission asked us to investigate  
6 Gascoyne with Westmoreland, which we eventually  
7 did. Our initial studies for that site were for a  
8 500 megawatt lignite-fired mine mouth unit.

9           Knowing that MDU could not take the  
10 complete 500 megawatts off that unit, both  
11 Westmoreland and MDU visited a number of regional  
12 utilities throughout the MAPP region at that time  
13 trying to identify partners that would take some of  
14 the 500 megawatt unit. Being unable to identify  
15 any partners because of transmission issues and  
16 other issues at the site, we eventually reduced the  
17 size to 250 megawatts and then -- to test whether  
18 economy of scale would have a large impact on that  
19 unit. Seeing that it was somewhat significant, and  
20 still 250 megawatts at that point was more than MDU  
21 could take by itself, we again reduced the size to  
22 175 megawatts and investigated it further. The 175  
23 megawatts in comparison to some of the other  
24 options we had reflected that we had lost the  
25 economy of scale at that size. So there was no

1 cost -- it was no longer cost-effective compared to  
2 participation in Big Stone II.

3           However, the information we gathered from  
4 the two RFPs in addition to individual  
5 conversations with independent power producers that  
6 came to our table and our experience in the Lignite  
7 Vision 21, that information was utilized to  
8 generate base information that was given to PA  
9 Consulting for them to evaluate the optimal  
10 resource plan for MDU. That being said, their  
11 investigation, I think as you heard earlier,  
12 determined that Big Stone II was indeed the lowest  
13 cost baseload resource expansion option for MDU.  
14 And that concludes my summary.

15           Q. Mr. Steen, I would like to cover a few  
16 things that have come up during the course of the  
17 hearing that you may have some background on, but,  
18 first, could you provide us a little bit more  
19 information about the responses to the RFPs, why  
20 they weren't able to meet MDU's needs at the time?

21           A. The initial RFP that was issued in 2004,  
22 we had three respondents. Our RFP was for  
23 somewhere between 70 and 100 megawatts of baseload,  
24 is what we were looking for at that time in 2004.  
25 None of the respondents were able to give us any

1 more than 50 megawatts and generally it was  
2 gas-fired at that point. Most of the contracts  
3 were also for short durations, no longer than five  
4 years.

5 Q. And then the second RFP.

6 A. In the second RFP in 2006 there was only  
7 two respondents. One of them was for, again, the  
8 250 megawatt gas-fired unit, which MDU would be  
9 responsible for taking the entire output which  
10 didn't match our need. 250 megawatts was more than  
11 we needed. The second response was indeed from a  
12 coal-fired unit in south central North Dakota,  
13 which we continued -- or south central United  
14 States -- excuse me -- which we continued to  
15 monitor. However, that is a 750-megawatt  
16 coal-fired unit of which we would take whatever  
17 piece of that we wanted. However, the balance of  
18 the unit has not been subscribed to date.

19 Q. So at this point it may or may not go  
20 forward?

21 A. So at this point it may or may not go  
22 forward. As far as I know, they do not have any of  
23 their permits in place.

24 Q. Can you give the Commission a little bit  
25 of background in terms of what went into the

1 determination by Montana-Dakota to subscribe to 19  
2 and a third percent of the Big Stone II Plant?

3 A. Sure. Upon being invited to participate  
4 in Big Stone II, it was a business decision at that  
5 point to have a number of partners take an equal  
6 amount of the unit to -- because there was seven  
7 partners, it was a huge undertaking, and we wanted  
8 to -- to have at least four of the partners have  
9 equal participation, and our 19 percent was indeed  
10 less than our projected need for baseload at that  
11 point in time. 119 -- the 116 megawatts we were  
12 going to get off the unit would only give us  
13 surplus for one year. In 2012 we would again be  
14 deficit.

15 Q. But couldn't you have taken a smaller  
16 piece and then looked for another plant as it come  
17 along?

18 A. We absolutely could have taken a smaller  
19 piece, for example, 50 megawatts or 25 megawatts.  
20 However, our forecast at that time was that we  
21 needed at least 120 megawatts, and these projects  
22 do not come along every day. As you remember, our  
23 participation in Coyote was in, I think, 1981 and  
24 nothing has been built since then, so these do not  
25 come along every day, so we needed to cover

1 ourselves for at least up to the time that the unit  
2 was built and, hopefully, would have enough for a  
3 little bit into the future.

4 Q. There was a question, I believe, that was  
5 raised about the amount of wind that could possibly  
6 be built in MDU's footprint and added to and also a  
7 separate question how much could be added to MDU's  
8 system. Do you have any opinions on either of  
9 those two questions, Mr. Steen?

10 A. Yes, I do. We've been involved in wind  
11 generation for a long time. Our history with wind  
12 is back into the 1980s. I think you heard  
13 testimony earlier that MDU was the first utility in  
14 North Dakota to sign a PPA with a wind developer,  
15 but that project never come to fruition. So we  
16 have been monitoring wind for a long time.

17 In our model that we utilized with looking  
18 at PA's model, I guess referring to Mr. Heidell's  
19 testimony yesterday, you heard that we had 60  
20 megawatts in that model. A year ago when we ran  
21 that model, we indeed had one signed contract for  
22 31.5 megawatts, a wind farm in South Dakota, again,  
23 which never was built, but at the time the model  
24 was generated we knew we had to sign a contract, so  
25 we input that into the model. We also input into

1 the model our renewable portfolio objective in the  
2 State of Montana, which basically was 20 megawatts  
3 in 2010 and an additional 10 megawatts in 2014. So  
4 our model utilized 60 megawatts.

5 Now, whether or not that could have been  
6 built will really depend upon the queue process in  
7 MISO. The only way we would know whether or not  
8 that will actually fit into our system is get in  
9 the queue with MISO and then start doing the  
10 transmission studies. So whether or not an  
11 additional hundred megawatts will fit on our system  
12 or 200 megawatts will fit on our system we won't  
13 know until we actually get in the queue with MISO.  
14 Generally the MISO queue transmission modeling is  
15 somewhere between \$250,000 and a million-dollar  
16 venture.

17 Q. So you are in the queue for the Montana  
18 project?

19 A. We are in the queue for the Montana  
20 project.

21 Q. And once that's complete, what's the plan?

22 A. We are also in the queue for the South  
23 Dakota 30 megawatts -- pardon me. Can you --

24 Q. But, I mean, after the Montana project is  
25 built, what is Montana-Dakota's thoughts with

1 respect to additional wind?

2 A. Okay. We are currently internally doing  
3 ratepayer impact tests for -- to meet the North  
4 Dakota renewable portfolio objective.

5 Q. When the AVS -- when you knew the AVS  
6 contract was going to expire in '06, was wind  
7 looked at as a replacement for that particular  
8 contract?

9 A. When we knew the AVS contract was going to  
10 expire, wind was not looked at as replacement for  
11 baseload. In the -- in the MISO system, we have to  
12 have accreditable capacity. Wind only -- at this  
13 point in time in the MISO system wind only gets a  
14 20 percent accreditable capacity factor. So in  
15 order to replace 60 megawatts of baseload, one  
16 would have to install at least 300-plus megawatts  
17 of wind in order to get the same accreditability.

18 Q. Well, baseload or any capacity?

19 A. Baseload or any capacity.

20 Q. If you want -- any capacity that you want  
21 to provide with wind would basically take about a  
22 one-fifth of what you have?

23 A. That would be correct.

24 Q. There was also, I believe, a question or a  
25 comment, I believe it was from Commissioner Wefald,

1 about whether or not Montana-Dakota could use its  
2 existing gas turbines as backup for wind. Do you  
3 have any comments on that?

4 A. The existing gas turbines we have are  
5 already accredited in the MAPP system. I think in  
6 order to back up wind, generally you would put  
7 additional gas generation on to get that  
8 accreditation.

9 Q. To get any additional capacity?

10 A. To get any additional accreditation.

11 Q. And then, finally, Mr. Steen, there was  
12 some discussion about whether the plant  
13 participants should be looking at an ultra  
14 supercritical plant versus a supercritical plant.  
15 Can you provide any opinions on that issue?

16 A. I can. As you heard Mr. Rolfes indicate,  
17 there are about 15 ultra supercritical units  
18 operating with -- and the incremental cost for an  
19 ultra supercritical is some 2 to 5-plus million  
20 dollars. As he indicated, we, as owners, do not  
21 know at this point what that total incremental cost  
22 might be. It could very well be 5 million, it  
23 could very well be 10 million, it could very well  
24 be 15 million. We don't know.

25 Most of the 15 units that are currently

1 operating are located in Japan, which has a very  
2 high fuel delivery cost, and that might have driven  
3 their decision to go to ultra supercritical. In  
4 addition, these plants in Japan were not  
5 manufactured using U.S. technology or U.S.  
6 manufacturers. So not all U.S. manufacturers have  
7 an ultra supercritical plant that they have built.  
8 Most of them have ultra supercritical options that  
9 they have on paper, but none of them have been  
10 built.

11 In addition, the plants in Japan do not  
12 have an extended operational time period. These  
13 are not -- these boilers are not your father's  
14 boiler. They do not have long-term operational  
15 experience. The analogy I like to use internally  
16 is that Toyota manufactures the Prius, not that GM  
17 couldn't build one and GM might have on the shelf,  
18 a paper one, but they could build one. Okay. But  
19 even the Prius doesn't have 100 or 150,000-mile  
20 operating experience. And those are some of the  
21 things we have to look at as we look at the ultra  
22 supercritical decision.

23 Q. So nobody has really got a long operating  
24 history with those extra operating pressures and  
25 temperatures and the effect on the plant

1 components?

2 A. That would be correct. And that's one of  
3 the nice things about being involved in the Big  
4 Stone project where you have seven co-owners. Each  
5 one of the seven co-owners are an experienced  
6 utility that bring a lot of experience to the  
7 table, and so we are indeed as a group looking at  
8 ultra supercritical.

9 Q. But the decision has not been made?

10 A. But the decision has not been made.

11 Q. I just want to back up to the beginning of  
12 your answer. I was a little confused because I  
13 thought you said first it was 2 to 5 million and  
14 then you said it was somewhere between 5 and 15.

15 A. Well, I guess the point being we have  
16 indications that it could be 2 million, we have  
17 indications that it could be 5 million, we also  
18 have indications that it could be 10 million. So  
19 we do not know what the price for the ultra  
20 supercritical -- total price might be.

21 MR. KUNTZ: That's all the questions I  
22 have for Mr. Steen and I would tender him for  
23 cross-examination.

24 JUDGE WAHL: Mr. Breen.

25

**CROSS-EXAMINATION**

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**BY MR. BREEN:**

Q. Sir, correct me if I'm wrong about this statement. I thought I heard in your testimony the co-owners of the Big Stone II project reached an agreement to build the Big Stone project sometime in 2005?

A. The -- the group of co-owners came together to discuss building Big Stone in 2004, I think, initially and that jelled in 2005.

Q. In 2005 it was formalized in a letter of agreement of some sort?

A. That's correct.

Q. Now, the PA analysis you referred to did not consider the issue of environmental cost for carbon dioxide; isn't that true?

A. That would be correct.

Q. And you didn't consider the issue of environmental cost for carbon dioxide; is that true?

A. That would be correct.

Q. And when you submitted this evaluation before the proceedings in Minnesota and South Dakota, you and PA did consider the issue of environmental cost in your evaluations; is that

1 correct?

2 A. Could you -- could you restate that again?

3 Q. I'll break it up. When yourself and the  
4 PA analysis group -- consulting group considered  
5 presenting this testimony before the proceedings in  
6 Minnesota you did consider the issue of  
7 environmental cost?

8 A. I did not testify in Minnesota.

9 Q. Oh, you did not?

10 A. No, I did not.

11 Q. When you and your consultant did an  
12 evaluation to determine if Big Stone II was the  
13 least-cost alternative amongst your choices, you  
14 and your consultants did not consider the issue of  
15 environmental cost for carbon dioxide; do we agree?

16 A. I don't know. My position is one to give  
17 information to PA so that they can do their  
18 modeling.

19 MR. BREEN: I have no other questions.

20 JUDGE WAHL: Mr. Binek.

21 **CROSS-EXAMINATION**

22 **BY MR. BINEK:**

23 Q. Mr. Steen, on page 4 of your direct  
24 testimony you talk about the proposals and in your  
25 summary you had talked about the proposal from

1 Iowa. I guess I would like a little bit of  
2 clarification of what the situation is with that  
3 plant in Iowa. Apparently you're still looking at  
4 that plant as a possibility for providing your  
5 needs?

6 A. We are still monitoring that plant as a  
7 possibility.

8 Q. Okay. And there has been no firm  
9 commitment to participation in the Big Stone  
10 project; is that correct?

11 A. We have not gone through financial close,  
12 if that's your question -- answer to your question.

13 Q. Right. Yes. In your testimony, I believe  
14 it was on page 8, you talk about Big Stone II  
15 remaining the lowest option for MDU and that it  
16 also confirms Montana-Dakota's plan to use demand  
17 side management, renewable energy sources and other  
18 resources along with that plant to meet your needs.  
19 What are the other resources you're referring to  
20 besides demand side management and renewable energy  
21 resources?

22 A. We have signed some confidentiality  
23 agreements, but you should be aware that wind is  
24 not the only source of renewable credits.

25 Q. Okay. So the other sources you're talking

1 about are other renewables?

2 A. We're looking at other renewable options.

3 MR. BINEK: I have no further questions.

4 JUDGE WAHL: Questions from the  
5 Commission. Commissioner Wefald.

6 MR. BINEK: Excuse me. I do have one  
7 additional one.

8 JUDGE WAHL: All right.

9 Q. (MR. BINEK CONTINUING) And that's  
10 relating to the Gascoyne plant. And my question is  
11 the same question that I asked Andrea yesterday,  
12 and that is whether Gascoyne -- I realize it's not  
13 a viable option at this point. Is Gascoyne a  
14 viable option in the future, in your opinion?

15 A. My opinion is that Gascoyne is indeed a  
16 viable option. I'm probably the best cheerleader  
17 for Gascoyne there is.

18 MR. BINEK: Thank you. I have no further  
19 questions.

20 JUDGE WAHL: Commissioner Wefald.

21 **EXAMINATION**

22 **BY COMMISSIONER WEFALD:**

23 Q. Good morning.

24 A. Good morning.

25 Q. MDU has had some really -- MDU has had

1 some really unfortunate experiences as it's  
2 attempted to purchase wind.

3 A. That's correct. That's correct.

4 Q. Every project you seem to pick fails, so I  
5 feel sorry for the Montana project. That's the  
6 truth. We think of the ones you've announced to  
7 us, every single one has failed that you've told us  
8 that you've signed an agreement for, so --

9 A. Questionably, that's one of the reasons  
10 why we wanted to self-build. It's a self-build  
11 option.

12 Q. I was wondering, did you ever consider the  
13 PPM project in northern North Dakota, which is  
14 adjacent to your service territory, that offered --  
15 has still offered 150 megawatts of wind and has  
16 gone through the whole queue process with MISO?

17 A. We are looking -- we are looking at that  
18 project as one of the possibilities to satisfy our  
19 North Dakota renewable objective.

20 Q. Have you looked at it in the past?

21 A. We did not look at it to meet the Montana  
22 renewable portfolio standard. As far as in the  
23 past, yes, we have -- we have met with them  
24 individually.

25 Q. Thank you. How or would the company

1 participate in the Big Stone II project if the  
2 Commission determined it would be prudent to allow  
3 MDU to purchase, let's say, 90 megawatts of energy  
4 and capacity from the Big Stone project and with  
5 the remainder of load requirement and demand met  
6 through demand -- excuse me -- and the requirement  
7 of load requirement met through demand side  
8 management and renewables?

9 A. How would we participate, is that your  
10 question?

11 Q. How would the company participate?

12 A. I think you have to understand that we  
13 have done an extensive expansion of our -- of our  
14 demand side management at this point and put that  
15 into the model, and the model still picks 116  
16 megawatts of Big Stone.

17 Q. I understand that.

18 A. Okay.

19 Q. I understand that. How or would the  
20 company participate in the Big Stone II project if  
21 the Commission determined it would be prudent to  
22 allow MDU to purchase, let's say, for example, 90  
23 megawatts of energy and capacity instead of the  
24 116?

25 A. I guess as a policymaker, I'm not the

1 policymaker for the company, so I would have to  
2 just assume that we would participate with 90  
3 megawatts.

4 COMMISSIONER WEFALD: Thank you.

5 JUDGE WAHL: Any further questions from  
6 the Commission? Commissioner Clark.

7 **EXAMINATION**

8 **BY COMMISSIONER CLARK:**

9 Q. Just a couple on Gascoyne versus Big Stone  
10 II so I understand the timeline and the procedure.  
11 You had said that when MDU looked at Gascoyne as a  
12 250 megawatt unit, you thought that it perhaps --  
13 it was still in the ballpark, it passed the smell  
14 test, you lost some efficiencies, but not as much  
15 as you lost when you went to 175 and it became  
16 unviable; is that right?

17 A. That would be correct.

18 Q. Okay. At the point that it was  
19 potentially a 250 megawatt project, was Otter Tail  
20 included in discussions? Because it occurs to me  
21 here that we have, exclusive all those Minnesota  
22 utilities that want to participate in Big Stone,  
23 two utilities whose megawatts you're going to be  
24 drawing off it roughly equates to 250 megawatts.  
25 Were you able to compare Big Stone II at 250, Otter

1 Tail and MDU participating in it with Gascoyne --  
2 I'm sorry. I didn't say that right -- Gascoyne at  
3 250, Otter Tail and MDU participating in it versus  
4 Big Stone II?

5 A. As far as I know, we did not run the  
6 generation capacity expansion model utilizing the  
7 Gascoyne unit at 250 as one option versus Big Stone  
8 II as one of the other options. I don't think we  
9 ever did that. You should be aware, however, that  
10 I personally believe that Big Stone II would  
11 probably still come out because -- because at the  
12 250 -- even at the 250 megawatt level, and we chose  
13 that specifically because the options for boilers  
14 range up to 250 megawatts. The 500 megawatt unit  
15 had to have two separate boilers, and that's one of  
16 the reasons why it drove the cost up. You know,  
17 even at 500 megawatts, the capital cost at Gascoyne  
18 is significantly more than the capital cost at Big  
19 Stone II.

20 Q. Right. Although one of the things that I  
21 think is becoming clear through this process is we  
22 have to consider not just capital cost, but  
23 delivered cost to consumers, which would be  
24 inclusive of the delivered cost of fuel. When you  
25 said probably Big Stone II would come ahead, is

1 that -- does that take into account -- how do I ask  
2 it -- are you assuming that the cost of fuel is  
3 going to be a 2-and-a-half percent increase roughly  
4 a year at Big Stone II?

5 A. And we assumed that same inflation rate at  
6 Gascoyne.

7 Q. Okay. The Montana wind farm, help me  
8 understand this a little bit, walk through it a  
9 little bit. This may come up somewhere else not  
10 necessarily in this case. The rationale for  
11 building that one in particular, what need does it  
12 fill from an engineering standpoint, from an  
13 integrated resource standpoint versus what need  
14 does it fill to meet a statutory requirement in  
15 Montana? In other words, if you just ran the  
16 model -- your IRP planning process, would that be  
17 one that would get picked barring the mandate in  
18 Montana?

19 A. In an integrated resource model or in a  
20 generation expansion program, generally wind will  
21 not get picked as the low-cost option.  
22 Consequently, the way -- the way that wind is being  
23 presented in these models is it's being forced in.  
24 It's essentially a must-run unit. It's forced into  
25 the model. The same thing occurred when we did the

1 model with the 30 megawatts from the South Dakota  
2 project, that was forced in, it was a must-run.  
3 And the same thing in the model with the Montana,  
4 it was forced in as a must-run unit.

5 Q. Okay.

6 A. Generally it will not pick wind as the  
7 least-cost option.

8 COMMISSIONER CLARK: Thank you. That's  
9 all I have.

10 COMMISSIONER WEFALD: I have one.

11 JUDGE WAHL: Commissioner Wefald.

12 **FURTHER EXAMINATION**

13 **BY COMMISSIONER WEFALD:**

14 Q. It's on that same topic. What was the  
15 forced -- what made it forced in for 30 megawatts  
16 in South Dakota?

17 A. Well, we had a contract. We had a  
18 contract with the wind developer.

19 Q. What made you -- what made you decide to  
20 put that contract in then? You said it was a  
21 forced in. Why did you force it into the model?  
22 Why did you force in 30 megawatts then if you  
23 didn't --

24 COMMISSIONER CRAMER: Why did you even  
25 consider it?

1 Q. (COMMISSIONER WEFALD CONTINUING) Why did  
2 you even consider it then in South Dakota?

3 A. Well, the --

4 Q. Did they tell you you had to build 30  
5 megawatts of wind there as part of your deal with  
6 the Big Stone Plant? Is that part of it? I mean,  
7 is that the forcing like with Montana, the 10 --  
8 the 15 megawatts there because they have the  
9 mandate to have wind? You know, is that the  
10 reason? Is that what you mean by "forcing it in"?

11 A. No. No. I guess what I mean by forcing  
12 it in is, the generation expansion model has to  
13 include all of the knowns at the time you run the  
14 model to push the start button on how. And those  
15 knowns are your existing units, which are Heskett  
16 I, Heskett II, Lewis & Clark. Those units are also  
17 put into the model as well as any knowns, such as a  
18 purchased power agreement with Basin Electric or a  
19 purchased power agreement with a wind developer.  
20 Those are put into the model. And if you have a  
21 purchased power agreement with Basin where Basin  
22 says you must take the energy off of this unit, the  
23 model forces that in and says on a dispatch region  
24 this energy has to come from Basin Electric, and  
25 it's the same thing with wind. It says this amount

1 of energy has to come from that contract, so it's  
2 forced into the model. So the model doesn't pick  
3 it -- doesn't have the option of picking it. It's  
4 forced into the model.

5 Q. So you're saying that Mr. -- yesterday  
6 when we had the testimony, and he was here at that  
7 time but he's not here now any longer, his analysis  
8 from his company, his study showed 50 or 60  
9 megawatts of wind in his -- in his plan for MDU  
10 resources?

11 A. Okay. I don't know about how he set up  
12 the model -- his model.

13 COMMISSIONER WEFALD: Thank you.

14 THE WITNESS: I can't respond how he did  
15 that.

16 JUDGE WAHL: Commissioner Cramer.

17 MR. KUNTZ: Just a -- before you were  
18 talking about Mr. Heidell, weren't you,  
19 Commissioner Wefald? I'm not sure the two of you  
20 were on the same page.

21 COMMISSIONER CRAMER: Yeah, I wasn't sure,  
22 either.

23 COMMISSIONER WEFALD: Is it Mr. Heidell  
24 or --

25 MR. KUNTZ: From PA Consulting?

1 COMMISSIONER WEFALD: PA Consulting.

2 MR. KUNTZ: Right.

3 COMMISSIONER WEFALD: What name did I use?

4 MR. KUNTZ: You didn't have a name and I  
5 think --

6 THE WITNESS: Okay. I was thinking of Mr.  
7 Schlissel when you said his model.

8 COMMISSIONER WEFALD: No, I was talking  
9 about Mr. Heidell.

10 THE WITNESS: Okay. Can you restate your  
11 question again, please?

12 Q. (COMMISSIONER WEFALD CONTINUING) Mr.  
13 Heidell had 50 megawatts of wind in his model --

14 A. That's right. That's correct.

15 Q. -- that he came with to MDU and he said  
16 this is your model.

17 A. That's right. Yes. His 50 megawatts that  
18 he put in his model were known wind projects that  
19 we had on our system -- that we thought we would  
20 have on our system in 2012. Those known wind  
21 projects for 50 megawatts were 30 megawatts in  
22 South Dakota with a PPA and 20 megawatts in  
23 Montana.

24 Q. But you're telling me that the resource  
25 model you used would never choose wind unless there

1 was --

2 A. Unless you force it in.

3 Q. Unless you force it in.

4 A. I believe that's true.

5 Q. And why do you -- well, I should have  
6 asked -- been able to ask Mr. Heidell that, but I  
7 can't, because we're seeing wind coming in at much  
8 cheaper costs these days than it did before and  
9 with the -- and with the production tax credit  
10 we're finally seeing that other utilities are  
11 picking it as their least-cost resource. So, you  
12 know, it's just interesting that your model doesn't  
13 put it in at all, never would put it in.

14 A. Well, I guess I respectfully disagree that  
15 wind is coming in cheaper. We've seen the same  
16 price increases in wind because of the copper and  
17 the steel that we have seen in other generation  
18 resources, so wind is getting -- wind is expensive.

19 COMMISSIONER CLARK: Does wind sometimes  
20 work, though, as a -- as a peaking resource? A lot  
21 of what I've heard is that that's often where it  
22 seems to fit because it kicks off natural gas that  
23 would otherwise run and that's where you get some  
24 of the economies of wind. Is that incorporated  
25 into the model, or how does that --

1           THE WITNESS: It can -- it can if your  
2 utility is really dependent on natural gas to cover  
3 its peak. In MDU's system we do have natural gas  
4 to cover our peak, but our peak is for a very short  
5 time period in the summertime. We're a  
6 summer-peaking utility. You know, a hot, hot day  
7 in July we would generally start up a combustion  
8 turbine to cover that peak. And generally on those  
9 days the wind is not blowing. I wish it were.

10           COMMISSIONER CLARK: Does wind tend to do  
11 well also paired with highly dispatchable firm  
12 hydro where hydro is sort of the backbone and then  
13 again wind is the variable resource?

14           THE WITNESS: My personal observation is  
15 that's the best backup for wind, is hydro.

16           COMMISSIONER CLARK: But you're telling us  
17 that on MDU's system it doesn't seem to fit that  
18 profile?

19           THE WITNESS: MDU, it does not fit that  
20 profile.

21           Q. (COMMISSIONER WEFALD CONTINUING) Why then  
22 can't -- if you only use those gas combustion  
23 generators that you're invested in and they're  
24 sitting there all year long and you use them for a  
25 couple hours a year, why then wouldn't it be a

1 better use of resources to have wind pair up with  
2 those so that you could be using them throughout  
3 the year and create a baseload resource?

4 A. Generally wind, because it's  
5 nondispatchable, will -- will offset coal, is  
6 really what happens.

7 Q. But systems all across the country are  
8 using it for offsetting natural gas because the  
9 price is so much higher.

10 A. If they have a lot of natural gas on their  
11 system.

12 Q. But you have 110 megawatts. That's --

13 A. But we don't operate it very often, only  
14 when MISO calls. Only when MISO calls now.

15 COMMISSIONER WEFALD: Thank you.

16 JUDGE WAHL: Anything further from the  
17 Commission?

18 COMMISSIONER CRAMER: Yes.

19 JUDGE WAHL: Commissioner Cramer.

20 **EXAMINATION**

21 **BY COMMISSIONER CRAMER:**

22 Q. I want to get back, I think, to clarify --  
23 well, at least a question that popped into my mind  
24 when Commissioner Wefald was asking you about why  
25 the South Dakota deal. Model aside, completely

1 understand you have to force it in to make -- you  
2 know, to make it work, what was the impetus or what  
3 was the driver to considering 31-and-a-half  
4 megawatts in South Dakota?

5 A. The 31-and-a-half megawatts in South  
6 Dakota came about because of the PURPA  
7 requirements.

8 Q. Oh, that's right.

9 A. It actually went in as a qualifying  
10 facility before the Commission.

11 Q. When exactly did MDU know for certain that  
12 the AVS contract would not be extended?

13 A. I wasn't directly involved in that, but I  
14 was involved from the standpoint that I knew we  
15 tried numerous times to get that contract extended.  
16 The exact date when, you know, we were notified  
17 that it would be no longer an option, I am not  
18 sure.

19 Q. Was it a year ago, two years ago?

20 A. It was shortly before the contract  
21 expired -- real short. We're talking months before  
22 the contract expired.

23 Q. I think one of the frustrations that I've  
24 had in -- not just in this, but overall with  
25 utilities is not very good planning. Now, I

1 realize it's not a simple thing and I realize when  
2 you're talking about billions, not millions, it's  
3 really not a simple thing, but just hearing your  
4 answer saying we tried numerous times causes me to  
5 wonder, at what point even prior to the certainty  
6 of months prior, shortly prior to the contract  
7 ending, did you have a pretty good indication that  
8 this probably wasn't going to happen? Because I  
9 get the sense that somebody was hoping for  
10 something that wasn't very likely.

11 A. Well, I think you're probably correct in  
12 that we're eternal optimists. From the standpoint  
13 that -- and the other part of that is that we're  
14 always looking for the cheapest solution, you know,  
15 should we make a cheap solution decision today,  
16 what happens if something comes cheaper tomorrow?  
17 So I think we're always looking for the cheapest  
18 solution. And these power plant opportunities like  
19 Big Stone II don't come along very often. You  
20 know, I think you know that we're involved with the  
21 Milton R. Young III, which is quite a ways into the  
22 future, 2015, but that's a long -- you have to have  
23 that ten-year window to get these large coal units  
24 built.

25 Q. Then, finally, and I don't know how

1 relevant this is, but it's interesting to me given  
2 the Gascoyne discussions. Were you aware that  
3 Westmoreland had an air permit hearing yesterday on  
4 Gascoyne here in the Capitol?

5 A. I was aware that Westmoreland was here at  
6 the Capitol. I was not aware that it was for an  
7 air permit hearing.

8 COMMISSIONER CRAMER: I have nothing else.

9 JUDGE WAHL: Anything further from the  
10 Commission? Mr. Kuntz.

11 MR. KUNTZ: Thank you.

12 **REDIRECT EXAMINATION**

13 **BY MR. KUNTZ:**

14 Q. Mr. Steen, in response to Commissioner  
15 Wefald's question that if the Commission were to  
16 determine only 90 megawatts of the plant were  
17 prudent from MDU's standpoint and assuming that MDU  
18 could back down its participation in Big Stone  
19 II -- do you know if, indeed, that's a fact, that  
20 Montana-Dakota would be allowed to back down its  
21 participation in Big Stone II?

22 A. I do not know that MDU would be allowed to  
23 back down.

24 Q. Assuming it could, if I understood your  
25 testimony correctly, that would mean that the

1 company would have to make up about -- find about  
2 26 extra megawatts in order to have capacity  
3 available by that 2012 time frame; is that correct?

4 A. That would be correct.

5 Q. Do you believe that in addition to the DSM  
6 that the company has already included in Mr.  
7 Heidell's model plus what it already has in place  
8 or on the boards, that you could make up that 26  
9 megawatt deficit through additional DSM over and  
10 above that on your system?

11 A. I am not the DSM expert, but I know from  
12 conversations that there is concern about DSM  
13 penetration in our North Dakota consumers.

14 Q. So if you weren't able to do it through  
15 DSM, what would be your most likely next option if  
16 you couldn't do it through Big Stone II?

17 A. Our next most likely option would be  
18 natural gas-fired combustion turbines.

19 Q. In combination with wind?

20 A. Very possibly in a combination with wind.  
21 Because we do plan on achieving if -- if it's best  
22 for our customers in North Dakota renewable  
23 portfolio objective.

24 Q. Based upon your studies and analysis, Mr.  
25 Steen, how does the comparison of a capacity

1 megawatt for megawatt of a wind CT gas turbine  
2 compare with the cost of Big Stone II?

3 A. I know from experience in our Montana wind  
4 project that wind is approximately, rough numbers,  
5 \$2,000 a kilowatt. To back that one kilowatt up, I  
6 think you heard testimony yesterday from Mr.  
7 Heidell that a gas turbine is about \$900 a  
8 kilowatt. So the combination of the two, add the  
9 two together, 2,000 plus 900, is about \$2,900 a  
10 kilowatt. That's as expensive or maybe a little  
11 bit more expensive than Big Stone.

12 Q. And you'd have to add transmission for  
13 that, as well, then?

14 A. All those scenarios would have to have  
15 transmission, that would be correct.

16 Q. And just so the record is clear, when you  
17 say that you have to force in wind into the model,  
18 you're basically telling the model to assume a  
19 certain amount of wind?

20 A. That would be correct. By forcing it in,  
21 I'm saying you set the model up so that it says so  
22 much of the energy required for our customers has  
23 to come from this source.

24 Q. So it doesn't have the option of picking  
25 or not picking it?



1 relatively small percentage. And, of course, that  
2 20 percent is a given for the first couple years  
3 that the wind farm is on line. If you happen to  
4 select a poor resource area, that can go  
5 considerably less than 20 percent.

6 Q. Okay.

7 A. So it might drop to 15. So 15 percent of  
8 that megawatt probably can be covered, but the  
9 other -- the other 85 percent has to be covered by  
10 natural gas.

11 Q. So if we accept your numbers for \$2,000  
12 per -- what is that, kilowatt installed?

13 A. \$2,000 a kilowatt, that would be correct.

14 Q. And 900 for natural gas. And it's a  
15 little under that \$2,900 number?

16 A. Yeah. You could probably take 85 percent  
17 of that \$2,000, whatever that number is.

18 Q. Okay. Thank you. Has MDU looked at  
19 buying into MidAmerican Energy Company's current  
20 permitted 545 megawatts in western Iowa?

21 A. I'm not familiar with that, no.

22 Q. Are you familiar with the current price of  
23 renewable energy credits on the Chicago Climate  
24 Exchange?

25 A. I am not -- I have not looked today.

1 Q. Are you familiar with the current price of  
2 carbon sequestration credits on the Chicago Climate  
3 Exchange?

4 A. I guess I would admit I have never looked.

5 Q. It's very interesting. The 750 megawatt  
6 plant in Iowa hasn't yet begun its permit  
7 applications; is that right?

8 A. That's what I believe.

9 Q. And what coal does that plant propose to  
10 burn?

11 A. As I understand and the information  
12 they've given us on that, it would be Powder River  
13 Basin.

14 Q. Has the Gascoyne 500 begun its permit  
15 applications?

16 A. The Gascoyne 500 did not start any of the  
17 permit applications.

18 Q. And has MDU quantified the exact  
19 transmission costs for either Coyote or Gascoyne?

20 A. Quantified, meaning if we were to have an  
21 expansion at Coyote versus Gascoyne?

22 Q. Right.

23 A. We have not quantified exactly those  
24 transmission costs.

25 Q. When you model the least-cost option, does

1 that include projected fuel costs for the life of  
2 the plant?

3 A. It does.

4 MS. LA SEUR: Thank you. Nothing further.

5 JUDGE WAHL: Mr. Binek.

6 MR. BINEK: Thank you.

7 **RE-CROSS-EXAMINATION**

8 **BY MR. BINEK:**

9 Q. Mr. Steen, how often does MISO require you  
10 to start your gas turbines?

11 A. That -- I'm in -- you know, looking at  
12 expansion -- generation expansion, so existing  
13 units I have very limited knowledge of that. But I  
14 do know they run some -- maybe two, three hundred  
15 hours a year on average.

16 MR. BINEK: Thank you. No further  
17 questions.

18 JUDGE WAHL: Any further questions from  
19 the Commission?

20 COMMISSIONER WEFALD: No.

21 JUDGE WAHL: All right.

22 COMMISSIONER WEFALD: Oh, I have one  
23 comment or question. It's probably both.

24 JUDGE WAHL: Commissioner Wefald.

25

**FURTHER EXAMINATION**

1  
2 **BY COMMISSIONER WEFALD:**

3 Q. You said that you're not certain whether  
4 your customers in Montana-Dakota Utilities would be  
5 interested in any demand side management options?

6 A. No. I said I didn't know if there -- that  
7 they could achieve the penetration levels required  
8 for some of the options.

9 Q. How will you know that until you offer  
10 them?

11 A. Even if they're offered, I don't know how  
12 you would know whether they -- that's one of the  
13 problems with demand side management, as I  
14 understand it, is how do you quantify it.

15 Q. Well, doesn't part of it -- isn't part of  
16 it how attractive the offer is? Just to give an  
17 example, some utilities have offered green pricing  
18 options to their customers.

19 A. Like we did.

20 Q. Like you did. And lots of people took  
21 them. MDU offered them and no one -- almost no one  
22 signed up. Maybe the factor was the price that you  
23 put on that green pricing option. I mean, maybe  
24 other places they offered it a lower rate or maybe  
25 it was the same or whatever. So perhaps part of it

1 is the -- just like it is if you're selling a car,  
2 people look for the best price. Maybe it has to do  
3 with the terms of the offer.

4 A. Mm-hmm. I would agree with you. In fact,  
5 I think that's one of the reasons why we have  
6 expanded that program and now have a dedicated  
7 person responsible to implement that program so  
8 that he can make those exact judgment calls.

9 COMMISSIONER WEFALD: Thank you.

10 JUDGE WAHL: Any further questions from  
11 the Commission?

12 COMMISSIONER CLARK: No.

13 COMMISSIONER CRAMER: No.

14 JUDGE WAHL: Anything further?

15 **REDIRECT EXAMINATION**

16 **BY MR. KUNTZ:**

17 Q. I think in response to a question by Ms.  
18 La Seur you wanted to add something about  
19 quantifying transmission costs at Gascoyne or  
20 Coyote. Did you have some additional follow-up  
21 information on that?

22 A. No.

23 MR. KUNTZ: Then we have nothing further.

24 JUDGE WAHL: Ms. La Seur, anything  
25 further?

1 MS. LA SEUR: No. Thank you.

2 JUDGE WAHL: Mr. Binek?

3 MR. BINEK: No.

4 JUDGE WAHL: Thank you very much, Mr.  
5 Steen. Next.

6 MR. KUNTZ: Montana-Dakota would call Rita  
7 Mulkern.

8 JUDGE WAHL: Ms. Mulkern, as you have  
9 heard me advise previous witnesses, your testimony  
10 is required to be under oath and I'm required by  
11 law to advise you regarding perjury before  
12 administering the oath. Perjury is a false  
13 statement of material fact which you do not believe  
14 to be true, in other words, generally speaking, a  
15 lie. In North Dakota perjury is a Class C felony,  
16 punishable by a fine up to \$5,000, imprisonment for  
17 a period of up to five years, or both. Will you  
18 raise your right hand, please?

19 (Witness sworn.)

20 JUDGE WAHL: Mr. Kuntz.

21 **RITA A. MULKERN,**

22 being first duly sworn, was examined and testified  
23 as follows:

24 **DIRECT EXAMINATION**

25 **BY MR. KUNTZ:**

1 Q. State your name and business address.

2 A. My name is Rita A. Mulkern, and my  
3 business address is 400 North Fourth Street,  
4 Bismarck, North Dakota 58501.

5 Q. Whom are you employed by?

6 A. I am employed by Montana-Dakota Utilities.

7 Q. And what's your position with  
8 Montana-Dakota?

9 A. I am the regulatory analysis manager for  
10 Montana-Dakota.

11 Q. And what are your responsibilities  
12 included in that position?

13 A. Among my responsibilities are doing cost  
14 of service studies. I'm responsible for the fuel  
15 cost adjustments and the purchased gas cost  
16 adjustments now in the states that Montana-Dakota  
17 serves.

18 Q. What's your educational background?

19 A. I have a bachelor of arts degree from  
20 North Dakota State University with majors in  
21 economics and business administration and a minor  
22 in statistics.

23 Q. What's your work experience background?

24 A. I began working at Montana-Dakota in 1981  
25 in the regulatory affairs area and have progressed

1 through that department, and I believe I assumed my  
2 current position in 1999.

3 Q. Have you caused to be prepared prefiled  
4 direct testimony, as well as supporting exhibits in  
5 this proceeding?

6 A. Yes, I did.

7 Q. I'm showing you what should be in front of  
8 you marked as Exhibits MDU-206, 207 and 208, with  
9 Exhibit 206 being your prefiled direct testimony  
10 and 207 and 208 being supporting exhibits. Are  
11 those numbers?

12 A. Yes.

13 Q. And that is your prefiled direct testimony  
14 and exhibits?

15 A. Yes.

16 Q. Do you have any corrections or additions,  
17 changes to make to that testimony?

18 A. I do not.

19 Q. If I were to ask you the questions that  
20 appear in Exhibit 206 today, would your answers be  
21 the same as appears in that exhibit?

22 A. They would.

23 MR. KUNTZ: We would offer Exhibits MDU-  
24 206, 207 and 208 into evidence.

25 JUDGE WAHL: Mr. Breen.

1 MR. BREEN: No objection.

2 JUDGE WAHL: Mr. Binek.

3 MR. BINEK: No objection.

4 JUDGE WAHL: MDU Exhibits 206, 207 and 208  
5 are each received.

6 MR. KUNTZ: Thank you, Your Honor.

7 Q. (MR. KUNTZ CONTINUING) Ms. Mulkern, could  
8 you give the Commission a summary of your  
9 testimony, please?

10 A. Yes, I will. The purpose of my testimony  
11 is to present an overall revenue requirement for  
12 our North Dakota share of the Big Stone II Power  
13 Plant.

14 As testified by Mr. Rolfes in his direct  
15 testimony, the capital cost of Big Stone II is  
16 projected to be about 1.6 billion dollars.  
17 Montana-Dakota's participation in Big Stone is  
18 approximately 19.33 percent of the total and its  
19 share of the investment is approximately 309  
20 million dollars.

21 Generation facilities are allocated to the  
22 jurisdictions on the basis of the sum of the 12  
23 monthly peak demands by jurisdiction. North Dakota  
24 customers contribute 68.53 percent of annual peak  
25 demand. Therefore, the North Dakota allocated

1 share is 212 million, which represents 68.5 percent  
2 -- 68.53 percent of Montana-Dakota's investment.  
3 Ultimately the inclusion allows for funds used  
4 during construction or construction work in  
5 progress, would add 18.8 percent or 6.6 percent,  
6 respectively, to the cost of the plant.

7           The estimated revenue requirement of the  
8 Big Stone II Plant exclusive -- reflecting only the  
9 investment, exclusive of any operation and  
10 maintenance expenses, depreciation expense, ad  
11 valorem taxes, and effects of fuel and purchased  
12 power is 1.87 cents per kilowatt-hour for North  
13 Dakota customers. And I just want to clarify that  
14 is the effect of the capital cost. What I'm trying  
15 to do in my testimony basically is define the  
16 ballpark. And there will be other -- at the time  
17 we come in -- we're not requesting any change of  
18 rates in this proceeding. Any new request for a  
19 change in rates would be in a separate proceeding,  
20 and at that time we would take into account all the  
21 factors that affect the price of electricity or the  
22 price of the generation at the Big Stone II Station  
23 and they would be quantified at that time.

24           That, I believe, concludes my summary of  
25 my testimony.

1 Q. So, Ms. Mulkern, if I understand your last  
2 comment then, the number that you gave -- what was  
3 it, 1 point --

4 A. 1.87 cents.

5 Q. -- 87 cents doesn't necessarily transfer  
6 into the amount of the rate increase that would be  
7 seen as a result of Big Stone II coming on line; is  
8 that correct?

9 A. That is correct.

10 Q. It could be more, could be less?

11 A. Could be more, could be less. One of the  
12 factors that will affect the rates at the time the  
13 plant goes on line is the fact that we are  
14 purchasing power from the MISO market and we  
15 anticipate that when Big Stone goes on line, we  
16 will see a reduction in our fuel costs. So we're  
17 going to have a cost of capital, we'll have some  
18 depreciation, some O & M, but we also will see a  
19 reduction in fuel costs. And so at this time it's  
20 really not possible to quantify what the effect  
21 will be at the time rates go into effect.

22 Q. And Big Stone II, being -- having the  
23 latest technology, would expect to be from a fuel  
24 -- or an energy standpoint be a relatively  
25 efficient plant in terms of cost of the overall

1 power the company uses?

2 A. From what I understand, it will be more  
3 efficient, it will use less fuel, which would --  
4 less fuel means lower fuel costs even, you know,  
5 considering that the price may be higher than  
6 today.

7 Q. But it might replace more expensive  
8 alternatives that would be available to  
9 Montana-Dakota either within its existing  
10 generation or through the MISO market?

11 A. That is correct.

12 MR. KUNTZ: No further questions and we  
13 would tender Ms. Mulkern for cross-examination.

14 JUDGE WAHL: Mr. Breen.

15 **CROSS-EXAMINATION**

16 **BY MR. BREEN:**

17 Q. It's not possible at the present time for  
18 you to predict with any probability the actual cost  
19 this -- these capital costs will turn into for a  
20 rate increase for the customer; is that correct?

21 A. I can't quantify at this time the overall  
22 cost change that customers will experience in 2012.

23 Q. Thank you.

24 A. There are many variables other than the  
25 ones I just discussed.

1 MR. BREEN: Thank you.

2 JUDGE WAHL: Are you finished, Mr. Breen?

3 MR. BREEN: Oh, I'm sorry. Yes, I am.

4 JUDGE WAHL: Mr. Binek.

5 MR. BINEK: I have no questions for this  
6 witness.

7 JUDGE WAHL: Questions from the  
8 Commission?

9 COMMISSIONER CLARK: None.

10 BY COMMISSIONER WEFALD: I have one.

11 JUDGE WAHL: Commissioner Wefald.

12 **EXAMINATION**

13 **BY COMMISSIONER WEFALD:**

14 Q. It's my understanding that -- did you just  
15 -- let me just ask the question. Did you just say  
16 that customers may experience these price increases  
17 in 2012? Is that your plan?

18 A. No. We have not decided our plan yet. I  
19 mean, we're not asking for a rate change at this  
20 time, and, as I mentioned, it depends on if we  
21 request construction work in progress or allowance  
22 for funds used during construction. So that's  
23 another reason I can't quantify exactly what the  
24 rate change will be.

25 Q. So potentially if the Commission decides

1 it's prudent and reasonable to proceed with this,  
2 it's your understanding that probably within a year  
3 you'd come in for a rate increase for customers?

4 A. We have not decided what we will do at  
5 this time.

6 COMMISSIONER WEFALD: Thank you.

7 JUDGE WAHL: Any further questions from  
8 the Commission?

9 COMMISSIONER CRAMER: I have none.

10 JUDGE WAHL: Mr. Kuntz.

11 MR. KUNTZ: Nothing further.

12 JUDGE WAHL: Commissioner Wefald.

13 COMMISSIONER WEFALD: I have a question  
14 for you, sir. Is it possible to call Mr. Steen  
15 back for one more question?

16 JUDGE WAHL: Oh, I'm sure it is.

17 COMMISSIONER WEFALD: Okay.

18 JUDGE WAHL: Thank you very much, Ms.  
19 Mulkern.

20 MR. KUNTZ: I told you you should have  
21 went back to the office.

22 MR. STEEN: I would much rather discuss it  
23 with Commissioner Wefald.

24 JUDGE WAHL: Mr. Steen, you understand, of  
25 course, that your testimony continues under oath

1 and subject to the penalties of perjury?

2 THE WITNESS: Yes, I do.

3 JUDGE WAHL: Commissioner Wefald.

4 **DUANE STEEN,**

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

7 **FURTHER EXAMINATION**

8 **By COMMISSIONER WEFALD:**

9 Q. Okay. That's the problem, you kind of  
10 think a little bit more.

11 A. Sure.

12 Q. I'm still concerned about and thinking  
13 about these peaking plants that MDU has, the 110  
14 megawatts.

15 A. Yes, ma'am.

16 Q. In the proposal before us with the Big  
17 Stone II project, would you characterize that as  
18 baseload power or peaking power?

19 A. Big Stone II will be baseload.

20 Q. Baseload. And isn't MDU also planning to  
21 build peaking units -- well, at least I saw in your  
22 resource plan that in around 2014 that there's  
23 plans for more gas turbines to be put on your  
24 system.

25 A. I believe it's farther out than that, but

1 I don't -- you know, without having that  
2 information right in front of me, I don't know, but  
3 I believe that there's additional need for peaking  
4 farther out into the future, that probably would be  
5 correct.

6 Q. Okay. I saw those dates yesterday, but I  
7 can't find those right now. Okay. The 110  
8 megawatts that you have in gas turbines right now,  
9 those are mainly used for peaking; right?

10 A. That would be mainly used for peaking.

11 Q. So what is the problem with turning some  
12 of that into baseload? You need baseload. You  
13 could do that by using those plants either a  
14 hundred percent, which I don't think anyone in this  
15 room would think would be a very good use because  
16 we all know the prices of natural gas. All right?

17 A. That would be correct.

18 Q. But if you built wind which could offset  
19 the cost for a portion of the time of those gas  
20 costs, what's the drawback of doing that when you  
21 already have those facilities in place that could  
22 be used as baseload?

23 A. Well, the existing combustion turbines, I  
24 think, are already in the system and their capacity  
25 is already accounted for.

1 Q. But that's capacity that is used only at  
2 peak.

3 A. But it is part of the capacity -- let me  
4 use an example, I guess. Our peak load might be  
5 500 megawatts on July 14th.

6 Q. Mm-hmm.

7 A. On the 14th of July it might be 500  
8 megawatts. Of that -- and so we need 500 megawatts  
9 plus 15 percent for reserve margins.

10 Q. Yes, I understand that.

11 A. And so right now those turbines are  
12 already part of that 500 plus 15 percent. They're  
13 already counted. Now, next year we're going to  
14 need another 5 megawatts because our load grows  
15 from 500 to 505. Okay. In order to accredit that  
16 other 5 megawatts, it has to be an additional 5  
17 megawatts of capacity. You can't dip back in and  
18 use what you have. That's already consumed. The  
19 next 5 megawatts has to be new capacity.

20 Q. But you said that wind does have a  
21 capacity value of 20 percent if it's nameplate, so  
22 let's say you put in -- let's say you put in 50  
23 megawatts of wind --

24 A. Yes.

25 Q. -- to balance the capacity that you have

1 with your system right now in megawatts with --  
2 with your gas, 110.

3 A. Right.

4 Q. And I don't know if that's the right  
5 number to balance with 110, but if you did, then  
6 you would have another 10 megawatts of capacity  
7 next year.

8 A. That's exact right.

9 Q. So it would meet -- it would meet your  
10 goal.

11 A. 50 megawatts would give you --

12 Q. 10 additional?

13 A. -- 10 megawatts.

14 Q. But you wouldn't have had to have the  
15 investment of another -- and you already have your  
16 investment of your 110 megawatts of gas peaking  
17 already in place.

18 A. Mm-hmm.

19 Q. So why doesn't that become a lower -- I  
20 mean, a somewhat lower cost resource than always  
21 comparing it to building new, where you're talking  
22 about you have to build new wind plus new gas  
23 peaking if you wanted to add any wind that counted  
24 as capacity?

25 A. You're exactly right in that 50 megawatts

1 would give you 10, but that's, you know, two years'  
2 worth of capacity. Now you'd have to put another  
3 50 in, and so, you know, wind -- wind capacity does  
4 not count for much.

5 Q. But it counts for something?

6 A. It counts for something, that's exactly  
7 correct.

8 COMMISSIONER WEFALD: Thank you.

9 JUDGE WAHL: Commissioner Cramer.

10 COMMISSIONER CRAMER: Yes.

11 **FURTHER EXAMINATION**

12 **BY COMMISSIONER CRAMER:**

13 Q. So that I understand this, if -- maybe I  
14 don't. If you were to count the 110 megawatts of  
15 gas peaking units now toward baseload, would you  
16 then have to find another 110 megawatts somewhere  
17 else, too?

18 A. No, you would not. It's accumulative.  
19 Baseload --

20 Q. I understand.

21 A. On that peak, it's different.

22 Q. But would you have to find some new  
23 peaking?

24 A. You would have to look at the load  
25 profile, is what you have to look at, you know, a

1 daily and a yearly load profile, and that really  
2 kind of determines what you need for baseload as  
3 opposed to peaking. It's a load profile.

4 **FURTHER EXAMINATION**

5 **COMMISSIONER WEFALD:**

6 Q. Has MDU had to go out into the marketplace  
7 for capacity in the past to meet summer peak?

8 A. Yes, we have.

9 Q. How many years would you say in the last  
10 five have you had to do that?

11 A. We've had to go out in the market ever  
12 since the AVS contract expired.

13 Q. Did you have to do that even prior to that  
14 on occasion?

15 A. Yes, we have. On occasion we have had to  
16 do that.

17 COMMISSIONER WEFALD: Thank you.

18 JUDGE WAHL: Commissioner Clark.

19 **FURTHER EXAMINATION**

20 **BY COMMISSIONER CLARK:**

21 Q. This is probably not the right question  
22 for you, but if you know it, let me know. I think  
23 in Ms. Stomberg's testimony she indicated that at  
24 times the cost of going out into the market reached  
25 as high as a hundred megawatt -- a hundred dollars

1 per megawatt-hour or more. Do you know what the  
2 average cost of procuring power in the market --  
3 MISO market has been if you annualized it?

4 A. I do not have that. I do not have that.  
5 But, yes, I do know for a fact because I have been  
6 on the website where power has been more than a  
7 hundred dollars a megawatt-hour in the MISO system.

8 Q. Could that be provided just with a --

9 A. Sure.

10 Q. Okay. I understand what the peak is, but  
11 I would be interested in an average cost.

12 A. An average cost.

13 COMMISSIONER CLARK: Thanks.

14 MR. KUNTZ: Average cost of capacity we're  
15 talking or energy?

16 COMMISSIONER CLARK: Energy.

17 COMMISSIONER WEFALD: Oh, you want energy?

18 COMMISSIONER CLARK: Energy.

19 COMMISSIONER WEFALD: I want capacity, as  
20 well.

21 MR. KUNTZ: I guess we want both.

22 MS. STOMBERG: We don't buy capacity from  
23 the -- you mean in our contracts?

24 THE WITNESS: Yeah.

25 MR. KUNTZ: I'm not sure that the MISO

1 market is -- has got capacity.

2 THE WITNESS: There is no MISO capacity.

3 COMMISSIONER WEFALD: There's a billboard  
4 for capacity. We know about that.

5 COMMISSIONER CLARK: I can tell what you  
6 I'm interested in. In your testimony, Ms.  
7 Stomberg, you had referenced a hundred dollars a  
8 megawatt-hour from the MISO market as an example of  
9 as high as it's reached. I would be interested in  
10 the average. Thanks.

11 COMMISSIONER WEFALD: And I'm interested  
12 in -- like for this summer I think you had to  
13 purchase some capacity.

14 THE WITNESS: That's correct.

15 COMMISSIONER WEFALD: And so maybe you  
16 could share with us the price of that contract for  
17 capacity. It's confidential.

18 MS. STOMBERG: Yeah. We can provide that  
19 under our confidential.

20 COMMISSIONER WEFALD: Okay. Thank you.

21 **REDIRECT EXAMINATION**

22 **BY MR. KUNTZ:**

23 Q. Mr. Steen, I just want to make sure we're  
24 clear on this example, the hypothetical you used.  
25 Let's assume you've got a situation where your