STATE OF NORTH DAKOTA

PUBLIC SERVICE COMMISSION

Basin Electric Power Cooperative	**:**	**Case No.**
Pioneer Generating Station Phase III	**:**	**PU-14-829**
Project Siting Application	**:**	

TRANSCRIPT OF

PUBLIC HEARING

Taken At
14120 Highway 2
Williston, North Dakota
March 2, 2015

BEFORE THE HONORABLE WADE MANN
-- ADMINISTRATIVE LAW JUDGE --

34 PU-14-829 Filed 04/02/2015 Pages: 192
Written transcript of March 2, 2015 formal hearing
Emineth & Associates Court Reporters

A P P E A R A N C E S

COMMISSIONERS PRESENT:

COMMISSIONER BRIAN P. KALK
COMMISSIONER JULIE FEDORCHAK
COMMISSIONER RANDY CHRISTMANN

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FOR THE COMMISSION.

C O N T E N T S

C O N T E N T S (Continued)

C O N T E N T S (Continued)

BASIN ELECTRIC COOPERATIVE EXHIBITS:

(The proceedings herein were had and made of record, commencing at 9:30 a.m., Monday, March 2, 2015, as follows:)

JUDGE MANN: Good morning, everybody. We're now on the record. And let the record show that it is 9:30 a.m. on March 2nd, 2015. We are present at the Ernie French Center of the North Dakota State University Williston Research Center in Williston, North Dakota, for the public hearing in the matter of the application of Basin Electric Power Cooperative for a certificate of site compatibility to construct and operate 12 reciprocating internal combustion engines, each generating a maximum of 9.22 megawatts of electricity, to be constructed adjacent to three existing 45-megawatt simple-cycle combustion turbines in Williams County, North Dakota. This is Case No. PU-14-829.

My name is Wade Mann, and I am the procedural administrative law judge designated to preside over this matter. And at this time I will take appearances for the record, beginning with the applicant.

MS. JACOBSON: Casey Jacobson, Basin Electric Power Cooperative.

MS. LAMBERT: Anine Lambert, Basin Electric Power Cooperative.

JUDGE MANN: And advisory staff.

MR. SCHMIDT: Brian Schmidt, appointed Special Assistant Attorney General for the advisory counsel for the Public Service Commission. And next to me is Victor Schock, public utility analyst, and we are going to request that Mr. Schock be allowed to ask questions today.

JUDGE MANN: Miss Jacobson, any objection?

MS. JACOBSON: No, Your Honor.

JUDGE MANN: Mr. Schock, you'll be able to directly ask questions of the witnesses.

Also present today are the members of the Public Service Commission, Commissioner Brian Kalk, Commissioner Julie Fedorchak and Commissioner Randy Christmann. I'll be calling on the commissioners shortly for opening comments after we address the procedure for today's hearing.

Before we do that, just the issues to be addressed for today's hearing are threefold. The first issue is, will the location, construction and operation of the proposed facility produce minimal adverse effects on the environment and upon the welfare of the citizens of North Dakota?

Second, is the proposed facility compatible with the environmental preservation and the efficient use of resources?

And, third, will the proposed facility location minimize adverse human and environmental impact while ensuring continuing system reliability and integrity and ensuring that energy needs are met and fulfilled in an orderly and timely fashion?

Basin Electric will give its presentation of its case first, call its witnesses, present any documentary evidence it wants into the record. Any witnesses that Basin calls, advisory staff will have the ability to cross-examine those witnesses. The commissioners will also have the ability to ask questions. Once the commissioners have asked their questions, then we will allow for follow-up questions in the same order, same manner.

Once Basin has completed the presentation of its case, then any members of the public who wish to offer any testimony will have the ability to do so. We'll call on them to come up to the table. They will be sworn in like any other witness and be subject to questioning from counsel for Basin Electric, advisory staff and the commissioners.

I serve as the procedural administrative law judge in this case, meaning I don't make the decision -- the final decision on the application. That will be made by the Public Service Commission. No decision will be made today. The hearing is being recorded and the transcript will be available for later review.

Are there any questions with respect to procedure before we continue? Miss Jacobson, anything?

MS. JACOBSON: No, Your Honor.

JUDGE MANN: Mr. Schmidt?

MR. SCHMIDT: No, Your Honor.

JUDGE MANN: Okay. And at this time I will call on commissioners for comments. Commissioner Fedorchak.

COMMISSIONER FEDORCHAK: I'll make a couple brief comments, but then I think this is Brian's portfolio, so he'll go first.

JUDGE MANN: Oh, I'm sorry.

COMMISSIONER FEDORCHAK: But just to get things started, thanks everyone for being here, appreciate having this opportunity to talk about this important program -- or this project. And really driving out here this morning, listened to

Dennis Hill several times on the radio talking about the need for power in western North Dakota.

And so it's been a few months since we've had discussions with Basin and talked about your latest load forecasts and talked to local co-ops, who are here too, to hear from you guys on how things are going, what you're seeing, how things might have changed with the slowdown in drilling and the activity out here in the oil patch and just get a good sense for, you know, how we plan most effectively for something that's really volatile and an industry that changes on a dime.

So look forward to our discussion today. It's an interesting project just the way you've proposed it with the 12 different generators, smaller generators with lots of flexibility, so I look forward to hearing more about that as well.

So thanks for your work on the application. You guys always do a good, thorough job and I look forward to a productive hearing.

JUDGE MANN: Commissioner Kalk.

COMMISSIONER KALK: Thank you, Your Honor. Just to follow up a little bit more on what Commissioner Fedorchak said, the big thing for us when we come out to these hearings is to be

situated for public input. So for the members of the public out there, this is your chance to say what you like or don't like about the project, so there will be a time when that comes. And that's perhaps the biggest reason we're out here, is to make sure we get access to people's individual thoughts about projects.

We are in Williston today. I'm glad to be at the NDSU Center, of course; right? But this is also the girlhood home of Commissioner Julie Fedorchak for those of you that don't know that. And the address to your home is?

COMMISSIONER FEDORCHAK: I can't give that out, Brian, because there would be such a flood of people that would drive by it.

COMMISSIONER KALK: Very well then. But it is downtown on Second Street.

Anyway, just thank the company for putting the prefiled testimony in. That really helps out a lot. I didn't see anything that really jumped out at me as out of the ordinary in this particular case except for this is a new type of unit that the Commission hasn't seen before, so I may ask some technical questions about that. And maybe if you want to -- Casey, as you flesh through, if there's

anything different about the air permits or the emergency response, the same kind of questions that you've heard us ask before. I mean, I think everything is certainly in order, but we haven't seen this kind before, so that will be -- I'm glad to see you experimenting with something different that may fit better, but I may have some questions that we don't usually have.

And, finally, as members of the Public Service Commission, we've got Jack Schuh and Casey Furey joining us in the audience. You two -- one lady and one gentleman -- raise your hand. They're new to the Public Service Commission. We always bring in new young talent. We're excited to have them aboard. And if you look too, we see our other attorneys, Brian over there and Victor. I now notice that the Public Service Commission, the old people are the people sitting up here. So it's good to see that we're continuing to hire good people. And I thank all the members of our staff too for their work before we get to the hearing. So thank you.

JUDGE MANN: Commissioner Christmann.

COMMISSIONER CHRISTMANN: I think most everything has been said. I thought it was a good

application. I don't have very many things tabbed here that as I went through it, that brought up questions, and I expect that you'll probably have most of those answered by the time you're done with your initial presentation. But we'll see once as we go along what there are for questions.

I also want to just reiterate, I guess, what's already been said, but if there's anybody here from the public, please don't feel at all like you're disturbing a process or something to testify. It's the reason why we're out here as opposed to just having the hearing in Bismarck or somewhere that might be more convenient for us. We want to hear from the public. It helps us to make the best decisions possible when we get feedback and information from the people who actually live in the area.

So if anybody is thinking of speaking and not sure of the process, the reason we have you go sit through the whole initial part of the hearing is that it's important that you have your comments and your responses to the actual plan, not just what you might have heard uptown or something like that. So we always have the company go first and present what it is that they're actually proposing

to do and then we open it up for the public, and we really hope to hear from members of the public. Like I said, it helps us do the best we can. So looking forward to a good hearing.

JUDGE MANN: Miss Jacobson, do you have an opening statement?

MS. JACOBSON: No, Your Honor.

JUDGE MANN: Okay. You can call your first witness.

MS. JACOBSON: Your Honor, this might be the appropriate time to enter the exhibits into evidence. I've provided copies to Mr. Schmidt last week, and I believe the plan was to just stipulate to their admission.

JUDGE MANN: Ten exhibits?

MS. JACOBSON: Yes, Your Honor.

JUDGE MANN: Mr. Schmidt, any objection to admitting Exhibits 1 through 10 into the record at this time?

MR. SCHMIDT: No objection, Your Honor.

JUDGE MANN: Exhibits 1 through 10 are admitted.

MS. JACOBSON: Thank you. The first witness is Mr. Josh Rossow.

JUDGE MANN: Good morning, Mr. Rossow.

MR. ROSSOW: Good morning, Your Honor.

JUDGE MANN: Before you testify, I'm required to give you an oath and I need to advise you of the penalty for perjury in North Dakota. It's a Class C felony, punishable by a maximum fine of $10,000, maximum five years imprisonment, or both.

JOSH ROSSOW,

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

JUDGE MANN: Okay. Go ahead.

MS. JACOBSON: Thank you, Your Honor.

DIRECT EXAMINATION

BY MS. JACOBSON:

Q. What is your name, business address and occupation?

A. My name is Josh Rossow. I'm the project manager for Basin Electric Power Cooperative. My business address is 1717 East Interstate Avenue, Bismarck, North Dakota.

Q. What is your employment history?

A. I've been employed with Basin Electric for eight years. I started off as a performance engineer at the Leland Olds Station, then I was an environmental coordinator for all of Basin

Electric's gas and wind generation, and presently I'm a project manager in the project management and construction group. Prior to that I was an engineer with a Bismarck company called LAS International.

Q. And what's your educational background?

A. I received a bachelor's degree in mechanical engineering in 2004 from South Dakota School of Mines & Technology.

Q. And what are your responsibilities with the proposed project?

A. I am the project manager for Pioneer Phase III. My responsibilities include coordinating the various aspects of the project, such as siting, technology selection, permitting, engineering, and so forth, as well as coordinating utility interconnects such as gas and water and transmission.

Q. And can you please describe the general location of the proposed project?

A. The Pioneer Generation Station is located approximately 15 miles northwest of Williston. More specifically it is six and a half miles north of U.S. Highway 2 on Williams County Highway 5.

Q. And can you please describe the status of

Phase I and Phase II of the Pioneer Generation Station?

A. Pioneer Generation Station Phase I and Phase II consisted of three 45-megawatt simple-cycle combustion turbines. Those phases began construction in 2012 and they were commercially available for operation in March of 2014.

Q. And can you please describe where the proposed project is in relation to the existing units?

A. If you look at the aerial photo up here, Phase I and II are located there, and Phase III will be located directly south of the existing units.

Q. And can you describe why this type of technology was chosen for Phase III instead of the existing technology that exists through Unit I and Unit II?

A. A generating unit is typically most efficient when it's at its maximum capacity, and because these are approximately 9 megawatts instead of a larger 45-megawatt unit, we're able to operate the units at full load and start and stop the engines rather than run them at partial load.

Along with that, because of the critical

nature of power supply in this area, having 12 generating units, there's a lot of inherent redundancy because of lots of duplication of equipment.

Q. Does this technology exist for the generation of electricity in North Dakota?

A. It's actually very common to use reciprocating engines for electricity generation except we normally see them as diesel engines. In this case it's a spark-ignition engine, and it's much larger than reciprocating engines that we normally see. To my knowledge, these will be the biggest reciprocating engines in North Dakota.

Q. Can you please describe the schedule for the proposed project?

A. If all permits and approvals are received, we intend to begin construction in May of 2015, and construction will largely be complete by April 1st, 2016. After that we will begin a detailed process of commissioning and checkout. And after that is complete, the units will be available for commercial operation.

Q. And what is the cost of the proposed project?

A. The budget for the project is $161.2

million.

Q. And can you please describe the workforce needed to construct the project?

A. The workforce will peak at approximately 225 workers. These workers will primarily consist of skilled folks, such as electricians, pipefitters and millwrights, and because of the labor demand in this area, we would anticipate most of these workers will come from out of state.

Q. And can you describe the water and gas supply for the proposed project?

A. For the gas supply, we receive the gas from a WBI Energy-owned pipeline. If you look at the aerial photo, across Highway 5 from the project is the ONEOK Stateline Gas Processing Plant, and WBI has the Stateline Pipeline, which delivers gas from ONEOK Plant to the Northern Border Pipeline, and we have a small -- or a short lateral off of that Stateline Pipeline, and that delivers gas to the Pioneer Generation Station, and that pipeline is able to accommodate all the generation on the site.

On the water side, the Williams Rural Water District has a pipeline that delivers water to the plant. However, Phase III will require very

little water, primarily for potable water uses for the employees and to make up water to the cooling systems occasionally, as well as refilling the fire protection tank in the event of an emergency.

Q. Is there a backup fuel for the proposed project if natural gas is unavailable?

A. The engines are normally designed to combust natural gas, but they are able to operate on propane if a backup fuel supply is necessary. Currently we're not required to have a backup fuel supply. However, in the fall of 2015 Basin Electric will be joining the Southwest Power Pool, and if and when Southwest Power Pool requires a backup fuel, we could install propane storage on site and combust that fuel. And depending on SPP's requirement, that amount of storage will probably be between 20,000 and 120,000 gallons.

Q. How and where will the project interconnect with the electrical grid?

A. Mountrail-Williams Electric Co-op owns the Stateline Substation over across Highway 5. Pioneer Station Units 1, 2 and 3 currently interconnect to that substation and they will remain interconnected there. The Sheridan Electric Co-op owns a transmission line that runs along the

north edge of our property, and we will interconnect into that line.

Q. Have there been any emergency response plans developed for the proposed project?

A. Basin Electric has an emergency response plan for the existing units, and the Phase III -- that plan will cover Phase III as well. The plan is -- covers a number of different emergency scenarios such as fire or medical emergency or hazmat or possibly even weather-related emergencies.

And it's also worth noting that Phase I and II use anhydrous ammonia as a reagent, and we store that ammonia in excess of 10,000 pounds, so we are required to have a risk management program by EPA rules, and part of that is we are required to work with the local emergency planning committee, and so we do that as well as we invite local emergency responders out to the site annually so that we can familiarize them with the site and how it operates and what our emergency procedures are.

Q. How many full-time positions will be created by the proposed project?

A. There will be six full-time operator

technicians added to the staff.

Q. Will this -- can this project be operated remotely similar to the other units that exist?

A. Yes. The project will be staffed Monday through Friday during normal business hours. On weekends and after hours, the units will be able to be remotely operated from Basin Electric headquarters in Bismarck just like all of our other peaking generation.

Q. Would this site be able to accommodate any additional generation or projects?

A. There is adequate area and gas supply to support additional generation on this site. However, at this time we don't have any plans for additional generation.

MS. JACOBSON: No further questions, Your Honor.

JUDGE MANN: Okay. Mr. Schmidt.

MR. SCHMIDT: Thank you, Your Honor.

CROSS-EXAMINATION

BY MR. SCHMIDT:

Q. If I ask you a question and you're not the correct witness to answer it, just let me know and I'll table that for a later witness, so feel free to say I don't know and I'll ask somebody else.

Okay?

A. Okay.

Q. In the application it talks about a switchyard, a 115-kilowatt switchyard will be constructed on the facility. Why is the switchyard necessary with the third phase of the project but was not necessary with Phase I or Phase II?

A. In the case of Phase I and Phase II there was an available bay in the Mountrail-Williams Electric Co-op substation to accept a transmission line. However, there are no more available bays, which made it necessary to build a switchyard.

Q. Can you just briefly describe what will be within the switchyard and what it will look like?

A. In a switchyard -- in this case there will not be any transformation of voltages. It will all be at 115 kilovolts. There will be switches there and breakers as well as overhead conductors located within the switchyard boundaries.

Q. How big will this switchyard be? Will there be a building there, or will it be just kind of something that sits on the ground, or what are we looking at?

A. You can see the -- I don't know what the exact dimensions are, but you can see the relative

size of the switchyard on the aerial photo, and there will be one small control building on the site and, again, I don't know what the dimensions of that are, but it is quite small.

Q. In your prefiled testimony you indicated an existing 1800-foot transmission line that connects PGS to the existing ONEOK plant. You further stated that this pipeline is able to accommodate Phase III with only modifications to the meters. What type of modifications to these meters will be necessary to make this pipeline compatible with Phase III?

A. The metering station is located right there on the property, and the meters -- the revenue meters on that metering station cannot measure flows low enough to -- for the small engine size as well as measure high enough to measure the flows when all of the generation is running. So it's just a matter of installing different meters that are ranged or calibrated across the range of flow.

Q. You were talking about how this Phase III can operate on backup fuel, specifically it was liquefied propane gas. What type of scenario would require this project to run on backup fuel?

A. In the event that there was a pipeline emergency where the pipeline was not available and we were called to run, we could then operate on the backup fuel, or perhaps if there was a major gas shortage where we could not even physically purchase gas if needed.

Q. Are there any additional safety concerns to consider if this plant has to operate on backup fuel?

A. Liquid -- LPG fuel is quite safe. There are some concerns that LPG gas is heavier than air, so if we were to do that, we would have to install LPG sensors down on the floor level. But for the most part, LPG gas is very safe.

Q. I understand that Phase III is going to be implementing reciprocating engines, and the application refers to them as RICE engines. I'll refer to them as RICE throughout the remainder of the questions.

Now, the Phase I and Phase II operate on a simple-cycle combustion turbine; is that correct?

A. That's correct.

Q. Other than the fact that these RICE engines do not consume any water and they appear to be more reliable, are there other advantages to

using this type of engine over this simple combustion turbine?

A. They are more efficient than a simple-cycle combustion turbine, so they require less fuel and less costly to operate.

Q. Have you had any personal experience with other plants that have used RICE engines?

A. Basin Electric does not own or operate any large-scale reciprocating engine generators. However, it is quite common in the industry to have plants such as this.

Q. Will Basin have to implement any new safety policies with regard to the RICE engines that are different from those necessary to manage a sealed combustion engine?

A. In the case of the simple-cycle combustion turbines, it is not possible to operate -- or excuse me -- to perform maintenance on that unit inside its enclosure while the unit is running. In the case of these engines, they will be located inside of the engine hull and other units may be running while you're trying to perform maintenance on one of the engines, and so there will be an extensive hearing protection program to protect employees.

Q. And how will you ensure that that's implemented?

A. Basin Electric has hearing protection programs at all of our coal-fired power plants as well as our distributed generation power plants as well, and it is a required policy that employees wear hearing protection at all times when out in the plant area.

Q. How long have RICE engines been used for this type of plant?

A. I believe that they've been used at least for 20 or 30 years on this scale.

Q. In the binder with the exhibits, can you turn to Exhibit 9, please. It's a map. On the map in the lower right-hand corner it says Basin Electric Pioneer Generation Station. It has two different colors in the legend, a light blue and a yellow. I just want to make sure that we're on the same map.

A. I'm sorry. I'm sorry. Could you repeat the question?

Q. In the bottom right-hand corner it just says Basin Electric Pioneer Generation Station. Next to it is a legend that has a blue color that says Phase I and Phase II next to it and a yellow

color that says Phase III.

MS. JACOBSON: It's Exhibit 7.

MR. SCHMIDT: Exhibit 7? It's Exhibit 9 in my binder, I guess. Is it Exhibit 7?

JUDGE MANN: In the exhibits that are part of the record now it's Exhibit 7. Maybe in the prefiled it may have been 9. But, regardless, you can go ahead.

Q. (MR. SCHMIDT CONTINUING) As long as we're on the same map, I guess, that's the important thing.

The application talks about how this project will require a 2500-foot transmission line connecting to the Sheridan Electric Cooperative. Is this proposed transmission line the yellow line that runs to the west of the current plant -- it runs in a straight line and turns into the switchyard?

A. Yes. That is correct.

Q. Now, can you just kind of describe where this connects? I know you did on that map up there, but what I'm asking is, here we have a yellow line that runs east and west on the top. Is that the existing Sheridan Electric Cooperative line?

A. Yes. That is correct. It runs across the northern property boundary.

Q. And it intersects right at the property line -- or right at the property boundary?

A. I'm not certain if it's exactly on the property boundary. It might be -- it's very close.

Q. Close. I guess I just wanted to ensure that that yellow line at the top was the Sheridan Electric Cooperative line and not a property boundary line. That's kind of where I was getting with that question, just to figure out where the interconnection was.

If you follow the yellow transmission line to the south, there's an outline of a stormwater pond.

A. Yes.

Q. Do you see which one I'm talking about?

A. Yes.

Q. Are there any concerns with the proximity of this transmission line being that close to the stormwater pond?

A. No. There will not be any transmission structures located near the outflow of the stormwater pond, so there won't be any erosion around the transmission structures.

Q. How deep will this transmission line be buried?

A. It will be overhead.

Q. Oh, it will be an aboveground structure?

A. Yes.

Q. Okay. In the application can you turn to page 6-1. The page has a list of the different permits on it. It's a table.

A. Yes.

Q. In that table it talks about the minor source air construction permit application you submitted in September of 2014. Do you have an update with regard to that application process?

A. I'd like to defer that question to Mr. Miller.

Q. Right below that there's an NPDES permit, then next to it it says, "Would be acquired by Basin Electric's contractor," then there's a variety of things that state, "Permit required if," then there's a laundry list after that. Do you know whether this permit will be necessary for this project?

A. Again, I would like to defer that to Mr. Miller.

Q. I have a feeling I'm probably going to get

the same answer with my next question as well, but I'll ask it anyway.

Do you have an update with regard to the conditional use permit with Williams County?

A. Again, I would like to defer to Mr. Miller.

Q. During your direct testimony you talked about the labor force that will be used for this project. In the application it states that there's going to be approximately 225 employees needed to construct Phase III; is that correct?

A. That's correct.

Q. Does Basin have any plan to ensure these employees will have adequate lodging?

A. The lodging logistics are left up to the contractor to ensure that they have adequate lodging. In construction of the previous phases we have not encountered any difficulty in ensuring lodging.

Q. Will there be any new roads that need to be constructed with regard to this project?

A. Only on the plantsite to access the 115-kV switchyard as well as a road permit -- or road approach on Highway 5.

Q. Does Basin have to obtain any new

easements to construct these roads?

A. I don't believe so. I'll defer that to Mr. Miller.

Q. Will these roads be located solely on property that Basin owns?

A. Yes.

Q. Is it anticipated that any other landowners will be affected by these roads?

A. I do not believe so.

Q. In the application it states that the nearest residence is located approximately two miles away from the site. Are you aware of any inhabited buildings or other residences, either temporary or permanent, that have been constructed closer than that since this application was submitted?

A. I'll defer that to Mr. Miller.

Q. I have some questions with regard to the church that's nearby. Would you like to defer those as well?

A. Yes.

Q. I just want to ask a couple questions about the scope of your application.

In the materials that were provided it indicates that Basin is requesting the entire

120-acre parcel where this Phase I, II, and III are located upon to be identified as an energy conversion facility. Why is Basin requesting such a large area for the purposes of siting?

A. I'd like to defer that to Mr. Miller.

MR. SCHMIDT: I have no further questions.

JUDGE MANN: Mr. Schock, any questions?

MR. SCHOCK: Yes.

CROSS-EXAMINATION

BY MR. SCHOCK:

Q. So you talked a little bit about the efficiency of these RICE engines versus the combustion turbine. Can you give us some idea of the numbers, you know, so what's the thermal efficiency factor of a RICE engine versus a combustion turbine?

A. The RICE engines will have a heat rate of 8800 BTUs per kilowatt-hour, which means that 8800 BTUs of energy from the fuel is required to produce one kilowatt-hour of electricity. In comparison, the combustion turbines that are at Pioneer have a heat rate of 9500 BTUs per kilowatt-hour.

Q. So basically you can get more kilowatt-hours per therm or per dekatherm of natural gas?

A. That's correct.

Q. How about the CO2 ratings between the two different types of units? I mean, is the RICE engine rated similarly, better?

A. The amount of CO2 produced will be proportionately less than the combustion turbines according to the heat rate.

Q. Okay. So, again, on a per kilowatt-hour basis, you would expect less pounds of CO2 per --

A. Yes, there will be less pounds of CO2 per kilowatt-hour produced.

Q. Excellent. And there was a little bit of talk in the application about the air permit. Is that a better question for Mr. Miller as well? I guess it's questions about what the permits are required for.

A. Yes, Mr. Miller will address that.

MR. SCHOCK: No more questions. Thank you.

JUDGE MANN: Commissioner Kalk.

COMMISSIONER KALK: Thank you, Your Honor.

EXAMINATION

BY COMMISSIONER KALK:

Q. Thank you, Josh, for your testimony. And it sounds like Mr. Miller is queuing up some good

questions here.

I appreciate our Brian and Victor asking a lot of the same questions I was thinking about, but I did have just a couple followups and mostly just the thought process of why you picked the twelve 9 megawatts instead of something larger. So when Basin decides which units to run, will Phase I and II units always run first and then Phase III will kick in, or once this Phase III is built, would then Phase III sometimes be the first mover?

A. That will largely be determined by the Southwest Power Pool market once we're -- once we are in that market, and because these are more efficient, I think typically the reciprocating engine would run first.

Q. Well, that kind of leads in -- you know, your choice to pick what size project you want, but why don't you build something bigger knowing that we're so energy short not only in our region but nationally with all the challenges out there? You're going to -- you joined an RTO. Why wouldn't you give yourself -- why did you rule out building a 90-megawatt gas or something bigger knowing you're going to need it down the road?

A. I would like to defer that to Becky Kern.

Q. Okay. That's a resource queue-up question. Okay.

And then just a couple. The noise profile you said -- you can address that or can someone else better address the noise profile?

A. Mr. Miller will talk about that, but I would like to address a few things that I wanted to address in my testimony but it slipped my mind.

The engines are located in an enclosed building and the building has noise-absorbing liners on the inside to reduce noise as well as exhaust silencers on each of the exhausts. And another source of noise are the air-cooled radiators, and the radiators are specially designed to minimize noise.

Q. Okay. So basically it's going to be quieter than the other kind -- quieter than in the previous -- that you would have seen in Phase I and Phase II.

A. I don't know. I'm not certain how they would compare.

Q. Okay. And then the last two questions. What was the CO2 output? Do you have a number? You know, with reagents it's going to be less than it would be with other types, but do you know what

the discharge number that it would be? Is it an 1800, is it a 1500 PPM, or -- just to get a reference point of what we're talking here.

A. Typically simple cycle peaking ranges from, say, a thousand to 1200 pounds per megawatt-hour. I don't know for certain what these engines will produce, but it will be on the lower end of that range.

Q. Were the -- depending how you look at it, were the pending CO2 rules the reason you looked at this type of generation instead of something else?

A. No, I don't believe that was a factor in our decision.

Q. Okay. And I think -- oh, the last one. The ONEOK Plant, I've been up there quite a bit and we've had some -- quite honestly, some issues with that runoff -- that stormwater plant -- pond to the northeast corner. So we're working on that in separate venues. But in your discussion with the water board, do they have any concerns about how this will change the water flow from west to east and how it might affect the Stateline Plant?

A. Mr. Miller has addressed that quite extensively and I'll defer that to him.

COMMISSIONER KALK: Okay. Thank you.

JUDGE MANN: Commissioner Fedorchak.

EXAMINATION

BY COMMISSIONER FEDORCHAK:

Q. Good morning, Josh. Thank you for your testimony. I think this is your first time before the Commission; is that correct?

A. That's correct.

Q. Well, welcome. A couple followups to Commissioner Kalk. As long as we're talking about the emissions and the EPA, do you know whether this facility will be considered an existing source or a new source when it's operational under the EPA rules? Have you guys looked at that or is it too early to say?

A. As far as CO2 regulations go?

Q. Yeah.

A. This would be a new source.

Q. Okay. So you're preparing to meet the new source standards, whatever they might be?

A. I'll let Mr. Miller address what the new source performance standards are for these units.

Q. Okay. A few more questions on the technology. You talked about some of the benefits of this, the RICE engines and this approach. I haven't been doing this a long time, but I have

been doing it enough to know that every benefit -- everything has drawbacks too. So tell us what the drawbacks of this approach are, this technology.

A. One of the main drawbacks that we have to balance when we're choosing a technology is the capital cost versus the efficiency when it's running, and the reciprocating engines are slightly more capital intensive, but we feel that in this case the improved efficiency makes for a lower lifetime cost than what a simple-cycle combustion turbine would be.

Q. And is this the type of thing you can continue to add on to, you could add, you know, 13, 14, 15, just put more of these engines on the same site?

A. We have designed the site to be able to expand an additional 12 in this direction toward the south if we so chose to, but at this time we don't have any plans to do that.

Q. And so this is Basin's first time using this anyplace in your facility -- in your footprint?

A. We have a very small diesel generator located at our headquarters, but that's less than one megawatt.

Q. So why is that? Why haven't you guys -- if this stuff is so great, why haven't you used it before?

A. I think that it's only recently been viewed as a mature technology and we felt that it would be a good fit in this case. It has been on our radar before, but we felt that it would be a good fit in this particular instance.

Q. Is this type of a generator a good backup for wind and, if so, why or why not?

A. Yes, that is one of the benefits of the reciprocating engines, is that they are able to start and stop fairly quickly. In less than ten minutes they can be at full load. And as I said before, they can be run at -- each engine can be run at full load and peak efficiency, so they are very flexible.

Q. Okay. How much do you anticipate these running based on your load projections?

A. I would like to defer that to Miss Kern.

Q. Okay. And then I think my last -- one question in followup on the noise. From what I was reading, the noise study, it sounds like these are fairly loud. Without the silencers, these would be well above the EPA guideline of 55 decibels. Is

that correct? Is that a correct kind of a read of the noise analysis?

A. I'd like to defer that to Mr. Miller, the details of the noise analysis.

Q. Okay. He can talk through all the noise questions.

Then my last question for you is, something that I'm hearing more about nationally at different meetings is combined heat and power and the potential that has for improving efficiencies and also generating another source for heat for industrial development. That site has a lot of land next to it. There's a lot of industrial development in Williston. Are you guys looking at combined heat and power at any of your locations where you're expanding generation? Do you have those conversations with customers? Is this on your radar, the development of combined heat and power as you add generation and generation and generation throughout this region?

A. Miss Kern would be better suited to answer that question.

Q. Okay. But as an engineer, are you -- is that a technology that you're familiar with and your company is looking at, that you're aware of?

A. We are aware of it. I can't say whether we're actively looking at implementing it, but it is something that we are aware of and familiar with.

COMMISSIONER FEDORCHAK: Okay. All right. I'll talk to Becky about that then. That's all my questions so far. Thanks.

JUDGE MANN: Commissioner Christmann.

EXAMINATION

BY COMMISSIONER CHRISTMANN:

Q. Did you say that each individual engine is either running full output or not, or can you run them 50 percent or 75 percent?

A. Yes, they can operate down to 40 or 50 percent of maximum capacity, but it is beneficial to try to run them at full load.

Q. Are each of the 12 the same size, or are some higher output than others?

A. They're all 9.22 megawatts.

Q. So when it says that it could be 3 to 111, that would be -- the 3 would be assuming one of them is running at --

A. That's correct.

Q. -- a very minimal amount?

A. Yes.

Q. On your photo there, the main rectangle where it says Phase III, does that signify 8.2 acres, or is 8.2 acres just the exact spot where the engines would be?

A. I believe that the 8.2 acres is within the fence line. On Exhibit 7 the fence line is shown. That is surrounding the generation block. It has the circles along the line.

Q. Okay. Inside of there, what's not in the building, is that a like concrete or asphalt, or is it like crushed rock or something where rainwater absorbs down through, or does all the rainwater have to be caught and discharged?

A. Within the road that surrounds the plant area, all of the rainwater is caught and channeled to the stormwater pond. However, there is an area between Phase I and II and Phase III where it's allowed to be absorbed into the ground or take its natural runoff path.

Q. And if you added the propane storage, where would that go?

A. Again, on this Exhibit 7, I believe, by the -- just north of the entrance road coming off of Highway 5 there are two long cylindrical-shaped items. That is where the propane tanks would be

located.

Q. And you said if you added -- you said you had designed it in a way that you could add 12 more engines and those would go to the south.

A. That's correct.

Q. So that area between Unit 3 and Units 1 and 2 where -- on this map where gas lines end, is that additional space that's just being held in case more combustion turbines are added, or what goes in there?

A. That was the thinking, is that, if so desired, we could add Units 4 and 5 combustion turbines in that area, but, again, we don't have plans for that. We just don't like to box ourselves in.

Q. Okay. In the original application -- and maybe this is a Becky question, I'm not sure -- there's a statement that Basin Electric would need additional quick-start local generation in 2016 to help with transmission load serving issues in the Williston Basin area until the 345-kV transmission line from Antelope Valley Station to Williston is completed. So does that mean if that were just done, we really wouldn't need to be building this, that this is kind of a makeshift thing to get

through the next two years, or is this really needed long term?

A. I would like to let Becky answer that.

COMMISSIONER CHRISTMANN: I don't have any other questions. Thank you.

JUDGE MANN: Miss Jacobson?

MS. JACOBSON: Nothing further, Your Honor.

JUDGE MANN: Okay. Mr. Schmidt?

MR. SCHMIDT: Nothing further, Your Honor.

JUDGE MANN: Mr. Schock?

MR. SCHOCK: Nothing further.

JUDGE MANN: Commissioner Kalk, anything else? Commissioner Fedorchak?

COMMISSIONER FEDORCHAK: You can step down. Thank you.

JUDGE MANN: I think we'll take about a ten-minute break and start up with the next witness.

(Recess taken at 10:23 a.m. to 10:38 a.m.)

JUDGE MANN: We're back on the record. Miss Jacobson, you can call your next witness.

MS. JACOBSON: Sure. Miss Becky Kern.

JUDGE MANN: Good morning, Miss Kern. Before you testify, I need to give you the oath as

well. I need to advise you of the penalty for perjury in North Dakota. It's a Class C felony, punishable by a maximum fine of $10,000, maximum five years imprisonment, or both.

BECKY KERN,

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

JUDGE MANN: Okay. Go ahead.

DIRECT EXAMINATION

BY MS. JACOBSON:

Q. What is your name, business address and occupation?

A. My name is Becky Kern. My business address is 1717 East Interstate Avenue, Bismarck, North Dakota. I am the director of utility planning for Basin Electric.

Q. And what is your employment history?

A. For the last two years I've been either the manager or director of utility planning, overseeing the long-term load forecasting and the long-term power supply planning.

Prior to that, for almost ten years, I was a power supply engineer for Basin Electric, performing the power supply studies that went into the integrated resource plan modeling, production

cost modeling, and basically just reviewing what all of our power supply needs were and what made sense for new resource development.

Q. And what's your educational background?

A. I have a bachelor of science degree in electrical engineering from North Dakota State University and graduated in 2002.

Q. And can you please describe your involvement with the proposed project?

A. I was responsible for identifying the need of additional generation through our load forecasting process and subsequent evaluation of our ability to meet our member load obligation. Through the development of integrated resource plans, we were able to identify that additional natural gas generation was needed for this project.

Q. And can you just please describe the load forecasting process and how you went about determining the need for the project?

A. The load forecast process is performed either every other year or every three years with annual updates and are prepared in accordance with the Rural Utility Service general criteria. The load forecast represents a joint effort by our distribution cooperatives, our generation and

transmission cooperatives, and Basin Electric.

In order to assure all segments of the cooperative's structure are involved, a load forecast technical committee is established with involvement of the distribution co-ops, the G&Ts, and Basin Electric. The load forecast is prepared on a distribution cooperative basis, and the general criteria of RUS defines a load forecast as a thorough study of a cooperative's electric load and factors that affect those loads in order to determine as accurately and as practical the cooperative's future requirements for energy and capacity.

Econometric modeling is used to identify factors in the economy that have historically affected electrical consumption. This is accomplished by using regression analysis software that establishes a mathematical relationship between the economic factors and power usage. Different models are developed for each member depending on the type of load that they serve. Examples of these models include residential, oil related, coal related, ethanol, and biodiesel related forecasts.

There are also certain instances that a

mathematical equation cannot be developed to predict the future, and in these cases judgmental forecasts are created with the help of the local distribution cooperative serving the loads because of their local knowledge and expertise. The results of these load forecasts are then translated into a model that represent Basin Electric's system on a delivery point basis. This allows for planning of infrastructure, improvements to be made where needed. The load forecast is then monitored on a monthly basis to ensure that the forecast is performing as expected.

Also due to the detailed information available from the large commercial sector, individual projects can be monitored to ensure that they are proceeding as planned. And if the load deviates significantly from the forecast, modifications can be made for future load forecasts.

So we use that information that is developed with our load forecast, and from the loads by delivery point we evaluate our system by the different general power supply planning areas that we have, and those general power supply planning areas are separated usually by

transmission infrastructure constraints or balancing areas or it could be regional transmission organizations.

We look in those different power supply planning areas that are existing generation and determine what additional power supply is needed to meet our obligations plus a planning reserve. We then evaluate what the different options are utilizing a production cost model, and additional peaking generation was determined in this past analysis that made the most economic sense to meet our growing obligations for our members.

Q. Can you describe the results of the load forecast that justified the need for the project?

A. The load forecast that was utilized was the 2014 load forecast. It was approved by our members' board of directors as well as Basin Electric's board of directors in the spring of 2014. This forecast showed that Basin Electric's entire membership, which went across nine states, was anticipated to grow almost 1,900 megawatts from 2014 through 2035.

Q. Has Basin Electric reviewed that forecast in light of decreasing oil prices?

A. As I mentioned earlier, our load

forecasts, we actually do annual updates and we just completed a new annual update to our 2014 load forecast. That was completed in January and February of this year. And under that we developed a baseline forecast, which was based on the oil conditions that we've seen for about the last year, up until the very end of 2014. We also created or evaluated or developed an alternative case that looked at the lowering oil prices. The baseline forecasts around 2600 megawatts of forecasted load growth in that same time period.

As I mentioned previously, the alternative shows around 2100 megawatts of increased load growth. This alternative case, when we looked at it, we assumed almost half the number of drilling rigs that are operating or had been operating previously, and this also said around 2035 about half as many wells were being produced.

What we are seeing, though, is a more focusing in on where the drilling is happening at least in the near term so they can continue operating, so some of the fringing -- they're moving away from the fringes and focusing in a little bit more, so we've seen probably a slowdown maybe in the long term, a little bit of a slowdown

right now, but we think it will come back.

Q. So does that updated load forecast impact the need for this proposed project?

A. We believe that this project is still needed. This project was needed to meet our entire system load growth, not just western North Dakota. We did site the unit in this area to help when -- the timing of the 345 transmission facilities, but it is a facility that will help meet our North Dakota members, our South Dakota members, as well as all of our other members.

Q. And how does the project affect the reliability of the area?

A. This project, as well as the Culbertson Generation Station located near Culbertson, Montana, and the Lonesome Creek Generation Station located near Watford City, North Dakota, will provide local generation in the event of transmission line outages as well as local area support as needed.

Q. Besides the proposed project, what else is Basin Electric doing to meet the electrical demand of its members?

A. Basin Electric is also developing Phase III of the Lonesome Creek Generation Station to be

in service in 2016. We've also entered into several power purchase agreements for additional wind generation to be online in 2015 and '16. These additional wind power purchase agreements will bring Basin Electric's wind generation portfolio to almost 1400 megawatts of wind when all completed. We've also entered into a number of power purchase agreements to provide additional capacity and energy to meet our growing obligations as we continue to monitor the load growth on our system as well as evaluate the need for additional generation within our service territory in the next three to seven years.

MS. JACOBSON: No further questions, Your Honor.

JUDGE MANN: Okay. Mr. Schmidt?

MR. SCHMIDT: Thank you, Your Honor.

CROSS-EXAMINATION

BY MR. SCHMIDT:

Q. Miss Kern, in some of the material that was submitted to us, you discuss how you're responsible for long-term power supply planning. In the material you defined "long-term" as beyond the next 12 to 18 months. How far in advance did you forecast to determine the need for this

facility? Was anything looked at beyond 2035?

A. Can you repeat your question a little bit for me?

Q. Sure. How far in advance did you forecast to determine the need for this facility?

A. This facility. You know, we did know that we needed additional generation here several years ago. The determination that it was this particular facility on what we were going to do happened in the summer of 2014, but we had been evaluating our need for additional generation for a number of years.

Q. Okay. Now, you're talking about the additional need. You were also talking about forecasting. I guess my question was, how far into the future did you look with forecasting before determining that this project was needed?

A. We always -- we perform a load forecast that goes out through 2035 and are always evaluating what the next resource is or the plan for additional generation. We also look at how much timing does it take when you commit to a project, the permitting it takes, the construction and everything. So if you need three years or five years to get a facility online, you always know

what your options are in order to plan for additional power supply. So we are continually looking at what additional generation we need.

Q. What's the estimated useful life of this Phase III?

A. I think the RUS depreciable life is probably around 32, 33 years, but I would believe our engineering group, and we'd probably have to get outside engineering, but on natural gas combustion turbines it would probably be around 50-year life. As far as reciprocating engines, I'm not that familiar, but I would believe beyond 30 years would be prudent as well.

Q. So it's fair to say that the useful life of this Phase III is expected to go beyond the year 2035; is that correct?

A. Yes.

Q. Have you done any forecasting beyond 2035 with regard to this facility?

A. We are always looking at what our general needs are. We are also factoring in planned retirements or at least wind. We believe some of our existing facilities may need to retire and looking at what additional generation is needed into the future. We are looking at some of our

long-term options that may be available 10, 20 years out into the future.

Q. Is your forecasting limited to the potential demand in the western part of North Dakota, or does it take into account other markets as well?

A. Our forecasting, we do a load forecast for every single one of our member distribution co-ops. We've got 138 member systems in our system. Our members span nine states, so we are always, you know, preparing load forecasts for our membership across those nine states and evaluating it and looking at general other areas in the U.S. economy and everything on what's going on in the economy that would affect growth in our area as well.

Q. So in the event that there is a population plateau or even a decline in the future for some reason in western North Dakota, will this Phase III project have the ability to supply power to other markets within North Dakota and the surrounding areas?

A. This facility would be able to serve other obligations that Basin Electric has outside of western North Dakota as well -- I mean, it's going to be dispatched into the Southwest Power Pool in a

greater marketplace, and so it will be dispatched based on how it's needed, but it will be available for generation in other areas.

Q. In your testimony you discussed how there are some situations where a mathematical formula is inapplicable for the forecasting. Can you just kind of explain what kind of a situation that could be?

A. To some extent, the oil development in western North Dakota, if you look based on history, you know, when you find new areas, it may not be a mathematical equation because history did not foresee that coming, and so we work with the local distribution co-ops to go, okay, you've been talking with your local consumers. You know, are they planning for expanded stuff going on in their service territory.

Q. Just to kind of follow up on that, how can you make a forecast with any degree of -- reasonable degree of certainty when there's no mathematical formula to lead you in that direction?

A. It's a very small portion of our forecasts that use these judgmental forecasts. The majority of our forecast is a mathematical equation, you know, and that's where we do work with, you know,

the local expertise and work with Lynn Helms quite a bit as far as to know what drilling is going to be available or what may be permitted and basically just work with our local distribution co-ops, you know, as they're talking to their consumers, what are their plans, what are their drilling plans and everything.

MR. SCHMIDT: I have no further questions.

JUDGE MANN: Mr. Schock?

MR. SCHOCK: No questions.

JUDGE MANN: Commissioner Kalk?

COMMISSIONER KALK: Thank you, Your Honor.

EXAMINATION

BY COMMISSIONER KALK:

Q. Thank you, Becky, for your testimony.

You talk about judgmental forecasts. Most folks know Mayor Walaker, Denny, from Fargo for years, and he never followed the forecasting from the national flood guys. He went out and looked at it himself and he was always right. So I personally tend to view judgmental forecasting of people with experience as better than any model you can plug in there, but that's my own edification.

So just a couple quick ones. What is your reserve margin now at Basin Electric?

A. Right now we generally follow the old Mid-Continent Area Power Pool reserve margin where they have about a 15 percent reserve margin for our system in North Dakota and South Dakota. Our obligations that reside in Midcontinent Independent System Operator, or MISO, follow that rule set, and our obligations in the Western Interconnection follow the rule sets over there. As we move to the Southwest Power Pool, we will follow SPP's criteria, and right now they have a 12 percent capacity margin, which is about a 13 and a half percent reserve margin.

Q. Okay. So SPP reserve margin is actually lower or higher than MISO?

A. MISO is probably about 12 and a half, 13 percent and SPP would be about 13 and a half.

Q. Okay. So either way you benefited from doing an RTO as far as the reserve margins?

A. Yes, we did.

Q. So even with that benefit reserve margin, you still needed this power?

A. Yes.

Q. Okay. And then the projections, it's really tough, period, to figure out what you're going to need, but how do you go into where you're

going to need that load at to where you put the generation at? How does that tie in to your planning figure?

A. As I had mentioned earlier, we do separate our nine-state system into these power supply planning areas so we have a planning area for our obligations and our resources in MISO, we have the SPP area, and then we also have a Western Interconnection. And so generally when it comes to the SPP area, we're looking at, you know, where is all the load growth happening, where on the transmission system can you actually interconnect facilities. As we go into SPP and are part of a market, additional analysis will be done in the future to conduct where is the best placement as it relates to market dispatch. You want to site your generation where you're going to get paid the most. You don't want to put generation in an area -- low-priced area, otherwise, it may -- the offsets aren't -- you're not necessarily going to get paid enough to actually compensate for your costs of the facility.

Q. Okay. And that kind of ties in to what I was thinking, but you can't -- South Dakota doesn't have the gas that we do, Wyoming doesn't. The

other states don't have the generation opportunity that we have, so it seems to me -- my gut tells me we should be building bigger stuff up here than smaller stuff. I mean, am I missing that?

A. You have to have the transmission infrastructure in place in order to move the generation where the load obligations are. And as you look at the transmission system, you know, what -- also what are the market prices of the units going to get dispatched. We've got a lot of land up here you could dispatch, but we also have a fair amount -- a significant amount of existing generation in the state of North Dakota that do tend to bring market prices in North Dakota down because you have a lot of generation here. South Dakota does not have a lot of generation so you're moving the generation into South Dakota from outside of there.

Q. So the same way that 345 will help bring power to the northwest, can it someday help out going back the other way?

A. Yes, it can.

Q. But it will just take some time. So the unit dispatch, I don't think I fully understand how that -- I mean, I get it, but the differences in

those prices sound like they're pretty big.

A. Well, it can be. The market -- the market dispatches a price for the entire market, so SPP goes from North Dakota all the way down to the northern edge of Texas and they will be dispatching for that entire system, and there will be congestion and losses to get to all the different areas and so you'll be looking at how much congestion and losses are there on the system, so if there's more congestion or more losses on a system, the prices reflect that, and all generation gets paid that price that was cleared by the market. So if the market prices are higher, everyone gets paid higher if they were cleared to dispatch.

Q. Got it. And then a little more local question. How could an MDU customer in Williston benefit from this plant being built?

A. Well, right now MDU, their loads and resources are in MISO. This facility will be in SPP. They do benefit that we are an interconnected facility and that there is access to additional generation in this area that would also help that -- serve that load, but they are part of a different market as well.

Q. So they'll have to go to the market, so it could come from you or it could come from a wind farm somewhere else. Is there a way that you can have an agreement with MDU to give them firm supply of power since you're in different power pools, or are those days kind of gone?

A. We can continue to have bilateral agreements with other utilities. Just like I mentioned, we signed -- executed power purchase agreements. We are constantly looking at is there ways that you can buy surplus generation off of another counterparty to delay the installation of a new-build facility and avoid -- I shouldn't say avoid, but delay that capital cost an extra year or two, you know, so that when you do bring on these larger facilities, you can actually operate those facilities more where they were designed to.

Q. Okay. Do you -- do you contact MDU when you build your generation? What's your relationship on a day-to-day basis so we're not -- we're building the right size generation for our region instead of you build a bunch of 9-megawatt peakers and they build some? What discussion do you have with MDU in this area?

A. We have had some discussion with MDU. We

did talk here in 2014 about the possibility of jointly developing something. It did not end up panning out. You know, we did talk for a couple of months, and it just made more sense for Basin to do ours and MDU to do theirs. Siting of those resources, you know, where do they need generation, where do we need generation becomes a big discussion point.

Q. Is it getting harder because there's now two RTOs that you're operating?

A. That does bring additional challenges because we do need our generation in SPP and they want their generation in MISO.

Q. Got it. And the last question, Becky. These power purchase agreements you signed for the wind farms, are these wind farms that we've approved that are being built now or are they yet to be approved?

A. I believe some of them have come in front of you. I do not know if all of them have. But they are -- there's five new wind projects. I believe four of them are in North Dakota to be online in '15 and 2016.

COMMISSIONER KALK: Okay. Thank you, ma'am.

JUDGE MANN: Commissioner Fedorchak?

COMMISSIONER FEDORCHAK: Yes.

EXAMINATION

BY COMMISSIONER FEDORCHAK:

Q. Thank you, Becky. It's always interesting to hear from you. We were kind of getting regular updates there for a while and now we haven't, and I think we're going to probably be seeing you a lot in the next couple of months. But I do want to have you go through in a little bit more detail some of the load forecast materials that are in the application, but before we do that, I have a couple other kind of questions.

You said something that was surprising to me, so now I need to hear more about this, and Commissioner Kalk followed up on it a little bit, but I'm still a little confused. You said that you site the generation where you're paid the most for dispatch.

A. That's one criteria that goes into siting of generation. You've got transmission. Can you interconnect the facility into the transmission system, do you have fuel supply, do you have water if you need it. But one additional piece that's being part of a market now in the future is you

want your unit to get paid more if you're going to dispatch it. You've got certain costs, your fuel costs, O&M costs. You're only going to actually generate if the market is high enough that you exceed those costs.

Q. So you said that -- you kind of indicated that there's a lot of generation in North Dakota so the price here isn't probably as competitive, but South Dakota is not the same so it might be more advantageous, if I'm hearing you correctly, to build more generation in South Dakota?

A. Not necessarily. I mean, that's something we're looking at as far as our next resources, you know, where are our next resources beyond Pioneer Phase III and Lonesome Creek Phase III. Those bring additional support in western North Dakota to have that local generation in the event of reliability needs and stuff like that, you know, the timing of the 345 transmission build-out, local issues that may be going on in that area, but we're evaluating our entire system to see where maybe -- that next resource, where should we site it.

Q. Tell me, how would you get -- how would the pricing be different in South Dakota versus North Dakota.

A. I haven't looked at any specific -- anything right now, you know. Our system that we operate is not part of a market as of right now. It joins as of October 1, 2015, so there is no actual information that we can say that, you know, this is the price differential as of right now. Once October 1, 2015, happens, we will see that price differential. Right now forecasts are being made based on models that have been developed, but right now we don't know how it's going to actually operate once we're in SPP.

Q. Okay. A slightly different issue, but you mentioned all the wind that you're bringing on. Tell me, what are the strengths and weaknesses of wind for meeting the load that we have in the oil patch?

A. The strengths that wind brings is it's a fuel offset. You know, you can get some very low-priced wind these days. Prices right now are very low. We can bring the energy value when it's operating to our membership. When it is generating, it does typically avoid the running of generation through a natural gas combustion turbine. However, it does not bring a dispatchable resource, so when you need the power and the wind

is not generating, you do need to have other facilities that can dispatch when you need it, and that's where we've got Pioneer, Lonesome Creek, we've got other peaking generation facilities that can ramp up if wind is not available.

Q. Are there any technical difficulties you have experienced with wind in terms of voltage and some of the weaknesses? We've heard from a reliability standpoint that wind just doesn't function the same way on the grid as power generated by, you know, big, large moving pieces of steel.

A. It can change on an instant. It can be windy one moment and not the next and all of a sudden you lose generation or it comes -- it ramps up very quickly, you know, so you have to have generation on standby. That's where your regulation comes into play. You know, you've got to have facilities that are capable of moving up and down when wind moves up and down to move in an opposite direction.

Q. And currently who manages those fluctuations?

A. Currently Western Area Power Administration is the control area operator in this

area. Once we join the Southwest Power Pool, SPP will become the control area operator and they will be monitoring, and I believe Western Area Power Administration will be providing some local support in this area as well.

Q. Was that a significant factor in the company's decision to use these RICE generators versus the bigger combustion turbine?

A. You know, as Josh mentioned, these, you know, being twelve 9-megawatt units, we have the ability to provide very rapid response resource. You know, you can get them up and operating in ten minutes, you can get up to 9 megawatts, you can ramp them up fairly quickly. You know, you can provide that additional support. We can get some ancillary services out of these resources being able to provide quick start or regulation capability if we needed to.

Q. And as a resource planner, are you looking at any sort of a sweet spot for the amount of wind or renewables that you think that your system should have to function, you know, reliably? Do you think that there's a cap like at a certain percentage of total generation capacity you want to stay there or below? Are you looking at that type

of a formula?

A. We haven't necessarily looked at a cap, but we are constantly monitoring how much wind generation do we have within our system, does it make sense to continue to operate at that. You know, we are one of the few systems in the United States that are growing right now. We've got the capability, you know, and ability to add generation.

I know a number of utilities have wanted to add more renewables to their facilities, so they're looking at shutting down your more stable coal-based power plants in order to add wind generation, you know, so it will be interesting to watch the reliability of those systems in the future.

With us, you know, we're not looking to shut anything down. We're trying to optimize what we have as we add additional generation into our portfolio.

Q. Do you know offhand the percentage of renewables you have currently, both in capacity and then in actual function how much is coming from -- how much energy use is actually coming from your wind resources?

A. I cannot recall an exact percentage, but right now I can state that today we have around 700 megawatts of wind generation in our portfolio and we've got around 5000, maybe a little more than 5000 megawatts of generation, so that's on a capacity basis.

Q. And you don't know the actual energy?

A. The energy is probably in that 15 percent range -- 10 to 20, but maybe around 15 percent.

Q. Okay. And then you heard me ask Josh about the combined heat and power. Can you talk about how your company is looking at that, or could in the future, anything that you can share with your guys' participation in or potential participation in combined heat and power projects?

A. I think, you know, we would be more than interested in having discussions with anyone that -- you know, any industrial person that would be interested in having some of those discussions to see if it does make sense within our service territory and in a facility that we're building or could potentially build into the future.

Q. But as of now you haven't had anyone reach out to you?

A. Nobody has reached out right now. We are

internally looking and evaluating very preliminarily with our Dakota Gasification, the Great Plains Synfuels, you know, is there any sort of opportunities there. I don't know if anything would materialize or not, though.

Q. Are any of the local economic developers in contact with you about that type of thing or the State Commerce Department looking at those?

A. I personally haven't heard anything.

Q. Okay. Then if you could open the application and turn to the section that, I think, you probably put together or had a lot of input in, which is the load forecast, so it's 1-21 in the introduction section. And then maybe go to actually 1-24 and there's that map there. If you could just kind of walk through the maps on those two pages, then I'll have you jump ahead to the last couple of pages on like page 30, 31, 32. Just -- you don't have to elaborate a lot, but just kind of walk through these. You said something earlier that I didn't think matched this, so I might have heard you wrong.

A. This area here on page 1-24, the graph is entitled Williston Basin load forecast, so this is just looking at the Williston Basin area in western

North Dakota from around -- it's looking like about 2013 to 2014 time period through 2035, around 1600 megawatts of load growth in Williston, North Dakota -- or the Williston Basin area. When I mentioned earlier around 1900 megawatts, that's our entire nine-state region.

Q. Mm-hmm. All right.

A. You can see the majority of our load growth last year was -- you know, two-thirds, three-quarters of it was in the Bakken area.

Q. Where do you see that? Is that on the map, or are you just saying that?

A. No. I'm just saying 1600 megawatts of roughly 2000.

Q. Okay. So then the next one walk through.

A. Again, this is the Williston Basin area. This is the load growth and it's just on a monthly basis. The previous one was an annual peak. So this is just showing the line would represent the forecast that was prepared, and the green bars would represent the actuals by month that have occurred just to show how is our forecast for the Williston Basin area tracking to actuals.

Q. And do you have these updated through January '15 now? Is it fairly accurate?

A. It is still fairly accurate. I don't remember -- you know, we're probably within 50, 70 megawatts, you know, within there.

Q. All right. Okay. Then jump ahead to page 30, and you can just kind of buzz through these last three charts too.

A. Now, this would be our entire system, so our entire nine-state area. The first one, Figure 1-6, would be our total member requirements by sector and so it's identifying how much of our member systems are residential, small commercial, large commercial, oil, ethanol, so you can see the different sectors within our nine-state area.

When you go to page 1-31, Figure 1-7, this would be an annual demand by power supplier. So our member cooperatives, most of them have a Western Area Power allocation and some of them have some other power suppliers, so Basin is the supplemental over and above the Western Area Power allocation that they have, and so our obligation to our membership would represent the blue in that graph, and they've got a base amount being supplied by Western or someone else.

Q. Okay.

A. And then 1-32, this would just show the

Basin annual demand forecast. And this one's a little deceiving. It is an annual demand. It could be summer season, it could be winter season, so typically when I've mentioned 1900 megawatts, that's a consistent season. This is just looking at an annual peak.

Q. Okay. The one thing that I haven't seen in here, and maybe I just missed it, is a schedule that kind of takes these maps with the demand and shows the company's plans for bringing on generation to meet those. Maybe you can point me to that.

A. As we go further into here, I think starting on page 1-47, this is where we break our system into those power supply areas. So 1-47 would be our western system, and this is a surplus deficit on a capacity basis. So this is showing our western system, the western interconnection, so we're surplus in our western interconnection.

We flip to page 1-48, we have an eastern system, but that is made up of both SPP and MISO obligations, and so that's where you can see that we are starting to fall deficit.

When we go to 1-49, that would be our old integrated system which is now becoming the

Southwest Power Pool system, and you can see we're deficit in '16, and that's why we need these facilities to meet our obligations in '16.

COMMISSIONER FEDORCHAK: Mm-hmm. Okay. I think that's it for me. Thanks, Becky.

JUDGE MANN: Commissioner Christmann.

EXAMINATION

BY COMMISSIONER CHRISTMANN:

Q. What kind of price do you need to run these engines per megawatt or kilowatt?

A. I guess depending on the gas price. You know, if we say --

Q. At the current gas prices.

A. -- $4 a million BTU or $5 a million -- per dekatherm, and as Josh mentioned earlier, I think about 8800 -- we could round it to 9000 just to make the math easy on us, but 9,000, you would say 9 times 5 for $5 a dekatherm would be $45 a megawatt-hour just for the fuel. That doesn't include any O&M. The heat rate was slightly better than that. Gas prices right now are a little below $5, so I would guess in that $35 to $45 for fuel only.

Q. So at your $4 gas -- to make sure I wrote it down right --

A. $4 --

Q. -- it would be about $45 per megawatt just for the fuel?

A. $4 -- 4 times 9 would be 36.

Q. Okay. Do you forecast an amount that you think that these engines would be running in your -- or do you just figure it on peak seasons, or how do you plan that?

A. When we do our analysis and we determine what type of facility we need, a peaking unit is what was determined was needed because we knew we needed something that was going to operate less than about 20 to 25 percent annual capacity factor. That's why peaking was what was selected. You know, as we look into the future, it may be less some years, you know, lower -- you know, maybe 5 percent some years, or it could be closer to 25 percent in some years depending on the timing of new resources and where market conditions and gas prices and everything else is. But I would guess somewhere less than 25 percent.

Q. When you're -- you talked about the membership and making your forecast and the fact that right now wind is very cheap. So do you calculate in that your members as citizens also

have to pay some taxes to pay for the tax incentives that are available for renewables, or do you only calculate in the costs that the company deals with directly?

A. And you're talking about renewable energy objectives, that kind of --

Q. Correct. Production tax credits for wind primarily.

A. Okay. If there's a production tax that somebody is getting from that, you know, I mean, that would be reflected in the price that we're paying for in the power purchase agreement since we generally do power purchase agreements, so those are factored into the prices, so somebody else has taken on that they're getting the production tax credits for those.

If we are talking about renewable energy objectives or obligations that certain states have obligations to have certain renewable energy credits to meet state mandates, we do factor in that if we've got members that have obligations in certain states that have those obligations, that we plan to make sure that we can meet those obligations.

Q. My point is really more that when one

builds anything with subsidies available to build it, it isn't a part of your cost because they're able to sell it to you cheaper than it would be if it were not subsidized.

A. Right.

Q. But as a member of a cooperative, is there anything ever calculated in for the fact that your members, if you build this, as taxpayers are going to have to pay for the cost of those government subsidies that whoever you purchase the power from received?

A. We haven't necessarily looked at it like that, you know, I guess, not calculated it out like that right now. You know, basically just look at, you know, what does the federal law allow for the production tax credits.

Q. Is there anything other than just the cost of the power, anything with inertia or anything like that that you figure in? It seems to me with the support that's available for wind right now, you know, we are in sort of a cycle here where you build some wind power and then we come up here and we build some peaking power, then you build some more wind power and build some more peaking power. But at what point does, you know, some kind of

baseload generation, a combined-cycle gas plant or something -- how does that figure in?

A. That does figure in to all of our future planning. As a note, up until Basin started developing wind itself or entering into contracts for wind generation, Basin was probably 95 percent baseload power inside of its generation portfolio. We have significant surpluses during off-peak and colder-month time period because we were 95 percent coal-based generation.

You know, as we go out into the future, we're looking to develop some sort of optimal portfolio. Your obligations aren't flat year-round. You know, they cycle during hot times, cold times, you know, at nighttime, daytime, and so you're trying to develop an optimal portfolio, which is a mixture of baseload, intermediate, peaking generation, and where does wind fall in there.

You know, so because Basin has so much baseload generation, we have not needed to develop the baseload in the recent last eight to ten years. We are evaluating in the future, you know, when does Basin need additional baseload generation, at what point, you know, will we retire some of our

existing resources, is it 20 years from now, you know, what are our options going to be.

So we will be factoring that in as well as, you know, as our systems continue to grow, we've got more than 5,000 megawatts today of generation, and as we add more generation into the future, you know, what's that right mix of baseload, intermediate and peaking generation.

Q. And you really said the words that I couldn't come up with, but from my perspective, one of the most important things that I think we do here is searching for that optimal mix --

A. Yes.

Q. -- that you talked about.

A. Mm-hmm.

Q. So at this point in time what do you feel is the optimal mix for an upper midwest state like this?

A. It all depends on what your obligations are. You know, are they rural, are they urban. You know, what type of a load factor do your consumers have. You know, are you a 50, 60 percent load factor obligation. Are you a 70, 80 percent load factor obligation. Every utility is going to have a slightly different optimal portfolio to meet

their obligations.

You know, Basin and its members probably have a 65 percent load factor on average, you know, so you need some -- some fair amount of baseload generation, an amount of intermediate. You know, you could throw numbers out, you know, maybe 50 to 65 percent baseload, some magnitude of intermediate, and the rest would be peaking.

COMMISSIONER CHRISTMANN: Thank you. No other questions.

JUDGE MANN: Miss Jacobson?

MS. JACOBSON: Nothing further, Your Honor.

JUDGE MANN: Mr. Schmidt?

MR. SCHMIDT: Nothing further, Your Honor.

JUDGE MANN: Mr. Schock?

MR. SCHOCK: No.

JUDGE MANN: Commissioner Kalk?

COMMISSIONER KALK: Thank you, Your Honor. Just some followup.

FURTHER EXAMINATION

BY COMMISSIONER KALK:

Q. I'm glad we have a court reporter here today because what you just said, I mean, it's good stuff. I mean, you walked it through, that you

gave us your candid answer what you think you need for baseload and intermediate. I mean, I think that's -- that's one of the challenges that I've kind of struggled through is that we all grew up with big baseload coal, but the grid has changed, and that's just the way it is, and so you're trying to figure out what the future brings and trying to keep your costs down, and your point about you don't need 95 percent baseload when you don't need power all the time. It's the very start point that I hadn't heard quite so eloquently put, but it was good.

On that, what kind of contract do you get for gas? When you negotiate -- and if it's trade secret, you won't tell me, I'm sure, but are you able to get a 20-year contract for gas prices or a five-year contract, or do you have to negotiate annually?

A. You can do, you know, a lot of different things as you want. Personally I'm not involved with the actual gas contracting. Our marketing group is the entity at Basin Electric that does a lot of that. You know, you can, you know, contract with a gas field, you know, and lock in prices or you lock it into an index or a hub price or

something like that, you know, you pay some cost over a hub price or something like that. You could -- you know, you can hedge a little bit, you know, into the future if you think prices are down now or they're down in the future, prices are going to come up, you know, you could hedge a couple months or a couple years depending if you can find the counterparties.

Q. Suffice it to say the fact that you've got this located across from ONEOK was a good idea that was put into play that should help you keep your gas prices down for a long time?

A. We should have adequate gas supplies there, yes.

Q. Because when you kind of walked through those numbers of how much it is per megawatt, those are really low numbers. Those get into almost what it could be for -- I hate to say it, but mine-mouth coal these days is getting close to some of those prices.

What is the percent you get for energy capacity on this system? Like on the Southwest Power Pool, what do they give you for this?

A. For what?

Q. For the capacity side of it.

A. This facility, this project?

Q. This project -- I'm sorry -- yeah.

A. We would get the credited value of this, so we would look at what rating can it achieve in the summertime. So I think Josh mentioned about 111 megawatts or so. We would get 111 megawatts, 112 megawatts of accredited generation from this facility, so the full hundred percent capability of the facility.

Q. Okay. He said that, but I didn't put two and two together. So you get a hundred percent on this?

A. Because it's a dispatchable resource, we can call on it whenever we need to.

Q. Huge. Okay. And the last question is outside the box a little bit, but I've heard a lot of discussion about you buying -- Basin buying some power from Minnkota. How does that figure into your energy needs?

A. They're a counterparty with surplus generation that we've been able to negotiate a power purchase agreement. We are actually transacting power between us right now. You know, they are inside of MISO, but with their new Center to Grand Forks line --

Q. Right.

A. -- I think there's also an interconnection at Mandan, North Dakota, that intercepts with the Basin Electric-WAPA integrated system and so we actually get our power out of the Mandan area into our system, and we were able to negotiate something so that power is actually -- and what we've done in technical terms real quickly is pseudo-tied that generation, so the WAPA balancing area is the one that's included that generation under that contract into our balancing area and so it's not being -- that 50 megawatts or whatever that's under the contract right now is not being dispatched by MISO at the moment.

COMMISSIONER KALK: Okay. I know we have a meeting tomorrow that we will be talking about this in some more detail. I'm just curious. Thank you.

JUDGE MANN: Commissioner Fedorchak.

FURTHER EXAMINATION

BY COMMISSIONER FEDORCHAK:

Q. One more followup on the gas -- the price of gas. Do you have somebody here who can tell us -- you said there are a number of different options for securing, you know, a long-term

agreement on gas, but you weren't sure what it was for this project. Is there somebody who knows that?

A. Our marketing and asset management department at Basin Electric is the one that handles the actual gas contracting and they are not in attendance today.

COMMISSIONER FEDORCHAK: Okay. I'm seeing Josh nodding, so maybe we'll get him back up. Okay. That would be good. I'm just interested if you do have a long-term contract or -- you know, how you're securing the price. Even though you're right next to ONEOK, it doesn't mean they're going to sell it to you --

THE WITNESS: Right.

COMMISSIONER FEDORCHAK: -- for a set price. Okay. Thanks.

JUDGE MANN: Commissioner Christmann?

COMMISSIONER CHRISTMANN: No questions.

JUDGE MANN: Anything further, Miss Jacobson?

MS. JACOBSON: No, Your Honor.

JUDGE MANN: Okay. You can step down. Thank you. And you can call your next witness.

MS. JACOBSON: Mr. Cris Miller.

JUDGE MANN: Good morning, Mr. Miller.

MR. MILLER: Good morning.

JUDGE MANN: I need to give you the oath as well, advise you of the penalty for perjury in North Dakota. It's a Class C felony, punishable by a maximum fine of $10,000, maximum five years imprisonment, or both.

CRIS MILLER,

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

JUDGE MANN: Go ahead.

MS. JACOBSON: Thank you, Your Honor.

DIRECT EXAMINATION

BY MS. JACOBSON:

Q. What is your name, business address and occupation?

A. My name is Cris Miller. I work with Basin Electric Power Cooperative. We're located at 1717 East Interstate Avenue, Bismarck, North Dakota.

Q. And what is your employment history?

A. I'm employed as a senior environmental project specialist. I prepare permits for future transmission generation projects.

Q. And what is your educational background?

A. I graduated from North Dakota State

University in 1982 with a bachelor of science in civil engineering.

Q. What is your responsibility with the proposed project?

A. I coordinate the -- in preparation of all reports, studies and applications to acquire the permitting requirements from whether it's a local, county, state or federal permit.

Q. Was there a federal nexus for the proposed project that required compliance with the National Environmental Policy Act?

A. No, there was not.

Q. Can you please describe the overall land use of the proposed site?

A. The land that's at the Basin Electric's 120-acre owned parcel, other than the seven acres that are within the fence line of Phase I, the rest of the remaining land is being utilized as agricultural purposes at the moment.

Q. And can you please describe the land use surrounding the proposed project?

A. As the photograph shows from the exhibit, there's the ONEOK Stateline processing plant immediately across Williams County Road 5. There are certainly oil and gas production facilities

around the area, but for the fundamental land use it's still predominantly agricultural.

Q. Can you please discuss the nearest residence or other buildings that are located close to the proposed project?

A. Certainly. There is a -- just north of our facility approximately three-quarters of a mile there is a church. There are some residences, I believe, about a mile and a half, a mile and three-quarters surrounding the facility.

Q. Does the proposed site contain any avoidance or exclusion areas?

A. No, it does not.

Q. Has Basin Electric received all permits necessary for construction and operation of the proposed project?

A. No, we have not. There are several currently ongoing. We are still waiting our North Dakota Department of Health permit to construct for the air permit. We also have an application in to Williams County for the conditional use permit. We have received an approval letter from the Hebron Township, which was part of our application process to Williams County.

Q. Were there any studies done to assess the

noise levels of the proposed project?

A. Yes, there was. When we went through the permitting process for Phase II, we did a predicted model for the noise emissions from the facility. In the fall of 2013 we hired Burns and McDonnell, who actually performed the initial predictive modeling. They went out there and assessed the actual noise that was being emitted from the Pioneer Units 1, 2 and 3. So what they did then is they qualified that -- the predictive model. There was very good relationship between the model and actual conditions found.

And then we did the third step where we actually put the Pioneer Phase III and then we did a predictive model of those noise levels, the same receptors.

Q. And will the proposed project's noise levels be under the EPA guidelines with respect to noise?

A. Yes. The EPA guideline is 55 dBA for a day/night level. Our predictive noise emissions is approximately 49.5, .4, somewhere in that range, so less than the 55 dB level from EPA.

Q. Mr. Miller, have there been any other environmental issues associated with the proposed

project that you're aware of?

A. As far as the proposed project, there's the -- going through the county, the local township board, they live locally and they farm, they actively engage around the facility. The township board brought up an issue with our Pioneer Phase I and II. That stormwater pond we actually had kind of a leaking discharge valve that put that water into the ditch so it had a little seeping area and some cattails were growing. Since that was brought to our attention here this winter, we have made a commitment to go out this spring once the ice is off our pond and off our valve open box. We will look at that and make that repair.

The other concerns that we were made aware of from the township side had to do with the local runoff. And you'll see from -- in our application and see in the site, our site is basically on a crown in that drainage area. So for Pioneer Phase I and II, the stormwater pond is located on the northeast side of the property, it discharges in the county road ditch, and then it flows to the north approximately about a half a mile, then it flows to the east down that drainage.

For Pioneer Phase III, the stormwater pond

is on the west side of the project, and so it goes down a whole entirely different drainage. So we do not believe that there's any concerns, the lands around our property will continue to be farmed by the existing tenant.

And in the -- one other step. In the Williams County conditional use permit process, the local Williams County Water Board is a part of that review process, so our stormwater pond discharge criteria and design will be going through that local expertise.

MS. JACOBSON: Thank you, Mr. Miller. No further questions.

JUDGE MANN: Mr. Schmidt.

MR. SCHMIDT: Thank you, Your Honor.

CROSS-EXAMINATION

BY MR. SCHMIDT:

Q. Earlier we heard a little bit of testimony about a couple of roads that will need to be constructed to build Phase III.

A. Correct.

Q. Will Basin have to obtain any new easements to construct these roads?

A. We do not need to obtain any easements, but from County Road 5 for the new approach on the

east side of the plant site we'll need an approach permit from Williams County, from the county engineer.

Q. Has that application been submitted?

A. Yes, it has. Then for the road that's off the quarter section line to serve and support the switchyard, that's a township road and that is part of our -- it was reviewed by the township board and there's no permits required.

Q. And all of the property where these roads will be located is owned by Basin; is that correct?

A. That is correct.

Q. You briefly testified about the nearby residences. In the application, and I think you said it was about a mile and a half to a mile and three-quarters away the nearest house was or place where somebody lived. Are you aware of any inhabited buildings that have been constructed, either temporary or permanent housing, since this application was submitted?

A. I am not aware of any additional homes or residences since we did our modeling.

Q. You also testified that there's a rural church located about three-quarters of a mile away from the proposed site. Are you aware if this

church is currently active or is it abandoned?

A. No, it's an active church.

Q. Has Basin had any interaction with this church in the past?

A. Not with the church proper. We certainly have had our discussions with the Hebron Township. No comments or no -- no, I guess, input has been made.

Q. Will construction of Phase III have any additional anticipated adverse impacts on this church?

A. There will be a slight -- from our predictive modeling, if you look at the numbers, it's a slight tick upwards, of course, but it's still well below the EPA guideline.

Q. And you're referring to noise?

A. Yes. Certainly, you know, from a visual aspect anybody around the area, our current exhaust stacks are approximately 80 foot in height. Pioneer Phase III it will be two exhaust stacks. Those stacks will be approximately 170 foot in height. So, you know, our visual footprint will be greater.

Q. The materials that were submitted to the PSC indicated that Basin is requesting the entire

120-acre parcel to be identified as an energy conversion facility. Why is Basin requesting such a large area for siting purposes?

A. Well, we kind of had this conversation our first go-around. We have the -- you know, as Mr. Rossow indicated, we have the generating facility itself within a fence line. That's approximately a little over eight acres. Then we have the disconnected switchyard, is approximately four. We'll have our lay-down yards that are temporary, but they're being to the south of the project. Then we have our access road that's going to be permanent to the switchyard. And then we have our 115 line running up to the north to intersect Sheridan Electric. So I guess geometrically it's a nice box. If we want to start parceling out, you know, a narrow corridor -- I don't believe there's a threshold, I don't believe there's a guidance that the North Dakota Public Service Commission has on identifying what should be within an energy conversion facility. So the entire 120 acres, it's been zoned industrial by Williams County and then we have all these different supporting infrastructure for our project so it made for a nice box.

Q. So is it fair to say this is just kind of an attempt to streamline any further additions Basin wishes to make to this property?

A. We are certainly aware of any addition that would be -- that could be placed at this facility. It certainly would have county, local requirements and approvals, but the North Dakota Public Service Commission also has approvals required for anything over 50 megawatts or transmission lines over 230, et cetera.

Q. I guess just briefly in one or two short sentences, why is it necessary to make this request with regard to this project?

A. You're referring to the --

Q. I'm referring to the 120-acre request.

A. Why we're making the request for the 120 acres, we need to identify what is the energy conversion facility that's been requested from the Public Service Commission in the past. So we know that the request is going to be made, we threw it out there to be the 120 acres.

Q. During your testimony you talked about noise a little bit. The noise study in the application factors in noise that's generated by the nearby ONEOK plant as well as the PGS plant.

How do you go about separating the noise and the anticipated noise generated by PGS from the noise generated by ONEOK?

A. The only thing we did -- that verification process we talked about that we did last fall where we did actual noise survey meter. That process in itself, ONEOK Gas Processing Plant was operating, we believe it was at a hundred percent or near full capacity, so that incorporated all noise, whether it's highway noise, whether -- in fact, if you go to that study, our nighttime noise measurements actually we kind of had to kind of toss out. The insects created more noise on an offline condition than it was during the daytime when the insects weren't making so much noise.

One thing Burns and McDonnell did incorporate into their predictive modeling is that they know that noise isn't one noise source. Next-door to another noise source, if both of them are, just for an example, say, 50 decibels, put them together, they don't add up to a hundred decibels. They're not additive. So it all depends the frequencies that the sound is being emitted. And, I guess, a point of reference is a 10-decibel increase is approximately a doubling of the sound

pressure. So the predictive modeling, we know that ONEOK exists, our actual noise measurements incorporated both sounds, so by not indirect measurements, we would have great confidence that both plants could be operating and we would still be below the guideline.

Q. Can you turn to Exhibit 7. It's the same map that we referenced earlier.

A. Yes.

Q. Exhibit 7 depicts a stormwater pond. In your testimony you talked a little bit about the drainage. You just said it would drain differently than the existing pond. Can you just kind of talk me through how the water will drain out of this new proposed stormwater pond?

A. Certainly. I was wondering if there would probably be a better map. It's in the application, though.

Q. Okay.

A. Figure 3-1. I guess I will refer to Figure 3-2 as well. But Figure 3-1 you can see our 120 acres outlined by the -- we'll call it the gold box, but you also see all the drainages around that flow off to the east side, so it's pretty obvious that our plant site is kind of on the crown. There

is a surface drainage divide, as I previously testified, water that flows to the -- from Phase I and II, flows to the northeast and to the north so that would go down the -- I believe it's referred to as Painted Woods drainage.

Our stormwater pond for Phase III is on the west side of the property, and we see from the blue -- we'll call it tributaries of the Little Muddy Creek, so it actually flows west from our pond approximately a mile and then heads south to interconnect with the big drainage of the Little Muddy and which eventually flows down to the Missouri River.

Q. Is it anticipated that the drainage of this pond will have an adverse effect on any agricultural use of adjacent landowners?

A. No. And that's one of the -- when we met with the township and we met with the adjacent landowner back in January when we discussed the stormwater pond for Phase I, we walked through on how we would operate this pond. Although the Pioneer Phase I and II has a -- I'll call it a process, an NPDES permit, we do have some process water that goes into that north pond so it has to meet -- there's a valve that's in the bottom of the

outlet. When the water level gets high enough, we make sure we have the water quality -- the water quality standards as far as discharge.

For, as Mr. Rossow testified, the Pioneer Phase III, the only need for water on the plant site is for potable water purposes, showers, lavatory, and drinking water, et cetera, and for makeup to the cooling system. But there is no discharge off site or into any pond. So for Phase III that pond is going to be strictly for stormwater.

North Dakota rules allow that if we apply for a certificate of non-exposure and that it only be stormwater and that our plant is designed -- it has the spill prevention countermeasure design, we don't have open oil or -- what do you want to call it -- do maintenance activities, you know, on the outside so we have very little risk for oil and grease or any type of runoff exposure, we'd operate that pond basically like a storm sedimentation pond. The valve -- there will be kind of a little dike there to provide capacity for -- I believe it's a 10-year -- 24-hour 25-year rainfall event and then that water would just overflow by itself. So whatever sediment may be picked up during that

rainfall event would be dropped off in a pond.

The other thing you'll note, since we're on this crown, so it's a very defined drainage, so whatever -- we're not creating water. All we're doing is delaying the release of it off of our plant site. Once that sedimentation basin gets filled up and it's going to overflow naturally, it is going to be at the same rate that it would normally otherwise. We're not combining drainages. We're just letting water go down its natural drainage.

Q. So is it fair to say that the existing, I guess, water drainage system for Phase I and Phase II is mutually exclusive from the drainage system for Phase III?

A. That is correct.

Q. The application discusses that there will be some farmland that will be taken out of commission if Phase III is put in. There will also be some additional farmland that will be permanently and temporarily, I guess, taken out of commission due to staging activities and the actual Phase III building that will go there, and it's a fairly nominal amount. However, is there a potential for adjacent landowners to be deprived of

any use of their agricultural land as a result of the construction of Phase III?

A. We don't believe so. It will just be our tenant on the land that we own. He's farmed that on a rental type of an agreement the last couple of years. So this year prior to the spring planting, we'll be out there and putting markers out there so he does not plant something, the next week, once we get our permits, go out there and destroy his crop seeding. So we'll coordinate with our tenant.

Q. The application discusses noxious weeds just briefly. I just have one or two quick questions with regard to that. What is Basin's plan to prevent the spread of noxious weeds with regard to the construction of Phase III?

A. Our plan is to once the -- you know, we get our permits, we start construction, we'll peel off the topsoil and have that stockpiled for final reclamation when we're all done with this plant. That stockpile will be seeded with grass, you know, to make sure it's preserved. Once our construction activities at the original site -- civil work is done, all the drainage is in, then what we'll do is to go back and we will reseed the areas that will not be disturbed.

And I know right now -- you'll see it from the aerial photography, you'll see the area around Pioneer Phase I and II, you can see it's a different brown. We actually are a little bit delayed in our restoration activities. It should have been done last fall, but with the rains we had, it created a little trouble with our contractor, but that area will be reseeded here this spring.

Q. Will construction of the new stormwater pond provide any additional complications with regard to noxious weed control?

A. It should not.

Q. I guess that's enough about the plants. Let's talk about the animals a little bit. The application indicates that this project will have little to no impact on wildlife habitat, but does Basin have any type of plan in place in the event of an unanticipated habitat find discovered in the construction of the project?

A. I guess if there was a habitat find -- like you're referring to like some nest?

Q. A nest or something that was just missed previously in the study.

A. The areas right now, whether it's the

disturbed -- previously disturbed ground from our lay-down area and preconstruction area for Phase I and II or the previously tilled land, I guess we don't really hold that highly -- what do you want to call it -- priority nesting area for any type of an avian bird, so we don't anticipate any nesting.

Q. So to a reasonable degree of certainty, you can say that there will be no habitats that weren't identified in the application found on site --

A. That's correct.

Q. -- is that correct?

A. That's correct.

Q. Can you please turn to Appendix G of your application.

A. Yes.

Q. And within Appendix G, it would be -- I guess the pages aren't numbered, but eight pages into Appendix G there's a telephone memorandum. Let me know when you have an opportunity to find it. It's regarding a phone conversation with the United States Fish and Wildlife Service.

A. Okay.

Q. It has Burns and McDonnell in the upper right-hand corner, then telephone memorandum in the

heading. It's dated September 19th, 2014.

A. Yes, I have it.

Q. Other than this one memorandum, has Basin received any other correspondence from the United States Fish and Wildlife Service?

A. No, we have not.

Q. The memorandum indicates that United States Fish and Wildlife Service will not send a formal response unless requested. Did Basin request a formal response from the United States Fish and Wildlife Service?

A. We believe that -- no, we have not.

Q. Why not?

A. This telephone memorandum, we went through this process with Pioneer Phase II. We had that response, the same land use, the surrounding area's land use stayed the same, and we don't believe any wildlife or habitat has changed from the course of a year.

Q. Let's move on to the cultural studies. The application indicates that Basin did perform a Class III cultural study for a previous -- I think it was for the siting of Phase I and Phase II -- or probably just for the siting of Phase II because I don't think Phase I was jurisdictional. We can

confirm that.

A. Phase I was not jurisdictional, but we did the entire cultural survey of the entire area prior to any disturbance to the area out there from the original construction.

Q. Now, when you say "the entire area," what do you mean?

A. The entire 120-acre parcel that we purchased. We do that so we know if there are some cultural resources there and it helped us in defining our project, but since none was found, basically it cleared the area.

Q. Did Basin submit the same information in 2014 for approval from the State Historical Society as it did when it received approval in 2012?

A. Because the State Historical Society already sent out their findings where they had the report and they accepted it, another follow-up report was not submitted. It is one and the same. The State Historical Society tracks areas surveyed by the parcel, not by what year of request. So in subsequent years if one would go back and do the Class I surveys, that's what the documents would show, that it's been surveyed, none was found.

Q. So no new updated material was required

for the 2014 approval; is that correct?

A. That's correct.

Q. And none was requested from Basin; is that also correct?

A. That's correct.

MR. SCHMIDT: I have no further questions.

JUDGE MANN: Mr. Schock.

CROSS-EXAMINATION

BY MR. SCHOCK:

Q. I want to talk a little bit about the CO2 ratings of these units. In the application it seemed to indicate that you don't believe that these units would fall under the new standards law for the EPA, which I believe is around 1100 pounds per megawatt-hour. Can you explain how you made that determination?

A. If you're talking about the new EPA rule that they had proposed, proposed new source performance standards for combustion turbines and for coal plants, which is -- I believe it's quad TTTT, those rules were proposed in 2012. They since have been rescinded. I believe they're still developing. But they also had a threshold of 25 megawatts per nameplate capacity. As Mr. Rossow testified, these are 9.3 megawatts, so these RICE

engines are not underneath the EPA's proposed new source performance standards.

Q. I'm not familiar enough with the law, so basically you're looking at each of these individually rather than the entire site?

A. That is correct.

Q. Do you know if -- so let's say that the EPA wouldn't agree with you and they would say that this is one big unit. Would this meet that threshold?

A. Yes, it would on a -- I'll call it emission intensity. As Mr. Rossow testified, these are very efficient machines, so I believe the EPA's were looking around a thousand, 1100 pounds of CO2 per megawatt, and these would be a thousand or less, so we would -- even if it was under jurisdiction, this would be a very low-emitting machine.

Q. So a thousand or less, that's actually better. So I think what we heard before is a combustion turbine is around 1100 --

A. Correct.

Q. -- so these are really good. All the facilities you're proposing to construct, including the generator plants, the pipelines and the

transmission line, is all within Basin-owned property; is that correct?

A. That is correct.

Q. I have a few questions around the sound studies. For Phases I and II I would imagine -- I guess I don't imagine, I found the applications, the sound studies were completed to determine the noise levels at the close receptor sites. If I remember correctly, I think the loudest that it would be at any one receptor site was about 42 decibels and, as you said, the EPA guidelines is 55 so it's well within that. Do you have anything, since the two units are in place now and operating, what the actual sound levels are at the receptor sites?

A. Yes, we do. If you refer back to Appendix C, and Appendix C is actually three different reports so we have to go to the middle, and that's that modeling that we did in the fall of 2014. So it's entitled noise compliance study --

Q. Okay.

A. -- which is actually an appendix of the first report. Have you found it?

Q. No. I'm trying to find the right page here. Have you found the page?

A. I can say go to Appendix C and it's Appendix A of a sound assessment study. It's called noise compliance study.

Q. Okay. Appendix C. Here's Appendix B. We're just about there. I seem to be missing Appendix C. I have Appendix B.

A. It's Appendix C in our application.

Q. Yep, yep. Appendix C, sound study.

A. About 20 pages back or so.

Q. Operational noise assessment study, is that it?

A. If you've got the assessment study, I believe you're too far back.

COMMISSIONER FEDORCHAK: It's right after 7-1.

Q. (MR. SCHOCK CONTINUING) 7-1. Okay.

A. The noise compliance study, like I said, was a -- Burns and McDonnell went out there in the fall of 2014 to actually take survey meters and went and actually performed noise studies, and what they did is they identified the noise receptors, they put their noise survey meters up on a tripod directionally towards the plant. They took sound as if it was constant sound. They were there five, ten minutes, I more lean towards five minutes, and

took the measurements. But they also did it during two operating periods. They did one during the day and they also went back towards the evening. Their findings were that we were -- it was twofold. One was to verify that their predictive modeling that they performed for Phase 2 actually was accurate and then we looked at what the actual emissions were from operations of Pioneer phase -- Units 1, 2, and 3.

Q. Did they find they were close with their original assessment? Was it higher or lower?

A. I believe it was slightly higher, but I think it was .2 decibels.

Q. Okay. So we could probably expect a similar type of error ratio with the second. I think there was one receptor site on this Phase III that was getting -- I think we were in the 49-decibel range, so maybe at most 50, is that reasonable?

A. My understanding, if we go back to the data, is that 49 decibels, that was up at the church, which is not the local occupied residence. So the church is approximately three-quarters of a mile away, the nearest occupied residence approximately a mile and a half, so you'll see a

big dropoff of the decibel readings at that residence.

Q. Have you had any noise complaints from any nearby neighbors?

A. No, we have not. And I know Mr. Rossow testified with the emergency plan we have, you know, the emergency responders that come on plant site and visit, I know when we had the members of the township board out there in January, we gave them a nice tour, the plant was operating and you can see what an operating facility was and what the noise impact is. Certainly Phase III is going to be somewhat different noise emitters than what exists there today, but the total sound -- noise levels that are going to be seen are very close to what's there now.

MR. SCHOCK: I have no other questions. Thank you.

JUDGE MANN: We're going to take another short break before we continue with the commissioners' questions, so if we can come back in about ten minutes or so.

(Recess taken at 12:05 p.m. to 12:16 p.m.)

JUDGE MANN: We are back on the record. Mr. Miller, you remain under oath. Mr. Schock had

just completed his questioning, so, Commissioner Kalk, you can go ahead.

COMMISSIONER KALK: Thank you, Your Honor.

EXAMINATION

BY COMMISSIONER KALK:

Q. Thank you, Cris, for your testimony. For those that don't know, Cris and I grew up together back in the day back in Bottineau, so I always ask you the hardest questions, right, Cris?

I appreciate your discussion about hearing the insects because I'm thinking back to what it was like at Lake Metigoshe late at night.

Cris, actually I think our counsel did a very good job of questions. I only had a couple. Tell me again about the federal nexus, because I thought Basin, because of RUS dollars, there was always a federal nexus. I'm fine there's not. I'm just curious of what's the trigger.

A. Typically with a project in -- serving in our service territory, as Miss Kern explained about Western Area Power, if we would interconnect with a Western Area Power facility, so that's a transmission interconnect, which would be a federal nexus.

Q. Okay.

A. If we would have to have another federal-issued permit, if we cross some other federal land. As far as RUS goes, Basin Electric has two options. We can apply for a loan from the Rural Utility Service, and if we were doing that, then we would have to follow their NEPA rules. In this case Basin Electric made the decision to go to private funding, our public funding, not through RUS, so there will be no loan application so there's no federal nexus with RUS.

Q. Okay. So if you do get RUS dollars, that creates the federal nexus no matter what?

A. That's correct.

Q. Okay. Thank you, sir. And the last question I had was, walk me through again the air quality permits as far as just the process. I'm thinking that -- is there one permit issued for this whole plant, or do you have several permits that will be issued?

A. The --

Q. I mean, Phase I, II and III, if that will be one permit or if it will be multiple permits.

A. Right now we have an existing permit, and what they'll do, they'll roll -- they're considering and evaluating Phase III as a separate

permit application, but at the end of the day they'll issue -- they'll combine that into a -- I shouldn't say that. There will be a -- it will be a separate permit on the permit to construct, but as a Title 5 operating permit, they will combine the two processes, so for a permit to construct separate. Once you get the operating permit, then they'll combine the Title 5 permit.

Q. Okay. Outside of this hearing, just a knowledge question for me, who is the guru at Basin that as we steward forward on these 111(d) rules -- is that going to be you, Cris, who we will be talking to on what your recommendation is?

A. No, it won't be me, but I know there's a whole host of people that are engaged with Basin Electric on the 111(d). It affects so much of our industry, so there's a good solid team working on the 111(d) program as we speak.

COMMISSIONER KALK: Thank you. I have no further questions.

JUDGE MANN: Commissioner Fedorchak.

EXAMINATION

BY COMMISSIONER FEDORCHAK:

Q. Cris, I'm trying to just clarify the actual size of the site. I know you talked a lot

with Brian about this. But do you currently have a permit for the entire -- a siting permit for the entire 120-acre parcel?

A. From what entity? From --

Q. Did you receive that -- did we include in the siting certificate for the Pioneer Generation Station Phase I and II that entire 120-acre parcel?

A. From the Public Service Commission, no, you did not. We combined it to the fence line, so it's like seven acres, which is an existing fence of Pioneer I and II.

Q. And so are you in this certificate seeking -- in this application seeking a permit for the entire 120-acre?

A. That's what we have proposed, that's correct.

Q. Okay. So then if you expand and added another facility, say Phase IV, what's your understanding of the permitting process required?

A. If it exceeds the 50-megawatt threshold for jurisdictional for the Public Service Commission, we would be back in front of this body.

Q. And if it was less than that?

A. It may not be, but we also know that you're free to put any type of additional

conditions on your findings of fact --

Q. Okay.

A. -- as well.

Q. And then we've had some discrepancy with this in the last six months or so, working with various companies on they sign -- we typically, and you already have, signed the certification document that's attached to our orders typically, and in that there's a couple points where you say the company agrees that it shall advise the Commission of any extraordinary events that take place at the site. That's mostly related to accidents. Then also shall inform the Commission in writing any plans to modify the facility or of any plans to modify the site and you'll obtain written approval from the Commission prior to any modifications to the site plan or the energy conversion facility, et cetera, et cetera. Approval may be granted after notice and opportunity for hearing. So we still -- even though there is the whole -- what's that term -- the footprint law where you can build within a previously approved site, there is that contingency in our certification document that does require you to come back for permitting during which we could just do it, you know, sort of a

modified permitting process. Are you comfortable with that?

A. Yes.

COMMISSIONER FEDORCHAK: Okay. All right. I just wanted to clarify that on the record. Thank you. I don't have any other questions.

JUDGE MANN: Commissioner Christmann?

EXAMINATION

BY COMMISSIONER CHRISTMANN:

Q. Well, one of mine just disappeared, Your Honor, so the only other line of questioning that I would have is, regarding stormwater you made it sound pretty simple, I guess, because there's not oil or anything like that involved here, but what about if you add the liquid petroleum storage, what happens if there's a breach of that?

A. Liquid -- the LNG, I believe the design criteria would be that it would be a -- it's a pressurized vessel, steel, but there would be a perimeter berm around that tank. As Mr. Rossow said, it's heavier than air, but it will also evaporate pressure too, so there might be -- so we'll have a containment around that, but whether it actually would be there by the time we had any type of remedial action is another story. So

that's part of that design criteria we have where there is low risk or no real exposure to having contaminants in the stormwater.

Q. But there would be some kind of a bunker built around that?

A. Correct. Correct.

COMMISSIONER CHRISTMANN: Okay. I have no other questions.

JUDGE MANN: Miss Jacobson?

MS. JACOBSON: Nothing, Your Honor.

JUDGE MANN: Mr. Schmidt?

MR. SCHMIDT: Nothing further, Your Honor.

JUDGE MANN: Mr. Schock? Commissioner Kalk, anything else?

COMMISSIONER KALK: Nothing.

JUDGE MANN: Commissioner Fedorchak?

COMMISSIONER FEDORCHAK: No.

JUDGE MANN: Commissioner Christmann? Okay. Thank you. You can step down.

THE WITNESS: Thank you.

JUDGE MANN: Miss Jacobson, do you have another witness?

MS. JACOBSON: There are no additional witnesses, but we would be happy to recall Mr. Rossow to talk about the gas supply if you

desire now.

JUDGE MANN: Okay. I think there was a question for him. You can recall him at this point.

And you remain under oath.

Miss Jacobson, did you have any initial questions for the witness?

MS. JACOBSON: No. That's okay if you just want to --

JUDGE MANN: Okay. Mr. Schmidt?

MR. SCHMIDT: I have no questions for this witness.

JUDGE MANN: Mr. Schock?

MR. SCHOCK: No questions.

JUDGE MANN: Commissioner Kalk?

COMMISSIONER KALK: Just briefly.

JOSH ROSSOW,

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

FURTHER EXAMINATION

BY COMMISSIONER KALK:

Q. What kind of contracts have you secured for this facility? And if it's trade secret, then just tell us because that's fair.

A. I think the point I'd like to make is that

there are two separate aspects to gas supply. There's the transport of the gas and then there's also the purchase of the gas itself. And because we are basically held hostage by a gas pipeline -- one gas pipeline, we do secure a very long-term contract like 20 or 30 years.

In the case of purchasing the gas, that's a very dynamic situation where we're looking at it on a daily basis nominating gas and many different counterparties, and because we are a producer of gas through the Dakota Gasification Great Plains Synfuels, we're also -- there are synergies there as well.

Q. But in general terms, I mean, do you have a contract for gas in this facility with ONEOK for one year or five years or ten years?

A. We do not have a contract with ONEOK. We have a contract with WBI to transport the gas for us, but typically we go through a gas marketing firm to match us up with a counterparty to purchase that gas, so we don't necessarily have to purchase from ONEOK.

Q. Well, how do you -- what I'm trying to get to, I guess, how do you figure -- I know Miss Kern talked about what she figured for $5 gas equals X

amount of price per kilowatt, which was a good price, but you must use some planning figure, and how do you base that planning figure? There must be some security or solid -- what's the word I'm looking for here? There must be some --

COMMISSIONER FEDORCHAK: Certainty.

Q. (COMMISSIONER KALK CONTINUING) -- certainty -- there you go -- thank you, Commissioner -- some certainty that this is a good idea. I mean, how do you take $10 gas off the table maybe is a better question.

A. Basin Electric does engage in hedging and things like that, but we can't do that long term like ten years out. I'm not involved in the details of that hedging so I can't speak to what is involved. But there are industry forecasts on what gas price is going to be, and so forth. It's really the risk you run when you build natural gas.

Q. Okay. So basically you'll take the experts that -- and the industry will give you a price and you'll say that's probably going to be accurate and so you'll hedge that's going to hold and then make your investment?

A. I'm not aware of how that decision is made.

COMMISSIONER KALK: And this is not -- this particular case I don't think -- this is a siting case so I'm just curious how it works, because that's the volatility in gas, is knowing how long this facility is really going to be worthwhile, and we don't necessarily assess need so much in this, but as a state trying to figure out what's a fair price for gas as it relates to kilowatts or something that's in front of us a lot, so the better we understand how you're able to make those decisions. Is it just a matter of you're not going to build any new coal because of all the uncertainty there, so you just say, Well, our choices are gas and wind and you just build it no matter what? It's just a thought, I guess. Thank you.

JUDGE MANN: Commissioner Fedorchak?

FURTHER EXAMINATION

BY COMMISSIONER FEDORCHAK:

Q. Just to kind of expand upon this a little bit, this is a subject that has come up a lot in national circles. I'm on the gas committee at NARUC and the long-term contracting is something I have been asking at various committee meetings and just recently expressed some concern that our

companies aren't able to secure long-term contracts -- not for the pipeline but for the gas, so you do just what Commissioner Kalk is saying, establish some sort of certain price for the generation long term. There's a lot of -- a lot of companies banking on predictions for gas price and replacing, you know, coal facilities with gas-fired facilities and there's no certainty other than what the experts think the price future is. That's -- that is very uncertain.

I did, however, have three people come up to me at the last NARUC meeting after similar comments saying, you give this card to your companies, we'll do a long-term price -- we'll do a long-term commitment with them, 15, 20 years. So I throw that out there. I have some cards in my hand right now that these companies said they would be happy to talk about long-term gas prices. So I would love to take them up on that.

A. All right. Thank you. We would be happy to look at it.

JUDGE MANN: Commissioner Christmann?

COMMISSIONER CHRISTMANN: No other questions.

JUDGE MANN: Okay. Anything further, Miss

Jacobson?

MS. JACOBSON: No, Your Honor.

JUDGE MANN: Okay. You may be excused. Thank you.

Anything else from Basin Electric?

MS. JACOBSON: Nothing further, Your Honor.

JUDGE MANN: Okay. Thank you.

Any members of the public wish to testify, they can do so at this point.

Do you have another copy? If you want it entered into the record, I have to have it marked as an exhibit.

MR. VIGESAA: Sorry about that.

JUDGE MANN: That's okay. And can I get your name, sir?

MR. VIGESAA: Claire, C-l-a-i-r-e, Vigesaa, V-i-g-e-s-a-a.

JUDGE MANN: And, Mr. Vigesaa, before you testify, give your testimony, I need to give you the same oath that I gave the other witnesses and I need to advise you of the penalty for perjury in North Dakota. It's a Class C felony, punishable by a maximum fine of $10,000, maximum five years imprisonment, or both.

(Witness sworn.)

JUDGE MANN: And then just once you're completed with your testimony, if you can just remain up there and we'll give everybody -- the attorneys and the commissioners an opportunity to ask any questions they might have.

MR. VIGESAA: Certainly.

JUDGE MANN: Then just with respect to the two documents, I'll just ask counsel if they have any objections to having these documents admitted into the record? Miss Jacobson, any objection?

MS. JACOBSON: No, Your Honor.

JUDGE MANN: Mr. Schmidt?

MR. SCHMIDT: I guess, can we have a chance to review them before making a decision on that?

JUDGE MANN: Sure. Go ahead.

MR. SCHMIDT: I don't have a copy of it.

THE WITNESS: Here. I have lots of copies actually.

JUDGE MANN: And, Mr. Vigesaa, I'm assuming that you will identify these documents as part of your testimony, what they are, and so forth.

MR. VIGESAA: Sure.

JUDGE MANN: So go ahead.

CLAIRE VIGESAA,

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

MR. VIGESAA: I'm Claire Vigesaa. I'm general manager of Upper Missouri Power Cooperative headquartered in Sidney, Montana. 95 -- or about 92 percent of our sales, however, are in North Dakota. We provide transmission services to five electric -- or electric cooperatives in North Dakota and five in Montana, but, like I mentioned, the bulk of our sales are -- 92 percent of them are in North Dakota.

And I just wanted to relay our support for this project, Basin's Pioneer Station Phase III project. Upper Missouri in 2014 had a peak of 987 megawatts, so for those of you familiar with Antelope Valley, our load share of the Basin system, we take more than the capacity of Antelope Valley 1 and 2. And we sold nearly 6,000 gigawatt-hours of energy in 2014, and that's a 27 percent growth over 2013.

So we're a big part of Basin. We're about 25 percent of Basin's sales, growing to about 31 percent of Basin's sales, so we're very interested

in whether or not Basin is building generation to serve our members.

So the message is we're still catching up. There's still growth in the Bakken and there's new pipeline load and then continued gas plant expansions to take care of additional flaring. So there is needed -- the generation is very much needed.

So the second page there is similar. This is specific to the Upper Missouri region. You heard from Miss Kern from Basin as a whole Upper Missouri's forecasts there. The red line is what the forecast for load was in 2014 and the blue line was the original forecast for 2015 -- the update in 2015. And then the dotted line was, like Miss Kern mentioned, taking away half of the drilling rigs and eliminating the TransCanada project. Even with that in the forecast, you can still see that the Upper Missouri family is expected to grow over 1200 megawatts in the next 20 years.

So there's no doubt in our mind that we need additional generation and appreciate Basin's efforts to meet our needs. That's all I have.

JUDGE MANN: Okay. And just before questions, with respect to the exhibits, I'll mark

the letter of support as Upper Missouri Exhibit No. 1 and the load forecast chart as Upper Missouri Exhibit No. 2. And, Miss Jacobson, did you have objection to either of those exhibits being admitted?

MS. JACOBSON: No, Your Honor.

JUDGE MANN: Mr. Schmidt, any objection?

MR. SCHMIDT: No, Your Honor.

JUDGE MANN: Okay. I will admit both those exhibits.

And, Miss Jacobson, did you have any questions?

MS. JACOBSON: Nothing, Your Honor.

JUDGE MANN: Mr. Schmidt?

MR. SCHMIDT: I have no questions, Your Honor.

JUDGE MANN: Mr. Schock?

MR. SCHOCK: No questions.

JUDGE MANN: Commissioner Kalk?

COMMISSIONER KALK: Thank you, Your Honor.

EXAMINATION

BY COMMISSIONER KALK:

Q. Thank you, Claire, for coming up here today and giving us your testimony.

What's the relationship of Upper Missouri

going to be once Basin joins Southwest Power Pool? How do you tie in to that -- I won't use the word mess, but --

A. Sure. We -- Upper Missouri owns assets that are qualifying for SPP as do our members, including Dale, who's, I think, still in the back here, Mountrail-Williams, and so we have actually petitioned to include our assets -- qualifying assets into SPP, and our plan is to lease our assets -- qualifying assets in Mountrail-Williams for Divide, Sheridan into -- lease them to Basin and then they'll be entering into SPP January 1st of 2016. So the infrastructure up in this part of Upper Missouri's territory is -- will be in petition to enter into SPP as well.

Q. Sure. Then the last question is, in your letter you said roughly 1200 megawatts more in the next few years. Are you comfortable that building 9-megawatt peakers at a time is what you really need?

A. I think it's a great idea just for incrementally adding, you know, load rather than one big plant at this time. You know, I know Basin has thoughts of bigger plants in the future, but at this time to be able to incrementally bring on 9

megawatts at a time is helpful for operating the system in this area.

COMMISSIONER KALK: Okay. Thank you.

JUDGE MANN: Commissioner Fedorchak.

EXAMINATION

BY COMMISSIONER FEDORCHAK:

Q. Thank you, Claire. Good to see you again. Thank you for being here.

Just to follow up on that a little bit, so when the plans were being developed for this project, the downturn in the oil price hadn't occurred yet, but does this particular approach seem all the more brilliant now with that additional volatility knowing like we may or may not know when it's going to come around again and this is just a little bit of a hedge on that too?

A. I think, yes.

Q. And is it --

A. Are short answers allowed?

Q. Yes, but I prefer long answers because you might say something I hadn't thought of.

A. Sure.

Q. Are you comfortable with the plans -- looking at this -- even the revised forecast, are you comfortable with the plans to meet that demand?

A. Yes, we are. I mean, the transmission, getting the 345 built is critical and as well as this additional generation at this location.

COMMISSIONER FEDORCHAK: Okay. All right. I don't think I have any additional. Thanks for being here.

JUDGE MANN: Commissioner Christmann?

EXAMINATION

BY COMMISSIONER CHRISTMANN:

Q. I understand that, you know, you like the idea of getting this online in order to meet the needs of your customers, but do you have any concerns about the amount of time this might be running depending on the gas prices, 35 or $45 a megawatt just for the gas?

A. Concern about the cost of operating?

Q. The cost of it that you're going to have to pass on to your customers.

A. I think we've recognized what Commissioner Fedorchak mentioned before, you know, there are risks in the gas market, but, you know, I guess, we have confidence in Basin's ability and market to do the best they can to get the best contracts in the future. But we certainly -- you know, we're from the -- I've been around for a long time -- the old

school coal, you've got the mine and you know the cost, is hard to give up.

COMMISSIONER CHRISTMANN: No other questions. Thank you.

JUDGE MANN: Thank you, Mr. Vigesaa. You may step down.

Could I get your name?

MR. HAUGEN: Dale Haugen, H-a-u-g-e-n.

JUDGE MANN: And, Mr. Haugen, I need to give you the oath, advise you of the penalty for perjury in North Dakota. Class C felony, punishable by a maximum fine of $10,000, maximum five years imprisonment, or both.

(Witness sworn.)

JUDGE MANN: Go ahead.

DALE HAUGEN,

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

MR. HAUGEN: My name is Dale Haugen. I'm the general manager of Mountrail-Williams Electric Cooperative here in Williston, which we refer to as boots on the ground. I'm the local guy. I'm also a member of Claire's Upper Missouri Power Cooperative, one of the ten that resides here in North Dakota.

And I'm here to support Basin Electric in their venture and, I guess, without getting into any -- too many details and allow the commissioners to ask questions, is my attire.

In 2013 we had our 200-megawatt coat, of which Mountrail-Williams reached a milestone. In December I thought it was inappropriate, but we bought 300 hoodies with 300 megawatts on. And since just December, Upper Missouri's power bill for January -- billed me for 356 megawatts of power for just Mountrail and Williams County. And it looks like our target date as 400 megawatts is around the corner as we bring on additional gas capture, the Whiting Ray Gas Plant, the Enbridge Sandpiper Pipeline, and some of the new facilities coming on, it won't be long before 400 megawatts is in reach.

So with that, I'll take questions.

JUDGE MANN: Thank you. Miss Jacobson?

MS. JACOBSON: No, Your Honor.

JUDGE MANN: Mr. Schmidt?

MR. SCHMIDT: I have no questions, Your Honor.

JUDGE MANN: Mr. Schock?

MR. SCHOCK: No questions.

JUDGE MANN: Commissioner Kalk?

COMMISSIONER KALK: Thank you, Your Honor.

EXAMINATION

BY COMMISSIONER KALK:

Q. Have you thought about anything like 400-megawatt golf balls or something like that?

A. I tell you, we're very particular about our team. We just don't give the coats out. They have to be part of the 300-megawatt team, part of the 400-megawatt team, and golf balls don't play into that.

Q. Gotcha. A serious question, Dale. So how is it going to work in your mind when SPP is here and MISO is here about all those relationships that you've had with MDU over the years on sharing power and services? How is that playing out right now?

A. The world just got complicated.

Q. How are you negotiating with MDU on that?

A. Basically it's like you've heard further testimony -- or previous testimony is the MISO area, the SPP area, and for me being in the program for 34 years learning a new model. You know, it's no longer mine mouth to meter. There's an intercompany in between called SPP, learning that an MOD is no longer a motor-operated disconnect.

It's model on demand. How do you get the transmission data and everything to the appropriate entities and how the system is running. It's a new curve for me and it's complicated and kind of still going through the weeds and learning the ropes.

Q. So the traditional pricing models that you may have been able to work out with buying power from MDU, the costs are probably going to go up?

A. Okay. Commissioner Kalk, remember, I got an all power requirements contract with Upper Missouri and Basin, so negotiating with -- it would be more the interconnection common use agreements.

As Claire testified, the transmission facilities that are going to be leased will be a tariff-type lease, a different type of a cost recovery. I'm no longer a TOP more than now I am just a TO. I will be a transmission owner, responsible for maintenance, vegetation management and everything else. We pretty well leased our rights of being a transmission operator to SPP.

COMMISSIONER KALK: Okay. Thank you.

JUDGE MANN: Commissioner Fedorchak.

EXAMINATION

BY COMMISSIONER FEDORCHAK:

Q. Dale, thanks for coming. Could you give

us an update on how you are keeping up? In some of our previous hearings you've come and you've sort of given us a status report about how far behind you are for hooking up, you know, various new customers, and if you could just give us a status report on that, if you've made some -- made some time up now with a little bit of a slowdown here.

A. Commissioner Fedorchak, I would believe we are making some headway. I looked this morning, we're a little bit -- 200-plus requests away from getting totally caught up. But like they said, the perimeter drilling has more condensed into the heart. We've actually seen an increase in drilling, an increase in the multi-well pads, everything else, which has been tough on the design criteria because who would have ever guessed what used to have one or two wells has now got an Atlanta pad from Continental, 14 wells on one site, everything else. I mean, are we to a point now that everything that we designed four, five, six years ago has to be relooked at, reconducted, rebuilt, so the acceleration is still there.

My biggest concern is still landowner fatigue. Tough, tough to get easements. Tough relationships, four, five, six visits per each

landowner to talk about their concerns. So landowner fatigue is still the biggest issue.

Q. A couple followups to that on the large well pads. Are they more efficient in terms of the energy they use, or do they just require 14 times?

A. We're seeing a lot of technology change, variable frequency drive, sharing some of the region between the wells, one on the downstroke, one on the upstroke. Personally I haven't done enough analysis to answer that intelligently.

Q. So when you say you have to reconstruct, are you talking about pulling up the old transmission and getting new higher-voltage lines in, that type of thing?

A. When an oil company requests, typically for a single well pad, they would say, I'm going to use a 60-horsepower motor, a 125-horsepower motor, we would size it appropriately and use the normal rule of thumb, you know, is this going to be a distribution line, a main trunk line, what does the future look like. And the future has changed in them two or three years, which is now, you know, 15 times 125-horsepower motor. I mean, that's a full city subdivision, the usage of these. So, yes, it has definitely changed the way we look at things

and being cautious on stranded cost.

Q. So do you have any sense for how long the wells are waiting to get hooked up and using their -- sort of their auxiliary or temporary power?

A. We sat down with a group of lease generator owners, and they kind of wanted to know the same question, and I said even if some of the predictions of North Dakota are correct and we're going to get 9,000 wells, just because of the landowner fatigue and everything else and the risk of getting there, I told them is it 10 percent the utilities aren't going to get to, is it 5 percent, is it 3 percent. I told them there's no way that we'll get to every well, so there will always be some generation out there.

Q. Do you sense from the landowner fatigue that they're treating you differently than they may like a pipeline, or are you all in the same kind of category, they don't want anybody?

A. We used to be the local co-op on the block, and some are feeling we're no different than big oil anymore. The difference between me and the pipeline companies and big oil, we're the last one on the block.

By saying that, I mean the oil well is there, they've forced their hand that they're able to put a pipeline in, everything else. The last thing that comes to the oil well pad is electricity. So we're the last one to visit the landowners, so if the land hasn't been reclaimed correctly, everything else, they hold Mountrail-Williams typically hostage for us to be the mediator to bring the oil company and the landowner together and try to resolve it.

Most of them are resolved. Once in a while we'll get that 20-day demand letter that says we have the right to produce that well. I will go and visit with that particular landowner on a case-by-case basis and say, Would you rather have your local electric co-op own that power line, or do you want your oil company to own that power line? If there's something wrong with it, anything else, you're able to come and visit with me eye to eye, you're able to look at me or even to get to my board of directors. Good luck in going to Oklahoma, Houston and resolving your problem.

So far to date we have not had one case where we could not have resolved the issues, but it takes a lot of effort.

Q. So help me understand, how would the oil company bring themselves electricity?

A. A member is a member. We have agricultural members, we have oil company members, we have pipeline members, and if a member requests electricity, the determination is the point of meet. If I can't get right of access or an easement to go across, they may exercise their lease options and take power from the well site a half-mile or a mile, whatever it takes to meet Mountrail-Williams, and at that point would be the interconnect.

COMMISSIONER FEDORCHAK: I think that's all for me. Thank you.

THE WITNESS: Thank you, Commissioner.

JUDGE MANN: Commissioner Christmann?

EXAMINATION

BY COMMISSIONER CHRISTMANN:

Q. Are you still a winter-peaking company or summer, or is your peak always just the most recent month?

A. You've got it. Every month is a new date, like 50 first dates.

Q. Well, we're not going there. Tell me about close calls insofar as not being able to get

enough energy.

A. Basin Electric manager meetings are always interesting, and especially every other Monday at eleven o'clock we have a western North Dakota call-in and we talk about the load pocket that you've heard in testimony today, where are we at, where's the transmission line at, do we have to do maintenance, what line is going down, what's not, a very, very coordinated effort with Western Area Power and Basin Electric and the individual co-ops. Timing is when each individual line can be taken out, load studies, load studies, operational guides, emergency op guides. We really look at it every other week, hands on.

Q. You've not had to do curtailments, though?

A. We haven't had to do curtailments. We do do some relay settings for undervoltage tripping for emergency, we're looking at underfrequency tripping now, which is just a standard operating procedure of SPP, but at this time no curtailments.

COMMISSIONER CHRISTMANN: No other questions, but thank you for being here, Dale.

THE WITNESS: Thank you, Commissioner.

JUDGE MANN: Thank you, Mr. Haugen. You can step down.

Any others? Your name, sir?

MR. MILLER: Rodney Miller.

JUDGE MANN: Okay. And, Mr. Miller, as I'm sure you're aware, I need to give you the oath, to advise you of the penalty for perjury in North Dakota. It's a Class C felony, punishable by a maximum fine of $10,000, maximum five years imprisonment, or both.

(Witness sworn.)

JUDGE MANN: Okay. Go ahead.

RODNEY MILLER,

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

MR. RODNEY MILLER: My name is Rodney Miller. My address is 328 East 20th Street in Williston. I am an area landowner out there by the facility. I do support the facility. I think it needs to be put in. Progress. It's progress.

My main concern today is the water runoff from the facility. When you take land out of agriculture and put it into industrial or commercial, the soil doesn't absorb like it normally does and you may end up changing the way the water has naturally left that area. And I realize it is going to the west on this facility,

and some could get to mine from the old existing area.

I guess my biggest question is they say they are going to test the water. How do they test the water when it leaves the facility? A visual test would be to look for a sheen on the water, but I'm concerned, does a herbicide or a sterilant leave a sheen on the water? So are they doing any other tests but a visual test? That's my main concern.

JUDGE MANN: Okay. Thank you. Miss Jacobson, any questions?

MS. JACOBSON: No questions, Your Honor.

JUDGE MANN: Mr. Schmidt?

MR. SCHMIDT: I have no questions, Your Honor.

JUDGE MANN: Mr. Schock?

MR. SCHOCK: No questions.

JUDGE MANN: Commissioner Kalk?

COMMISSIONER KALK: Thank you, Your Honor.

EXAMINATION

BY COMMISSIONER KALK:

Q. Thank you, Rodney, for waiting today for a chance to say your piece. I'm just curious. Are you related to Floyd Miller?

A. Yes. That is my brother.
Q. Okay. So I know I've been to Floyd's place before and I walked out there on his property, which is -- well, you know where his place is at, but northeast of the outlet on there on the Stateline project. Where is your property on that map that I'm looking at here, Pioneer Generation Station, photo taken September 23rd?
A. My property is adjacent to the ONEOK plant.
Q. Straight east of there?
A. No. To the northeast. I own the Northeast Quarter in 21.
Q. So that was your property I was walking around with Floyd that day?
A. Yes.
Q. Did he tell you we were out there?
A. This was a year ago or so?
Q. Yeah.
A. Yeah.
Q. That's good. I don't want to break the law.
A. And then technically Floyd and I own the farm together. It is our farm.
Q. Okay.

A. Floyd calls it his, but --

Q. I'll talk to him about that next time I see him.

A. Okay.

Q. But seriously, I know this water issue has been a concern with the ONEOK plant.

A. Mm-hmm.

Q. And I believe I understand your concern in this one is that there's still going to be continued discharge out of Phase I and Phase II's plant, so you're concerned about that, and then also Phase III, where that may go to?

A. Well, Phase III, yeah, they stated that will go to the west, so that will not affect mine at all. Only if it drains to the east and it is able to get over to where their original drain is now, and if it goes through my brother's property and then gets to me.

Q. But that channel from Phase I to Phase II that flows from west to east, is there still unresolved issues in that channel, the drainage -- natural drainage once it comes out of the Phase I and Phase II plant?

A. Just in the ditch there that I see that -- of the county road where they said cattails were

growing earlier.

Q. What about your confidence with the Williams County Water Board? That was one of the things that they weren't heavily engaged in the ONEOK plant, but it appears that Basin has done a good job talking to them now. Have you expressed your concerns to the Williams County Water Board and the confidence with what they're doing here?

A. No, I haven't at the moment, but, yeah, they weren't very involved with the ONEOK one at all, and I am happy that the Pioneer Generating Plant is talking with the water board, so -- to get them involved with these concerns.

Q. Because we'll probably get someone back up here from Basin, but my understanding with the water board is they have a whole list of criteria before they can discharge and things they have to test from, so if the water board is asking the right questions, would you be comfortable if the water board issues the permit? I mean, how much comfort do you have with the water board and what their result will be in this?

A. I guess I'm unfamiliar with their -- what they can do. Do they have to issue a permit for the release of the water?

Q. Typically that's the way it goes, but every one is a little bit different. From the way I understand, your biggest concern is to make sure that the herbicides and everything that might be tested for before there's a discharge so it obviously could affect the cropland?

A. Mm-hmm.

COMMISSIONER KALK: We'll follow up with the company. Thank you, sir.

JUDGE MANN: Commissioner Fedorchak.

COMMISSIONER FEDORCHAK: Thank you, Rodney, for coming. I don't have any additional questions, but I do appreciate you sticking around and saying your piece.

JUDGE MANN: Commissioner Christmann.

COMMISSIONER CHRISTMANN: Kind of the same thing. I appreciate you mentioning that on the sterilants and herbicides. We'll make sure and follow up on that. Thank you. Good point.

JUDGE MANN: Thank you, Mr. Miller. You can step down.

THE WITNESS: Thank you.

JUDGE MANN: Miss Jacobson, did you want to recall a witness at this time to address any questions?

MS. JACOBSON: Yes. Mr. Miller, please.

JUDGE MANN: Again, Mr. Miller, you're still under oath. And, Miss Jacobson, do you have any initial questions?

MS. JACOBSON: Sure. I can start it out.

CRIS MILLER,

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

REDIRECT EXAMINATION

BY MS. JACOBSON:

Q. Mr. Miller, can you describe your ongoing discussions with the water board and what requirements they have as far as a permit?

A. Yeah. The Williams County conditional use permit process actually brought the water board in to their process, so that's why when we went through this conditional use permit acquisition two years ago, the water board wasn't perhaps part of the conversation. Williams County has brought them in to all their conditional use permits.

In looking at the water board's, I'll call it oversight, it's basically a direction of flow and that if you have stormwater ponds and you increase this runoff, do you actually even have an easement to back up water onto -- from your holding

pond, and then actually the rate of release and your design of the pond so that you're not incurring any type of a damage to adjoining neighbors and property owners.

Q. So earlier this morning you talked about plans that Basin Electric has for this spring. Can you talk more about that and state specifically what these plans are?

A. Sure. What is at issue is we believe the -- there's a knife gate on the outlet valve of the existing pond for Pioneer I and II. The most likely scenario is that knife gate would have a rubber gasket seal behind it. We believe that's leaking by. So if you go out there in the wintertime, you can see the ice lens -- lensing with the outflow of the pipe, so that's why -- it's a slow leak, it's a minor leak, but when it's below zero, you'll`accumulate ice.

So once that ice is -- we have the thaw -- and spring will come, we hope -- we will go out there and investigate that knife gate, we'll see where the rubber gasket -- and make those repairs. I guess there's also a contingency that there's some other source of leaking of the water in that pond.

One thing that's kind of unusual about that pond, there's -- even though we had some rains last fall, that pond never dried up, so once this issue was brought to my attention, I went back and I looked and it appears that the -- even though we're on the crest of a hill, there is groundwater, it must be a little perched water table, the bottom of our pond actually intercepts the local -- localized water table. So that's why you always have some water showing in the pond. It's not that our plant is discharging that water. It's basically that we excavated a hole and we intercepted the water table.

So a normal operation for that process water that does get there, we only use that area cooling water when it's over 60 degrees, and I believe it's like two gallons a minute from each plant, so it's actually a small amount of water. So if it was in the summertime, we don't operate 24/7, typically you wouldn't with a peaking plant, you would expect that water just to be in that pond and evaporate. We shouldn't have any discharges from the pond.

But going back to the leak, we'll wait till it thaws. The damage that's obviously

happening, because it's leaking slowly, it's saturating that ground in the highway ditch so then you change it from a grass type of a vegetation, now you have some wetland, cattails type emerging. Basin Electric owns the ditch. Basically our property is the centerline of the county road. We have our own mowing equipment, et cetera, to maintain that area, so we'll keep that area mowed.

Once that discharge valve is corrected, we think that area will dry up like any other part of the ditch in Williams County.

Q. Thank you. Mr. Rodney Miller testified about concerns with herbicides in the water, and can you respond to his concerns, please?

A. Sure. Part of our plant we need to maintain, you know, for noxious weed controls, et cetera, and then we certainly use -- like in the switchyard you'll use soil sterilants. Those soil sterilants are approved by EPA for its intended purpose, so when you do your application, et cetera, there should not be any residual to go off into the stormwater pond. So if your applicator is doing his correct application, we don't believe any herbicides should be in that pond.

I would like to address one other thing too. We talked about in the existing pond we have an industrial -- stormwater industrial discharge permit. Typical parameters for that is pH, so you're between 7 and 9, and then you have that visual inspection for oil and grease, so that's why we talk about a design about having spill containment and don't have maintenance activity, et cetera, to do it, so that visual sheen is a good indicator of whether it is -- oil and grease is present on the property or within the water pond itself.

MS. JACOBSON: Thank you, Your Honor. No further questions.

JUDGE MANN: Okay. Mr. Schmidt?

RECROSS-EXAMINATION

BY MR. SCHMIDT:

Q. Just to follow up on your last comment there, you were talking about the visual sheen for oil and some other materials that can be in the water. Would herbicides show up in that visual sheen?

A. It depends on the carrier, but typically it would not.

Q. Is there a specific way that Basin tests

for herbicides in the water?

A. Typically testing for herbicides is not a discharge parameter. You look at your facility, what type of waste, what type of processes that occur within your collection area of your stormwater pond, and herbicides is not a typical thing we do. However, we do -- use of that herbicide, like I say, people who deal with herbicides and pesticides, the label is the law, and if that permit -- I mean, that herbicide wasn't licensed to be used in your area, you're misapplying your herbicide.

Q. So is it fair to say that the way that you check the herbicidal content of the water is you rely upon the -- what the EPA allows and those are the only types of products that you use; would that be correct?

A. Correct. It's the proper application, proper use, proper selection of the herbicide for our intended use. That's correct.

MR. SCHMIDT: Thank you. I have no further questions.

JUDGE MANN: Mr. Schock, anything?

MR. SCHOCK: No questions.

JUDGE MANN: Commissioner Kalk.

COMMISSIONER KALK: Thank you, Your Honor.

FURTHER EXAMINATION

BY COMMISSIONER KALK:

Q. Thank you, Cris, for coming back up here again. So the industrial permit has a bunch of criteria before you can discharge, but the herbicides and sterilants are not part of that permit; correct?

A. That's correct.

Q. Now, it's been a while since I've been up there, but the transition line -- transmission line that's north of ONEOK, is that Basin Electric's property?

A. Basin Electric does not own any land east of County Road 5.

Q. Okay. So the property that Basin owns is just north of Phase I and Phase II. As it gets to the highway, then that's where your ownership stops?

A. Correct, at the section line.

Q. And who owns the property just east of the road once it goes under the culvert and comes down that stream? Is that all ONEOK's property all through there?

A. I wonder if it wouldn't be helpful to look

at one of our other maps here.

Q. Why don't you do that. Where I'm going with this is, I remember before the landowner had -- there was some runoff issues that caused some crop loss at the Miller farm, and so ONEOK got out with them to some degree, and I know there's still some issues there. What I'm trying to get to, I guess, is just the -- if there is something that goes wrong, what's your commitment to the Miller family on making sure they're happy and that everything you say happens, you get it all fixed, there's no more discharge coming, everything is good, but if it's not, then the water goes under the road and then it becomes he said/she said whose water problem it is.

A. Sure. What I was going to look at is Figure 3-1 in our application. It shows where our plant site is at and then we're on this hydrogeologic divide, so water that's released from Pioneer I and II, it actually stays on the west side of the highway, but it flows north approximately -- is it a half-mile or so, and then that's where it crosses to the east of County Road 5 and follows the drainage down that goes through the Miller brothers' land.

As I mentioned before, we had our discussions with the township board and we talked about coordinating water, so if it rains and rains to such a degree that we need to have a release of our pond, first the water -- if our plant wasn't there, that water would flow down the ditch and flow down the same drainage as it always would.

Q. But it wouldn't be as concentrated as it is now.

A. And that's the time. So that's what we do, is we have that delay, so it's stored until it meets our discharge quality parameters and then it's a controlled release, so it would be later in time. It most likely would be less of a volume, but it would be over several days.

When we currently had our discussions with the members of the township is that we would notify the landowners, like -- as a concern was on the highway ditch for haying, et cetera, so let them know about our pending discharge.

Q. So does that mean you'll notify the Miller family before you'll discharge?

A. If that's what it's going to take to help coordinate this, yeah, we can start doing that if that's --

Q. I thought you said that that's what they asked you to do.

A. Well, the landowner that was -- had our discussion was for the haying of the county road ditch, so --

Q. Okay.

A. -- it was to try and coordinate that effort. I would guess that the next step would be that we could set up a system of identifying contacts of whose land it was and let them know that we're having our discharge. But the -- I guess it won't be a right, but I'll call it the privilege of discharging that water, I guess, we don't really have another choice but going down the natural drainage that it always would have flowed down, just how you stop --

Q. When I was up there before, it looked just like it -- there was some big rainfall events that nobody planned on, there was some issues that ONEOK didn't do things quite right. I think going forward, my gut is if you keep working with the water board, now that you've met Mr. Miller -- you maybe probably already met him before -- that if you keep talking back and forth, we should alleviate some problems, but I just advise Mr.

Miller that if something goes wrong, you've just got to call us just like you did before. The big thing, I think, different this time is the local water board is involved and they're going to put some tighter strings on Basin than perhaps they put on ONEOK from lessons learned.

A. I'm not familiar with what ONEOK did, you know, to cause some concerns with the adjoining landowner. I know we have our pond. It's designed appropriate for the area. We have our discharge permit. It's been issued. If we have a need for discharge, we'll need to do that in order to be compliant with our permit. However, we will coordinate and assist and see how we can work around the issues with the adjacent landowners.

COMMISSIONER KALK: Thank you, Cris. And to beat the dead horse one more time, the long and short of the ONEOK plant, it was supposed to be a zero discharge facility and they had this huge rain event and all of a sudden it became a discharge facility and it had an uncontrolled release and was quite a mess. So hopefully we won't have that stuff happen again. Thank you.

JUDGE MANN: Commissioner Fedorchak?

FURTHER EXAMINATION

BY COMMISSIONER FEDORCHAK:

Q. Just a couple points of clarification. So this land -- this discharge -- this pond and any discharge from it, though, you expect to flow south and west and that should not impact Mr. Miller's property?

A. The discharge for Pioneer Phase III will be to the west. It will not flow to the north and to the east, that's correct.

Q. Okay. And you have the permit for that and will notify the landowners, as you said. And in regard to the two issues, the sheen and the presence of any oil products or herbicides, you test for the visual -- you have a visual inspection, you do not test for the herbicides or those types of chemicals, but you're only allowed to use EPA-approved herbicides that I'm assuming then are not harmful for agriculture?

A. Correct.

Q. Okay. And you don't -- you don't anticipate that there are going to be discharges? If this functions normally, it just evaporates? That's how it's constructed. Obviously there can be rain events, et cetera, that cause that so you

have the discharge permit, but it isn't part of the normal operating?

A. For -- we'll go back to Phase III. So, yeah, that will be a -- it's the pond storage, volume is calculated by our continuing area what's being disturbed. So for Phase III, since there's going to be no industrial process water going through there, we intend to head down the path of having just a -- I'll call it a sedimentation basin-type project where there would not be a control or, you know, a controlled release, it will just have the storage volume present, so when a rainfall event occurs, the water has a chance to get stored behind it, drop off the sediment, and then it will flow by itself should the rainfall event be a long enough duration to overcome the storage capacity for Phase III.

COMMISSIONER FEDORCHAK: Thank you, Cris.

JUDGE MANN: Commissioner Christmann?

FURTHER EXAMINATION

BY COMMISSIONER CHRISTMANN:

Q. I just want to clarify one of your answers to Commissioner Fedorchak's question. I'm assuming you're meaning that the sprays that are used on site, because of the volumes and the timing of when

they're applied, they shouldn't be harmful to agricultural products, but if you're using a sterilant and too much is used or it rains too quickly too much and that washes down onto a field, that is going to be harmful to ag land, as would herbicides in the case of particular crops; correct?

A. Correct. Anything that's improperly applied can cause harm.

Q. So let's take the case of an accident and some troubles like that. I suppose in real small amounts it could show up in down water streams and be a subject of dispute whether that came off of other people's fields or yours or what, but in the case of a heavy concentration, it should be visible then in the valleys through which the water flowed; correct?

A. Correct. In that scenario you are correct.

Q. And if that happened, what is the downstream landowner's course of action if a valley is all of a sudden deadened?

A. I'm not an expert in this, but I know that there is a process in North Dakota -- and perhaps as an agriculture background, you might have a --

know more about this. Just any type of misuse of a herbicide, that applicator has got the responsibility. I know oversprayed conditions when there's a crop being sprayed and the adjacent crop is not compatible with that herbicide, there is damage and there is a legal process. I believe it's -- the state agricultural department has a process to go for that review. And I'm sure there's legal recourse as well. But in the scenario that you explained, should the applicator misapply or misuse a chemical and there is downstream impacts, that the impacts would have to have some type of a recourse, legal or, like I say, through the agricultural department.

Q. And who does the spraying for Basin in these situations, your employees that are out on the site or do you hire a contractor that's licensed and certified in that?

A. Yeah. Basin Electric does not use our own spray. We do not have commercial applicators. So in these remote sites here we contract that out to people who have a commercial pesticide application license.

COMMISSIONER CHRISTMANN: No other questions. Thank you.

JUDGE MANN: Miss Jacobson, anything further?

MS. JACOBSON: No, Your Honor.

JUDGE MANN: Okay. Thank you, Mr. Miller. You can step down.

Miss Jacobson, do you have any closing statement or anything?

MS. JACOBSON: I don't, Your Honor.

JUDGE MANN: Okay. Mr. Schmidt, any closing comments or anything we need to address before closing the hearing?

MR. SCHMIDT: I don't believe so, Your Honor.

JUDGE MANN: Commissioner Kalk, any closing comments?

COMMISSIONER KALK: Sure. Thank you, Your Honor. Thank you, Basin, for putting the case together and thank you, Mr. Miller, for coming out here. You have to go remind your brother whose farm it is after all; right? I really do appreciate you coming out. That's exactly why we're up here and it's an issue that we certainly have been tracking for a while, and the fact that you reminded everybody here, it's something that will stay in our forefront of the discussion.

And just, I guess, as the way of planning out this, you file things in to the Commission, we'll get a work session scheduled as quick as we can and we'll come to a decision pretty quick. Thank you.

COMMISSIONER FEDORCHAK: I just echo those thanks and appreciation -- appreciate you also indulging us with some of your technical knowledge beyond the scope of this hearing and sharing your, you know, experiences and bringing us up to date on what's going on out in this area with the latest downturn in the oil patch. It's really helpful and good not just for this application, but it's helpful for us in other things we're doing. So thank you very much.

JUDGE MANN: Commissioner Christmann.

COMMISSIONER CHRISTMANN: And I think that the last discussion here is something that merits our consideration on a whole -- not just this case, but in a whole variety of cases because I know it's a big deal in production agriculture issues of pesticides and herbicides and those sorts of things and what happens to the runoff, what happens to the soil long term, those types of things. And, you know, we deal with it on mine siting, these kinds

of sitings, just all kinds of things that we do, so it's a good point and we'll make sure to keep some of our young lawyers busy for probably many years to come. But it is a good point to consider this in all of our cases, and I don't have any perfect solutions at this point, but we'll be certainly taking it under consideration. Thank you.

JUDGE MANN: And I would ask that Basin Electric prepare proposed findings, conclusions of law and a proposed order.

And anything else, Mr. Schmidt?

MR. SCHMIDT: We did send out a sign-in sheet a while ago. I'm just curious where that's at. If you could just turn that in to the ALJ, that would be appreciated. Thank you.

JUDGE MANN: Thank you. And that will conclude the public hearing on this matter.

(Concluded at 1:19 p.m., the same day.)

CERTIFICATE OF COURT REPORTER

I, Denise M. Andahl, a Registered Professional Reporter,

DO HEREBY CERTIFY that I recorded in shorthand the foregoing proceedings had and made of record at the time and place hereinbefore indicated.

I DO HEREBY FURTHER CERTIFY that the foregoing typewritten pages contain an accurate transcript of my shorthand notes then and there taken.

Bismarck, North Dakota, this 30th day of March, 2015.

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Denise M. Andahl
Registered Professional Reporter

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