ORIGINAL

THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF SOUTH DAKOTA

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IN THE MATTER OF THE APPLICATION
OF BASIN ELECTRIC POWER COOPERATION,
INC. FOR AN ENERGY CONVERSION FACILITY EL04-041
PERMIT FOR THE CONSTRUCTION OF A
COMBUSTION TURBINE GENERATOR NEAR
GROTON, SOUTH DAKOTA

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Transcript of Proceedings
February 3, 2005
6 o'clock, p.m.

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BEFORE THE PUBLIC UTILITIES COMMISSION,
GARY HANSON, CHAIRPERSON
BOB SAHR, VICE CHAIRPERSON
DUSTY JOHNSON, COMMISSIONER

COMMISSION STAFF
John Smith
Karen Cremer
Greg Rislov
Michele Farris
Sara Greff

Taken at:
Coco's Restaurant
Junction of Highways 12 and 27
Groton, South Dakota

Reporter: Tammy Erickson, RPR

WHEREUPON,

the following proceedings were had, to wit:

COMMISSIONER HANSON: Good evening, Ladies and Gentleman. Members of the Public Utilities Commission welcome you here this evening. We're gathered for the purpose of a public hearing for a proposed energy conversion facility. My name is Gary Hanson and I'm a commissioner with the PUC. With me this evening is Commissioner Bob Sahr and Commissioner Dusty Johnson. We appreciate your attendance and would like to remind our staff to turn off their cell phones.

Also, there is a sign-up sheet. We would very much appreciate it if you would sign up, give us the information so that if there is a need to make note of who's speaking and who needs additional information, we will have that available to us.

For those of you who wish to testify this evening, please make certain that you speak loud enough for everyone in the crowd. If you need to use the microphone, we have a fairly lengthy cord. There is a court reporter this evening and for that reason we also want you to speak up and let us know who you are.

We will now begin the public input evening hearing concerning an application submitted by Basin Electric Power Cooperative, and by the way, if there is any juncture

while we are speaking that you are unable to hear us, please raise your hand and we'll take care of that. For a permit for an energy conversion facility. The date is February 3rd, 2005. The time is 6 p.m. and the place of this hearing is Groton, South Dakota. The purpose of this hearing is to provide information to the public about Basin's proposed project and to hear public comments regarding Basin's project. Interested persons may present their views and comments regarding the application. A copy of the application is on file with the Brown and Spink County auditors.

On December 22nd, 2004, Basin Electric Power Cooperative, Incorporated submitted to the Public Utilities Commission an application for a permit for an energy conversion facility. Basin Electric is a consumer-owned, regional cooperative headquartered in Bismarck, North Dakota. Basin proposes to construct a new 100-megawatt simple-cycle gas turbine approximately five miles south of the City of Groton, three miles north of the community of Ferney and eighteen miles southeast of the City of Aberdeen; all of which is in Brown County.

The parties to this proceeding at this time are Basin Electric and the Commission. Under South Dakota law, each municipality, county and governmental agency in the area where the facility is proposed to be constructed, any

nonprofit organization formed in whole or in part to promote conservation or natural beauty, to protect the environment, personal health or other biological values, to preserve historical sites, to promote consumer interest, to represent commercial and industrial groups or to promote the orderly development of the area in which the facility is to be constructed or any interested person may be granted party status to this proceeding by making written application to the commission on or before February 21st, 2005. We do have applications available here this evening if you would like to apply for party status.

Basin Electric must show that the proposed energy conversion facility will comply with all applicable laws and rules, that the energy conversion facility will not pose a threat of serious injury to the environment or to the social and economic condition of inhabitants or expected inhabitants in the siting area and the energy conversion facility will not substantially impair the health, safety or welfare of the inhabitants and that the energy conversion facility will not unduly interfere with the orderly development of the region. With due consideration having been given to the views of the governing bodies of the affected local units of government, the Commission will decide whether the energy conversion facility should be granted, denied or granted upon such terms, conditions or modifications of the construction,

operation or maintenance of the facilities as the Commission finds appropriate.

Basin Electric will begin with a presentation to explain its proposed project. Following that presentation, we will take comments from any interested persons and we want to encourage members of the public to present your views. I would remind you again that there's a sign-up sheet and you may also submit written comments to us if you wish. Thank you for allowing me those remarks at this juncture and Basin Electric, the floor is yours.

MYRON STECKLER: I'll probably grab that mike. I'm not sure where I should stand to stay out of everybody's way here.

Thank you, commissioners. My name is Myron Steckler. I'm the overall project coordinator for this project and obviously I work for Basin Electric. I guess before we get started, I'd like to introduce some of the people I brought with me from Basin Electric. We have Jim Berg who's our environmental coordinator; Curt Pearson, marketing coordinator, and also Russ Mahler, our staff counsel. We had a lot of discussions on the way down here why we brought him with and it went from to drive, but I think we're going to make him pay for supper. Also with us we have three folks I believe here from Tetra Tech. Tetra Tech is a consulting and environmental consulting firm that

we hire from time to time to help us with the environmental permitting effort and that's Bob Farns, I'm not sure where I saw him, Bob Hammer and I don't remember the name of the --

LEONARD NELMS: Len Nelms.

MYRON STECKLER: Okay. I guess I'll start out with I guess like you had mentioned what the project is. We started out eighty to a hundred megawatts. The unit that we're looking at is a hundred megawatt natural gas-fired peaking turbine generator at an estimated cost of $69 million.

I just want to point out it's a peaking unit expected to run probably ten to fifteen percent of the time to handle our peak demand and I will cover that a little bit more later on.

Before I get started, I just want to give you a little presentation on who Basin Electric is for those of you who don't know. Basin Electric is a regional wholesale power provider to our member co-ops. We have I guess I believe it's ten Class A members. That blue here is the area that we provide power to in the blue and within those nine or ten Class A members, there are an additional hundred and twenty member cooperatives of which I guess I want to point out the East River Power Cooperative is the Class A member in this area, and then we provide -- it's Basin's responsibility to provide power, create and deliver to our Class A members;

East River being one of those Class A members. East River then in turn supplies power to its member co-ops. Northern Electric is the member co-op for Spink and Brown County. I guess that's where Groton is.

As far as Basin's resources, I just want to touch on that a little bit. We have Antelope Valley Station which is up near Beulah, North Dakota. There's two units there at 450 megawatts. Leland Olds Station, also in North Dakota. It's near Stanton, and that's a combined capacity of two units there at 650. We also have Laramie River Station in Wyoming and that is three units, 550 megawatts each. Basin operates this unit, but only has about 50 percent of the capacity from it. We also have two peaking units, one in Spirit Mound Station in Vermillion, South Dakota, and also the Wyoming distributive generation, there's nine small gas-fired units in and around the Gillette area and these units are around six megawatts each. We also have the Dakota Gasification Company where we gasify lignite coal and produce natural gas. And I guess one of the -- I just thought about, one of the other peaking units that we do have capacity from is the unit down in, what is it, Spencer, Iowa, I believe the 80-megawatt unit down there.

We also have some wind resources. We've got two units or two turbines up in Minot with a total output of three megawatts and we have two turbines in Chamberlain, 2.6

megawatts, and we also have the capacity out of the 40-megawatt wind farm in Edgeley and the 40-megawatt Highmore wind farm.

I guess Basin, I guess power goes to a lot of areas, but it covers, you know, both ag, commercial and industrial loads.

Basin needs to have enough capacity to serve its members' peak load. In the past -- I guess over the last ten years, our peak is typically in the summertime, so when I talk about peaking, that is the time of the year mainly that we would see it in operation. This load has, peak load has been increasing on our member systems, increasing at about 72 megawatts per year.

Basin Electric has gone through some expensive studies to determine the capacity that we need to support our members and as you can see here, we showed a deficit as we move forward based on our ability to produce enough power for our members. In the first, you know, I suppose eight or nine years here, it has shown that the best resource to add to our portfolio would be approximately a hundred megawatt peaking unit.

Once we determined, Basin determined the need for additional capacity, we completed a site selection study. We started this approximately two years ago. In this study we looked at our compared gas supply, transmission access, water

availability, environmental impact, public impact and road access to determine the best location. We started out with about ten, I believe it's ten potential sites in eastern South Dakota, northwestern Iowa and eventually narrowed it down to the Groton site as a preferred site. I guess what I want to show here is the Groton site is probably a good site because it has good access. We have the highway that runs along adjacent to the site. There is water available, Web water has a 12-inch distribution water line that runs alongside the -- again right alongside the site. The site is adjacent to two substations so the transmission requirement is less than a quarter mile of actual transmission and the site provides a fairly close fuel supply. This project includes approximately twelve miles -- a new twelve mile gas line and the site also provides the least amount of impact to the public locating it adjacent to an existing industrial site.

Here is I guess an aerial photo of the area that we're looking to build the project. I just want to show we have the WAPA Area Power Administration 115KV substation in the lower left corner, the existing Groton 345KV substation. The remainder of that quarter section, Basin has recently purchased for this project and we are planning on building the turbine on the site in this area.

Here's that same I guess photo with an overlay of

the preliminary plot plan. I just want to point out here the transmission line. It's a very short transmission interconnection. That line is the existing Web water which will require a very short interconnection and the road that we plan to reach to the site would come around the north side. This would also be the route of the gas pipeline from the highway.

Just a blowup of that layout, again this is a preliminary layout and it's fairly close to the same thing. We may have tweaked here and there a few feet. I just want to point out a few of the items. There's going to be a maintenance/operations building. It's approximately 70 by 140. We have a two hundred thousand gallon storage tank for I guess NOx control water.

The turbine generator, this right here is the, you know, it's the intake and the turbine and the generator sitting on the end here. We have the stack. It's approximately 85 feet tall, diameter of eleven and a half feet. Here we have the GSU or the step up transformer. We take the voltage output for the turbine which is at 13.8 KV and step it up to the 115 required time throughout the site. And on the west side here, the dry cooling tower, it's a fairly large cooling tower. It does not use water. It's a glycol system, an enclosed system just like the radiator in a car, and we're going to be building a pond on the end to

catch all of the rain runoff from the site and also any noncontact good water would be diverted to the pond for evaporation.

Just a 3-D look, you know, at the site. First of all this is a wet cooling tower. We're going to have a dry one to stay away from the water issue; much larger. This is the turbine generator intake turbine and the generator on the end here. We have the simple-cycle exhaust stack like I mentioned. This unit has an intercooler which takes the combustion air, cools it through a heat exchanger and back into the intermediate pressure compressor, and this here is a variable bleed valve and just bleeds off the combustion air during startup and shutdown, mainly during shutdown.

Everybody see over here? Probably late to ask, but...

The unit that we're going to plan on putting in is a General Electric LMS 100. This is just a picture of the turbine itself. I guess I'm going walk you through here on the technology. It's just based on the left side, combustion air comes in and goes through a high pressure or a low pressure compressor and during that compression, heat is generated. That combustion air then goes through the scroll, goes through that heat exchanger and is reintroduced back into the turbine where it goes through an intermediate and a high pressure compressor, through the combustion chamber

where the natural gas and water for noxious control is introduced and then is expanded out through the low, intermediate and high pressure turbines or also called a power turbine and then out through the exhaust.

Here is a fisheye view of a unit that's in fabrication. It's just a picture of the same turbine we just looked at. The combustion air comes in, goes through the low pressure compressor. The scrolls are not in here right now. We have the super core which is the combustion chamber, intermediate turbine, power turbine and out through the exhaust diffuser. I guess I looked at that picture several times before I noticed there's a guy standing here, but it just gives you a feel for the size of the unit.

This is again the turbine you just saw in fabrication. The unit is completely enclosed in a weather enclosure, also for sound stimulation.

Picture of the aux skid on site and with that aux skid is just your lube oil cooling pumps, turbine wash and NOx control water pumps. This will also have an enclosure around it.

This is a picture of the test site down in Houston. The unit will be tested before coming here. Here is a picture of the generator. Again gives you a feel for the size of the equipment. Here again, they have wet cooling towers here, we'll have dry.

Pipeline route, I guess I want to point out that this entire pipeline route parallels an existing six-inch line. I believe that it goes to Web. It ties into the Web valve site here. The line is ten inches in diameter. It's going to be the same pressure as the Northern Border main transmission line here. A max of 1300 and I believe 13 to 20 is the max pressure. The first part of the pipeline here approximately nine miles will be installed in the existing road ditch and we have a permit with DOT or approval from them to put that pipeline in the road ditch. The last two miles cuts across some landowner property here which requires some permit easements. Again this parallels an existing six-inch line and ties into an existing valve site. There will be additional valves located here, but there will not be a new tap. There will also be a meter station.

Just an aerial photo of the diagonal two-mile stretch here. Our land department is in the process of working with the local land owners to get easements on this cut across.

Water usage for the site is fairly small for a unit of this size. The main use is for NOx control. It's around 70 gallons per minute. This water is injected into the combustion chamber and a hundred percent of it is evaporated off into the atmosphere. The second use is evaptive cooling. Evaptive cooling works just like the

humidifier in your furnace. The water is trickled down over a media, the combustion air is drawn through it for cooling and out of the 30 gallons per minute, about half of that is evaporated, the other half will be directed to the pond. Again this is good water, clean water, noncontact water. I just want to point out that evaptive cooling will only be used during the hot summer days, roughly 80 degrees and above.

Waste water for the site, again minimal. Basically what I broke it down here is noncontact and contact. Noncontact water is good quality water, it does not come into contact with any chemicals or oils, any processed fluid and that water is directed to the pond for evaporation. The contact water, again it's -- an example of the contact water would be an oily waste, you know, leaks from the turbine, you know, water from the turbine wash and what we have on site are two 3,000 -- plan to have on site is two 3,000 gallon tanks where this will be directed to and we will contract with a disposal company to come in, pump it out and properly dispose of it.

A little information on the sound expected or the impact in the area. I guess I'll first point out, we had Tetra Tech do a noise survey at the site to kind of get a base line and they did I guess two locations here. Part of the survey is to set up two continuous monitoring stations.

On two different occasions they monitored the noise for 48 hours. The results indicated averages that ranged from 33 to 90 dBAs at the, I guess the fence line near the residence to the north, and at the substation fence line saw averages or limited averages that range from 46 to 60 dBAs. The contract that we would have with General Electric has a guarantee of 85 dBA for the equipment and it's called a near field guarantee and basically you have three feet from any piece of equipment five feet above the ground, the noise cannot exceed 85 dBA. Also part of the guarantee in the contract is what we call a far field guarantee. What that states is that 400 feet from the site for any of the pieces of equipment making noise and this circle is 400 feet from any of that equipment, at this point the noise cannot exceed 65 dBA.

Going through the equations, this is not a guarantee, but we're projecting based on this 85 to 65, the projected noise from the unit will be 54 at the same area here of this survey point. I just want to point out, it falls somewhere in between the low and high that we saw on the survey.

I just want to give you an idea, you know, what does 85 dBA, what does 60 dBA represent. Here are some examples. This come out of a U.S. EPA publication. I guess a couple of them to point out, a typical construction site is 85; a typical highway at a hundred feet is at 60 dBA.

Another example that I've seen in the past, a typical tractor is around 90, 95 dBA.

Construction manpower that we're projecting, I guess the site, General Electric is -- getting carried away here. The site construction that General Electric is responsible for, they're estimating peak manpower requirement of 109 to 145 people. Obviously during the beginning of the project you'll have less, peaking out at 109 to 145 and then falling off at the end of the project. The pipeline installation, the 12 miles of pipeline estimating approximately 75 construction workers. Transmission, this includes a short transmission line that I pointed out and also modifications to the Western Area Power substation, modifications required to tap in, and they're estimating that 40 to 60 percent of this manpower they will get locally, I guess if available.

Long-term employment, we're expecting two full-time positions and that would be eight hours a day five days a week. The unit during the weekends, evenings is going to be controlled from -- at this point we're planning on controlling it from our Leland Olds Station at Stanton, North Dakota.

I guess just a little update on the permit environmental activity we've been working on. We have received a special exception permit from Brown County for the

acreage that we purchased. Air quality permit application has been submitted to the state; that is in review. Part of this application is that Tetra Tech was required to do an air model. Do not expect -- and part of the gas power unit is a really clean unit. We do not expect any problems getting that permit. Environmental assessment was also completed. The findings that we had from that was no significant impact to the environment. The copies of all three of the first items here are included in the Public Utilities Commission permit application and obviously we're working on the -- we also require a permit to construct from the South Dakota Commission, that's why we are here today.

Schedule for the project, if all goes well, the design keeps moving along and we get all our permits in place, we are hoping to start this summer to construct. I guess right now preferably in June is our contract with GE, but again this is tied to having all our construction permits in place. February of '06 we would actually complete the electrical interconnection and back feed power into the site to begin bumping the motors, checking the site out. April would be, April of '06, first fire, first time we'd fire the unit and it would take approximately two months for testing and tweaking on the unit before we could go commercial.

That's all I have. If there's any questions.

COMMISSIONER JOHNSON: Single fuel or dual fuel?

MYRON STECKLER: Single fuel, natural gas.

COMMISSIONER JOHNSON: Okay.

COMMISSIONER SAHR: I may have some questions, but I may wait to see if other people have comments. I assume you'll be here for the duration?

MYRON STECKLER: I'll be here a while.

COMMISSIONER SAHR: All right. Thanks.

COMMISSIONER HANSON: Does anyone have any questions of Myron at this time?

JOHN SMITH: I have one. May I ask a question? You talked about the noise level. What is the nearest residence to the site?

MYRON STECKLER: The nearest residence is approximately 1800 feet and it's on the -- right there. This is a quarter mile or a half mile and this distance is roughly 17, 18 hundred feet I believe. The noise study that Tetra Tech completed, a copy of that is also in that PUC application.

COMMISSIONER SAHR: And with the residence, you're anticipating that the projected level or Tetra Tech has come up with 54 dBs, is that what we're looking at?

MYRON STECKLER: The noise from the turbine will fall off to approximately 54 at this location.

COMMISSIONER SAHR: And could you go to the chart that shows the relative comparisons? That's the one. So 54

would be between residential area during day and typical highway at a hundred feet?

MYRON STECKLER: Yes.

COMMISSIONER SAHR: And will it be louder than that at certain points in time than the 54 level?

MYRON STECKLER: That would be the max.

COMMISSIONER SAHR: That would be the anticipated max?

MYRON STECKLER: Yeah. You know, once you meet this 65 dBA it's basically a calculation of what to expect at this area, that being 54.

COMMISSIONER SAHR: And with a peaking plant like that, I believe you said that you expected that it would be operating during the summertime months, 80 degree weather or above, is that what you said?

MYRON STECKLER: It's typically going to be running for peak demand, summertime. Kind of a daily peak you'd be looking, you know, daylight hours; however, the unit is also going to be a backup resource for Basin's other base load units if we happen to -- one of our other units go down, we would run it other times.

COMMISSIONER SAHR: Are there any scenarios where you would anticipate it running say after 9 o'clock at night, other than maybe a backup to a base load plant?

MYRON STECKLER: You would -- yeah, you would

still see it run at night.

COMMISSIONER SAHR: At night?

MYRON STECKLER: At night.

COMMISSIONER SAHR: Would it be when it's warmer or what would be the situation where it would run at night?

MYRON STECKLER: Most of the time when it's warmer, but again, if you get into a backup situation, you would see it run more.

COMMISSIONER SAHR: How often would you anticipate the backup type situation to occur?

MYRON STECKLER: That part I guess I could not answer.

COMMISSIONER SAHR: Is that when like the plant has some sort of catastrophe, maybe it's down for routine maintenance, that sort of thing?

MYRON STECKLER: We get high demand area due to other units going down, the unit will run.

COMMISSIONER SAHR: I guess what I'm getting at is I'm just kind of curious to see how much it will be operating at night because, you know, clearly if there are affected landowners or people residing in that area, I think probably the sensitivity level is going to be a little bit higher during the nighttime hours. Again, do you have any feel for when it's going to be -- how often it's going to be running at night?

MYRON STECKLER: I could not answer that, but I mean the unit is going to be -- we're expecting 10 to 15 percent. It is a peaking unit. It's going to run -- you know, obviously again the peaking is the summertime. Again on a daily basis, typically your peak is during the day, but there is times where it will run at night. I cannot put a number to that, how much. Ten to fifteen percent of the time it will run. Most of that will be not nighttime, but it will run; could run I should say.

COMMISSIONER SAHR: And have you had an opportunity to meet with the landowners in the area?

MYRON STECKLER: We have a land department, the guy that was down here, purchased the land, looked at the easements, has talked to some of the landowners. I do not know which ones. Kelly Suko is the guy's name.

COMMISSIONER SAHR: And are you talking about the nearest property or you're talking about the landowner of the actual site that you purchased?

MYRON STECKLER: Yeah, he I believe has talked to the residents here and also more along the pipeline route.

COMMISSIONER SAHR: Do you know, and is that the person who is actually living there or persons, do you know if they're owners or if they're renters? Probably some of the people in the room know.

MYRON STECKLER: Yeah. My understanding is they

owned 40 acres or something here.

COMMISSIONER SAHR: Are they here tonight, I'm just curious? And do we know, are any of the other landowners in that area, are any of them here tonight? We have a couple here. Sir, I'd ask you, do you intend to make some comments or are you just here for an informational standpoint?

UNIDENTIFIED MAN: Not at all. We're just anxious to have it come; the quicker the better.

COMMISSIONER SAHR: I think that's a hint that I shouldn't be asking so many questions.

And I would like to just give a little bit of background to some of these noise questions is we were involved in citing up an AC/DC tie in the Rapid City area and we have had some landowners express concerns about noise, especially during the evening hours, so if I seem to be obsessed with asking questions about noise comparisons and landowner type issues, it's because of our experience in that part of the state.

The Brown County special permit that you received, does that have any sort of noise requirements or does that require that you stay within any type of noise ranges?

MYRON STECKLER: No.

COMMISSIONER SAHR: And would you anticipate any

local permits addressing that issue or will it strictly be whatever might come out of this commission?

MYRON STECKLER: Just whatever comes out of this commission.

COMMISSIONER SAHR: Along the same lines about the questions about noise, do you know if you were to be in a situation where it was noisier than projected and perhaps noisier than what the commission might order, what sort of mitigation steps or what sort of analysis would you take to deal with that situation?

MYRON STECKLER: I'm not sure. I mean some of the things -- I guess right now the biggest thing is the guarantee is the 65 dBA and we would meet that, General Electric has to meet that. I don't believe it's going to be a problem to meet that. Some of the things that we may do is put up some sound barrier, but typically that's not feasible, not cost effective. It tends to push the project to a point where it's not worth it and especially if you try to meet that sound on all sides.

COMMISSIONER SAHR: Yeah, and I am familiar with the geography out there and it's very level ground. I guess what I'm getting at is if we have a situation where we were to allow the project to go forward and set some sort of expected sound level, if we had -- then if you're outside of that and a landowner were to be interested in seeing it drop

down, I mean what sort of steps could you take to look at doing that, to do that?

LEONARD NELMS: One of the simplest things to is vegetative barriers, evergreen barriers that diffuse the sound and that's -- one of the points at that house, there's also a vegetative barrier there.

COMMISSIONER SAHR: May I ask you to identify yourself for the court reporter?

LEONARD NELMS: I'm sorry. I'm Len Nelms with Tetra Tech.

COMMISSIONER SAHR: Thank you.

COMMISSIONER JOHNSON: So that 54 decibel level, is that taken on the other side of the vegetative barrier, I mean your estimates, or ahead of it?

LEONARD NELMS: That would be before the vegetative barrier and that's the outside level. Keep in mind that a home or a building would attenuate sound as well.

COMMISSIONER JOHNSON: Any idea how much?

LEONARD NELMS: Excuse me?

COMMISSIONER JOHNSON: Any idea how much and I know you're estimating, but --

LEONARD NELMS: It's hard to estimate. I mean we have semis going by out there and I haven't heard one yet, but buildings particularly when windows are closed are very good at deadening sound. Keep in mind too, 54 is an

estimate. You run the math and you do the calculations, sound level decreases with distance.

COMMISSIONER JOHNSON: Could we talk about the holding pond for just a bit?

MYRON STECKLER: Sure.

COMMISSIONER JOHNSON: How large?

MYRON STECKLER: I do not have the answer right now for the volume, but what I can point out is -- this was an early, I guess just started conceptional layout, the actual pond is going to be much smaller, it's probably going to be around that size.

COMMISSIONER HANSON: Can I ask you to speak a little louder please?

MYRON STECKLER: It's going to be about two-thirds that size. The actual volume I do not know right now and it's designed for a 50-year extreme rainfall.

COMMISSIONER JOHNSON: And so that is two things, the noncontact water and then also the runoff from the asphalt areas?

MYRON STECKLER: Yes.

DOUG SOMBKE: There's already --

COMMISSIONER HANSON: Sir, do you want to identify yourself?

DOUG SOMBKE: Doug Sombke, I farm that land. There's already a runoff pond there with the existing

substation. Is there some reason you're not using that existing pond rather than building the other one?

MYRON STECKLER: The existing pond is part of the 345 sub which there are three participants involved in that. It's not a hundred percent Basin owned. This was a -- it's just an easier method of, you know, handling that runoff.

DOUG SOMBKE: I'm trying not to lose so much farmland, that's the reason I ask that.

MYRON STECKLER: No, I mean we're probably talking here four or five acres I guess just a quick estimate.

COMMISSIONER HANSON: Are there further questions, members of the audience? Yes, sir.

MIKE WILLIAMS: Mike Williams. Does the pipeline allow for a future expansion, a second turbine by chance?

MYRON STECKLER: We did, you know, when we're going in putting a pipe in, try to look at what made sense early on, what to size up and we did design or are designing a pipe, the ten-inch pipe is good for an additional unit down the road if that ever becomes a need, a Basin need.

COMMISSIONER SAHR: And I'm just curious, have you been involved in building similar units before?

MYRON STECKLER: We've been involved with the -- there's a Wyoming distributor generation that has nine small units and basically they're a lot like this, they're turbine

generators. It has a stack, has a building. Those units do not have the intercooler, they don't have the cooling tower. They do not have a pond, but you know, it's fairly similar. We also have the 80-megawatt unit that we are part-owner of down in Iowa. They were responsible to build it, but we were involved with that also.

COMMISSIONER SAHR: And have you had any noise complaints with those units?

MYRON STECKLER: No.

COMMISSIONER SAHR: And are there landowners as close as they are at this particular unit?

MYRON STECKLER: I'm trying to picture it. There are some that are fairly close. I would say that they're not that close.

COMMISSIONER SAHR: I mean just because if you drive that road, you can see how close that house is to where this is being proposed. And do you know, have there been any other situations, maybe not that you've been involved with, but that you've heard about involving these type of units and noise from neighboring landowners?

MYRON STECKLER: I have not.

COMMISSIONER SAHR: And obviously it's different than an AC/DC tie. Are there any dynamics with this type of turbine that would maybe make it less likely to be subject to noise complaints from local people in the area?

MYRON STECKLER: I don't know.

COMMISSIONER SAHR: I mean obviously if it operates ten to fifteen percent of the time, that might be one mitigating factor.

LEONARD NELMS: Len Nelms again. I've been in and around a number of gas turbine plants. There is a whine. It's a steady whine when they're running. It's -- you think of it as like a jet engine, but it's very, very different. It's not anything that is even really noticeable inside the buildings of the power plants.

COMMISSIONER SAHR: Thank you. Do you have any experience with any landowner issues coming up or generally those aren't that big of issue with these type of units?

LEONARD NELMS: Generally these units, the plants I've worked in haven't had noise issues.

COMMISSIONER SAHR: Thanks. I appreciate that. I may have some additional questions. I kind of want to hear what members of the public are going to ask.

DOUG SOMBKE: Doug Sombke again. When you guys are taking those tests for the sound, there's a whine there now. Do you know what level that whine is at?

LEONARD NELMS: That level was the background at the fence line area. It's basically the hum of transformers and the crackling of the power line and in the area near the transformers it was up in the 60, 65 decibel range, down to

50 decibels at the existing fence line at three directions. It's louder at the road because the fence is much closer.

DOUG SOMBKE: Was that a humid day or was that a fairly dry day because I know it's made a difference. Like when I've been out there, when it is humid it is a lot louder.

LEONARD NELMS: I'm trying to remember. It was late August on the first one and then the second set of data was in late September. In September we had a huge storm that came through, it was rainy that period of time I know. I know we shielded the noise monitors from the standpoint of potential rain in August. So I don't think it was particularly dry, no, is my recollection.

COMMISSIONER SAHR: Do you live out there as well as farm?

DOUG SOMBKE: No, I just farm that ground. I don't live in that house.

COMMISSIONER SAHR: I mean I'm going to ask you a question and if you're not comfortable answering it, that's fine too. How is the noise level, it sounds like it's going to be somewhat close to what they're projecting, maybe not inside that house, but on the outside fence line. How loud would you think it is? I mean is it very loud, moderately loud, not loud?

DOUG SOMBKE: It's -- I would call it noticeable.

I mean it's -- you'd probably get used to it, but it's not an annoying noise by any means. It's just like a constant hum and you know, like I said, as the humidity gets heavier, it gets more of a crackle sound to it. It's -- I think it's something you probably get used to, but it's not like these semis going by now, it's nothing like that. Definitely not annoying like that.

COMMISSIONER SAHR: And I've asked questions about, you know, what sort of mitigation steps you might be able to take and I appreciate your response to those. I mean what would you do if you just have a landowner or someone living in that house that just absolutely can't stand the noise level, I mean do you look at further mitigation, do you look at buyouts, what type of thing is the next step?

MYRON STECKLER: I guess I'm not sure how to answer that one. We found a reason why we brought this guy along.

COMMISSIONER SAHR: I want to give your attorney a chance to get some billing time in.

RUSS MAHLER: I'm not buying dinner anymore. You know, you're referring to the Rapid City tie and we have some experience with that as you're aware. It's incredibly important I think for all of us to do as you're doing which is to focus up-front on what the noise levels are because once we get past a point where it's in and it's performing

the way it needs to perform, it's incredibly difficult fairly to answer the questions that you're posing because as has been discovered in a lot of different areas, noise and people's response to noise is very, very subjective. So we couldn't tell you offhand if we meet a standard, I mean what we try to do and what we hope to do here is going up-front and say this is what we expect the noise to be. These are the terms that hopefully we all can agree to in the stipulation or in the permit as it's issued and if we meet that, we expect to be held to that, but we don't expect to have to go in constantly after that and try and better it and better it and better it because we can't tell you what it would take to do that. There's different kinds of noise sources. Noise sources aggravate together and produce different effects that sometimes aren't noises that are irritating to some people. So it's really important that we do what we do and say the noise level is going to be X and we all have to be comfortable with that up-front. It's not as satisfying an answer as I'd love to give you. I'd love to go in and say well, we'll buy out anybody that doesn't like it. We can't say where that would begin and end. I mean we absolutely can't say how far we'd go with trying to take that kind of thing into account, so we'd really like to focus on getting a noise level that's acceptable. We will absolutely meet the noise level that we agree to. We'll do what it

takes to meet that noise level, but I don't think we're in a position to promise you that we will continually try and decrease that because I don't know if we can.

COMMISSIONER SAHR: And as I'm sitting now, you know, in this case you have somebody who's very close to the proposed site; fewer people if you just start going a little bit further away. The question I have then is, you know, what sort of level do you think is appropriate from the farmhouse type standpoint? I mean we talked about the guarantees and the fence. Are you saying that 54 is something that you'd be comfortable with as having a sound level at that fence post?

RUSS MAHLER: I think that's something that we have to work out with your staff. It's my understanding that the general standards as far as 55 decibels at the nearest farmhouse or the nearest residence and this is projected to meet that, and you'll see already one of the things that makes this confusing and somewhat difficult to work with is the ambient noise already that's been surveyed in that area and by ambient noise I'm going to refer to exactly what testing methods they use. What they do is they go in and do the best job they can in trying to measure the noise levels before anything is built out there and get a base line study. We're already at a situation where at least some of the readings apparently were up as high as 90 decibels and so the

55 would seem to be a reasonable standard and it seems to be a generally accepted standard and what we're saying tonight is we believe that based on the mathematical projections, the dropoff over a distance will leave that at about that level.

COMMISSIONER SAHR: Thank you, and I can see we have some other people in the audience who have some questions.

COMMISSIONER HANSON: Is there a gentlemen back here with a question?

ARNOLD BAHR: I'm about the second closest to that site and I can hear the substations at times at my place, not all the time but at times I can hear the substations humming there, the substation.

COMMISSIONER HANSON: Would you give your name please, sir?

ARNOLD BAHR: Arnold Bahr.

COMMISSIONER HANSON: Arnold Bahr?

ARNOLD BAHR: Yes.

COMMISSIONER HANSON: Thank you. Were there some additional questions? There's some staff with some either questions or comments?

MICHELE FARRIS: I'd just like to make a comment. As part of the preparation for the public meeting tonight, Basin Electric did send out registered letters to the affected landowners and Jim Berg can talk to how many he

knows were received, but as far as we know, most of the affected landowners were notified of this meeting, the time, the place and an opportunity to offer comments.

COMMISSIONER JOHNSON: Mr. Bahr, can you talk a little bit about what the sound is like currently at your place with the existing substation?

ARNOLD BAHR: Well, I've just noticed it at night and I don't think you can hear it at daytime. I've noticed it at nights sometime, the summertime when it's a still night where the wind is right and you can hear it hum.

COMMISSIONER JOHNSON: Not bothersome?

ARNOLD BAHR: No. You'd have to be outside to hear it and you can't hear it in the house or anything like that, and I'm probably about a mile or less from the substation.

COMMISSIONER SAHR: Mr. Bahr, do you have any concerns about the noise that might be generated by this facility?

ARNOLD BAHR: No, I don't have any.

COMMISSIONER SAHR: Thank you.

COMMISSIONER JOHNSON: How long will the construction process be?

MYRON STECKLER: Approximately a 12- to 13-month construction time frame if everything goes well.

COMMISSIONER JOHNSON: Okay.

MYRON STECKLER: Just the pipeline itself, we're talking two to three months and that again, permits in hand, we'd be looking at late summer, fall, do that before the freeze up.

DOUG SOMBKE: I just want to make one final comment. I don't have any more questions. I will --

COMMISSIONER HANSON: Your name?

DOUG SOMBKE: Doug Sombke. I will say you guys have done a very good job. Kelly was real accommodating and tried to get all our questions answered up-front and I think he talked to Arnie also, I'm not sure, and I know the family that lives there, he's went out of his way to try to contact them. Unfortunately they're not here tonight and he did also tell me that they haven't returned or accepted their registered mail, so I don't know what the situation is there, so that's why you're not getting any comments from them tonight.

MYRON STECKLER: Thank you. Did we receive any --

JIM BERG: Yeah, I sent out 14 registered letters. It was about a two-mile radius of the facility. All 14 came back, so everybody received their letter and signed for it. I'm Jim Berg.

COMMISSIONER HANSON: Thank you, Jim. Myron, could you address the natural gas usage for us please? I

understand from your proposal that the facility will use approximately 26 million cubic feet per day?

MYRON STECKLER: That's going to be a question I'm not sure I can answer right now or have that information with me. The unit is, it uses 9300 BTUs per kilowatt produced. I'd have to go through those calculations right now. I don't have that with me. It's probably in there.

COMMISSIONER HANSON: I believe, yes, your report that you presented to us as I recall, I hope my memory is correct, stated that it has 26 -- that you'd be using 26 million cubic feet per day. Do you have an idea of the effect of that usage upon businesses, homeowners, cost of gas, that sort of thing?

MYRON STECKLER: It's a very small -- I mean as far as its effect on other people's natural gas prices, is that the question?

COMMISSIONER HANSON: Yeah, our concern or at least my concern that I'm expressing now is the fact that having gone through the winter, it was fairly mild this year, however the one month that was cold, we saw heating bills skyrocket. We're sensitive to the costs, especially the cost and effect, the cause and effect of using another 26 million cubic feet for this station and what may happen with cost of natural gas for heating for residential purposes and for business, and I'm curious whether or not you have a grasp on

that that you can share with us by using another 26 million cubic feet what the effect that that will have upon costs.

MYRON STECKLER: I guess obviously that's a very small amount of gas relative to what's going down the transmission line. It's supply and demand. You know, I would expect it not to have that big of effect, but supply and demand, the more demand you have, which this gas treatment will have some demand, always will affect the gas prices. I guess the other thing I wanted to point out is the natural gas, I guess the contract we have for the supply of natural gas, we have a contract with Northern Border for the interconnection to their pipeline, but Basin also has another interconnection down the pipe a ways and I talked earlier about the Dakota Gasification Company, a subsidiary of ours that we produce natural gas from the gasification of coal. Our contract for the supply of gas is with our subsidiary of natural gas.

COMMISSIONER HANSON: So in general terms, you don't have an idea of how that will affect --

MYRON STECKLER: No.

COMMISSIONER HANSON: Also -- forgive me for not having my booklet with me and highlighted so I could ask specific questions. As I recall, there was something in there pertaining to the fact that you could meet the federal guidelines for NOx and carbon dioxide, but that there were

South Dakota guidelines that you would not meet?

MYRON STECKLER: I'm going to have to refer that. I don't remember.

COMMISSIONER HANSON: I'll look through here while we're pursuing this.

MYRON STECKLER: Natural gas is the most clean unit you can -- type of fuel you can burn. I guess I can't imagine -- it probably does, but I would think it does not say anything like that. We can meet all the regulations or else we would not be looking at this unit. We wouldn't be able to get a permit for the air quality.

COMMISSIONER HANSON: We have a gentleman with a question here and then I'll see if I can find that.

RON OGREN: Ron Ogren, Wessington Springs. I was just thinking that if this is a peaking unit predominantly for summer load, if we've got a 40 below zero windchill and maybe this thing wouldn't be running to be using the natural gas during the cold areas to be pulling, you know, natural gas out of that pipe, just a thought.

MYRON STECKLER: If it's 40 below out, our surface area would probably also have a higher peak, so there would be a good chance we would run during that time also. Typically our peak is in the summertime, that's when it would typically run.

COMMISSIONER HANSON: On page 38 on 2.16 under

air quality, it states towards the end of the first paragraph, perhaps I'm reading this wrong. Proposed emissions for the combustion turbine are below the major source threshold of 250 tons per year with respect to the prevention of significant deterioration standards; however, they are above the South Dakota Title 5 operating permit's major source threshold of 100 TPY with four CO and four NO2.

BOB HAMMER: Bob Hammer with Tetra Tech. What that's referring to is what regulations are triggered and so what it's basically saying is that there are different levels of regulations. One of them is this 250 ton per year threshold. What that's telling us is that we don't emit anything that high, so it does not get affected by those particular regulations. It is over 100 tons per year of emissions. What that does is trigger us into a permitting mechanism that is called the title five permitting program. And then within those, all those regulations are set out. So what we have to do is turn in an application to the State of South Dakota so that they will then evaluate numerous things including what the environmental impact is, what the level of emissions are and there are a lot of stringent guidelines and regulations. So that's simply pointing out that we have to go through a certain part of the permitting process. It's not that there is a standard that we aren't meeting. We will have to show that.

MICHELE FARRIS: Chairman Hanson?

COMMISSIONER HANSON: Yes, Michele.

MICHELE FARRIS: In my prior life I actually did title five permitting for the state and when you determine whether you fall into the title five program, you look at the worst case, so it's as though it were operating 8,760 hours a year. If you go over that hundred tons per year threshold, then you have to get an operating permit. It doesn't mean that you will ever meet that hundred tons per year, but you have to look at the worst case scenario.

COMMISSIONER HANSON: Okay. Thank you. Was everyone able to hear? Thank you, Michele. Further questions, members of the audience? Yes, sir.

RON OGREN: Ron Ogren, Wessington Springs. You're probably wondering why would somebody from Wessington Springs be interested in what's going on in Groton. We've got hills that have got a lot of wind blowing over the top of them and we're really excited and interested in getting some wind turbines and stuff going up there and one of the governor's goals was to start having additional generation capacity and we're excited that this plant could be a possibility to help be a buffering zone for our wind power if that's possible and I guess I was interested to see that Basin had identified there's about a hundred megawatts capacity on these lines and we're here to see if -- or try to

find out if there's any of that capacity being available to be allocated for wind out of our part of the world and I don't know if any of you guys are here. Sometimes we feel like we're sitting in the dark winking at a girl. We know what we're doing, but nobody else does and we're really interested in getting this wind power going, but we need to get Basin and WAPA and these other outfits to understand just how sincere we are about it and just how important it is to our little community. So if you could give us some ideas on how we could communicate that better and who we need to talk to, we'd appreciate it, and if there is any room on those lines for allocation for wind.

MYRON STECKLER: I guess -- I mean I cannot answer that question. I don't believe we have anybody here, but you know, I think we can -- Curt, I don't know if we can get somebody to talk to him a little bit.

CURT PEARSON: Curt Pearson from Basin Electric. If need be, we could do some follow-up with these people certainly.

MYRON STECKLER: One of the things I want to point out about this unit that I guess I didn't get into. One of the features that we're designing into is a clutch between the generator and the turbine itself. It's called a synchronous clutch. What that does is allows during times when we do not need the generation, you can start this unit

up and just rotate the generator and it provides voltage support in the area which helps the overall transmission system and I believe, you know, I'm not sure if, Dennis, you can talk to that at all as far as adding voltage support to the area even at times when you're not running the turbine. It's one aspect of this unit.

COMMISSIONER SAHR: Well, and I should note and there's been a request from at least one person that I know of to have an e-mail comment to be made part of the record and it would be kind of a good follow-up to the question Mr. Ogren asked and basically I would like to put -- I guess I'd like to put that in the record since it was requested by this person that sent to the PUC e-mail address and her question was along those same lines. Is there the potential to be able to provide the opportunity to have additional power injected at this point using wind power as well as using it as a place to have a peaking unit and is there any possibility that anyone can address that issue.

MYRON STECKLER: I cannot address that issue. You know, there's a lot of transmission studies out there. It's a queue process of who comes first in the queue of tying into this transmission. Is there more capacity, I cannot answer that right now.

COMMISSIONER SAHR: And it does -- and I can understand the need to study this, but I think part of what I

think she is asking and Mr. Ogren is probably getting at as well is if you have a spot that you expect to see this machine operate 10 to 15 percent of the time, especially if it's during warm months where there probably is less wind being generated, is there a potential to somehow look at partnering that in the future with some type of wind production, either right in this area or else somewhere along the system in conjunction with this unit?

MYRON STECKLER: I guess I'm not sure of the question, but I would assume if we have a wind farm in the area that somebody owns and you know, they're looking for backup to that wind farm when the wind is not blowing, again I believe, you know, for the cost of production that that unit could run to back up the wind.

COMMISSIONER SAHR: And again, I'm looking at an e-mail that I have no idea if anyone's even seen in the audience, I'm going to ask staff to make that part of the record and maybe to do a follow-up with Basin just to see if they can provide some type of background and maybe get this member of the public and Mr. Ogren and some other people that might have interest in that some information on whether or not that is something that is feasible.

COMMISSIONER HANSON: Thank you. Yes, and if that's the same one that we have, it's from Becky Smith with the Clean Water Action, Clean Water Fund and that will be

made part of the record.

Is there anyone else at this time who would like to address this commission or ask questions? Then we will --

COMMISSIONER SAHR: I do have additional questions of the staff though.

COMMISSIONER HANSON: All right.

COMMISSIONER SAHR: I do have a few questions for staff. Ms. Farris, I just want to check and see, we heard that notice was mailed to landowners and my understanding is that there was also a published notice as well. Did staff make any efforts to make any sort of personal contacts with any of the landowners?

MICHELE FARRIS: We did not personally contact them. We had Basin send the registered letters.

COMMISSIONER SAHR: And essentially with the landowner who's very close to this, I mean would it be possible for staff to try to find out and attempt to contact and see if they have any concerns about the project because I think Basin's attorney hit the nail on the head, this is a lot easier to deal with up-front if they have any concerns and I know -- of course I came in mid-process with the Rapid City AC/DC tie, but I know that there's some landowners who didn't participate in the process and then after the fact were concerned about sound levels, so you know, my feeling is the earlier we can bring people into the process, even if it

involves going slightly ahead of -- beyond what the law requires, maybe making a phone call to those people.

MICHELE FARRIS: And I agree. We don't have their names and that's why we asked Basin. I had contacted Mr. Berg to ask his land people to send it, but we can certainly get the landowners, the names and phone numbers and contact them. We just don't have it in the application.

COMMISSIONER SAHR: And certainly I think the one I would be most concerned about is the person who's living within 1800 feet. I would like to see that person contacted and if staff would follow through and just to let them know that this process is taking place. I realize we may have met the, you know, the minimal -- I shouldn't say minimal, but the requirements that the law would have. At the same time, if there are some really strenuous objections, I would like to have the input of those people, so if staff could make some efforts to do that and you know, within the next couple of days, I'd really appreciate that and perhaps be able to summarize what the landowners' statements were, that would be something that I would find a benefit.

MICHELE FARRIS: I'll have to get that landowner information from Basin.

COMMISSIONER SAHR: Do you have any recommendations or any thoughts on what would be an appropriate noise level here?

MICHELE FARRIS: Not at this time.

COMMISSIONER SAHR: Thank you.

COMMISSIONER HANSON: Are there any further questions at this time?

JOHN SMITH: Mr. Chairman?

COMMISSIONER HANSON: John.

JOHN SMITH: I forgot the gentleman there with the plaid sweater.

JIM BERG: Jim Berg.

JOHN SMITH: Oh, Jim Berg. I know another Jim Berg. You don't look like him.

JIM BERG: He spells his last name wrong.

JOHN SMITH: A comment was made here that you stated that you sent registered letters to all of the landowners?

JIM BERG: Yeah, I've got copies of them here.

JOHN SMITH: And I just was wondering about this particular land owner, the close landowner, a letter was sent to him?

JIM BERG: Her, yes.

JOHN SMITH: To her?

JIM BERG: Yes. Actually she was contacted twice with registered letters. When the Brown County planning and zoning was entertaining our special exception permit application, they sent certified letters out also. That

letter for that special exception permit was tried to -- was tried to be delivered three different times and apparently refused. This one was accepted by her though however.

JOHN SMITH: Does anyone have any idea why she refused those?

JIM BERG: No, that would only be speculation.

JOHN SMITH: Okay. Thank you.

COMMISSIONER HANSON: Especially if you have addressed the group this evening, would you please be sure to sign up so that the court reporter will be able to spell your name correctly and thank you all very much for attending this meeting this evening.

(This hearing was concluded at 7:15 o'clock, p.m.)

NOTARY REPORTER'S CERTIFICATE

STATE OF SOUTH DAKOTA

COUNTY OF MARSHALL

I, Tammy Erickson, a Notary Public within and for the County of Marshall and State of South Dakota, do hereby certify:

That said transcript, consisting of forty-seven (47) pages of typewritten materials, was taken down by me in Stenotype at the time and place therein named, and was thereafter transcribed by means of computer-aided transcription.

I further certify that I am neither related to any of the parties or counsel nor interested in this matter directly or indirectly.

Witness my hand and seal the 18th day of February 2005.

Tammy Erickson

Tammy Erickson, Notary Public

Marshall County, South Dakota

My Commission Expires: January 16, 2010