ARGONNE NATIONAL LABORATORY (ANL)

+ + + + +

WIND ENERGY DEVELOPMENT
PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT
SIOUX FALLS, SOUTH DAKOTA
PUBLIC COMMENT MEETING

+ + + + +

6:30 p.m.
Tuesday

+ + + + +

September 30, 2008

+ + + + +

International East Meeting Room
Holiday Inn, Sioux Falls City Centre
100 West 8th Street
Sioux Falls, South Dakota

JOHN HAYSE, ANL, Facilitator

ALSO PRESENT:

NICK STAS, Western Area Power Administration
LLOYD JONES, U.S. Fish and Wildlife Service
KARIN SINCLAIR, National Renewable Energy Laboratory

I N D E X

P R O C E E D I N G S

MR. HAYSE: Okay. It's looks like this microphone's working. So anyway, I'd like to go ahead and get started.

My name is John Hayse. I work for Argonne National Laboratory as an environmental scientist. And Argonne is a Department of Energy laboratory, and one of the things that we do at Argonne is we prepare environmental documentation such as environmental impact statements, and so Argonne is basically contracted through Western Area Power Administration and Fish and Wildlife Service to prepare the environmental impact statement that we're going to talk about tonight.

So with that brief introduction there, one of the first orders of business is I would like to ask everybody to please check your cell phones as a courtesy to our speakers and either turn them off or make sure they're in silent or vibrate mode. Okay.

And welcome then to our public scoping meetings for the Upper Great Plains wind energy programmatic environmental impact statement. And -- let's see if the slides work here -- I just have a brief slides. Basically the agenda here is we have some introductory material to talk about, EISs in general and the scoping process in particular.

Then we have three presentations planned for you tonight: one from Western Area Power Administration, one from the U.S. Fish and Wildlife Service, and one from the National Renewable Energy Lab to talk about wind energy technology in particular. And then after that we'll have a brief question and answer period, and then we will move into asking people who would like to provide comments about this particular environmental impact statement process to come up and provide those comments for us.

Okay. So just as an overview then of the EIS process, first off, why is this EIS

being prepared? And basically NEPA, the National Environmental Policy Act, requires that an environmental impact statement be prepared when a federal agency is undertaking a major action of some type, and major action, you know, has certain definitions that go with it, but a major action that has a potential for significant impacts to the environment.

Western Area Power Administration, which I'll refer to as "Western", and the U.S. Fish and Wildlife Service, which I'll refer to as the "Service" on and off tonight, have determined that a programmatic EIS is appropriate to evaluate some wind energy programs that they're considering implementing, or developing and implementing for their particular areas of interest.

Now as far as EISs go, what is a programmatic EIS? And the idea of behind a programmatic EIS is that it is a process to evaluate the environmental impacts that could occur as the result of implementing a

particular type of program, or implementing some sort of national policy as opposed to just doing an environmental impact statement to look at the effects of a particular small project, or, you know, a particular project on the environment.

So it's meant to look at the potential impacts from a program or a policy implementation by a federal agency. So it does not evaluate specific projects, but it considers the generic impacts that could occur from the types of projects that may result from implementation of a program or policy.

One of the other things that's planned for this particular EIS, and is often done in programmatic EISs, is to identify possible mitigation measures that could be implemented as part of the program to reduce the potential for environmental impacts.

What is the proposed action in this particular case? Basically Western and the Service are proposing to establish a

comprehensive program to evaluate the implementation of proposed wind energy projects that will either connect to Western's transmission grid system that they're responsible for, or that would be built on wetland or grassland easements that are managed by the U.S. Fish and Wildlife Service, and both of these are being considered, in particular for the area of the Upper Great Plains Region.

Now this program would identify mitigation strategies, standard construction practices, and also best management practices that could be implemented to reduce the potential for environment impacts.

One of the things that's done in environmental impact statements is to consider alternatives to the proposed action. And in this particular case there will be at least three alternative actions that could occur. First, the proposed action that I just spoke about a moment ago.

Second, there will be -- we will also consider in this impact statement the potential effects of a no action alternative. Now no action does not necessarily mean that nothing happens, but it means that we would look at the potential impacts if the proposed program did not go forward and things continue the way that they were right now.

Basically, the existing situation is that as wind energy projects are proposed, environmental evaluations for those projects are done on an ad hoc basis, or individually for each of those projects. And the idea behind this proposed action then is that it would allow some streamlining of that overall environmental evaluation process.

Finally, additional alternatives may also be added and evaluated in the EIS based upon input that we get during the public scoping period. So input that we gather from people at meetings like this.

Now one alternative that is being

considered as well is that Western could implement the part of the proposed action that applies to them, the Service could decide to do something different than the regular proposed action that I spoke about, such as not allowing wind energy to proceed on the wetland and grassland easements that they manage. So you can see that there are various ways that this program could be put together, and those are the kind of alternatives we will consider in the EIS.

What is scoping? Scoping is the part of the NEPA process by which we gather, or the agencies gather input from the public, from other federal agencies, from non-governmental organizations, and other interested parties with regards to the action that's being considered.

So we would gather information that pertains to the proposed action, the alternatives that we're going to consider, what are some of the significant issues that

we should analyze in the EIS, what are possible mitigation measures to reduce potential for environmental impacts. Maybe there are people in the audience, or members of those various groups that have data or other types of information that would help inform the decision that agencies make with regard to the proposed action, or one of the alternatives.

And finally, we're interested in hearing from individuals and other agencies or organizations about the specific concerns that they have regarding the proposed action. So in this case, development of wind energy that would connect to Western's transmission grid, or development of wind energy projects on wetland or grassland easements that the Fish and Wildlife Service manages.

Now we have a number of public -- we have a number of opportunities for the public to provide input to this process. First off we have the public scoping, which is

part of what this meeting is about, and that public scoping period runs -- started on September 11, and it will run through November 10. So through November 10 we will be actively trying to collect information, comments, and so forth from the public and other interested parties.

Some time during the fall or the winter of 2009, the draft programmatic environmental impact statement should become available to the public for their review. And we would invite comments from people that are interested in looking at that, seeing what the analyses are, and so forth, and getting information back to us relative to that draft EIS. And then finally there's also an opportunity to see what results from this process in the final EIS, which is expected to be prepared probably around the summer of 2010.

Now there's a number of ways that the public can gather information related to

this project. We have a project website that's been established, and the URL for that website is available on the screen here. But that provides access to a lot of information about the EIS process.

It gives the opportunity to learn more about wind energy resources and technologies, we will post EIS related documents that are prepared so that they're available to the public as well, it has information about the project's scheduled and updates about the project, and then there is also online comment forms that can be used to provide comments to us, and also you can sign up for e-mail notification so that you will be informed when there is some sort of substantial progress or an update to the overall project.

Okay. So with that, I'd like to introduce tonight's speakers. First will be Nick Stas, here to my right. Nick is with Western Area Power Administration here in the

Upper Great Plains Region, Customer Service area. Lloyd Jones, at the far end of the table to my right, is with the U.S. Fish and Wildlife Service's Division of Refuges. And Karin Sinclair is with the National Renewable Energy Lab, in particular she works with the Wind Technology Center at NREL, as we refer to that laboratory.

So with that I'd like to invite Nick to come up and tell us a little bit about Western.

MR. STAS: Thank you, John.

And, ladies and gentlemen, thank you for coming on this beautiful fall day in Sioux Falls, South Dakota, particularly with the Twins and White Sox game going on. I might give you an update as we go through this.

My goal is to give you some general information about Western to show how this project on the programmatic wind EIS will fit in. And also to give you some places for

additional information.

I'd like to introduce a few of my colleagues who are out in the audience. First of all, we're very pleased to have Mr. Ed Weber, who's the manager of Transmission Planning. He's back here. Dirk Shulund was here; he might have -- he stepped out a minute. He's a NEPA analyst in our office. And also we've got a customer service representative from the South Dakota office, Mr. Greg Vaselar. And a key person on this particular EIS, Mr. Mark Wieringa from our corporate service office.

We'll be glad to talk to folks after the presentations are over, and I was told before this started that bureaucrats and wind at a meeting sometimes is a bad combination, but hopefully that we'll get through this quickly and move on to some good discussion.

Okay. Who is Western? Western was part of the Department of Energy and just like

our partners, Argonne, as John mentioned, they have a lot of expertise on analyzing environmental impacts, and actually did a programmatic wind EIS for the Bureau of Land Management on all their lands, in our western lands. So we're very pleased to have them.

We very -- also very pleased to have with us as a joint lead the U.S. Fish and Wildlife Service. John mentioned we were doing these projects one at a time, and one of the issues that we needed to look at in a larger view is the issue of migratory birds. It's a key issue. So we're very pleased to have U.S. Fish and Wildlife Service partnering with us.

As I mentioned, we were formed in '77. A lot of the pieces that were put together were from the Bureau of Reclamation. We market the federal hydropower from the dams and the Upper Great Plains south of the Missouri River and the Big Horn River.

We're one of several power

marketing administrations in the Department of Energy. Just to give you some context, Bonneville Power is in the Pacific Northwest, Oregon and Washington, Idaho; Southeastern Power is, of course, in the southeastern part of the country; and Southwestern Power, their headquarters is out of Oklahoma.

Okay. The Upper Great Plains Region, this is this area right here. So when we're talking Upper Great Plains Region, this is what we're talking about. This is actually defined by the Pick-Sloan legislation, so this is the area that we'll be dealing with. And there's a map that shows where our facilities are in relation to this region.

As I mentioned, we market federal hydropower. And annually it's, on a normal water year, around $250 million worth of wholesale power a year. In the Upper Great Plains Region -- well, this is all of Western, it has 17,000 miles of high voltage lines in over 15 states. And we deliver wholesale

power with firm power contracts to our preference customers. The preference customers are those folks that are rural electrics, municipalities, co-ops, other government agencies. Today we have 671 customers, and also we have an allocation to Native American tribes.

We're funded by Congressional appropriations; however, we recover the cost and pay back to the Treasury the cost, the loans that were made to build the projects, the capital investment, as well as the transmission system and the -- we also have to comply with the FERC orders, 888 and 889, and we'll talk about this later. These are sideboards on how we can interconnect folks through our system. We were directed by the Department of Energy to comply with the open access transmission.

This is our mission, essentially. We market the hydropower, transmit it, control the energy grid out of our Watertown

operations office here in South Dakota, manage a couple interties, provide open access; that's what I talked about for the FERC requirements, and we're evolving to meet the changing power generation and transmission environment of which wind energy is going to be an important part.

And talk about the power grid: Going from the generation, whether it's hydropower or wind, fossil fuels, through the transmission grid into the distribution, this is primarily our co-op customers or municipalities doing the distribution, sometimes investor-owned utilities down to the end user, which is either commercial or residential. So just some of the terminology that we'll be using.

We've had increasing number of requests to interconnect with wind projects through out system, primarily in the Upper Great Plains, is why we felt we should go ahead with a programmatic EIS, and then John

talked about that already. And we've been conducting separate NEPA documents for each interconnection.

We would like to streamline the process to make it more efficient, and once we come up with a mechanism and procedures are programmed to do this, this would help those folks that are developing wind energy. And one part of the NEPA that I think we should mention, is John mentioned the providing opportunity for the public to make our decision better.

The goal of NEPA is to make better decisions, not just better documents. It's to involve the public and to provide the -- an important part of the information includes the environmental effects, as well as other economic and other effects of what we do so that that can be analyzed by the decision makers, both in this case by Western and Fish and Wildlife Service.

Okay. Our objectives address the

generic concerns of wind, and particularly the cumulative impacts rather than a one-by-one project; develop and present the mitigation measures to the extent of the technology; implement and adaptive management approach. All that means is we learn as we go along. We have a lessons learned, so that from one project, whether it's studies or whatever we determine can be transferred on to the next project, and that's just all adaptive management means. Provide an easy guide for the interconnections for the applicants.

I don't know what happened here. We had a power failure.

(Pause.)

MR. STAS: Okay. I just wanted to end up saying that there's additional information, particularly on our interconnection process at www.wapa.gov. There's also information on how the NEPA process works at a nepa.gov website that's run by the Council of Environmental Quality, and

John's outlined a good part of that process already, but there's more detailed information on how that works.

And I guess that -- unless there's anything else, I'll turn it over to my colleague, Lloyd Jones from Fish and Wildlife Service.

MR. JONES: Thank you, Nick.

The Fish and Wildlife Service is really pleased to be here tonight, and we really feel fortunate that Western was willing to let us be part of this EIS effort. As you may expect by our name, Fish and Wildlife Service, we're made up primarily of biologists. And to be able to tap into the expertise that exists with Western in terms of energy overall, but specific to this issue, wind energy, that's a pretty special opportunity for us. So we really appreciate the opportunity to be part of this effort.

I would like to introduce two people that are here with the Fish and

Wildlife Service to help me especially answer any questions that may come up. My position is Refuge Coordinator, and I'm stationed out of Bismark. But we have with us -- our area is divided up by districts -- Harris Hoistad is here, he's the project leader of our Huron Wetland Management District, and then also from South Dakota, Tonna Hughes is here. She is the state supervisor for our realty program, and she is stationed in Aberdeen.

So we've got a couple of folks here to bail me out if you all start asking me questions that I'm not able to answer. But we'll give it a try here.

The first thing that I want to do is try to get this clicker thing to work.

(Pause.)

MR. JONES: There we go, got it. Fish and Wildlife Service I needed to put up on the screen, what the mission of the overall Fish and Wildlife Service is, and we can serve and protect fish, wildlife and plants, and I

guess most people would expect that kind of thing. I'd point out, the last couple of words within the Service mission: to the benefit of the American people.

And before I offer additional comment on that, the specifics of the Refuge System, that's who I work for and Harris and Tonna work for as well, we have a lot of divisions within the Fish and Wildlife Service, we have law enforcement, we have ecological services, we have fisheries. We're the refuge division, we manage lands. The mission of the National Wildlife Refuge System is that, we administer a network of lands. But, again, I'd point out at the very last part of that where is says, "For present and future generations of Americans."

A lot of people think that the Fish and Wildlife Service, well, you're just duck people and the only thing you care about are ducks, and it's not people. But really, when you look at the mission of the Service, and

the mission of the Refuge System, what we do with wildlife is for the benefit of people. So I think that's very important to note.

One of the areas that we look to, to carry out the mission and purpose of the Fish and Wildlife Service, is the Prairie Pothole Region. It's a very unique area, it covers about 300,000 square miles in the upper Midwest and up into Canada. And interestingly enough, some of information that you've seen here tonight you can see the overlap that exists between where wind energy is interested in developing and where a key area for the Fish and Wildlife Service also exists.

An in this Prairie Pothole Region, I know some of you here tonight are land owners, you have grasslands and wetlands on your property, and in South Dakota, biological for the Fish and Wildlife Service, we recognize this, it's proven by biology over and over again, this area, this region, the Prairie Pothole Region, is the most productive

area in North America for migratory water fowl. That's a given, it's a high priority issue for our responsibilities that are given to us by the American people to look to this area for a very, very important purpose.

And you're going to see a little bit more about this as I go through these slides quickly, but it's both wetlands and grasslands. Wetlands themselves attract a lot of birds to this area for nesting or whatever, but a lot of the birds, when they get here, use the uplands, or the grasslands to actually nest in. So it's both the wetlands and the grassland that make the Prairie Pothole Region so important to migratory water fowl.

The challenge we face is that in a lot of areas in the Prairie Pothole Region, North and South Dakota, and into Canada and other parts of the Prairie Pothole Region, grassland is being converted to crop land. It has been for decades. It continues on to this day, today, to continue to be converted. And

I'm going to work it in yet, and then wetlands are also being drained.

Between the two, wetlands and grasslands, in a general sense throughout the Prairie Pothole Region, about 75 percent of the wetlands and grasslands, acres that used to exist here, that existed here prior to settlement, about 75 percent have either been grasslands plowed up and converted to other use, or wetlands that have been drained. So it creates a challenge for the Fish and Wildlife Service to address that high priority area within North America in how do we address that.

And one of the things we did was we developed what was called a conservation strategy: what is our interest, what is our goal, what are we trying to accomplish. We had to start out with something, and a few years ago we developed this strategy, and that is to protect wetland and grassland habitat in the Prairie Pothole Region to sustain over 90

percent of the current breeding population and productivity of water fowl.

It's not 100 percent. There's areas that have been converted where most of the grasslands and wetlands have been lost, that do support some water fowl and other migratory birds, we're never going to be able to protect probably what's left to make a difference, so it ends up being just a little over 90 percent. That's our goal, that's our objective, that's our strategy.

And when you break that down, what does that mean of terms of wetlands or grasslands. And we've looked at both as well, and what we need to do is, in addition to what's already been protected, which I'll cover here in a second, we need to protect about 1.4 million acres of wetlands that are out there now that are unprotected. And we also need to protect about -- this thing doesn't want to cooperate -- there you go -- 1.4 million acres of grassland.

And so as I mentioned earlier, a lot of that grassland and wetlands have been converted to other use. This is a challenge, but this biologically, we've determined, needs to be protected if the productivity of the prairies is going to continue.

So how do we do that? We have two basic programs. The first is the wetland conservation easement program and what that is, it's an easement program that we work out with the land owner, and it basically, very simply keeps wetlands from being drained, burned or filled. That's the bottom line, that's what the easement does, that's the right that we acquire from the private land owner.

The land remains in private ownership, we don't buy the land. We're just acquiring that one little bitty right, if a person has wetlands on their property, not to drain, burn or fill it, so it' in private ownership. The easement does stay with the

land. If the landowner sells the land or it transfers to another person, the easement stays with the land. But all other uses that occur out on that land, the landowner controls farming, if the wetlands are dry by natural causes, haying of the wetlands, hunting, any kind of other uses, other than drain, burn or fill, is totally up to the discretion of the landowner.

The second part of that program that we have is the grassland easement program. It's almost identical, only but in this case the grassland easements just simply protect the grasslands from being converted. It's basically a green side up kind of easement. The areas can be grazed, or hayed at any time, and it can be -- I'm sorry, grazed at any time, and hayed after July 15.

But, again, the easement does limit the grassland to basically stay as grassland, same as wetland easement stays in private ownership, and is the same with wetland

easements, if the land changes hands, the easement stays with the land regardless of who owns it. And, again, similar to wetland easement, all other uses are under the control of the landowner, for recreation uses, for hunting uses, for other uses, how they graze it, when they graze it, all that kind of thing is left up to the landowner.

This is what a wetland or grassland easement would look like from above. We took an aerial view. There's a lot of areas like this in North and South Dakota where there's a high density of wetlands, where there's a lot of grasslands surrounding the wetlands. That picture right there is why the Prairie Pothole Region is the most productive region in the North American continental for migratory water fowl.

So how well have we done? In North and South Dakota and Montana the number that's important, I guess, is that the combination of the wetland and grassland, we have protected

about 2.7 million acres of both wetlands and grasslands in the three states. Pretty significant accomplishment. It's probably one of the most successful conservation programs basically anywhere in the world that's had that much successful, you know, attempts to protect wetlands and grasslands. So that's pretty noteworthy.

In terms of where are those wetlands and grasslands easements, you can see where South Dakota is and North Dakota, that's where most of that 2.7 million acres is, but it does stretch out into Northern and Western Montana, which is part of the Prairie Pothole Region. If you remember that one slide up there, that's basically where the distribution of the wetland and grassland easements are.

But part of setting the background for why we're here tonight is the challenges that we face with the easement program. Wind development is rapidly expanding, and as you saw where all those easements are, that's a

high priority area of interest for wind development, and we recognize that.

We also recognize -- if you remember, we have that strategy where we've identified the need to protect another 10.4 million acres of wetlands. We have interest to protect that, and we need to have that program be successful in order for us to meet that strategy and accomplish that objective. And, again, we recognize that there is that overlap with wind.

We need to understand better, and we hope to make progress in that area through this EIS about the interaction of wind and wildlife, and then, of course, if there is an overlap, if wind is allowed on these easements areas that we've already acquired, you know, what is the right mix, where do they go, how many are there, you know, what is the impact. So there's a lot of challenges that we hope to address through this EIS process.

One thing I want to mention is that

we do have a process of dealing with requested uses. Wind isn't the first thing that's come to us with our management of the easement program. There are real water districts that need to bury lines, there are pipeline projects that need to cross easements, there are landowners that need to expand their operation and build calving sheds or, you know, build additional facilities, so we have dealt with requested uses in the past, and wind is simply just another one that we dealt with.

Roads is another issue that we have to address when we manage our easements. We also have a series of steps that we go through and we evaluate all those requested activities through what we call a flow chart, so we hope we're doing a fair and equitable job when we do consider all these different uses.

And there's also various requirements we have to meet. The very first one you see there is NEPA. That's why we're

all here tonight. The National Environmental Policy Act, National Historic Preservation Act, and then we have other internal policies like appropriate use and compatibility that Congress has told us, this is how you need to do business.

But here's the most important point that I want to bring up tonight through this slide series is that our general guidance, when we manage easements, is reasonable accommodation. If there is a way that we can work out development within these easements, we hope to do so in a reasonable manner.

The current status of wind and easements, somebody may want to know, well, what are you doing now kind of things, we have dealt with wind for some time now and we have authorized three projects with about 25 towers on easements, and administratively two of those we've done through a right-of-way process, a permit that we issue, one we've gone through where we've actually exchanged

part of the wetland and grassland easement, and so we've dealt with it that way.

The current -- future status, again, that PEIS's program, EIS wind projects and easements, where is that going to take us, and -- maybe I'm running low on batteries or something, this thing doesn't want to work -- we need to understand the impacts individually and cumulative. Nick made that comment about, you know, looking at this programmatically and trying to gather an understanding of all the impacts that might be associated. That's very important to this programmatic. We need to review what research is available in terms of wind and wildlife interaction and identify more if more is needed.

We need to streamline environmental compliance. For us to deal with those three projects I mentioned, we had to go through this NEPA process individually. It took up a lot of time, a lot of man power. Hopefully we can save companies and us a lot of time by

going through this EIS process.

And then, of course, we want to be able to work with the wind companies. They have some ideas on what they can do to make it more accommodating on the landscape and minimize the impacts. We have some ideas, and we hope to be able to come up with some guidance to do that. So that's the purpose of the Fish and Wildlife Service basically being involved in this process, is to meet those objectives right there. So I think that's real important.

And to make sure I knew when I was supposed to stop talking, I put a slide in there that said "The End", so I guess with that I'll turn it over to Karin.

I don't think that's going to work anymore. I must have wore it out.

MR. HAYSE: Let's see what I can mess up here.

(Pause.)

MR. HAYSE: Pardon us for just a

couple of minutes here until we can get things back on track.

(Pause.)

MR. HAYSE: Sorry, folks, but I don't think anybody wants to watch it flicker for the next 10 or 15 minutes. Right?

(Pause.)

MR. HAYSE: Yes, if there are any questions on the presentations that have been given already, what I would ask is, if you would step up to one of the microphones up front here to ask your questions so that we're sure that we hear it clearly and that our recorder over here it as well.

Does anybody have a particular question right now?

And if you would just state your name and affiliation, if there is one that you want to say.

MS. KINNEY: Jean Kinney, in Sioux Falls, and my husband, Bert Tollefson.

I don't know anything about energy

except what I read in the paper, you know, and whatever is presented to us. I don't have any background in energy at all. But did I miss that you're just getting wind from the windmills, or are you getting wind from the ground also?

Because there are certain areas I know, highway areas, that I have traveled in Arizona where there's a lot of wind on the ground. There's one section in particular on I-10 you have to be very careful when you're driving. But I was thinking more like with traffic like it is, you know, why not go back to the cause of all the problems, automobiles and energy that we're using. But why not have some kind of a grid along highways to pick up the wind from, you know, the trucks and the cars and everything, if that's possible and it's not a crazy idea.

You know, something other than windmills, because we've already heard from Senator Kennedy that he doesn't like windmills

in his front yard, you know, so I'm sure there are other people who don't like windmills, you know, on their property either. But if you can get it from the ground, from the traffic, you know, that might be a source.

MR. STAS: We have not had any proposals, Western Area Power, for capturing wind as you mentioned, from the ground. The proposals we've had for interconnection to our grid have all been the standard type of windmill design to capture energy for this system.

But it might be a feasible idea, and maybe Karin can address this when she talks.

MS. SINCLAIR: Well, I didn't give my presentation yet, but we don't -- we're not looking at that as far as the near term technologies. It's onshore/offshore wave technology, things of that nature, so I'm not really familiar with whether that's a feasible technology or not.

Should we go on?

MR. HAYSE: Yes, please.

MS. SINCLAIR: Okay. So I was asked to -- I don't have any back up support here, so be nice -- I was asked to give a presentation on wind technology. I'm from the National Renewable Energy Lab, and I'm with the wind program. And this is a picture of our site, which we are just outside of Boulder, Colorado.

And I've kind of organized my presentation in this way to talk about, a little bit about the technology -- we don't have a lot of time, so I'm really going to fly through this -- talk about where the capacity is installed, a little bit about what a project might look like, a couple of issues regarding transmission operational constraints, and the benefits and environmental impacts from wind.

So on this graph, this is sort of a historical time line on what -- how the

technology has evolved over time. And if you look at the far left side, those are state of the art large wind turbines back in the early '80s, and they were 100 kilowatts in size. In 2007 the average wind turbine that was installed was 2.2 megawatts, so 22 times the size. You can see also that the rotor size is 17 meters; now it's approaching 100 meters. So the technology is completely different today than it was 20 plus years ago.

And then on the bottom of the slide I overlaid some of the research, the national research meetings that we've been involved with since the early '90s when wildlife, in particular avian impact issues came to light. And through the Department of Energy we've been working on addressing this issue.

So from the standard wind turbine technology perspective, this is what -- it's simple is what it is. The wind turns the blades, which it's -- the shaft is connected to a generator and it produces electricity.

When you cluster a number of wind turbines, that is called either a wind project or a wind farm, a wind facility, and that all feeds into the transmission system, which is what WAPA's been talking about.

So this is a prototype of a wind turbine to try to capture wind in what's called low wind speed. If you've looked at the map over here, you see that the area, the region of the country that we're talking about, has tremendous wind. But if you look at it -- if you look at other parts of the country, you'll see that there isn't a lot of wind. So we are looking to develop technology that will help us extract that energy from lower wind speed parts of the country. However, these turbines will still be functional, viable in these higher wind speeds.

And I wanted to show you what -- would you just hit that one again -- just wanted to show you what a wind turbine looks

like when it's going around with today's technology. And I guess it's -- well, you can't hear anything, but that's because you can't hear anything. They don't make very much noise compared to the early technology.

So where is the capacity installed? Worldwide, the Europeans are way ahead of the game, and that's for very specific reasons. They have a lot less land available to them, so they're -- you know, they -- well, that's the -- anyway, they have a lot less interest in some of the other technologies that are out there and more interested in the renewable technologies, wind being one of them.

As of January '08, about 90,000 megawatts were installed worldwide, and Europeans contributed more than half of that. If you look at the middle row, the blue bars, that's North America, most of it's the United States. And just last month we broke the 20,000 megawatt threshold for capacity installed in the U.S. But the Europeans are

still planning to push further and faster in terms of adding capacity.

So these are the maps that you see over on the side there, and if you look at it, you'll see that there's a bit of a disconnect between where the energy resource is and where the capacity is installed, particularly with the states that we're talking about here. So there's a tremendous opportunity to increase the contribution from wind to our energy mix in this region of the country.

And there's also -- in 2005 there was some discussion about potentially contributing 20 percent of our electricity needs from wind. Subsequently, analysis was done and it looks like there really aren't any technical barriers to 20 percent of our wind coming by 2030 -- 20 percent of our electricity coming from wind by 2030.

So how do we get there from where we are today? This next series of maps shows, based on this analysis, how the various states

would need to increase their production from wind in order to meet that goal of 20 percent by 2030. And you'll also see that -- so this is 2012, 2018, 2024, and then finally 2030. In each of the states there's a little box and that represents the amount of the land that would be used, or put aside for the wind in order to contribute and meet this goal of 20 percent by 2030.

And you'll also notice on these maps that offshore makes a contribution, a very large contribution by the time we get to 2030, and in the earlier years there was nothing because as of today there is no offshore development in the United States, but the Europeans are forging ahead on that, so we'll learn a lot from their experiences.

So what does a wind farm look like? Well, today the common turbine is three-bladed and it's up wind. And as I said, the average size is about 2.2 megawatts. The tower that they're put on varies in size from

80 meters to about 150 meters.

And the way the wind farm will be laid out is going to be dependent on a number of factors, including the developer's access to various landowners' land as they get leases, so it could be contiguous, or it could be sort of patchwork as they put together their deal with the local landowners.

But a rule of thumb is, if you wanted to look at a project that's already been built, is that they're about two to three rotor diameter apart, and then each row is about 10 rotor diameters apart. And that's to sort of negate the impacts of turbulence from each turbine.

And I forgot to mention that I've tried to integrate pictures of wind farms that are already up and running in the Upper Great Plains. This one is in Minnesota.

Oh, I did forget to say -- I'm sorry, let's go back -- power generation. That was another question I was asked to

address. That's also going to vary depending on the size of the -- depending on a lot of factors. It depends on the size of the project, it depends on the size of the turbines, it depends on the wind regime. But generally speaking, if you're looking at turbines placed in an average wind regime, which is class 3 or class 4.

And if you don't know what that is, you can look on the maps and it describes what the wind speed would be for each of those classes. And if you think about what the average home owners' consumption is, which is today around 900 -- just under 900 kilowatt hours per month, then a one megawatt wind turbine, on average, will provide enough electricity for 225 to 300 homes.

So how does a developer -- what does a developer need to think about as they put together their wind farm? Well, first and foremost, it's going to be the wind. They need to generate income, and the income is

going to be a direct function of the wind -- the energy output, which is a function of the wind, and it's wind speed 2. So the higher up you go, the more wind you can get, the better wind regimes you go into, the more wind you can get, and this is one of the reasons that there's a lot of interest in high wind speed areas of the country.

Transmission access is a critical component, and without that there's -- you know, they can put the wind turbines in, but there's no place for it to go. So that's very important obviously. The developer typically needs to find an outlet for the energy that they're producing, and one of the most common ways of doing this is to create -- is to enter into a purchase power agreement with a utility.

And then they need to, of course, line up the land that this project is going to be put on and get their permits. And wildlife impacts and the concern of local citizens not

wanting it in their backyard are things that need to be dealt with in order to get a permit.

They need to find turbines at competitive prices. The reason I put that in there is because of some policies of pretty much all the turbines for the years 2007-2008 were bought up in 2007 and there just really aren't any turbines out there so finding turbines for a project is a critical piece of the whole puzzle. And then the developer would need to line up their financing.

So very quickly, the transmission issues will be addressed in this PEIS, I think, but the transmission availability is constrained, and the Federal Energy Regulatory Commission, FERC, which was mentioned several times, regulates for transmission.

Intermittency is an issue that frequently comes up, the fact that the wind doesn't blow all the time. And early on, utilities in particular, were concerned that

adding this type of a resource to their resource mix would cause issues for their operating system. But, in fact, we now know that that's not an issue of concern any more.

As an example, I would point to the most recent -- one of the most recent projects added in Colorado, Lamar. When the proposal was first made, there was a suggestion that there needed to be 100 percent back up for that project, and after all the analysis was done, the utility actually integrated this project into its system with zero back up required. So we know that it's not an issue. The Europeans have 20 percent plus wind in their resource mix, so it's really a non-issue any more.

And then operational considerations, gear box reliability, turbines are supposed to last 20 to 30 years. We have had a number of failures. There's an international collaborative that's been formed to address that issue, and then also some

early blade failures was a function of manufacturing start up woes I guess would be a good way of putting it, and those have been dealt with.

And here's a project from Iowa that is actually a mix of turbines, a number of 1.5 turbines, as well as some 1.0 megawatt turbines. I think it's interesting to see all of these projects out there in the field, and there's just not a common picture, but there's a lot of similarities between the way these projects are laid out.

So in terms of benefits, I put a flyer out in the front and hopefully you took it. There's just -- that was a summary of sort of the 10 common benefits of wind. They're -- it's economically competitive, it's a cash crop for farmers and ranchers, which can really help save the farm, and it has in many, many cases.

It doesn't use water, which is a concern in many parts of the country. Water

constraints contributes to national security by being an indigenous resource; we don't have to buy it from another country. It's exhaustible, it's renewable, it has no emissions, and once you put in your wind turbines, the fuel is free, which means you're not going to be susceptible to fossil fuel price volatility.

And then the thing that's interesting about wind is that it has a whole range of applications from the large wind farms that we might be talking about today, but also can be used for homes, businesses, it can be used in community projects for schools and tribal situations.

And the last section is the environmental issues. There are three major areas that we commonly hear about, acoustics, aesthetics, and wildlife. The acoustics, which I was talking about earlier, is really a non-issue anymore because the Europeans have -- because they have the wind farms built

much closer to where they live, they really pushed for development of international standards that have -- although the projects are more costly now, the turbines are more costly now, they have reduced the acoustic impacts. And for the manufacturers to play in a global market, they need to make sure that their turbines meet these international standards.

Aesthetics, that's beauty is in the eye of the beholder. Somebody may not want wind turbines in their backyard, other people look at it as artwork. So that's really a very subjective consideration.

And then the wildlife issues, birds, bats and habitat, primarily the wildlife issue revolved around raptor impact at the Altamont in the early years. And as you saw from the first graph, the turbines look a little different. I have a bunch of slides on that particular wind farm and it's -- the characteristics of that wind farm

are a lot different than where we're talking about wind turbines going in right now.

But in addition to that, because of that issue, we have, through the Department of Energy and collaborative research, spent many, many years, over a decade, working this issue, and have come up with strategies to avoid, minimize, and mitigate for impacts from birds in particular. However, there's an emerging issue with bats that came to light a couple of years ago in West Virginia and Pennsylvania. We also found bat impact issues in Canada and Germany. So it's not isolated to a single wind resource area.

As a result of the work that was done on birds back in the '90s, the community, the stakeholders of the energy offices, federal government, the industry and the non-government organizations like the Nature Conservancy, Sierra Club, Audubon Society, very -- are engaged in addressing this issue, and there's very aggressive cutting edge

research going on right now to try to address the bat impact issue.

And then the last wildlife impact issue is habitat. This is a proactive research project that we've been working on, and we're looking at how do wind farms impact the demographics of tall grass prairie species like greater prairie chickens, lesser prairie chickens and potentially sage grouse, and how does it impact their genetic dispersal.

So we have research going on in the Kansas area, also Texas and Oklahoma, to try to address this issue before wind farms go in that area in large amounts so that we will understand and be able to strategically place those wind farms so that they don't cause those impacts.

And then finally with the work that's been going on over the last 15 years, there's a tremendous amount of resources out there. I can't spend the time that I would want to talk about them, but these are just a

few of the resources that are available. There was a guidance document that describes metrics and methods that should be used for assessing wind -- potential wind farm development areas, and specifically diurnal daytime species.

And in the recent past, the last couple of years, we've now been looking at bats and also other nocturnal birds. And so we've developed this metrics and methods document that summarizes the tools and the technology that's out there to help developers, other stakeholders assess what the potential impact might be at a wind farm before it's built, and then proactively make decisions to avoid, minimize, or mitigate those impacts.

So I think that's -- I'm out of time.

MR. HAYSE: Okay. At this point, what I'd like to do is open the floor up if people have questions that are related to the

presentations that have been given. So points of clarification, or something like that, not necessarily comments at this point about what we should be looking at in the EIS and that type of thing.

And if you would, when you come to the microphone please state your name, if there's an affiliation, if you're representing an organization or something, please state that as well.

And give me just a moment, and I'll turn that microphone back on.

MR. SCHUMACHER: Good evening. My name is Bill Schumacher, and I'm a member of the Flandreau Santee Sioux tribe, and I'm their wind project coordinator. We've been working for the past couple of years, and I'm doing a 50 megawatt project at Flandreau.

But it's in coordination with some of the -- I also serve on the executive committee of the Intertribal Council on Utility Policy, and we've been working with

Mike Radecki from Western on the Section 2606 study of integrating tribal wind into the transmission system. And that report is -- I believe is due out in October.

So I guess my question would be, in this impact study, are you going to be considering the eight tribes that are part of the projects in that report? That would be the Flandreau Santee Sioux tribe, the Lower Brule Sioux tribe, the Rosebud Sioux tribe, the three affiliated tribes, the Omaha tribe, the Spirit Lake tribe, Ogalala Sioux tribe, and the Yankton Sioux tribe.

MR. STAS: As John mentioned earlier, we're not looking at any specific projects, but we will be looking as a whole on all the potential wind development in the Upper Great Plains Region, and from that, the developing decisions regarding mitigation and streamlining the process for future projects that are coming in. But as far as any specific projects, that's not the goal of this

programmatic EIS.

MR. SCHUMACHER: Well, I guess my question would be, will there be any integration of the 2606 report that --

MR. STAS: The report --

MR. SCHUMACHER: -- Western is also doing?

MR. STAS: The report will be recognized and included and referenced in the document, and that'll be, as you mentioned, Mike Radecki from the Upper Great Plains Region is looking at the integration of wind with hydropower study, and that will be referenced and integrated as we get into preparing the preliminary EIS.

MR. SCHUMACHER: Okay. And you also mentioned the National Historic Preservation Act, and will --

MR. STAS: Right.

MR. SCHUMACHER: -- Western be the lead agency under that Act? If several agencies are involved, one agency can be the

designated lead agency. Will that be Western?

MR. STAS: We have not decided that yet, but we will be doing some consultation on a, again, on a programmatic, not on any site-specific basis, but trying to get information incorporated to perhaps avoid some of the issues in the proposals in the future to the extent that we can release some of the information. Some of that information can't be released generally, but to the extent that we can include avoidance areas and things of that nature is our goal, to include that type of information for wind developers.

MR. SCHUMACHER: Oh, okay. I'd like to request that Intertribal COUP be included in any consultation that you'll do for this programmatic EIS.

MR. HAYSE: Could you also please come back up during the comment period and provide that as a comment. Right now we're just trying to get questions to clarify the presentations, if somebody had a question

about that. But --

MR. SCHUMACHER: Well, you had mentioned NHPA, I mean the National Historic Preservation Act, so that's all part of the same process.

MR. HAYSE: Absolutely.

MR. SCHUMACHER: And the reason I asked about the tribal sites is under the 2005 Energy Act there was delegation of secretarial authority to the tribes to approve energy resource agreements, TERA. Is there going to be any consultation, or any interconnection between your study and the TERA section of the Energy Act, because some of the very same things are required, meeting NEPA, meeting the National Historic Preservation Act, or will your study be able to be used by the tribes to satisfy those requirements?

MR. STAS: The study should be developing information for anybody that wants to develop wind in our part of the country, and there will be good information and

references for -- even if they don't interconnect with the Western grid, that information will still be useful and for folks that want to develop wind and still protect wildlife and cultural resources and things of that nature.

MR. SCHUMACHER: Thank you.

MR. TOLLEFSON: Sir, I had a question that related to what you were talking about. Tell us a little bit about the transmission arrangements in California at Palm Springs, and I think that's -- those windmills are all on tribal land aren't they, outside L.A.? Anybody know about that?

I'm Bert Tollefson, by the way, of Tollefson Energy.

MR. STAS: I'm looking for our transmission managers.

Ed, do you know anything about that?

MALE VOICE: I don't --

MR. STAS: I don't know --

MALE VOICE: We're talking about Montana, the Dakotas. I don't know anything about California. I'm sorry.

MALE VOICE: There is some development on tribal lands in California, that's correct.

MR. TOLLEFSON: Is there what?

MALE VOICE: There is some development on tribal lands in California.

MR. TOLLEFSON: It is on tribal lands.

MALE VOICE: Not entirely, but some.

MR. TOLLEFSON: Well, it's an example I think of what can be done in terms of transmission because it's worked out there. It's a real study, a case study, and I think it relates to other questions here because you need open lands. We've got a lot of reservation land here in South Dakota and the whole upper Midwest, and so it's kind of a natural in terms of giving an opportunity for

Indian land as well as private land to be used for location of windmills, and also transmission. I just wondered how that had worked out in California.

Did you have a comment?

MALE VOICE: No.

MR. TOLLEFSON: We've got a man here who's a Congressional aide, and I pointed out that one of my previous incarnations I was president of the American Corn Millers Federation. We developed the high protein foods that you've heard about that saved millions of lives around the world. But to shorten this story, when we were going through it, we ran into big objections from the nutritionists and the United Nations, and they were down in the Capitol when we put this together.

So without being immodest, I wrote the statements for both Democrats and Republicans, Congressmen, directing the U.S. Government to go ahead with it. The UN wanted

to study this for years, so I think that if we can get this together in terms of having the basic information, it's going to be very, very helpful. It's out of sessions just like this that we can move ahead with it. Thank you.

MR. HAYSE: Thank you.

One or two more questions?

MR. KOLSRUD: My name is David Kolsrud, and we have an office over in Brandon, renewable energy projects. Just a simple question, is this environmental impact statement going to slow down wind development in South Dakota? Do we have to wait until it's done, or is it going to impede some of it at all?

MR. STAS: The projects that are being reviewed are going forward in parallel. We have proposed projects that are being currently under review that are being looked at under the National Environmental Policy Act. Those will proceed and will not wait until the programmatic EIS is done.

The programmatic EIS is future-looking, but information, as we're developing, certainly we'll need to make sure that that gets shared with the folks, the projects that are happening as we finish the programmatic EIS.

MS. JONES: My name is Marcy Jones. My interest is actually in the hybrid homes, that's kind of what I'm learning about. And I have a question about the size of the turbines compared to the ones that are used in the hybrid homes.

MS. SINCLAIR: Could you tell me what a hybrid home is?

MS. JONES: It's a home where the --

MS. SINCLAIR: Could you --

MS. JONES: Okay, sorry.

MR. HAYSE: Please use the microphone.

MS. JONES: Okay. I know there are several areas out in West River where the home

is integrated. They have their own wind turbine and they are integrated into the grid. The grid is integrated into Black Hills Power and Light, and they're -- the home is run by wind energy when it's blowing -- when is blowing eight miles an hour or more, and then it credits the utility company.

If it's going faster or when you're not using it, and then the home is -- you get a bill from Black Hills Power and Light, and then you use your wind energy. And then on your bill it shows a credit for how much wind energy you produced and not used, that they will not charge you for in the future or something.

MS. SINCLAIR: Okay. So that's net metering, and generally if it's for a private residence -- these turbines are like I described, they're just way too big -- we have another segment of the wind industry that's called the small wind turbine industry, and they're projects by DOE's definition is 100

kilowatts or less. So what was state of the art as a large wind turbine back in the '80s is now the cap of what we call small wind turbines.

Generally speaking, for a home, you might have something on the size of 10 kilowatts. So very, very small. And I don't think that has anything to do with this project, because those are interconnected on the distribution side. So you have to have a direct relationship with your utility, your co-op, your, you know, whoever.

And like I have a PV system in my home for the same -- I have an interconnection agreement with my utility, it's net metered, we balance out at the end of the year, every state -- or jurisdiction does it differently. But those would be really small wind turbines.

MR. HAYSE: Anybody else have an urgent question related to the presentations?

(No response.)

MR. HAYSE: Okay. What I'd like to do next is to move into what we referred to as our public scoping comments phase of this meeting. And basically the idea here is that we will solicit comments related to things that we should either be considering in the EIS relative to the alternatives, the proposed action, information that we should consider as we conduct our analyses in the EIS, or information about environmental impacts and so forth.

Basically, before we move to actually giving those comments though, I'd like to point out that there are many ways that you can provide scoping comments on the environmental impact statement. You can come to this scoping meeting and provide comments, as we're preparing to do in a few moments, you can provide comments via the project's website and the URL for that is given on the screen here, and then finally you can also provide comments via mail.

Most of you when you came in probably picked up one of our comment forms, and if you would prefer to, you can actually write your comment on the form, fold that form up, and send it in to the address that's on that form, or prepare your comments in some other way and mail them to the same address. And the address is given on the website by the way.

Now those scoping comments, and regardless of which format you decide to use, or how you decide to transmit those comments, will be accepted through November 10, 2008. At that point, we will take the comments that we have and we will use that to further clarify what types of things we need to be looking at in greater detail in the environmental impact statement.

So as far as submitting written comments, I mentioned you can fill out one of those paper forms, or you can mail written comments, you know, however you decide to

prepare those, and any other supplemental material related to the EIS to the addresses that are given on the website or on the forms.

Alternatively, if you have something with you tonight, you could leave that with one of the EIS staff members, so somebody who's wearing a badge preferably. And the address for mailing comments is given here.

Now for more information related to the EIS and the EIS project as a whole, you can go to the project website, as I mentioned, or you can contact one of the federal agency representatives, one of the lead agency representatives that are here tonight, or that are listed on this slide, so that would either be Nick Stas, who's here next to me, or Michael Spratt if you're interested in submitting a comment, or asking questions of somebody in the Fish and Wildlife Service relative to this project.

All right. So as far as providing

oral comments tonight though is we have some people that signed up to provide comments as they registered for the meeting tonight. And those speakers that signed up and indicated an interest in providing oral comments will be asked to come to the microphone in the order in which they signed up.

Now unregistered speakers, or people in the audience who wish to provide a comment will be invited to come up after those registered speakers have provided their comments.

Now as far as making the oral comments goes, please, again, state your name and your affiliation, if there is one; keep your comments brief, and that's so that we can allow everybody a chance to make the comments that they're interested in; limit the comments, to the best of your ability, to the scope of the programmatic EIS.

And remember, we're talking specifically about looking at wind energy

development, interconnection to Western's energy transmission grid, and development of those wind energy projects on wetland or grassland easements that are managed by the Fish and Wildlife Service.

And then if you have copies of written remarks, or supplemental materials that you'd like to leave, please provide those to one of the staff members, me or somebody else who's wearing one of the badges here.

Keep in mind that the comments are being recorded, and that is so that we can prepare transcripts of those comments so that we're sure that we accurately capture the comments that are made tonight, and that those transcripts will be prepared and posted on the public website.

Now, other than the name that you state or your affiliation, we're not attempting to include personally identifiable information with those comments. But please be aware that we are recording the comments

that are made, and that's really to benefit us and to benefit other members of the public that would like to know what type of comments were made.

So with that said, I do have a list of the registered speakers, and the first speaker that I would like to call up is Gary Hanson, if Gary's in the audience still.

MR. HANSON: Good evening. Thanks for having us. I appreciate you putting on this event for us. My name is Gary Hanson. I am the chairman of the South Dakota Public Utilities Commission.

And the three Commissioners worked to put together a statement, so I am speaking on behalf of all three Commissioners, and thus I have to read it, otherwise, if I stay, then I am saying something that is not necessarily their opinion.

"South Dakota Public Utilities Commission both supports and encourages WAPA's and the Fish and Wildlife Service's proactive

intent to more clearly define, and hopefully streamline processes that allow us to develop new and cleaner sources of energy. The timely sighting, construction, and interconnection of new wind generation facilities is often dependent on public interest reviews conducted by a number of federal and state agencies.

"If we find the operation of these new facilities to be in the public interest, which the South Dakota PUC does, it stands to reason that more efficient processing of these reviews, without sacrificing any quality of the review, is also in the public interest.

"We are intrigued by the possibilities of the successful development of your programmatic EIS approach. It makes sense to us that moving from a case by case analysis to development of an accessible, pre-existing database for developers could result in tremendous efficiency and cost benefits for all, with additional potential benefit for the natural resources we all wish to protect.

"It appears to be a coherent response to increasing demands of the energy-using public, those interested in protecting our natural and human environmental resources, and the fast-developing wind generation industry. We applaud your effort.

Proposed transmission system enhancements are also to be considered with this process. It is no secret that South Dakota's exceptional wind resources will not be developed and will not reach a market until adequate transmission is constructed to reach those markets.

"While we are interested in efficiency improvements for existing transmission, we will need to go well beyond existing capacity if we wish to reach our vast potential to power a significant portion of the United States' needs with clean, domestic wind generation

"We will do whatever we can to support this development and strongly

encourage a sense of urgency in consideration of this portion of the process. We understand this is just the beginning of a process that may take up to two years to complete, and that many details have yet to be determined before completion.

"While we support the intent of the process, we do reserve the right to comment more fully when necessary program detail is proposed, and we look forward to doing what we can to assist a successful completion of your proposal."

Thanks for giving us the opportunity to speak this evening.

MR. HAYSE: Okay. The next speaker that registered to speak is Mike Vehle. Is that pronounced right?

MR. VEHLE: It's close.

MR. HAYSE: Okay.

MR. VEHLE: Thank you.

My name is Mike Vehle. It's Norwegian, Vehle, ja.

(General laughter.)

MR. VEHLE: First I want to thank the U.S. Fish and Wildlife Service and the Western Area Power Administration for coming out here and holding these hearings. I think it's important to get out into the region and hold these hearings.

I would even encourage you in the future to go even further into the region, out in Central South Dakota, so we can show you what real wind is like. Okay. South Dakota and the Upper Great Plains is one of the best sources of wind in the world.

And did I tell who I was when I started?

MR. HAYSE: Yes, you did.

MR. VEHLE: Okay. And I'm a legislator from District 20, which encompasses some of this area. So I'm a state legislator from District 20, which is Aurora and Davison County. So sorry about that.

And why is this wind energy so

attractive? Well, nuclear energy gets people worried about what we're going to do with the waste. Coal and other fossil fuels worries people about pollution and carbon dioxide. Whether that's right or wrong, it worries them. Solar, it's too expensive, and we probably can't produce enough.

But wind is plentiful. It's clean, it doesn't use water to produce energy, it's free, and if you live in South Dakota, you fully understand that its source is totally endless, and this planet will always have wind.

As with any source of energy, we must look at all the potential environmental impacts, and I commend you for -- both the Fish and Wildlife Service and the Western Area Power Administration for these hearings to explore these areas. I must relay that, from what I've been told, the lost to migratory birds is minimal at best.

Wind is a valuable resource for the

people in my district, Aurora and Davison County in Central South Dakota. And it can contribute to the enhancement of energy production, not only for our area, but for the entire nation. And it can help lessen our dependency upon foreign fossil fuels.

Electric cars are becoming more and more popular. I'm on a task force that's studying roads. We have an issue of how are we going to tax electricity that's used on the roads, because that's how we fund the building of our roads, is the tax on fossil fuels. So we've got another problem also there. But wind that creates this electricity is probably the cleanest and most endless source of energy possible to fuel our cars.

Now, on a more parochial basis. I grew up in Central South Dakota, and I was in the grain business for many years. Today we have high commodity prices, and we have high yields. Let me tell you something, that's an anomaly.

Generally, when you have high yields, prices are low. And when it's dry and you don't have much of a yield, prices are really high. My father used to say about our soil out here, the gumball in Central South Dakota, that you stick with it when it's dry and it'll stick with you when it's wet. And he was literally correct.

But back then we had a lot of farmers that had cows. And they milked those cows and they had what we call the milk check. And you know that was always a steady source of income, no matter what else happened, we always used to joke about, Yeah, but I've got the milk check.

And, you know, wind power could be another steady source of income like the milk check was to farmers back then, and it could help in the future because now most farmers in the area, they either specialize in producing milk, or you could specialize in something else. So you don't have that steady milk

check, and that's what maybe power could -- wind power could do. So this is vitally economically important to the people in my district.

Now in a second area, the legislature in South Dakota also recognizes this great resource of wind power. And it has diligently worked to encourage its development. Two things I want to mention, one, the state set an objective that by 2015 10 percent of the energy, electric energy consumed would come from renewable energy. We also, to help accomplish this, we provided various property tax and contractors excise tax reductions to help accomplish those goals.

Therefore, in conclusion, I urge that, in your consideration of a programmatic environmental impact statement and assessment, that you find ways to mitigate the migratory bird problem and allow the permitting of wind energy in this highly wind-power rich area of Central South Dakota in a manner that is more

quick and more efficient. Thank you.

MR. HAYSE: All right. Our next speaker is Steve Wegman.

MR. WEGMAN: Thank you.

My name is Steve Wegman. I represent myself and wind industry tonight. We thank Western Area Power Administration and U.S. Fish and Wildlife in having these public hearings, and we promote to have streamlined approach on doing wind assessment, in doing wind development, along with transmission upgrades.

One thing you have to remember in this business, it's very fragile. There are many hoops to go through in order to do a wind project. Wind projects can be installed in relatively short amount of time once you've got the approvals to go through. Typically in less than 180 days you can install 100 megawatts.

But it's very important that the federal government does not restrict or make

the time lines too long. For example, in MISO, in doing their planning process for interconnections, if you put a request into the queue today, you may get your answer back maybe in six, seven, eight years from today. If they speed up their process, they could cut it down.

One of the things that we're very concerned about in the wind industry is making sure that you have a streamlined approach, it's timely in fashion, that you not only include the wind development, but also the transmission upgrades that are necessary.

Wind energy is very important to rural South Dakota. For example, Tatanka project, which is on the McPherson-Dicky County of North Dakota and South Dakota, the South Dakota portion, which is less than -- right around 90 megawatts represents one-third of the tax -- gross tax assessable property in that county. These are huge monetary items for our rural economies.

And, again, it is a very fragile business. And the opportunity for us to do wind development is now. We don't need more delay, we need a streamlined approach, and we need to have a good time line in it. Thank you.

MR. HAYSE: Bob Sahr?

MR. SAHR: Good evening. My name is Bob Sahr, and I'm the general counsel for East River Electric Power Cooperative. And I too want to thank you for the opportunity to speak at this proceeding, and we appreciate the agencies taking the time to come out to Sioux Falls and the other sites and having these public input meetings.

And in particular I do want to note our long-standing very positive relationship with Western and we appreciate all your efforts in helping us build the projects we need to build on behalf of our members.

I'm a former public utilities commissioner, and after hearing the earlier

two public officials, I can see why they are current public officials and I'm a former one. They did a much better job, and I appreciate their comments.

So, thank you, to Chairman Gary Hanson and Representative Vehle, and I should also note that Representative Lance Carson is here as well, and I don't believe that he will speak, but I know he's got great interest in this.

And I've also talked to some of the folks from the governor's office and there is a representative from one of the state agencies here tonight. So there are a lot of people on the public policy side taking note of the proceedings, and they appreciate the opportunity to listen and perhaps eventually comment as well.

Right now, as you know, looking across this region and this state, we have tremendous momentum in terms of wind energy development, and we are seeing in South Dakota

a number of wind farms coming online with many plans for more wind farms. And I think if done correctly, we see this proceeding as an opportunity to streamline and to deal with the important issues in a faster, more efficient manner.

But, of course, the counter side to that is certain that if it is not done correctly, or if there -- things are put into place that are too burdensome, or too time consuming, then that certainly can have the adverse effect on wind energy development.

East River is a generation and transmission electric cooperative based in Madison, South Dakota. We have 21 members, 20-hour cooperatives, and we have one municipal system. Our members are in eastern South Dakota and western Minnesota.

And we have a number of members from Central Electric and their general manager, Loren Naess is here as well, and they are in the district that Mike Vehle referred

to earlier. They're in an area with tremendous wind resources, and they are in the area where Basin Electric would like to build their next wind farm in the Crow Lake area.

And they have plans for a 150 megawatts, and it would add to Basin Electric's growing portfolio that includes wind farms in North and South Dakota, waste energy, key projects, digester, small wind projects, and really it's -- Basin really is being a leader in making a push towards not only a self-imposed goal of 10 percent renewables by 2010, but going beyond that and meeting and exceeding any state objectives throughout the region.

East River receives our power from two places, as I'm sure you're aware of. One is from the dam system via Western, and then our supplemental wholesale power comes from Basin Electric. Basin is not here tonight. East River, as one of the members of Basin Electric, they will be in Bismark tomorrow

night.

And we certainly support wholeheartedly their comments, and I expect that they will provide a few more details in tomorrow night's proceedings. But I would like to just highlight a few of the issues that East River and Basin have identified.

First of all, the Upper Great Plains is one of the best wind resources in the world. We support a balanced approached that will allow for continued wind development, as well as wildlife protection because wind energy contributes to national energy security, reduces carbon dioxide emissions from the electric sector, reduces water consumption in the electric sector, may slow the loss of native grasslands and loss of CRP acreages by providing a revenue source alternative to cultivation.

Secondly, we support a programmatic EIS if establishing reasonable regulations regarding transmission of wildlife can help

move wind energy projects forward more quickly and efficiently, and it provides clarity to the NEPA process.

Third, however, we oppose the programmatic EIS if overly restrictive regulations delay or end wind energy development in this region, new rules are extended to existing projects or those already under construction or in progress. A broad area of some of the best wind resources in the Upper Great Plains will be excluded from development out of concern for the migratory bird fly aways, or rules restrict operation of wind projects after construction.

The desire to build more renewable energy certainly reflects not only the desires of our member owners, and the member owners of the individual cooperatives throughout this region, but also really I think reflects our commitment to environmental stewardship.

So we realize you have some important issues to consider, but what we

would urge is to look at this region as an opportunity to develop more wind energy, do so in a way that is respectful of environmental issues, but at the same time allows us to go out there and do a very positive thing for the environment, for wildlife, which is to move towards more wind energy development.

And with that I would close my comments, but I do want to note that in this audience I also see a number of land owners and really, as stated by earlier speakers, they are the ones who will also see some additional benefits, and much benefits, and have a real keen interest in this, and, in fact, are the folks who will -- are balancing these type of issues on a regular basis. So I look forward to hearing from some of them as well.

And I thank you for the opportunity to appear tonight. Thanks.

MR. HAYSE: Mitch Fargen?

MR. FARGEN: Hello. My name is

Mitch Fargen. I represent the South Dakota Farms Union. I just want to say thank you so much for giving us this opportunity to speak in front of you guys, and thank you so much for coming here to South Dakota.

The South Dakota Farmers Union, we represent the family farmers and ranchers and land owners all across South Dakota. You know, just like, you know, dealing with land owners, we know that our members are very concerned about development of wind energy on their land. They're big promoters of it, and they like -- were saying earlier, they like the opportunity I guess for the money and the supplemental income in there also.

We feel this is a great opportunity for our land owners, rural communities and the State of South Dakota. And with that, we'd also like to lend our support, full support to our rural electrics here in South Dakota with their wind projects across the state.

So I just wanted to say thank you

so much for this opportunity.

MR. HAYSE: Loren Naess?

MS. NAESS: Thank you. My name is Loren Naess, manager of Central Electric Co-op. That's Norwegian also.

In spite of -- as a co-op, many of this is -- comments have been said, we have a land owner. We have like eight or ten land owners that are here with us tonight. Instead of everyone speaking, they will probably be sending in a written report. But instead of all of us getting up and saying the same thing, we just want you to know that we do have about eight or ten interested land owners.

They're all from the Central Electric area. And in that area, Crow Lake that Bob Sahr just referred to, it covers about 30,000 acres and it's -- we have 30 or 40 different land owners in that area.

Just one project in there that, if the EIS -- you know, we're in favor of it with

the rural electric programs. We've been working with programmatic EISs for quite a few years. We've been very cooperative in that area, and anything that we can do. I can remember going through the bald eagles where we spread the cross arms wider for the wing spans, and we've gone through the -- for the triangles up there so they don't land. So there are many things that we can do.

And one of the problems is we just don't want this project to have to stop, because if it stops, there's probably the chance it won't go through, because we're in an opportune time. And we're also -- from Congress, of course, we have the slogan going on, "Our Energy, Our Future". They want to reduce CO2, and this is one way that we can -- the American people, we can use the product we have.

I just wanted to refer, as of yesterday, a quote I thought was interesting, and you probably have read it from Western,

but the rest of it. We got the 2007 Western Area Power Administration annual report yesterday. And I forgot the quote, but in their reading, Tim Meeks, the administrator of Western Area, he referred to the fact that nine out of ten states that are in Western's area are the most wind states. And in there he commented too about the fact that we wanted to move forward with as much wind, and I know Administrator Meeks is very in favor of wind development within the area.

Thank you very much.

MR. HAYSE: Next on the list is Jim Headley.

MR. HEADLEY: Thank you for being here today. It's been interesting. My name is Jim Headley, and I guess I'm the guy with a target on me. I live in the middle of the Crow Lake project, proposed Crow Lake project, wind project.

And I'm also on the Central Electric board, so I'm kind of caught in the

middle of this with my neighbors, with, you know, responsibility to promote wind. And the other thing that I am is I am a conservationist, which is -- I'm pretty proud of that.

In our area, Loren mentioned there's about 30,000 acres, and most of us in the area are in the ranching business. It's a hilly, good site. It's probably similar -- will be similar to the Highmore site. I don't know if you're familiar that, but it's a very efficient site. It's one of the better sites in the United States that I understand. We're not too far from that. But anyway, it's a ridge of hills.

And they wanted to -- we were talking about grasslands, how we can save grasslands. Well, anyway, in our county, we're somewhere over -- we've lost over 50,000 acres of grassland probably in the last 10 years. That's very close. And none of the grasslands -- or some of the grassland has

been broken, but anyway, this particular area, there's 30,000 acres.

I think there's an opportunity with the wind projects to let people, because of the additional income, to save all of those grass acres in that project. None of those acres have been broken, we're all in the ranching business, and the whole area ties together, you know, maybe eight miles, a couple of miles wide. So that's really a plus.

Because, you know, the annual rental payment, if there's 100 towers and there's 35 land owners, we're talking in terms of $4,000 a tower, which is pretty significant. And if you understand the farm program, a lot of the money goes to corn, soy beans, and we're not able to get a payment, so to speak, for grass, so this is very positive, I think.

And I guess the biggest thing is that -- I had some other things I wanted to

say, probably about birds, but I don't want to take too much time. I have identified over 90 species on my place, so I said I'm kind of a conservationist and I think that's, you know, that's quite a few species over 30 years.

I myself do rotational grazing and try to get into the grassland easement, but been short of money. And I'm not the only one. There's been several others in the area and this is really a good trade off. We can still save the grass, which I think where the Fish and Wildlife Service has been, you know, really, as we saw by our figures, a really important thing. And it is also a good area for the prairie potholes.

Tax implications, that's pretty good. The way in understand it, it's about $10,000 per tower going to the State of South Dakota, the county and the local school district, which as far as an added value project, it's going to be hard to beat, you know, for the taxes, that side of it.

I guess really that's about all I have to say, and the other thing is, we're located fairly close to the major transmission line that comes from Fort Thompson area across, so there'll be very little above ground transmission from this project that we will have to, you know, build. So it's just, you know, an excellent area, and I don't know, I guess I'm hoping the project will go through. Thank you.

MR. HAYSE: Our next commenter is David Kolsrud.

MALE VOICE: He left.

MR. HAYSE: Left. Okay.

And Bert Tollefson.

MR. TOLLEFSON: Thank you again for being here, all of you. It's very helpful at this time, and you can see there's been some very good presentations. I would mention that Gary Hanson, who I think is still here, was the mayor of Sioux Falls here before he was a PUC commissioner, and also a legislator. The

Sahr family is among the most prominent here in South Dakota, and he's done so many things. And so it's a little bit of a cross section.

I spoke, along with Senator Quentin Burdick, at the national RAA convention in Las Vegas; I was an ambassador rank at the time, and we discussed elements of what we're talking about tonight, including the failure, for whatever reason, of getting more done with wind energy when it's so logical to do it.

The co-ops, electric co-ops in this state have really transformed life out in the prairie. And we will have an opportunity, I think, to further do that in terms of the benefits for all agriculture and also for business people related to it. I think that there's a tremendous opportunity here if we can harness and organize and maybe ultimately it'll go right down to the individual farm that wants to, if they're in a remote area, have their own wind energy.

We had a lot of wind chargers out

here, you know, for many years. I grew up as a boy, and I won't get into detail on that, but our families have been here since the 1880s. The Kenneys came over in eastern Brookings County and the Tollefsons were over in western Brookings County, and we were the Norwegian branch. The Irish was over there at Elkton.

But anyway it -- examples of what we're talking about in terms of what happened here, and what we were able to do with hard work and entrepreneurship and that continues to be a failure. You're going to see that in the whole area. You've worked with it through the years and you've seen these qualities, in Montana and North Dakota and elsewhere. So there's a real blessing for this area to finally have this electrical power harvested through wind.

My only concern is the transmission, in getting it to the customer and getting it to the user. Have you been

approached -- my question -- I have many of them, but I'll ask just the one, have you been approached, any of you, by representatives from General Electric, or any of the other firms that'll have to be involved along with what we're doing here, if we're going to make it as a success that it can be?

Please respond to that if you would. Thank you again.

MR. STAS: If you're talking about the General Electric as far as manufacturing turbines, and Western is not approached by them, it's the people that are building the wind generation. And there's various types of turbines, I'm sure Karin could address that.

But one important point that it has not been mentioned, is there are components of wind turbines being manufactured in the Dakotas which produces some very good jobs in the Dakotas, and there is a back log of these. They're being made locally, so that's an important aspect of the wind production as

well.

MR. HAYSE: All right. I thank the commenters that signed up ahead of time. Are there people still in the audience who would like to provide some oral comments at the meeting tonight? Would you please raise your hand?

Okay. I see -- hold them high just so that I can get an idea of how many people. Okay. I see two.

So you, sir, and then you, sir. And then we'll see if anybody else has comments after that.

MR. CARLIN: I'm Brad Carlin from Reliance, South Dakota. A small town, Reliance, about -- a little less than 200 people.

I'm a land owner in the area, I'm here with -- some of my fellow land owners are here today too. I've worked with -- me and my brother have worked with WAPA through their equipment loan program doing wind data

logging, we're working with some of our neighbors, we have four 20-meter towers up in the area.

And then also between ourselves and another land owner, we got five 50- and 60-meter towers up. We've been logging wind data for some -- over two years now. We're in a class 5 and class 6 wind area on our lands.

I guess I would -- what I'd like to say is -- just the main thing I'd like to say is it's a big economic development thing for our area, and it's -- me, myself, my neighbors and all, and we just say please don't make any rules that are going to restrict us from being on the market, our wind in our area. It's just a big factor in small America.

MR. SCHUMACHER: Bill Schumacher, again, for Intertribal COUP. And for the last several years we've been working on an environmental justice project. Some time in the -- just a very short history, some time in the '30s they began building the dams on the

Missouri River, the Pick-Sloan project, and, of course, you know, as Western, you're in charge of producing and selling the federal power off those dams.

When those dams were first built, they were powered by 100 percent renewable energy, water from the run off, you know, from the snows in the winters. But then as progress came, then the Army Corps of Engineers was charged with many other uses of that water, from downstream barge traffic, to recreation, to irrigation and there became less and less water available for that hydropower.

And it slowly began to be replaced as a base energy for Western with coal power from private coal burning plants. Whereas today these lights you see in this room are 80 percent from coal, polluting coal.

And so, you know, whether -- I guess my question would be, is this environmental impact statement going to have,

even in a footnote, or in a section, or something, the amount of greenhouse gases, pollution, mercury, you know, that knocks the socks -- everything else that wind, you know, wind power will remove from the current production of electricity by replacing that 80 percent that's now supplied by private coal burning plants.

And as you know, those emissions are causing climate changes, so whether it's produced on native lands, whether it's produced on non-Indian lands, you know, we're behind 100 percent replacing that base load power with renewable energy. Thank you.

MR. HAYSE: Anyone else that would like to speak at the meeting?

(No response.)

MR. HAYSE: Okay. Just as a reminder, whether you have spoken tonight or not, does not preclude you from sending in additional comments, either electronically via the website, or via mail, or courier post, or,

you know, however you would like to transmit those comments to us. We would be more than happy to receive them. Remember, again, that the comment period, the scoping comment period closes on November 10.

And with that said, if there's nobody else that would like to speak, I'd like to thank all of you on behalf of Western Area Power Administration and the U.S. Fish and Wildlife Service for participating in tonight's public process. And we really do appreciate the comments that we've received here tonight.

MR. STAS: Could I make one other point, John?

MR. HAYSE: Okay. Sure.

MR. STAS: Just one other point. Also a cooperating agency, but not lead, is the Rural Utility Service. They are going to be cooperating with us. And if there is other folks that want to be a cooperating agency, we will take that request. You have to be a

government or tribe -- state, local, or tribal government or entity to be a cooperating agency. Thank you.

MR. TOLLEFSON: Excuse me. I've thought of one other question that related to what I said earlier. We've gotten, up by Gary here, a pretty substantial wind farm.

How many of you are familiar with that?

That's something you'd want to check out because that is done by, a lot it, by Europeans. So they've brought some of their technology over here, and I think this is going to become increasingly global. So as we look at more -- it's not as big as the wind farms in other parts of this country, but it's substantial right up here on the South Dakota/Minnesota line at Gary. So please check that out.

MR. HAYSE: All right. I thank everybody for coming, and with that we're going to conclude this meeting. Thank you.

(Whereupon, at 8:40 p.m., the meeting concluded.)