

WIND TURBINE GUIDELINES WEBINAR

May 6, 2010

Coordinator: Welcome and thank you for standing by. Currently all participants are on listen-only for the presentation. At the time of the question and answer session, please press star then 1 and record your name so we may introduce your question.

Today's call is being recorded. If anyone objects, they may disconnect. I'd like to turn the conference over to Mr. Flowers. Sir, you may begin.

Larry Flowers: Well, thank you very much and thank you folks for joining us today for this important Webinar on the guidelines that have recently been recommended to the Secretary of Interior.

Wind power and its interaction with avian bats and other wildlife has all - has been an issue ever since wind power got started in California back in the early 80s with the wind development called Altamont and the interaction with raptors.

That sort of brought the attention to this issue that wind turbines and things of flight have interaction from time and time and the wind industry has spent a lot of effort, as well as wildlife biologists and trying to understand this interaction and minimize it and mitigate it.

Recently an expert group from many different environmental and development organizations got together and reviewed the literature and the information and developed a set of recommendations that can hopefully come forward and be used across the land to have some uniform way of dealing with this important issue.

Today we have fortunately with us Dave Stout who's the Chief of the Division of Habitat and Resource Conservation for the U.S. Fish and Wildlife Service.

Dave in his current capacity is responsible for programs leading to wetlands protection and restoration, as well as mapping, conservation planning with federal agencies, marine mammals, coastal barrier protection and most energy related issues, including wind power, hydropower and oil and gas production and transmission which I'm sure is in the news these days.

Dave like myself is a grandfather, so we have great sense of responsibility to future generations and with that, let me turn it to Dave Stout to talk about these recommendations.

Fire away Dave.

David Stout: Thank you very much Larry. I really appreciate the opportunity to talk to these folks. I should say that we're lucky to be here. We just had a fire at our building. A vehicle in a parking garage in the basement caught fire. I still don't know if it was mine. I hope not.

But sorry for the delay. We've all been outside standing in the sun waiting for the police - the fire company to clean things up. So yeah, I'm sorry for the delay but thanks very much for the opportunity to talk to you today.

As Larry said, we just finished a FACA Committee. That's a Federal Advisory Committee Act, which is an act by Congress which directs federal agencies in how to receive balanced input on important issues.

So I'm going to run through the guidelines. I'm not going to talk too much about how the committee was formed. As Larry said, we had an amazing group.

We had 22 members, approximately half were from industry and half were from conservation, although I have to tell you that the industry folks on the committee I would say to a person also felt strongly that they represented conservation interests.

And I think that's the unique quality about this industry is that many of the people who found themselves or sought out work in this industry are very committed conservationists.

So we will go to the first slide, I hope. Okay, great.

You're all aware of what an important issue this is to our administration. It's been amazing with the new administration, the emphasis they've put on renewables.

We work - are working very closely with the new - I guess not so new any more, but they've turned their attention to wind power, solar power, and other technologies to an amazing extent and I'm happy to report they're very interested in working with the Fish and Wildlife Service. We can develop a pathway to develop these technologies and do it in a way that's compatible with a healthy environment.

So the Fish and Wildlife Service, their main interest in this process were endangered species, of course, migratory birds, bat species, which as many of you know become a big issue recently, and a variety of other truss resources and their habitats.

When it comes to wind energy and wildlife interactions, everyone's aware that there can be direct effects which are the bird and bat strikes. I don't know if we'll have time to talk about it in this call, but there's some exciting things that we're learning about minimizing in particular bat strikes, but also some, you know, innovative work being done and tests in the field in terms of reducing bird strikes.

A lot of good research is going on as we speak to define more technologies and improve our knowledge.

But in terms of indirect effects, we're also concerned about habitat loss or habitat fragmentation. We talked a lot about those two issues in the guidelines.

Behavioral modifications, that is what is the response of different organisms in terms of their behavior in the presence of a wind power project. Also concerned in any situation where there's land disturbance with facilitating the growth of invasive species and then also the question of cumulative impact because potentially we are talking about many tens of thousands of windmills, as well as further development of many other traditional and new alternative energy sources.

And the bottom bullet is key. We are still low in the learning curve in terms of understanding the potential impacts of wind power and measures we could take both pre and post construction to keep impacts to an acceptable level.

So briefly the main authorities that we're working under are the Endangered Species Act, the Migratory Bird Treaty Act, and the Bald and Golden Eagle Protection Act.

And I'll just fly through those. If anybody - if anyone has any questions, be glad to address those later.

In wind power, as with so many things, location, location, location. That's the best tool that a wind power developer has in terms of a siting that's appropriate in terms of environmental issues.

And in the guidelines we emphasize different ways that developers can get good scientifically valid information on wildlife species and their habitats and their locations and we encourage the developers to come and work with the Fish and Wildlife Service and other appropriate agencies very early on because with good siting the operational and other issues can be much less.

And the guidelines provide a decision-making framework which is what we'll spend most of our time talking about this morning.

And of course, in all issues, not just wind power, what developers are looking for and rightfully so is predictability in terms of project impact, evaluation, cost effectiveness.

I found in 30 plus years of doing work like this that developers are generally more than happy to pay for studies that they believe are scientifically valid and cost-effective.

One of the directives that I received from the Secretary of the Interior in forming this committee was that we would recommend measures to avoid and minimize impacts, but we would pay attention to the cost-effectiveness of those measures.

And I'd say that one of the philosophies that we have in the guidelines is let's do a few really good studies than just take a shotgun approach and study a lot of things superficially.

Fairness, of course, also has to do with predictability and consistency. Developers like to know that they'll be evaluated similarly no matter where they are in the country.

So a couple of the recommendations, some of the highlights; the first is a tiered approach. We'll be talking about that more.

That's starting off with a very general broad brush landscape or ecosystem approach to try and get the siting right and then gradually investing more in studies as we learn more about the site and more about the potential risk of that particular site.

Second recommendation is recommendations concerning best available science and also BMPs, best management practices.

Again the philosophy is with early coordination and timely review by the agencies, that's the best way to achieve the greatest conservation benefit and cost-effectiveness.

So the tiered approach is - at Tier 1 this is primarily the company doing its internal homework. You know, we're happy to talk to the companies very early on, but the feedback we got from the companies, the guidance we got from the companies that were on the committee was that the companies have a certain amount of internal work to do and that makes sense.

This is homework before they would have their first contact with the Fish and Wildlife Service or other agencies. At this stage what we're asking the companies to do is to use readily available information to take a landscape look at project siting.

So there are right now resources that are available online and there are more resources that will be coming online rapidly that will identify key habitat areas across the landscape, across the country and will guide developers away from those areas so that an investment is not made in an area that could prove very costly or impossible to develop.

So again, these are readily available materials. We have not started any serious negotiations with a company. This is just the company doing their homework and they may or may not consult with a service at that - at this point.

And when I use the word consult, it's a small C. It's not a capital C as in Section 7. I should say coordinate or communicate.

Tier 2 then is getting to know the site a little bit better. It's boots on the ground. And the purpose is to characterize risk to wildlife and habitat. It's to take some of the information that the companies developed or accumulated in Tier 1 and get out on the landscape and see whether or not the initial information they had was correct. Take a look at the vegetation; see what that tells him about potential wildlife use.

And at this point, again, this is the company getting out on the ground and where they're having the first coordination, in most cases, with the Fish and Wildlife Service, the states or others.

There are no detailed studies going on at this point. It's just a visual survey to get an idea what kind of habitat, what kind of vegetation is out there and so what kind of potential wildlife issues we may be encountering.

Tier 3 then is where the bulk of the investigations take place. So Tier 3 would be generally we hope highly interaction between the company, the consultants for the company, and the agencies. And we would begin with identifying species of concern and we'd begin the field studies to evaluate risk.

This whole document is about risk. And it's to help both the company and the agencies understand the risk of developing at that site and what opportunities exist through various means to reduce that risk.

So the quantitative scientifically rigorous studies begin to design the project, to look at measures to compensate for unavoidable significant impacts. Designing the post-construction studies and also then to begin looking at Tier 5 studies, which we'll talk about in just a few minutes.

So this is all preconstruction. At the end of Tier 1, Tier 2 or Tier 3, there's a decision point for the companies to make based on what they've learned about the environment, as well as of course many other factors that the company takes into consideration when looking at a particular project location.

But there are off-ramps at Tier 1, 2 and 3 where the company may decide that based on the increasing level of knowledge they have with that site that it is not economically feasible or environmental responsible to develop at that site.

Tier 4 then is the post-construction studies. And these are generally fatality studies during Tier 4. So it's going out afterwards with - after construction with very-well designed, scientifically valid studies to determine what the

mortality is at that site and to compare that mortality with the risk assessment that was done before project construction.

These are very important. This is our learning loop. This is how we and the companies together are going to learn how well our preconstruction studies led us to appropriate risk analysis and really learn what types of measures to avoid, minimize and mitigate for the impacts which actually work.

So we'll be looking at the relationships of the fatalities with the site characteristics, comparing fatalities with other sites, and as I said earlier, comparing what we are actually measuring with what we predicted in the preconstruction monitoring.

And at that point then, if there are unexpected impacts, there could well be a need for additional coordination between the company and the agencies, hopefully some measures were identified ahead of time that could be employed if fatalities were unacceptably high.

But there would be negotiations and discussions between the company and the service in terms of what needs to be done to reduce fatalities to an acceptable level.

I'll just interject here that the guidelines do not post or present hard and fast measures for cutoffs or for determining significance. What we do is try and lay out, you know, a philosophy or approach where site by site those discussions can take place.

So we try to establish a side boards some thoughts in terms of how many years of post-construction study would be appropriate in a particular situation.

And Tier 5 is looking at other post-construction concerns other than the direct mortality. So in some situations in a particular site we'll be concerned about things like habitat fragmentation or behavioral issues, avoidance issues.

And so prior to the project being constructed, we'll have that worked out with the company and possibly very likely with other partners that would also want to learn more about wind power impacts.

We lay out some other studies that we would like to do to learn more about the impact of wind power on important resources.

Sometimes these may approach research, and the document we talk about, the difference between site specific studies versus research. It's not the responsibility of the company to conduct research. Those would have to be funded cooperatively or by partners

But Tier 5 studies could be more collaborative. There could be cost-sharing because we're trying to learn about the issue of wind power and there are certain aspects of this project that need further evaluation.

One of the good things about this process, I think, was that we had a very strong and active federal caucus that I interacted with throughout the two and a half to three years of this committee.

The federal caucus was made up of Department of Energy, in fact NREL, the sponsors of this call today, were very active. They were some key advisors, but also we had Bureau of Land Management. We had Forest Service. We had Minerals Management Service who is in charge of the offshore issues.

But we also had Department of Defense. They're very interested in wind power for a variety of reasons.

Department of Agriculture - more Department Agriculture bureaus than I had every heard of that were very interested in having a tool to evaluate applications for loans or for connection to the grid.

So our goal all along is to involve as many federal agencies as possible so that in the end, these other agencies would use our guidelines which is good for the developer, its consistency, whether they're on federal land or private land and I think to a large extent we achieved that goal.

We're continuing to work with Forest Service. I think Forest Service is going to use the guidelines to a great extent, as well as BLM.

So I think it's very exciting. I think it's an example of good government that we took the time to make sure that this was a tool that was broadly useful. And we also hope, of course, that states, tribes, and local jurisdictions also use the guidelines, again, so that companies have predictability and consistency around the country in terms of how their project is going to be evaluated.

There is an important step ahead, though, that the guidelines will have to be stepped down to a more regional application. Again, at a federal guideline level, you know, we couldn't go too far in terms of being prescriptive.

We started out trying to be prescriptive and then realized that there's only so far you can go with national guidelines. So in many cases we're descriptive; describing the process, describing the desired outcomes. But the actual prescriptions in terms of locally appropriate studies, etc., or species of

concern, those need to be worked regionally or by state, but I think we have a lot of folks that are going to step in and help with that regionalization process.

In terms of private lands, it's very important that you-all understand that these guidelines are voluntary. And so there is no federal statute that has any kind of licensing or other oversight of wind power.

So that's why it was so important for us to have industry well represented at the table. And they were well represented. We had some outstanding companies that have been very progressive in terms of developing wind power projects with innovative environmental features, companies like Iberdrola and NextEra and Horizon and others that really helped us understand the wind power project development process and helped us come up with a process that meshes with a company's development scheme or scenario and just made sense.

We want the companies to voluntarily use these guidelines. If they don't, then we have failed.

Okay. Let me back up here just for a second. Okay, so this last point, early on in our discussions with the wind power companies, they commented, and rightfully so, that the companies by following the guidelines are committing themselves to a very high level of environmental review and responsibility.

That's true. And so the companies wanted some kind of incentive from the Fish and Wildlife Service in terms of what would it mean to the company for following the guidelines.

And so what we have done is crafted language in the guidelines that essentially says that if a company has - during an operation if a company has

unexpected mortalities of migratory birds which would trigger the Migratory Bird Treaty Act, if the company can demonstrate due diligence in terms of working with a service, in terms of applying the guidelines, then the Fish and Wildlife Service will not turn to an enforcement action but will in fact sit down with the company and do everything we can cooperatively to try and satisfy our concerns over those unexpected mortalities.

This is very important to the companies. They know the Migratory Bird Treaty Act is an important law and the companies want to be able to demonstrate to their investors, to their parent companies that they have shown due diligence and therefore an enforcement action is highly unlikely under the MBTA.

So ultimately even though we looked at almost 30 different potential incentives for companies to use the guidelines, in the end, the only incentive that the companies were interested in and the one that they believe we have delivered is this statement that I've just described that we will work diligently with companies who have worked with us to solve the problem and we will not seek enforcement as a way of resolving those unexpected fatalities.

Okay. Just as we were finalizing the guidelines, the Bald and Golden Eagle Protection Act came into being and this is something that we're scrambling to work out, to develop a pathway for the companies so that they don't have unexpected problems under the Bald and Golden Eagle Protection Act.

Right now the best thing that a company can do is, again, by following the guidelines, by coordinating early and often with the Fish and Wildlife Service and the other responsible agencies, they're going to put themselves in good standing under the Bald and Golden Eagle Protection Act.

We are in the process of developing programmatic permits. I don't know how long that's going to take, but in the mean time, what I can say with confidence is that by coordinating early and often and working with the Fish and Wildlife Service, a company can put themselves in good standing under this particular act.

So the benefits and the challenges in terms of environmental protection and development of wind energy, early coordination is promoted strongly in the guidelines. We want to be able to talk to the companies very early on.

Again, as I've said a couple of times location is so important, whether it's migratory bird issue or perhaps even more so with bats, location is tremendously important.

Another benefit for virtually everyone, especially the companies is consistency and clarity in terms of what they're going to be expected to do.

There's a commitment in the guidelines and by the Fish and Wildlife Service to use the best available science and to continue to work with important organizations, of course, NREL, the American Wind Wildlife Institute, AWWI, and with various companies to really dig into this issue, try and understand it a lot better and learn as we go so we can develop a process that promotes prompt coordination, does not delay projects and gets projects built, they're going to have minimal environmental impact.

The enforcement discretion that I just mentioned for good faith developers and hopefully we believe the guidelines will result in greater conservation.

The big question mark is since adherence is voluntary, if the companies choose to use the guidelines than I think we're going to have a broad and

positive impact around the country, if the companies determine that the guidelines are not helping them, then they will understandably reject them.

The next steps in March we presented our guidelines to the Secretary of the Interior. Those guidelines are available online and you'll see in just a minute where you can get them and contact information from me.

So the Secretary right now is reviewing the guidelines and then the Secretary then will give the Fish and Wildlife Service directions in terms of how he wants us to proceed.

The Fish and Wildlife Service then will finalize the guidelines. We will go out for public comment, then they will be finalized and we will provide updates probably around the order of every five years.

The service is also committed to maintaining the database online of best management practices.

We think the successful outcomes of this project were tremendous amount of trust built between the various stakeholders. We had tribes, we had quite a few states, we had some of the leading national NGOs, such as Audubon, Nature Conservancy and others involved so we had a great number and a variety of stakeholders who really did a good job maintaining contact with their caucuses throughout this process.

We think this outcome is going to help promote environmentally responsible wind energy and we hope that this will be a model for other renewable and traditional energy industries.

With that, that's me. I encourage you to contact me at my email is the best way. If you have issues or concerns or comments, I am always available. And I look forward to working with you.

And Susan at this point, I'll turn it back over to you.

Larry Flowers: Dave, this is Larry. Let me ask you a couple of questions. First of all, that's a flattering picture of you.

David Stout: Thank you.

Larry Flowers: Let me ask you a couple of questions before we open it up to the folks out there.

You know, Wind Powering America has 33 wind working groups around the country. Of course, this topic of wind and wildlife is important to every one of those groups, as you said. Locally it will be a little different.

But this is definitely looking at this from my perspective a great transition from confrontation that was out there maybe even just five years ago between fish and wildlife and the wind developers to communications collaboration.

And I applaud you and your team for coming up with something that truly shows a real growth in trust and collaboration.

On a couple issues, do you have - does the FACA group and the members thereof have an outreach plan so that each of its members, the NGOs, the states, the federal sector have a plan to go out and talk about this process with their various constituencies?

David Stout: Yes. I failed to mention it, so thank you Larry. We have a subset of the committee. I think almost half the people are actually on it because everybody is so interested. But we're having a call tomorrow to further develop our rollout plan.

And it's for all the reasons you mentioned, we want to have a consistent message, we want to spread the word far and wide that this product is out there, so yeah, we should have a rollout plan in place very shortly. That'll include public speakers and talking points and Power Points.

And Larry, one thing I forgot to mention is training. To achieve consistency and predictability and fairness and those other issues, I, of course, have the responsibility to make sure that my people are trained.

So we are working very hard right now with our National Conservation Training Center to develop that training session. It will be a week-long course. It will be open to, of course, all of my folks around the country but it will also be open for states, for NGOs, for consultants, for company people, for tribes.

We want to get everybody to have a very thorough training so, you know, this is a heavy document. I think it's, you know, 160 pages. We want everybody to be trained in it, to understand what this is all about so that it's applied fairly and consistent around the country.

Larry Flowers: Excellent. You know, and Karin Sinclair who's on the call, of course, was part of the FACA advisory group and she's on our Wind Powering America team and she'll help us coordinate that outreach to our state and working groups.

The second question I have deals with offshore. Is this process scoped in a way that it includes sort of the offshore challenge, as well?

David Stout: Yeah, we worked with MMS throughout this process. They don't have a similar project evaluation process, but I think they like what we did.

And even though the technology is different and a lot of the biological issues are different, of course, sampling is a nightmare when you get into the offshore world, but I think the overall thought process and the framework is one that will export itself well to the offshore arena.

And you mentioned Karin. Both Karin and Bob Thresher from NREL were two of my two key advisors and I asked both of them that if I started to head off in the wrong direction, to make sure they corralled me and gave me a good hard kick.

Larry Flowers: Well having worked for Bob 20 years, he will do just that.

David Stout: Exactly. Okay.

Larry Flowers: And the last question before I open it up to the group, has AWEA as an organization embraced this process?

David Stout: AWEA was at all of our meetings. One of my trusted advisors, is Laura Jodziewicz, who many of you know, of course she just left AWEA and has gone to...

Larry Flowers: Bluewater.

David Stout: Bluewater, yes, thank you. But AWEA attended our meetings, has been supportive. I don't think they've actually made a public statement. If they have, Laurie would kick my but, but they were certainly very important

constituents that we consulted with as we proceeded, and they actually made some of the recommendations in terms of appropriate members.

Larry Flowers: Okay. Operator, would you please open up the lines for questions to Dave?

Coordinator: Thank you. At this time if you would like to ask a question, please press star then 1 and record your name so we may introduce your question. To withdraw a question, press star then 2. Once again, to ask a question, please press star then 1. One moment for questions.

Larry Flowers: Dave, while we're waiting for our questions, let me ask you one further question. You mentioned states in this and of course states have their own DNR groups.

And you mentioned also you had some states on the FACA committee. I think this is one where NASEO, National Association of State Energy Officials, need to take a pretty serious action because from my experience, the intensity of the DNR oversight of wind varies tremendously from state to state.

And so what is - what do you know of the plans' outreach on these guidelines to state DNR officials?

David Stout: We - one of our members on the committee was actually representing the Association of Fish and Wildlife Agencies, so he was in essence representing all the states.

But we also had representatives from the state of Washington, Texas and Vermont.

So the rollout plan is going to include a component of outreach to the various state agencies, but, you know, that's also something that I'd be happy to help with in terms of state utilities or, you know, energy oversight boards.

Larry Flowers: I was not aware of an association of state Wildlife and Fish - is that what it's called, Association of State Wildlife and Fish officials?

David Stout: It's AFWA; The Association of Fish and Wildlife Agencies.

Larry Flowers: Okay.

David Stout: It's - you know, in the fish and wildlife service world, it's probably our most powerful partner and we coordinate with them on all issues and they were key advisors and consultants for us in this process, as well as actually having a member on the committee.

Larry Flowers: And another question that seems to come to mind. Of course, out here on the west and up in the Great Lakes region, transmission seems to be the big topic of discussion and planning.

Does this process also have a transmission element to it, as far as dealing with siting of transmission lines?

David Stout: No, it doesn't. We talked a little bit about just the connection, just the first electro-connection to the grid, but we did not get into the larger issues of transmission planning.

Many of you that there's the (APLEC) model out there, the manual, the - help me Karin. The American Power Line - I don't know if Karin can talk.

Anyway, so - and we do have guidelines out there for transmission lines and as I'm sure our listeners are well aware, there's a lot of different efforts and working closely with Western Governor's Association, for example, on some of their efforts in terms of transmission siting.

Larry Flowers: Well transmission siting guidelines are already established independent of the generation source.

David Stout: The guidelines to make transmission lines less fatal to raptors in particular.

Larry Flowers: Right.

David Stout: But most of the siting work that's going on is, as you know, through some of the larger planning processes.

Larry Flowers: Yeah, and of course they had a very successful, at least it sounded like a successful California process for Tehachapi, the ready process, renewable energy transmission initiative, in which they engaged I think 25 different conservation and environmental organizations.

In the planning process so that they did, you know - so they basically want to deliver a transmission line layout that wouldn't be dead on arrival with the environmental and wildlife organizations.

David Stout: Right. And of course the challenge there is coming up with good environmental data and geospatial data, GIS data so we can look at transmission planning in a landscape perspective and interstate.

But so major efforts, particularly with the Western Governors Association to try and do that; that large scale look at transmission planning.

Larry Flowers: Operator, are there any questions?

Coordinator: At this time we do have one question from (Bob Bleeker). Sir, your line is open.

(Bob Bleeker): Yes. I had a question about SEPA or NEPA and its relationship with this voluntary guidelines.

David Stout: Good question. Thanks (Bob). In terms of NEPA, the process that the guidelines lay out is very similar to NEPA and by working through the guidelines, most, if not all, of the issues that would be raised in the NEPA process would be addressed.

(Bob Bleeker): That's useful, thanks.

Coordinator: Once again, to ask a question, please press star then 1.

Larry Flowers: Okay. If there - this is Larry. If there's no more - no further questions, this particular Webinar will be put on the Wind Powering America Web site in full and so you can go back and reference it or refer it to your colleagues.

This is the first probably in a series of these because this is going to be a very important rollout of the next year at least with, as Dave said, both at the federal level, but also at the state level and I expect also that the industry will roll it out to its members.

Dave, is there a session on this at Wind Power in Dallas this month?

David Stout: I'm not involved in it, if there is. I don't think there is.

Larry, I did forget to put up our Web site. If folks want to get a copy of the guidelines, get more information about the committee's work, you can contact me or you can go to [www.fws](http://www.fws.gov) -- for fish and wildlife service -- fws.gov.

On the left side of our homepage there should be a link for wind power and that will take you right to all the documents that the committee created in turn including the final recommendations to the Secretary of the Interior.

Larry Flowers: And those folks out there from the State Wind Working Groups, if you have any more detailed questions or you'd like to have Dave present this to your wind working group at some future time, you can contact Dave or you can contact me and Karin Sinclair and we can organize that.

Dave, thank you so much for not only this Webinar but for all your work in this area and for the Fish and Wildlife's spirit of collaboration with the wind industry so we can move forward to a cleaner, more secure future.

Thanks Dave.

David Stout: Thanks Larry. Thank you.

Larry Flowers: Thanks everyone. Adios.

Coordinator: Today's call has concluded. All parties may disconnect.

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