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Dear Bob and Meg,

These comments are submitted in response to the Draft Environmental Impact Statement for the Deerfield Wind Project. Federal Register, Volume 73, No. 193, page 57620, October 3, 2008. The Wilderness Society (TWS), founded in 1935, works on behalf of more than 350,000 members and supporters nationwide to ensure future generations can enjoy an unspoiled legacy of wild places. The Center for Biological Diversity (CBD) is a 501(C)(3) not-for-profit organization with 180,000 members and online activists. CBD works to protect and restore biodiversity for the sake of nature and people. In January 2008, CBD absorbed Forest Watch, an organization that for 14 years had been dedicated to protecting wilderness and roadless areas on the Green Mountain National Forest (GMNF). We welcome this opportunity to comment on the draft environmental impact statement (DEIS).

We strongly agree with the Forest Service that the nation needs to reduce fossil fuel use for electric energy generation. Fossil fuel dependence poses enormous threats to the health and vitality of the United States, including global warming, national security risks and economic volatility. Global warming in particular poses an unprecedented threat to human health and welfare, the survival of ecosystems and wildlife, agriculture and our economy.

We also agree that, to respond to these threats, the nation must obtain more energy from clean renewable sources, which may include resources found on public lands, while enacting additional energy efficiency and conservation measures and taking immediate and deliberate steps to reduce greenhouse gas emissions. Great gains can be made through improved efficiency in multiple sectors, including buildings, appliances, industries and transportation, as well as through public education. Additionally, across the nation there are significant opportunities for smaller-scale renewable generation projects. But such strategies standing alone cannot provide the clean and sustainable energy our nation requires—developing additional clean energy over the next decade and beyond will require a significant investment that must start immediately.

At the same time, any role the nation's wildlands may play in supporting the transition to a clean energy future must strike a balance between the needed development of clean energy generation and transmission infrastructure, and protection of the integrity of wildlands, including biodiversity, carbon sequestration, and other ecosystem services upon which we depend. For over a century, the United States has prioritized sustainable use of the landscape including protection of the integrity of wildlands and the biodiversity these lands support. There are some places, particularly on public lands, which are not appropriate for developing renewable energy because of their unique or sensitive natural, cultural and other resources.

Renewable energy development must be planned, sited, designed, mitigated, and monitored in a thoughtful manner to ensure it is done right from the start. In order to ensure high-quality, legitimate, and non-controversial development decisions, renewable resource planning must be science-based and include robust opportunities for public engagement. The Forest Service's current approach for permitting development of wind resources does not meet this test. To this end, we recommended in our January 2008 comment letter on the agency's proposed directives for wind development that a programmatic environmental impact statement be conducted to thoroughly examine the impacts of wind energy development on the national forest system as the Department of the Interior's Bureau of Land Management and Minerals Management Service have done for both wind and solar resources.

We strongly support development of clean energy projects and are disappointed with the manner in which the agency has managed this first-of-a-kind project on national forest system (NFS) lands. As we clearly stated in our August 2005 scoping comment letter, we are very concerned about the impacts of any development on the Lamb Brook area which we believe should be recommended for designation as Wilderness. We do not believe these and other issues first raised in 2005 were adequately addressed in this DEIS. Our specific concerns are addressed below.

## **The DEIS is Premature**

### ***NEPA Requires Meaningful Public Involvement***

NEPA is the “basic national charter for protection of the environment.” 40 C.F.R. § 1500.1(a). As such, NEPA has twin aims: to ensure “that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts” and to guarantee “that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision.” Dep’t of Transp. v. Public Citizen, 541 U.S. 752, 768 (2004).

We believe the Forest Service has released this DEIS for public comment prematurely. There are ongoing processes which should have been completed before this release. There are also outstanding questions which should be answered before asking the public to provide meaningful input to the process. Overall, relevant information has not been provided to the public that would allow for meaningful public involvement. Many of the issues discussed in detail below likely will be resolved in the next few months. Relevant information will then only be available to the public after our opportunity for comment has passed. This is clearly not the intent of public involvement under NEPA.

The DEIS should have been held until the processes and questions described below had been resolved. Since it was not, we believe the agency must release a new draft or supplemental EIS and allow another public comment period to properly comply with NEPA.

### ***Forest Service National Wind Energy Policy Is Not Yet Final***

In September of 2007, the Forest Service released its proposed wind energy policy for public comment. This policy took the form of proposed amendments to the Forest Service directives in the Forest Service Handbook (FSH) and Forest Service Manual (FSM). Specifically, the agency proposed to add a new chapter 70, “Wind Energy Uses”, to the Special Uses Handbook, FSH 2709.11, and a new chapter 80, “Monitoring at Wind Energy Sites”, to the Wildlife Monitoring Handbook, FSH 2609.13. In addition, the proposed directives would make corresponding revisions to FSM 2726, “Energy Generation and Transmission”, and FSH 2709.11, Chapter 40, “Special Uses Administration”.

These proposed additions were not released as Interim Directives (ID) to the directives system (which would have meant they were in effect for a short period of time), but as proposed amendments. As such, they are not in effect until finalized. And as of this date, they have not been finalized. Without these amendments, the Forest Service has no official policy on the siting, monitoring, operation, decommissioning or permitting of wind energy facilities.

In our comments on the proposed Forest Service policy we addressed the failure of the agency to prepare a programmatic environmental impact statement (PEIS) for wind energy

development across the national forest system. TWS, et al January 23, 2008 Comment Letter on the Forest Service Proposed Wind Policy, see attached. A PEIS, as the BLM and MMS found, would assist the Forest Service in identifying cumulative impacts across a wider scale than the site-specific analysis for any given project entails and would have identified important considerations that would have assisted the public and GMNF staff in analysis of this project.

The Forest Service made little mention of the proposed directives amendments in the DEIS. In releasing the Deerfield Wind DEIS for comment at this time, the GMNF is both a) in effect betting on the results of the final policy when it is released and b) asking the public to comment meaningfully on a project now, when agency management requirements and important project details may change after the comment period, due to the nature of the final wind energy policy.

This has important potential ramifications for the Deerfield Wind Project. For example, monitoring measures as stipulated in the proposed agency policy are not as detailed or binding as we believe they should be, requiring only that the permit holder deliver to the agency a summary of the previous year's survey effort. Should the final agency policy be different than proposed, either through agency action or litigation, elements of the Deerfield Wind Project permit may have to change. This could be a burden on the permit holder and certainly is a burden on the public in being asked to comment meaningfully on cumulative impacts to important wildlife species when relevant information is not available.

### ***The On-Going Public Service Board Process***

One of the required elements in being able to connect to the electrical grid is for the project proponent to obtain a Certificate of Public Good from the Public Service Board (PSB) of the state of Vermont. Without this Certificate, the project will not move forward. The proponent is still engaged in this process at this time. In fact, two weeks of rebuttal testimony are scheduled to begin the Monday following the DEIS comment period deadline.

The project proposal before the PSB is different than the proposal first submitted to the Board, and different than the proposal first submitted to the Forest Service. In fact, the proponent's proposal has changed at least one other time since its initial submission. (How this affects the range of alternatives considered under NEPA is addressed below.) The proponent's proposal has been changing in light of concerns over environmental impacts raised during the PSB process. The proposal is now for a smaller project with fewer turbines.

The proposal may change yet again. The upcoming rebuttal hearings indicate areas of disagreement between Vermont state agencies, intervening parties and the project proponent. We know for instance, that there is considerable disagreement between the state of Vermont Agency of Natural Resources (ANR) and the project proponent over impacts to black bear. Some of these disagreements may be resolved through yet more changes to the proposed project.

The Forest Service cannot make a decision that would allow a larger development with greater environmental impacts than that allowed in the Certificate of Public Good. Such a decision would negate the Certificate and put the proponent back in front of the PSB seeking a new Certificate to reflect the Forest Service decision. As such, the outcome of the PSB process is critical to the Forest Service decision. It is also critical to the public's ability to participate in and provide meaningful comment on the Deerfield Wind Project.

The current DEIS comment period will end before rebuttal hearings even begin. As such, the DEIS is premature and should have been released for comment when the PSB process was concluded. Since that is no longer possible, a new draft, or supplemental EIS should be released to address this (and other) problem(s) and afford the public opportunity for meaningful comment.

### ***Proponent vs. Permit Holder***

Another important consideration in meaningfully commenting on the Deerfield Wind project proposal, or any special use permit proposal, is in understanding who the permit holder would be and their record in building, operating, maintaining and monitoring industrial wind energy facilities. Just as not all ski area companies or range allotment permit holders are "created equal", not all wind developers and site operators have the same standards and records for successful operation. Differences in how a company manages ongoing environmental impacts at its site, maintains its equipment, and its financial health to maintain operations over the term of the permit can be critical in deciding whether to grant a special use permit, especially one that allows exclusive private use of public lands for a period of 30 years.

The Forest Service would no doubt include some type of site inspection and recordkeeping / reporting requirements in the terms and conditions of the permit. But at its best, the agency often cannot conduct site visits and permit review as often as necessary to ensure complete compliance with the permit. With shrinking budgets and staff, the agency will have an even more difficult time ensuring compliance. Hence one of the many reasons for ensuring that only responsible and responsive companies can obtain special use permits.

In the case of the Deerfield Wind Project, we are not sure who the potential entities in this process are: who the project proponent is, who would build the facility, who would operate it, and who would sign the special use permit. The DEIS is silent on these issues. This information must be provided to the public in order to provide opportunity for meaningful comment under NEPA.

When the special use authorization request was first made, Deerfield Wind, LLC was the project proponent. Deerfield Wind, LLC was owned by Enxco. Since that first request, Deerfield Wind, LLC was bought by PPM Energy, Inc. PPM Energy was owned by Scottish Power PLC at the time. PPM was then acquired by Iberdrola, now known as Iberdrola Renewables Inc.

Does Deerfield Wind, LLC still exist as a legal entity? Or is “Deerfield Wind” now simply known as the name of the project due to its historical beginnings? Which legal corporation is proposing to build the wind facility should it be approved? Deerfield Wind, LLC? Iberdrola Renewables? Who would operate the facility? Who would sign the special use authorization and be the permit holder? If Deerfield Wind, LLC still exists as a separate corporate entity within Iberdrola, what separate assets for operating the facility does it have? What assets would it have to cover any liability concerns, mitigation to local residents (e.g. providing cable or satellite TV service to local residents for the life of the permit as but one of the potential measures disclosed in the DEIS), etc? If Deerfield Wind, LLC held the special use permit, could they continue operations under the same permit if they were sold to another company? Or would the Forest Service have to engage in analysis and disclosure under NEPA in order to issue a new special use permit to a new (parent) company?

Discussions with agency staff make us think that Deerfield Wind, LLC no longer exists as a separate corporate entity. Is this true? It is also our understanding from agency staff that Iberdrola Renewables may not be interested in operating the facility, only in building it. Is the Forest Service thinking of issuing separate special use authorizations: one for construction and one for operations? Or would Iberdrola Renewables have to sign the special use authorization in order to construct the facility and then if it sold it, the new owner would have to apply for a new special use permit in order to operate the facility? (Forest Service directives clearly call for a new NEPA process for authorization of a special use permit when facilities on national forest system (NFS) lands change ownership.)

If it is true that Iberdrola wants to sell a constructed facility to another corporation to operate, is there a prospective buyer lined up? Has the Forest Service engaged in any permit authorization discussions with other potential operators? If it is true that the corporation constructing the facility does not intend to operate it, we believe consideration of a special use permit on NFS lands is premature.

Finally, whoever owns and runs the facility must sell power to the grid operators. Are there any signed power agreements in place? If there aren't, what efforts have been made to enter into agreements? What is the likelihood of finding participants to power agreements and who are these entities?

The public deserves to know the answers to these questions in order to understand what is being proposed and what would likely happen on our public lands. It's our understanding that these transfers of ownership are fairly common in the industry. This fact suggests that the agency should complete development of a national policy for siting wind facilities that addresses this occurrence in a manner that provides clear guidance for developers and sufficient information to the public to fully evaluate projects. This information should have been disclosed in the DEIS. In addition, as the first such project on NFS lands in the country, actions here will set a precedent for actions on future Forest Service projects across agency units. The lack of clear information must be corrected.

## **The DEIS is Flawed**

### ***The Purpose and Need Are Too Narrowly Drawn***

The GMNF appears to have arbitrarily and capriciously constricted the purpose and need for the project. Further, the Forest has ignored its own criteria for evaluating need, focusing instead on a single element within the context of the proponent's project proposal. The underlying context for the concepts of purpose, need and a range of alternatives seems to have been mixed up.

The Forest Service lists five factors with which to evaluate the need for the Deerfield Wind Project. DEIS at pgs 4-9. They are to meet:

- ❖ Energy needs identified by the Federal Government
- ❖ Need to reduce fossil fuel use for electric energy generation
- ❖ Energy needs identified at the regional level
- ❖ Energy needs identified by state government
- ❖ Needs addressed by the project at this time and place

The purpose of the project is to

“evaluate an application for land use authorization to construct and operate a 17-turbine state-of-the-art wind energy facility on NFS lands in Searsburg and Readsboro, Vermont. The facility would provide up to 34 to 35.7 MW of wind-generated electric energy and capacity to supply renewable power to the Vermont and New England electric supply grid.”

DEIS at pg 4.

The purpose here is then limited to exactly the proponent's proposal. With a purpose so constricted, only those alternatives that would result in a 17-turbine state-of-the-art wind energy facility providing up to 34 to 35.7 MW on NFS lands in these 2 towns would meet the purpose of the project.

The Forest Service then took this purpose and decided that only the final factor with which to evaluate need – “needs addressed by the project at this time and place” – would apply here. The first four factors became subservient to the final factor. Any proposal or alternative that met the first four factors of need was thrown out if it didn't meet the final factor for this time and place. This can be seen in Table 2.1-2, Alternatives Eliminated from Further Consideration. DEIS at pg 28. These suggested alternatives “were considered infeasible because they clearly would not meet the Project's purpose and need, and did not rank well according to the siting criteria.” Ibid. This meant that the hydroelectric power alternative was eliminated from further consideration because “technical feasibility is an issue as there is no source of water at the site sufficient to

meet the generation goal.” Ibid, emphasis added. Wave generated electricity was eliminated from further consideration because it is an “Ocean wave power generation system. Not technically feasible as there is no water source producing waves present at the site.” Ibid, emphasis added.

As alarming are the consequences of the exclusion of renewable generation options on non-Forest Service lands on the opportunity to generate an equivalent or greater amount of energy from distributed wind resources. The Department of Energy currently has underway an initiative to expand the use of small-scale wind generation in Vermont using the same wind generation potential maps produced by the National Renewable Energy Lab. This program, called the Vermont Small-Scale Wind Energy Demonstration Program found at <http://www.vtwindprogram.org/>, is not discussed in the DEIS. Importantly, as the Program advertises, “net-metered wind turbine systems operate on a relatively small footprint, and are readily compatible with many existing land uses, including agricultural sites and schoolyards”. See <http://www.vtwindprogram.org/benefits/>, emphasis added. Additionally, significant possibilities to generate at small-scale or even utility scale on already disturbed land exist that were not discussed in the DEIS. These lands factored significantly in a recently-released initiative overseen by the California Energy Commission, which set about identification of zones across the landscape that were suitable for generation and transmission of renewable energy. See <http://www.energy.ca.gov/reti/>. Additionally, the National Renewable Energy Lab, in partnership with the Environmental Protection Agency, recently completed an inventory of wind energy generation potential on contaminated and abandoned mine lands, which includes several sites in Vermont. See <http://www.epa.gov/renewableenergyland/>. Rather than assess the potential for immediate, low-conflict opportunities for development, however, the DEIS disregards the many possibilities for achieving at least this level of new generation capacity with these inappropriate screening criteria that support only this project despite the longstanding objections expressed by our organizations and others. See TWS et al. scoping comment letter, August 2005.

The proposed generation capacity as stated in the purpose became a limiting factor on alternatives considered as well. Coal fired generation, oil fired generation, gas fired generation and nuclear electric generation alternatives were all eliminated from further consideration because they presented “a technical feasibility concern and a commercial viability issue at the desired output goal.” DEIS at pg 29, emphasis added. In other words, they were eliminated because it’s likely not technically possible to restrict their output to 34 to 35.7 MW, and because that low an output for any of those types of generation would not be commercially viable. We are not pointing this out to argue that these generation types should have been considered more seriously. We are highlighting these alternatives to show the degree to which the proposal itself drove the purpose and need and the range of alternatives. This is basically NEPA backwards. A proposal is supposed to meet the purpose and need, not be the purpose and need. The purpose and need is supposed to be sufficiently broad to allow for a range of alternatives capable of meeting it, not so narrow as to proscribe only one solution.

***Weighting the Screening Analysis to the Proponent's Proposal Was Arbitrary and Capricious***

Problems in determining a reasonable range of alternatives started with the Initial Screening Analysis. DEIS at pg 26-27. The Forest Service examined the various elements comprising the purpose and need (the proponent's proposal and the five factors described above) as well as Forest Plan compliance and siting criteria. The siting criteria were merely elements of the proponent's proposal, such as access to transmission at the adjacent Searsburg facility and the proponent's siting and design preferences. The inclusion of these siting criteria from the proponent's proposal, and the proposal itself as the purpose for the project served to double count the proponent's proposal in determining the alternatives for further analysis. In addition, the Forest Service arbitrarily "more heavily weighted" certain criteria. DEIS at pg 27. Suitable explanation as to why the additional weight was assessed and how much additional weight was added were not provided. The criteria given heavier weight included:

- ❖ The analysis of the specific SUP application
- ❖ Commercial viability
- ❖ The use of Forest Service land, and
- ❖ The proponent's siting and design preference

These are all elements of the proponent's proposal. Giving them heavier weight in the screening process on top of the earlier double counting irreversibly tilted the analysis to alternatives focused exclusively on the proponent's proposal. This resulted in only those alternatives which proposed use of not just NFS lands, but these particular NFS lands being considered.

Alternatives which proposed use of locations off NFS land, as well as alternatives that proposed use of other NFS land in addition to the proposed site were initially advanced for "additional information development" and then summarily dismissed from further consideration. DEIS at pgs 26-27. Both the alternatives "locations *off* of Forest Service land" and "other locations *on* Forest Service land in addition to proposed site" were listed in Table 2.1-1 as needing "Additional information need re: ability to meet generation goal, commercial viability, technical feasibility, and siting criteria." DEIS at pg 26. Table 2.1-4 discloses that the alternative "locations *off* of Forest Service land" was dismissed from further consideration because it "Does not fulfill one of the purpose and need goals of Use of Forest Service land, nor is this alternative ripe for consideration." DEIS at pg 30. Arbitrarily limiting the purpose and need to NFS land only automatically meant that non-NFS alternatives would never be considered.

The alternative "other locations *on* Forest Service land" was dropped after being judged "not ripe for consideration." Ibid. No further explanation was given as to why both this and the "locations *off* Forest Service land" alternative were not ripe for consideration. Presumably this

was because the GMNF was not interested in conducting a forest-wide assessment of suitable locations at this time. The Forest needs to explain its decision here.

All of these efforts to limit the purpose and need and the screening criteria for consideration of alternatives resulted in an inadequate range of alternatives being advanced in the DEIS. This subject is next discussed in further detail.

### ***Inadequate Range of Alternatives***

The Forest Service has failed to propose an adequate range of alternatives. The NEPA requires agencies to “study, develop, and describe appropriate alternatives,” 42 U.S.C. § 4332(2)(E), and the regulations direct federal agencies, “to the fullest extent possible,” to “identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment.” 40 C.F.R. § 1500.2(e).

In the case of the Deerfield Wind Project, the Forest Service has advanced the proposed action, the no action, and two alternatives for more detailed analysis in the DEIS. Unfortunately, due to the narrow purpose and need, the alternatives are merely smaller versions of the Proposed Action and do not represent a reasonable range of alternatives.

The proponent is concurrently before the Vermont Public Service Board seeking a Certificate of Public Good. The proposal before the PSB has been changed at least twice since the original proposal was first submitted. The Forest Service initially adjusted the proposed action to take these changes into account. At some point they did not, but no explanation is given for why they didn't continue adjusting the proposed action or the alternatives to reflect the proposal before the PSB. The Forest Service did acknowledge that they made at least one adjustment, “Please note that further site-specific refinement to the Proposed Action was required by the PSB in early 2007 for the Section 248 review.” DEIS at pg 25. The latest changes to the proposal before the PSB occurred long enough ago that they should have been included in the DEIS, even if the DEIS contained all the past versions of the alternatives as the Forest Service notes. Further explanation is required.

The end result of all these changes in the PSB proposal and the Forest Service proposal is to create a very confusing situation. The Forest Service proposed action is now not actually what the proponent is proposing to do. As it exceeds the version currently before the PSB in both number of turbines and environmental effects, were the Forest Service to choose the Proposed Action, it would require the proponent to go back before the PSB seeking a Certificate for a project that has already in effect been denied (by the fact that the proponent had to change their original proposal before the Board). This would be nonsensical, hence rendering the proposed action an unrealistic alternative.

Alternative 3, the “East-Side Only” alternative may not be financially viable according to the proponent. DEIS at pg 32. The Forest Service’s own weighted criteria of “commercial viability” would render Alternative 3 an unrealistic alternative if this is so. Given that commercial viability was a weighted criteria driving which alternatives moved forward in the NEPA process, the agency should have analyzed this question in detail and disclosed the results in the DEIS. The agency’s own criteria should have then eliminated this alternative from further consideration.

The Forest Service said that further analysis was done “to look at the role economic viability plays in determining a final range of alternatives.” Ibid. But no evidence of this analysis is presented in the DEIS. The agency effectively dismissed Alternative 3 as unrealistic, “Also, it was found that even though one or more of the alternatives moved forward for detailed analysis may not be completely economically viable from the Proponent’s perspective, it was nonetheless important to analyze these alternatives in full detail in order to fully address the significant issues and to adequately disclose and compare impacts across the range of alternatives.” Ibid.

If Alternative 3 is not a reasonable alternative, that leaves just Alternative 2 and the no action alternative. The courts have ruled that two alternatives (the no action and one other) are not sufficient under NEPA in examining a reasonable range of alternatives. Considering only the proposed action or doing nothing is not a range at all. This all or nothing approach does not “provide[] a clear basis for choice among options by the decisionmaker and the public,” 40 C.F.R. § 1502.14, because there are no other actions to choose among.

Finally, Alternative 2 is the closest alternative to the proposal before the PSB, but it is not the exact proposal. We believe the Forest Service has acted arbitrarily and capriciously in violation of NEPA by proposing an inadequate range of alternatives none of which mirror the proposal before the PSB.

The agency has violated NEPA and must examine a reasonable range of alternatives before proceeding to a decision. The purpose and need were arbitrarily and capriciously constrained to the proponent’s proposal on the Searsburg and Readsboro locations only. We believe a reasonable range would include other NFS locations and private land locations. The Forest Service must prepare a revised DEIS and make it available for public comment.

### ***Conditions of the Permit***

Very little about the actual permit that would be authorized is disclosed. We are concerned with this lack of detail and the seemingly optional nature of many of its potential elements. We recognize that many of the permit elements would come together after analyzing the comments made on the DEIS. However, some minimal information would seem to be required. Details must be disclosed on which of the design criteria and mitigation measures would be optional and which would be required.

The Deerfield Wind Project is the first wind facility proposed for NFS lands in the country. Most other wind facilities in the country are on private land. Monitoring results for these facilities are rarely disclosed making the assessment of effects difficult. Since this project would occur on public land, all monitoring results must be available. Reporting a summary of the year's monitoring results to the Forest Service is completely insufficient. All monitoring activities and evaluation results must be publicly available absent legal requirements for non-disclosure of locations (e.g. the location of discovered threatened and endangered species). There is a dearth of monitoring information on the impacts of wind energy facilities. If the proponent were to be granted the privilege of exclusive private use of public lands for 30 years there should be a strong requirement to contribute to the body of knowledge on environmental impacts of wind energy facilities.

### ***Bias and Forest Service Responsibilities When Using Proponent Financed Contracting***

The Forest Service often uses third-party contractors to complete NEPA analysis on large-scale special use permit authorizations sought by private companies. These companies usually pay the bill for the analysis after the Forest Service selects a contractor and defines the scope of the work. The agency has a responsibility to ensure that a) the analysis is conducted in a fair and impartial manner and b) agency staff have reviewed this analysis to ensure that a thorough and impartial analysis has occurred. The concurrent PSB Certificate of Public Good process has brought to light some very troubling concerns.

The proponent has hired a number of private contractors to advance its position and advocate on its behalf before the state Public Service Board. A number of these contractors have worked in the service of the proponent on the Deerfield Wind Project for many years. It is then quite troubling to find that many of these same contractors provided the analysis used in the DEIS. It is difficult to ascertain whether other views were sought, utilized or considered in the NEPA process. The narrative often lists a single source – the proponent's contractors – as the source of analysis.

This brings up troubling conflict-of-interest concerns. It is not enough to hire an independent contractor to write the EIS, when the source of the analysis is the proponent's advocates before the PSB. These contractors have a vested interest in promoting the proponent's position; after all, it's what they're being paid to do. The problem occurs when the Forest Service doesn't fulfill its responsibility to ensure a fair and impartial analysis under NEPA. The agency is supposed to evaluate the applicant's request for a special use permit, not advocate for it. We believe other sources of valid scientific information and analysis have been ignored in the reliance on the proponent's contractor's data. This is especially true in regards to bear impact data which we believe the state of Vermont Agency for Natural Resources (ANR) has repeatedly pointed out. The Forest Service must review the DEIS to ensure the full range of scientific data and analysis has been brought to bear in this process.

### **Failure to Comply with the National Historic Preservation Act (NHPA) and NEPA**

The analysis of effects on heritage (archaeological and historic) resources is not yet complete. Unfortunately, this is very difficult to ascertain by simply reading the DEIS. The Forest Service failed to disclose details of the Section 106 process under the National Historic Preservation Act (NHPA) in the DEIS. Only if one read the DEIS section and the rebuttal testimony submitted to the PSB and knew something about the Section 106 process was it possible to ascertain the level of work that has been completed and its intersection with legal requirements. The Forest Service has failed to comply with both the NHPA and the NEPA. This must be corrected.

### ***State Historic Preservation Officer (SHPO) Concurrence Has Not Been Obtained***

It is clear in the DEIS that Section 106 concurrence from the SHPO has not yet been obtained because of the outstanding volume of work yet to be completed and submitted to the Vermont Department of Historic Preservation (VTDHP). (The VTDHP is the Vermont state department that houses the office of the SHPO.) The DEIS states,

“At the VTDHP’s request, locations of the buildings and structures previously listed on the State and National Registers, as well as those recently surveyed buildings and structures within the 10-mile radial visual APE, would be provided as a mapped layer over a viewshed analysis map. In addition, photographs of structures at Laurel Lake would be obtained once weather conditions allow access to this area. Once this information is submitted, a qualified architectural historian would consult with the VTDHP about the recommended determinations of eligibility and potential impacts of the Project on the historic buildings and structures. This information would be provided in the FEIS [final environmental impact statement].

Visual impacts on these identified historic buildings and structures would also be evaluated in the FEIS.”

DEIS at pgs 147-148, emphasis added.

Section 106 compliance activities are usually conducted through the use of the NEPA process and documentation so long as the steps and standards of Section 800.8(c) of the Advisory Council on Historic Preservation (ACHP) regulations are met. The Forest Service has failed to meet the requirements of 36 CFR 800.8(a)(3) by failing to identify historic properties and assess the effects upon them in the DEIS, the appropriate stage for identification of the affected environment (which in this case includes the historic properties in the APE) and the effects analysis. Both the DEIS and materials submitted to the PSB make clear that the proponent still has a substantial volume of work yet to be completed in order to assess effects and receive SHPO concurrence. The issuance of the DEIS and attendant comment period should

have been delayed at least until the historic properties had all been identified. The Forest Service must reissue a completed DEIS for public comment.

### ***Failure to Disclose Effects under NEPA***

The Forest Service also failed to disclose effects to heritage resources under NEPA as required. The agency revealed that work to assess the effects has not yet been completed. DEIS at pgs 147-148, quoted above. Even had SHPO concurrence been obtained, the requirements of the NHPA do not substitute for the requirements of NEPA. The agency must disclose the impacts of the project on heritage resources and must provide the public an opportunity for meaningful public involvement. Delaying the disclosure of impacts to heritage resources until the FEIS is issued fails to meet the requirements of NEPA. A completed DEIS must be reissued and opportunity for public involvement provided.

### **The Issue of Federal Pre-Emption**

The proponent has recently advanced the sweeping view that Forest Service statutes and regulations pre-empt the Public Service Board's application of many important environmental review criteria under Section 248. Such a view, if embraced by the Forest Service, could have widespread ramifications not only for existing state and federal relations, but also for the future review of proposed projects in Vermont.

We do not believe this view of the concept of federal preemption applies here. First of all, there is no explicit intent to preempt state law in federal law or in Forest Service regulations. In fact, the agency has always been quite clear that state statutes apply to its management. Furthermore state law does not conflict with federal law, partially because the Forest Service regulations for special use authorizations require compliance with more stringent state standards for environmental protection. Finally, Forest Service regulations mandate that the Forest Supervisor shall give due deference to the findings of a utility commission such as the Public Service Board.

### **Lamb Brook: The Injunction and Future Uses**

In 1995, conservationists seeking to protect critical bear habitat and the remote, roadless qualities of the Lamb Brook area won a District Court injunction against the Forest Service's plans to log and build roads there. This ruling was upheld on appeal in the First Circuit Court in 1997. The Forest Service's EA on the Lamb Brook Timber Sale was deemed inadequate, and the agency was barred from any logging or road construction in the area until the completion of an EIS.

### ***Only a Court of Law May Lift the Injunction***

The court injunction still stands. The Deerfield Wind project would entail the construction of 1.57 miles of road, in a 35-foot wide swath, and the clearing of 26.9 acres in the Lamb Brook area. But the area is off-limits to these activities until the issues successfully raised in the Lamb Brook lawsuit are adequately addressed in an EIS *and* the injunction is lifted. Only a court of law can lift the injunction. The Forest Service must seek removal of the injunction by making a pro-active request to have it lifted. Production of an EIS only is not sufficient.

### ***The DEIS Fails to Address the Injunction***

The Deerfield Wind DEIS makes no mention whatsoever of the injunction and the Lamb Brook litigation. It fails to speak directly to the points raised by plaintiffs, and confirmed by the courts. The Second Circuit Court of Appeals clearly directed the Forest Service to address the issues affirmed as potentially significant by the District Court:

"Accordingly, for the reasons stated, we affirm the judgment insofar as it found the Forest Service's environmental assessment inadequate under NEPA. The judgment is reversed to the extent that the district court made a finding of potentially significant impact and ordered the Forest Service to prepare a site-specific environmental impact statement, and the case is remanded to the district court with instructions that it order the Forest Service to address the issues discussed and reassess the environmental significance of the Lamb Brook Project in light of these issues..."

Reported at *National Audubon Society v. Hoffman*, 917 F.Supp. 280 (D/Vt. 1995), *affirmed in part, reversed in part*, 132 F.3d 7 (2nd Cir. 1997).

The primary issue of concern in the *National Audubon Society v. Hoffman* case, confirmed by the Second Circuit, was illegal ATV use, or more specifically, the potential insufficiency of mitigation measures proposed by the Forest Service to bar unauthorized ATVs from using logging roads that would be built to access timber. The Forest Service failed to provide substantial evidence that its mitigation measures would work, did not propose monitoring to determine the effectiveness of the mitigation, and did not consider alternatives in case the proposed mitigation measures failed.

Because the Second Circuit was convinced on this matter alone that the Forest Service had failed to take the "hard look" required by NEPA, it did not address the District Court's other objections to the Lamb Brook EA. In addition to the matter of illegal ATV use, the District Court had cited the Forest Service's failure to adequately analyze the protection of bird and bear habitats, inconsistencies in the EA's discussion of future logging operations, and the agency's treatment of the Readsboro Town Plan.

The Forest Service has now produced an environmental impact statement—the Deerfield Wind DEIS—that treats, in part, the Lamb Brook area. However, the Forest Service has not directly addressed the failings of the prior Lamb Brook EA, as required by the Second Circuit. In addition, the agency has failed to discuss what it will mean for the injunction to no longer be in place. The DEIS should explicitly disclose that the Forest Service will be in a position to request the removal of the injunction, and it should further disclose what the potential consequences of this may be.

This is particularly relevant because it appears the Forest Service may be considering future options for ATV routes on the GMNF, which could potentially affect Lamb Brook; and the agency has also discussed future logging projects for the Lamb Brook area.

A recent FOIA request (10/31/08) to the Forest Service revealed communications between the agency and representatives of state and local ATV groups that are interested in gaining legal access to areas of the GMNF south of Route 9. Illegal use has been particularly problematic in this part of the national forest for years. In 2007, the Forest Service went so far as to authorize ATV access for members of the local Bennington Trail Conservancy to inventory and map illegal ATV trails in the Stamford Meadows and Harmon Hill areas, west of Lamb Brook. (See “Motorized Equipment Authorization, September 28, 2007, Manchester Ranger District, GMNF). While to our knowledge no formal proposals for ATV routes have been received by the agency to date, it is clear that there is increasing pressure from ATV proponents to open up certain areas of the national forest to off-road motorized recreation. Absent the protections of the current Lamb Brook injunction, that area may become a target for authorized use. The Forest Service should disclose this possibility.

### ***DEIS Does Not Improve Discussion of Mitigation Measures for Illegal ATVs***

The Forest Service acknowledges in the DEIS that illegal ATV use occurs in the Lamb Brook area:

Unauthorized ATV use has been observed in the past in the Lamb Brook Area. The Project would utilize approximately 1.25 linear miles of existing Searsburg Wind Facility access road. The access road would be extended into the Eastern Project site and end very close to the Lamb Brook Area. The extension of the access road may encourage unauthorized use by ATVs, motorcycles, and mountain bikes. Motorized vehicles such as ATVs generate noise, rut roads, and disturb recreational visitors and wildlife, such as bears. To minimize the risk of increased activity, design criteria that would control access, post signs, and provide for a routine presence of facility maintenance people and law enforcement personnel. Illegal trails leading to or from access roads along the ridge would be removed. Additional barriers in areas where ATV use is occurring would be erected to prevent further use. Unauthorized use by ATVs would be monitored.

DEIS at pg 307.

Forest Watch documented illegal ATV use in Lamb Brook in the mid 1990s. This evidence figured prominently in the Lamb Brook litigation. It was the Forest Service's failure to adequately demonstrate the efficacy of its mitigation measures for illegal ATV access that resulted in the Lamb Brook analysis being remanded to the agency by the Second Circuit in 1997.

However, since that time the Forest Service has demonstrated little ability to contain and control illegal ATV use on the GMNF, including the Lamb Brook area. Forest Watch documented illegal ATV use in many parts of the national forest for several years in the early 2000s, including in Lamb Brook in 2002 and 2003. See "ATV Field Report: Old Stage Road (FR 73) West of Heartwellville (11-25-03)," Dick Andrews, <http://forestwatch.org/content.php?id=213>.

Relative to the problematic analysis of illegal ATV mitigation measures in the Lamb Brook EA, the agency has not improved its analysis in the current DEIS. The document states:

There is currently no plan to construct gates or fencing around the proposed wind facility under the Proposed Action, the East Side Only, or the Reduced West alternatives. In the interest of public safety, safe facility operation, and mitigating the effects of road development on bear habitat and use, a forest closure order would close the proposed wind facility roads and surrounding ridge top areas adjacent and underneath the turbines to all public uses, including foot traffic, unless specifically authorized (e.g. a permitted facility tour, or permitted administrative need). The substations would be fenced off, and closed with a forest order as well. Forest closures would be implemented with the cooperation of law enforcement officials. In the rest of the Project area, signs would be posted to warn of the potential hazards but the public would still have access to these undeveloped areas surrounding the facility for dispersed recreation (e.g., hunting, snowmobiling etc.).

DEIS at pg 277.

The DEIS provides no evidence that a closure order and posted signs would be effective in keeping people, including those on ATVs, out of the turbine facility area and off the access road. It cites law enforcement patrols that would help keep people out of the area. It is clear, however, that the Forest Service is already unable to keep up with illegal ATV use on the GMNF, despite ongoing natural resource damage that should be a spur to greater attention to this problem.

The DEIS does in fact acknowledge that even gated roads do not stop illegal ATVs.

New roads, even though gated, could provide access for unauthorized use of all-terrain vehicles or other off-road vehicles. Such uses occur on the GMNF, despite the fact that they are not authorized in the Forest Plan (USDA Forest Service, 2006a). Gating of the

access roads, posting of signs, monitoring by FS law enforcement personnel, and the presence of operations and maintenance personnel would be anticipated to successfully discourage illegal ATV use of this site.

A number of specific design criteria may be utilized as needed to further reduce potential adverse indirect impacts to black bears. As discussed above, these would include restricting both motorized and non-motorized access on facility roads and ridge top areas adjacent and underneath the turbines. Trucks, ATVs, or other motorized vehicles would not be allowed past the gated entrance.

DEIS at pg 277.

Again, no evidence or discussion is provided to substantiate the agency's claim that its mitigation measures will be adequate to deter illegal ATV use, and there is abundant evidence from the agency's own records, as well as from groups like Forest Watch, that it has failed miserably at keeping ATVs in check on the GMNF. If gates and the present threat of a citation for trespass do not work, a closure order and posted signs seem highly unlikely to prove better barriers to illegal ATV access.

### ***Forest Service Fails to Disclose Potential Future Logging in Lamb Brook***

The DEIS does not disclose possible mitigation measures that may affect Lamb Brook and that the Forest Service may believe it is authorized to carry out once the injunction is no longer in place. In fact, the agency declares that it will not announce mitigation measures until the FEIS is released: "The Forest Service will prepare a FEIS to address issues raised in response to comments on the DEIS, complete the analysis and disclosure of impacts, propose appropriate mitigation and provide the basis for decision documentation..." DEIS at pg 10.

However, it is possible that among the mitigation measures the Forest Service recommends for the Deerfield Project will be clearcutting and other vegetation management in the Lamb Brook area. A recent FOIA request (10/31/08) to the Forest Service revealed a discussion with Vermont ANR staff about impacts to bears. The Vermont biologist suggested that:

...improving habitat in the project area would be worthwhile. Releasing apple trees, providing early successional habitat by clearcutting are some of the habitat improvements discussed that should be incorporated as design criteria or mitigation for this project. Forrest thought the Forest Service should revisit the Lamb Brook project but modify it to leave the BSB areas...Lamb Brook project proposed good habitat improvements for bears.

Meeting notes, 1/3/08, VFWD/ANR and GMNF biologists on Deerfield Wind Project, GMNF files.

Given the level of controversy the previous Lamb Brook logging proposal incurred, any mitigation measure contemplated by the Forest Service that may entail road entry, logging, and potential clearcutting in the area should be disclosed in the DEIS, while the public still has an opportunity to consider and comment on this possibility. Mitigation measures not revealed until the FEIS, and involving logging in Lamb Brook, will surely once again ignite a public outcry.

### **The Lamb Brook Roadless Area Was Not Properly Considered in the GMNF Plan**

All alternatives in the DEIS, except the No Action Alternative, include turbine construction on the “East Side” of the project area. This “East Side” is part of the Lamb Brook area. Lamb Brook contains 5,561 roadless acres on the GMNF, improperly excluded from the roadless area inventory in the Forest Plan Revision process. The Forest Service used criteria in its inventory process that were subjective, overly restrictive, arbitrary, and capricious. Because of this, Lamb Brook, and other excluded roadless areas on the GMNF, were improperly excluded from further evaluation as wilderness, and possible Congressional designation as such.

TWS, Forest Watch, and other groups critiqued this flawed inventory process in official comments on the GMNF DEIS and Draft Plan in 2005. However, the Forest Service chose not to correct the inventory. It remains our position that the inventory process used on the GMNF was unlawful, and therefore, before the Deerfield Wind project can proceed in Lamb Brook, the Forest Service must conduct a proper inventory, utilizing the correct set of inventory criteria.

### ***Flawed Roadless Inventory on the GMNF***

According to 36 CFR 219.17 (which is the correct regulation to apply to the GMNF roadless inventory as the Forest revised its plan under the 1982 planning regulations), the Forest Service, as part of the Forest Plan Revision process, is required to create a list or inventory of all roadless areas, then determine their suitability for congressional designation as wilderness. This is a two-step process: first, an objective inventory of all existing roadless areas; and second, a more subjective evaluation to determine which if any of the roadless areas should be recommended as additional wilderness.

The Forest Service is required to exclusively use the following criteria, as provided in Forest Service Handbook Chapter 7<sup>1</sup> (USDA Forest Service 1992):

- ❖ Contains 5,000 acres or more
- ❖ Contains less than 5,000 acres but
  - Is manageable in their natural condition due to physiography or vegetation.

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<sup>1</sup> This was the controlling FSH chapter at the time the GMNF revised their Land and Resource Management Plan (Forest Plan) under the 1982 NFMA Planning Rule. The Forest Service has since revised the planning rule in 2008; Chapter 7 is now known as Chapter 70 under FSH 1909.12.

- Are self-contained ecosystems such as an island.
- Are contiguous to existing wilderness, primitive areas, or roadless areas under other Federal jurisdiction.
- ❖ Do not contain improved roads maintained for travel by standard passenger vehicles, except as permitted in areas east of the 100<sup>th</sup> meridian.

Appendix C of the DEIS indicated that additional, more restrictive criteria were applied on the GMNF. The use of these more restrictive criteria led to the omission of eligible roadless areas, such as Lamb Brook: “The Lamb Brook area was not included in the Forest’s inventory of roadless areas as it did not meet the roadless area criteria of 2500 acres or more of semi-primitive non-motorized land in areas away from existing wildernesses.” DEIS, Appendix C, page C-243. This additional, unlawful criterion was the factor that precluded Lamb Brook from the roadless inventory and from further consideration as potential wilderness.

The Forest Service lacks the statutory authority to impose such additional restrictions in the roadless inventory absent changes in its directives system. The Forest Service Regional Office (Region 9 which oversees the GMNF) provided direction to use the Recreation Opportunity Spectrum (ROS) Guide in identifying inventoried roadless areas. However, the Regional Office did not have the legal authority to introduce criteria that would exclude hundreds of thousands of acres of potential wilderness from evaluation as additions to the National Wilderness Preservation System. Such action, especially in the East and without basis or explanation, was arbitrary and capricious. This guidance required roadless areas to have a 2,500-acre core at least ½ mile from roads to be eligible for recommendation as wilderness. Use of this single threshold requirement, focusing on an area’s “solitude,” was overly restrictive, arbitrary, and prematurely eliminated many potential wilderness areas from further consideration. It was stricter by far than what is required for inventory of national forest roadless areas in the West. It was not in accord with the Wilderness Act, the Eastern Wilderness Areas Act, and decades of congressional action establishing wilderness.

Moreover, GMNF planners appear to have used an even stricter “core-of-solitude” criterion than the one recommended in the regional guidance, requiring a Semi-primitive Non-motorized core rather than a Semi-Primitive Core, motorized or not. This was highly improper and resulted in even greater exclusion of potential roadless areas on the GMNF.

Consideration of a variety of more subjective factors may be appropriate during the wilderness evaluation phase of the process, but they should not trump all other considerations by being applied in the inventory phase, nor include elements not found in the Forest Service directives system, thus eliminating the possibility of evaluation for wilderness designation. Requiring a 2500-acre minimum size core area at least ½ mile from roads and snowmobile trails undermines a range of other values equally present in the Wilderness Act, including “ecological, geological, or other features of scientific, educational, scenic, or historical value” and manageability of boundaries.

The proper conduct of a roadless area inventory affects not only wilderness recommendations, but also the boundaries and choices of management areas, such as Remote Backcountry and special areas. A failure to use the correct inventory criteria can lead to a situation of self-fulfilling prophecy, whereby an excluded roadless area is assigned a less restrictive management category, such as General Forest Use, then subject to road-building, logging, and other intrusive development (e.g., an industrial energy project), and eventually becomes, in reality, a non-roadless area. Such appears to be the track Lamb Brook is on.

The roadless inventory must be redone. All areas that qualify as roadless on the GMNF under the corrected process must be included in the Plan's roadless inventory. We believe that a proper, lawful inventory will show that Lamb Brook is, indeed, a roadless area, and therefore, should have been evaluated as potential wilderness and (likely) recommended to Congress for Wilderness Area designation as we proposed in our citizen recommended wilderness proposals. At a minimum, the Lamb Brook area should have been assigned to a more protective management area designation, which would have precluded its consideration for development in the Deerfield Wind Project. The Forest Service and the courts have already confirmed, in fact, that Lamb Brook is an area of over 5,000 acres without roads—in the Environmental Assessment for the Lamb Brook timber sale (1993), and later, in findings by the Federal District Court of Vermont (1995) and Second Circuit Court of Appeals (1997). The inventory must be redone correctly using only the direction contained in the applicable Forest Service Handbook chapter.

### **The Forest Service Failed to Take a “Hard Look” as Required Under NEPA**

NEPA requires that federal agencies take a “hard look” at the environmental impacts of a proposed action before making a decision. An environmental document such as an EIS must contain “sufficient discussion of the relevant issues and opposing viewpoints to enable the decisionmaker to take a ‘hard look’ at the environmental factors, and to make a reasoned decision.” *Izaak Walton League v. Marsh*, 655 F.2d 346, 371 (D.C. Cir. 1981) (emphasis added). The Forest Service failed to take this hard look.

As has been seen above and will be explored further in the sections that follow, the Forest Service failed to take a “hard look” at environmental impacts from a number of different angles, from effects on bears and bats to effects of the project on noise and visuals. In a number of instances, the agency fails to identify the cumulative effects by limiting analysis to direct effects at the project site. As such, the DEIS is deficient and must be corrected. Details follow below.

### **Effects on Bears**

The Forest Service has failed to treat seriously the data and testimony presented by the Vermont Agency of Natural Resources (ANR) that show the Deerfield project would have highly negative effects on black bear. The Forest Service has a responsibility to assure that

development on the national forest does not unduly affect the viability of native species. ANR, which has studied bears and their habitat needs in Vermont for several decades, has made clear that the project would result in significant adverse impacts to bear habitat.

Further, the Forest Service has hampered the public's ability to fully and fairly assess the impact of the project on bears, and the means by which the agency came to its conclusions regarding bears, by refusing to release the testimony of the Bear Review Panel. This refusal casts significant doubt on whether the agency's summary of the panelists' responses was accurate and complete. One of the panelists (Michael Pelton) provided expert testimony in the Lamb Brook litigation, in which he confirmed that the Lamb Brook area provided extremely valuable bear scarred beech (BSB). Pelton further testified to the harm that roads, motorized access, and increasing human activity pose to bears, and is known to be a strong opponent of activities such as logging and road-building on public lands. Without the panelists' verbatim testimony, there is no way reviewers of the DEIS can truly know whether the Forest Service presented their opinions fairly.

Rather than repeat the strongly worded and extensive commentary provided by ANR on the myriad and serious impacts of the proposed project on bears, we wish to highlight several key points.

Habitat fragmentation leads to genetic isolation, which in turn makes bears more vulnerable to other threats. Black bears in southern Vermont appear to be genetically isolated from bears to the north according to research by Dr. Bill Kilpatrick at UVM and ANR. The key dividing line is Route 4, a major east-west highway. The wind turbine arrays will present linear, north-south slashes through key bear habitat in southern Vermont, potentially hindering bear travel east and west. If fencing of the facility is proposed as a mitigation factor, the barrier to bear movement will be significantly less permeable. If bears are to make use of other foraging habitat available in the project area following the loss of significant patches of BSB, the presence of the roads, turbines, human activity, and possible fences will make that travel to these alternative sites all the more difficult.

Bears in southern Vermont appear to be nutritionally stressed, according to studies by Kilpatrick and ANR. Removal of crucial BSB is harmful to bears not only because of the loss of the food source itself, but because bears will be forced to travel more in search of the alternative food sources in the area. The quality of the alternative food sources, relative to the BSB that would be lost, is one issue. The BSB on the western side of the project is clearly extremely concentrated and of high quality. Other food sources, such as berries, may be important, but do not provide the same nutritional values of beechnuts.

Further, bears that need to travel more in search of food, particularly as they must adjust to the loss of an area they know well, to finding new sources, are bears that are in greater danger from a number of threats. These include more road crossings, movement into areas more frequented by people, including hunters, and encounters with other bears that may drive them out

because they are defending their own limited food and other resources. In short, more bears are likely to die as an indirect consequence of losing the BSB in the project area, further constricting the limited gene pool of this vulnerable population.

Finally, the Forest Service fails to fully and adequately address the cumulative impacts of the project and other threats to bear habitat in southern Vermont. Bears in the future will have to contend with potentially greater ATV activity in the area (see section on Injunction), as the Forest Service considers allowing legal routes on the south half of the national forest. Illegal ATV use is ongoing and may worsen with legal access.

The agency is contemplating allowing more trail uses forest-wide, including mountain bikes and horseback riding. The agency does not address how these uses will interact with the project impacts in terms of harm to bears.

The GMNF may see other wind proposals that will further fragment habitat.

Climate change threatens to profoundly alter the forest communities in the region, with loss of beech being one anticipated consequence of warming temperatures.

Future renewable energy projects in the area are likely to require changes and additions to the power transmission system—another fragmenting factor.

Population growth and development in southern Vermont will affect bear habitat on private land. The Forest Service does not adequately discuss how these factors will affect bears in combination with the impacts of the project.

### **The Effect on Bats Have Not Been Adequately Disclosed**

There is a great deal of uncertainty regarding the impact of wind energy facilities on bats. The Forest Service should not proceed with the Deerfield Wind project, or any other wind facility on NFS land, until a PEIS can be completed that, among other things, assesses the cumulative effects of wind energy development on bats. Further, wind facilities permitted on NFS land should include strict stipulations, as recommended by the North American Symposium on Bat Research (NASBR), for long-term monitoring and mitigation. See “Resolution Concerning Bats and Wind Energy Development,” July 2008, <http://www.nasbr.org/resolution3.html>.

### ***Bats at Risk***

The level of bat mortality now occurring at existing wind installations around the country raises questions about the long-term population viability of those bat species most vulnerable to

wind turbines, to the point that some bat scientists and advocates are considering whether they warrant listing under the federal Endangered Species Act.

Fortunately, these same species do not appear to be affected by the devastating illness known as white-nose syndrome, which has killed hibernating bat species by the hundreds of thousands in the Northeast United States over the last two winters. However, lesser numbers of white-nose-affected species have occasionally been found dead at wind facilities, including eastern pipistrelles, now known as tri-colored bats. The mass mortality caused by white-nose syndrome may mean that special protective status may soon be needed for little brown bats, once the most common bat in the region. Little browns have been killed at wind energy facilities, also, though in much lower numbers than the “tree bats” hit hardest by wind development.

Between the mass bat die-off associated with white-nose syndrome, and the increasing number of bat deaths associated with wind energy facilities on ridgetops of the eastern United States, bats as a taxonomic group may be in serious trouble in the region. The prospect of significant population declines, even extirpation, for several or most species of Northeast bats, is disturbing to contemplate but not outside the realm of possibility. These long-lived animals, with low reproductive rates, are notoriously vulnerable to mortality setbacks. Bat populations are already under stress from a variety of threats, including habitat loss, pollution, and possibly climate change. For those species hit by both white-nose syndrome and wind energy fatalities, the combined impact may prove too much.

### ***Pre-Construction Surveys Cannot Predict Mortality***

As researchers, wildlife agencies, and wind energy developers have turned their attention to questions regarding bat mortality at wind turbine installations, it has become evident that pre-construction surveys for bats are not reliable indicators of post-construction mortality rates. Bat scientists now hypothesize that the bat species dying at the highest rates at wind energy facilities are, in fact, attracted to the turbines. See <http://www.fort.usgs.gov/BatsWindmills/>. There is, as yet, no clear consensus on the cause and mechanism of this attraction, but what is clear is that pre-construction surveys with little evidence of bat activity are no guarantee that bats will not be drawn into the area after the turbines are onsite.

If the Deerfield Wind facility is to be built, the Forest Service needs to assure that there is adequate monitoring of bat mortality after construction, and terms of the permit should require swift adaptive actions, including shutdown of the facility, temporary or permanent, if fatality thresholds are exceeded. Vermont ANR biologist Scott Darling made a recommendation for fatality thresholds in his testimony to the Public Service Board on Dec. 21, 2007. These range from 3.0 migratory bats/turbine/year, to 0.0 threatened or endangered bats/turbine/year, to 5.0 of the more common bat species/turbine/year. These thresholds should be subject to change as more information about impacts of wind energy on bats becomes available.

Monitoring should continue for a minimum of three years following construction, and the protocol should meet the approval of the Vermont ANR. Conditions of the permit to operate on NFS land must include the establishment of an escrow account to support post-construction monitoring by independent professionals.

It would be well for the Forest Service to include in its analysis of the Deerfield Wind project the seasonality and range of time that the facility may have to be temporarily shut down, if post-construction monitoring reveals excessive bat fatalities. Seasonal shut down of wind turbines, particularly during the late summer/fall migratory period, is currently being examined as one way of reducing bat mortalities at other locations. See <http://www.batsandwind.org/main.asp?page=research&sub=operational>. Obviously, while these techniques may enable a wind facility to operate with minimal threat to bats throughout the rest of the year, wind developers will be concerned about the economic impact of temporary shutdown, and may resist this strategy to reduce bat deaths.

### ***Deerfield Wind is Similar to Other Sites with High Mortality***

Over the last decade, as the number of wind energy installations in North America has grown, there has been a corresponding increase in the number of mass bat mortality events associated with them. Bat kills have occurred at wind turbine arrays in a wide variety of ecosystems and geophysical types, from the forested, mountainous southern Appalachian region, to the wide, open plains of Alberta.

However, wind facilities on deciduous, forested ridgetops in the eastern United States appear to be the most fatal to bats of any wind installations in North America. The first mass bat fatalities known were documented in the East in 2003. Bat deaths at the Mountaineer Wind Project in West Virginia were estimated that year at more than 2,000, or according to the now-accepted means of expressing deaths relative to the number of turbines, 47.5 dead bats/turbine.

Subsequent mass bat deaths have been documented from New York (25 bats/turbine) to Tennessee (64 bats/turbine). One of the first major bat kills documented, after Mountaineer, was at Meyersdale, Pennsylvania, in 2004, where 400 to 600 bats were killed at a 20-turbine facility. Scientists are unsure why eastern ridgetop facilities are particularly fatal. The Maple Ridge facility in Lowville, New York, west of the Adirondack Mountains, while different in a variety of ways from the Deerfield site, is the closest site with mortality monitoring data available. With mortality rates of 15 bats/turbine, the results are not reassuring. The Forest Service must consider in its analysis that the bat fatality levels at Deerfield Wind could be as high, or higher, than that currently documented at some of the most lethal wind facilities in the eastern U.S.

### ***Bigger Turbines Kill More Bats***

With the increasing number of wind facilities, wind turbine heights have also increased. Recent research indicates that taller turbines pose a greater threat to bats than shorter turbines.

See “Overview of Issues Related to Bats and Wind Energy,” a presentation by Paul Cryan to the Wind Turbine Guidelines Advisory Committee, February 26, 2008, at [http://www.fort.usgs.gov/news/news\\_story.asp?WebID=080326](http://www.fort.usgs.gov/news/news_story.asp?WebID=080326). The Searsburg wind turbines are nearly 200 feet high, from base to rotor tip. The turbines proposed for the Deerfield Wind project would be nearly twice as tall, at 393 feet high. A scarcity of bat deaths at the existing facility do not provide a basis for judging the likelihood of bat mortality with taller turbines.

### ***New Information Regarding Mode of Bat Kill***

Recent research has revealed that at least some bats killed at wind facilities are dying not because of collisions with turbine towers or blades, but because of sudden drops in barometric pressure. In other words, as bats approach moving turbine blades, they experience something like a sudden and severe case of the “bends.” See [http://www.newscientist.com/article/dn14593-wind-turbines-make-bat-lungs-explode.html?feedId=online-news\\_rss20](http://www.newscientist.com/article/dn14593-wind-turbines-make-bat-lungs-explode.html?feedId=online-news_rss20). This causes their lungs to essentially explode. Stipulations for operation of the turbines at Deerfield Wind need to take into account the latest science on how bats are being killed, and adjust operations accordingly. Turbines may need to be shutdown during times of the year and on nights when conditions are most conducive to bat mortality.

### ***Cumulative Impacts to Bats from Wind Energy***

According to Thomas Kunz, one of the most respected bat ecologists in the country, there is currently no effort underway to look at the cumulative impacts of wind energy development on bat populations throughout the United States. Yet, wind energy development is increasingly seen as a key part of our nation’s energy future. Scientists lack a great deal of information on the basic biology, life history, migratory patterns, and even population numbers of bats. How will we know when bat species are truly in trouble, when we do not even have a good way to measure the impact of various threats, including wind development?

Kunz et al (2007, “Ecological impacts of wind energy development on bats: questions, research needs, hypotheses,” *Frontiers of Ecology and the Environment* 5:315-324) attempted to project bat mortality levels, dependent on two different levels of wind energy development in the Mid-Atlantic highlands region by the year 2020. Under a scenario of 2158 MW of wind energy in the region, 33,000-62,000 bats would be killed annually. Under a 3856 MW scenario, 59,000-111,000 bats would be killed annually. The hardest hit species would be the long-distance, migratory species: hoary bat, red bat, and silver-haired bat.

Scientists do not yet know what the significance of these potential losses might be to the long-term health of the species. But these numbers have caused bat scientists to question whether such impacts would allow affected species to persist. See “Overview,” by Cryan, *ibid*.

Because the bat species at highest risk from wind energy development are long-distance latitudinal migrants, and in the eastern U.S., will potentially be exposed to multiple wind energy

facilities as they move seasonally along the ridgelines of the Appalachian Mountains, the Forest Service cannot limit its cumulative effects analysis for bats to site-specific project areas. The Forest Service has a responsibility to assure that the sum total of wind energy facilities to which bats may be exposed in their travels, do not become a threat to the viability of these species on NFS lands. As such, the DEIS is deficient in its analysis of the cumulative effect to bats. This must be corrected. We note also our earlier call to the agency to prepare a PEIS on its agency-wide wind energy policy. Such a document could begin to address the eastern U.S. cumulative effects analysis needed.

## **Climate and Air**

### ***Displacement of Emissions***

One of the stated purposes of the project is to “reduce fossil fuel use for electric energy generation”. DEIS at pgs 4-9. However, the DEIS does not provide adequate analysis of the potential for this project to reduce fossil fuel use.

### ***The DEIS Failed to Adequately Consider the Carbon Storage Values Lost in Building a Wind Energy Facility***

Despite recent comments from the Forest Service’s Deputy Chief and significant agency research supporting the importance of carbon storage services provided by the nation’s forests, and the stated purpose of exploring renewable energy development to offset carbon-intensive fossil fuel generation, the DEIS does not adequately address the consequences of development on the carbon storage capacity of the Green Mountain National Forest. See for example, comments of Deputy Chief Ann Bartuska on October 16 available at <http://www.srs.fs.fed.us/events/mediabriefingtranscript.pdf> or research published at <http://www.fs.fed.us/ccrc/topics/carbon.shtml>. Forests provide an enormous ecosystem service in offsetting greenhouse gas emissions every year. Removing forest cover to erect turbines and maintenance infrastructure takes some of this biomass out of the system resulting a reduction of the system’s ability to sequester carbon in the future. The DEIS makes passing acknowledgement of this fact on page 73: “In the case of CO<sub>2</sub>, the emissions reductions listed above would be partially offset by the permanent removal of existing tree cover from the Project area. It is estimated that up to approximately 80 acres would be cleared of tree cover for the 35.7 MW version of this proposed Project.” However, no effort is made to quantify this known and understood trade-off. This impact should be quantified and discussed. The Wilderness Society has produced a survey of the appropriate use of existing carbon storage tools—guidance for developing a reliable estimate of the carbon storage potential at a coarse scale can be found at <http://wilderness.org/files/carbonbrief.pdf> and a more in-depth discussion of forest carbon sequestration can be found at <http://wilderness.org/content/us-forest-carbon-and-climate-change-controversies-and-win-win-policy-approaches>. A fuller carbon accounting must be performed to

ensure that renewable energy products do not inadvertently exacerbate the causes of climate change.

## **Visuals**

### ***Nighttime Views in Vermont Not Addressed***

The DEIS provides extensive analysis of the daytime visual impacts of the Deerfield Wind project. However, there is scant analysis of the nighttime impacts of the lighted turbines, except passing reference in the text that the lighting may be bothersome to a limited number of people. For example, “Turbine lighting may be one of the more significant changes within this area [Lamb Brook].” DEIS at p. 126.

None of the viewpoint simulations in the DEIS present a nighttime view of the turbine strings, which would bear several red strobe lights, flashing at frequencies of at least 20 times per minute. And of course, a still image cannot simulate the experience of viewing a group of flashing lights on an otherwise dark mountain ridge. Flashing lights are a very different experience than steady lights.

While individuals’ responses to nighttime lighting are subjective, and probably somewhat variable, the Forest Service’s own goal for visual conditions on the GMNF is to: “Maintain or enhance visual resources such as viewsheds, vistas, overlooks, and special features.” LRMP at p. 17. The addition of industrial lighting on formerly dark ridgelines can hardly be construed by any reasonable person as the enhancement of visual resources.

Please provide a realistic, moving-picture representation of the nighttime views of the wind project, so that the public may have a better understanding of the aesthetic trade-offs that come with it. State standards for nighttime lighting are quite strict in comparison to other states and have resulted in a much darker nighttime sky in Vermont, even in inhabited areas. Many Vermonters as well as visitors to our state treasure the dark night skies and the dark mountain landscapes that often accompany them. The appearance of such a stark sign of our industrial/technological society will surely be off-putting to some, and either consciously or unconsciously suggest to others that Vermont and/or the national forest landscape has irretrievably lost some of its naturalness and wild beauty.

## **Social and Economic Effects**

### ***Power Capability and the Capacity Factor***

The DEIS repeatedly makes the assertion that 17 state-of-the-art wind turbines, each capable of generating in the range of 2.0 to 2.1 MW would have a combined capacity of up to 34 to 35.7

MW of “clean, renewable electric power.” While technically true, this statement, repeated in various forms throughout the DEIS, obfuscates pertinent details and is disingenuous. The Forest Service fails to disclose the concept of capacity factor and explain why likely power outputs would be significantly lower.

Capacities of 34 to 35.7 MW from 17 turbines assume that the wind blows at sufficient speed to generate electricity 24 hours a day, 7 days a week, 365 days a year. It is akin to arguing that you can drive 60 miles in 30 minutes because your car is capable of going 120 mph. Both examples ignore significant factors. In the case of when the wind blows, this just simply does not happen in New England. The industry uses the concept of capacity factors to determine the percentage of possible output that is likely given environmental and other conditions. NREL and the University of Massachusetts estimate this capacity factor at 20-40% depending on location and technology.

A number of calculations were built off the Forest Service’s capacity statement such as the number of houses that could be powered, etc. These calculations must be redone and disclosed to accurately estimate various social and economic effects.

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Overall, we are concerned that the EIS is insufficient in analyzing and disclosing the effects of the proposed project. It should be withdrawn and a new or supplemental EIS prepared and released for public comment.

We look forward to continued discussion of this proposed project to ensure that the first wind facility permit considered for developing wind resources on NFS lands is afforded consideration appropriate to the significance of this opportunity. We are hereby requesting that hard copies of the revised DEIS, or failing that preparation, hard copies of the final EIS and ROD be sent to each of us. Should you have any questions or need clarification on these comments, please contact us at the addresses, phone numbers or email addresses below. Thank you for your time and consideration.

Sincerely,

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enclosure