

Wind Energy Facility Siting Guidelines Working Group

Proposed Wind power Siting Guidelines¹ – May 29, 2007

Forwarded to the NH Energy Policy Committee Wind Siting Subcommittee

INTRODUCTION/BACKGROUND

Promotion of wind power development is an important component of state and national renewable energy policies. The New Hampshire Energy Plan of 2002² states, “It is now widely recognized that in order to continue building upon our state’s strengths, we should consider energy policies and programs that take advantage of new technologies, promote energy efficiency, encourage the development of cleaner, affordable alternative energy sources, utilize our plentiful renewable natural resources, and reduce our dependence on foreign oil.” New Hampshire possesses an indigenous wind resource that is capable of supporting commercial and “community scale” wind power development. Utilizing this resource for energy generation can create many benefits, including a reduction in the need to import fossil fuels to the region and a reduction in future emissions of greenhouse gasses and other pollutants.

The siting of wind power facilities presents some challenges that are different from those faced by other types of energy facilities. In New Hampshire, the wind resource capable of supporting commercial development is located primarily on ridgelines and in coastal and off-shore areas – places that may possess environmental, recreational and scenic values that need to be considered when evaluating development. The state’s Energy Plan notes “While there is strong potential for siting wind farms in the state, they also raise numerous concerns.” Among the potential obstacles cited in the plan are the distances from the grid, the proportion of windy ridgeline that lie on public conservation land, and the aesthetic and habitat values associated with undeveloped high-elevation open space.

The New Hampshire Energy Facility Evaluation, Siting, Construction and Operation Act (NH RSA 162-16:H.IV) sets forth the following criteria for the permitting of energy facilities under the jurisdiction of the state’s Site Evaluation Committee (SEC):

The Committee must find that the proposed site and facility:

- a) Applicant has the adequate financial, technical, and managerial capability to assure construction and operation of the facility in continuing compliance with the terms and conditions of the certificate.
- b) Will not interfere with the orderly development of the region with due consideration given to the views of municipal and regional planning commissions and municipal governing bodies.

¹ This document is intended to address windpower development on terrestrial ridgelines. While many of the issues addressed here will also apply to coastal and off-shore areas (the other part of the state with a strong wind resource), these areas will involve additional jurisdictional and resource issues that are not addressed here.

² See <http://www.nh.gov/oep/programs/energy/StateEnergyPlan.htm>.

- c) Will not have an unreasonable adverse effect on aesthetics, historic sites, air and water quality, the natural environment, and public health and safety.
- d) Operation is consistent with the state energy policy established in RSA 378:37.

The recommendations set forth here are intended to provide greater clarity to permitting authorities, developers and stakeholders as to how the above criteria should be evaluated, especially regarding criteria (b) and (c). They are intended primarily for projects under the jurisdiction of the SEC, but should prove useful for municipal permitting authorities as well. These recommendations put a strong emphasis on early site evaluation and screening and consultation with state resource agency personnel, local officials and citizens, and other stakeholders. They identify resource and social issues that should be considered during permitting and set forth guidance for evaluating the level of concern regarding a project's potential impact on natural resources and other issues³.

GENERAL GUIDELINES FOR APPROPRIATELY SITED PROJECTS

Ideally, appropriately sited wind power projects will have the following characteristics:

- Have substantial support from the local community.
- Provide positive economic benefits to the local community.
- Are compatible with local land use plans and regulations.
- Avoid or minimize degradation of the quality of life for local residents.
- Maximize the amount of power generated for the given level of impact.
- Avoid or minimize disturbance of populations of or habitat for rare plant and animal species.
- Avoid areas that create a high risk of mortality to birds and bats.
- Avoid or minimize disturbance of uncommon or high-quality wildlife habitat.
- Avoid or minimize fragmentation of large blocks of natural habitat.
- Avoid or minimize disturbance of steep or fragile soils.
- Avoid or minimize disturbance of wetlands, streams and riparian areas.
- Avoid or minimize disturbance of areas of high recreational use, especially use that is focused on the natural environment.
- Avoid or minimize degradation of scenic views, especially from areas of recognized high scenic value that depend on the undeveloped natural environment for their appeal.
- Have necessary infrastructure (access roads and transmission lines) on-site, in close proximity, or able to be constructed without undue impacts.
- Are located in areas that have been and continue to be altered by human use (e.g., developed or agricultural areas or lands under active timber management)⁴.

³ While every attempt has been made to make this guidance as objective as possible, an element of subjective judgment is inevitable.

⁴ The strongest terrestrial winds are found on ridgelines, which are most often areas of undeveloped forest land. If located on forested ridgelines, projects should be in areas of relatively common or younger forest types, and avoid the core of large areas of mature forest. (This is related to the fragmentation issue previously listed.)

It is recognized that few if any projects will have all of these characteristics, and that siting of wind power inevitably involves tradeoffs between the benefits and impacts of development. Also, these ideal characteristics need to be considered relative to the nature of the regional landscape. The ideal site will be much different in Coos County (where much of the landscape is undeveloped forest and infrastructure is less well developed) than in more heavily developed parts of the state.

REVIEW PROCESS

NH RSA 162-H sets up the Site Evaluation Committee, which has jurisdiction over permitting of energy facilities greater than 30 megawatts capacity. Projects smaller than 30 MW may come under the jurisdiction of the SEC if petitioned by the applicant, local officials or citizens as specified in the law. The SEC also has the authority to exercise jurisdiction over any project as specified in 162-H:2.II(a) and 162-H:2.VII.

The proposed process outlined below does not change the existing permitting structure, and is not intended to change other existing review or permitting processes that may be required in addition to SEC approval. It is intended to provide a framework for consultation and preliminary review early in the development process, and to provide a more structured approach to assessing the issues associated with development.

There are two modifications that could improve the current process, particularly in the pre-application phase. First, there should be a point person (hereafter referred to as the “state coordinator”) designated by the Chairman of the SEC to provide centralized coordination of the permitting process from the initial inquiries by an applicant to the final SEC review. This person would be responsible for guiding the applicant through the process (essentially providing “one-stop shopping”), promoting and facilitating collaborative discussion to resolve issues of concern (most likely through the wind power advisory group proposed below, augmented as necessary with municipal and local stakeholders with an interest in the particular project under consideration), and coordinating the necessary input and review by state agencies once an application has been submitted. Currently many of these functions are provided by the Administrator of the Public Information and Permitting Unit within DES. However, currently the Administrator’s role is limited to all activity up to the acceptance of the application by the SEC, after which he can no longer interact with the applicant, SEC members or intervenors to prevent the appearance of ex parte communication. The responsibilities of the state coordinator, as well as the pre-application consultation process, should be expanded and more clearly defined.

Second, the state should consider creating a wind power advisory group that would include representatives of state agencies, non-profit organizations, the wind power industry and community interests. The group would not have any regulatory authority, but would serve as a forum for discussion of issues related to both general windpower policy and specific development proposals. There are many such groups currently in existence in the state that provide a range of models as to how the group could be organized, including DES’s Dredge Management Task Force and Rivers Management Advisory Committee and DOT’s Statewide Trails Advisory Committee and Community Advisory Committee.

With these recommendations in mind, the following general process for wind power permitting is proposed:

Step 1 – Preliminary consultation/Initial data compilation⁵: Applicant is encouraged to consult with the state coordinator, who can assist the applicant with the identification of preliminary information to be collected and local government officials, state agency personnel and other stakeholders who the applicant should consider contacting. Applicant gathers existing data relevant to the resource issues listed below for one or more site(s) being considered for development, augmented by preliminary on-site evaluations (but not detailed studies).

Step 2 – Pre-application consultation: Applicant submits the results of the initial data compilation to the windpower advisory group. All proposals under the jurisdiction of the SEC would be required to undergo this consultation. Other proposals are encouraged to consult with the group, especially if the proposal involves known natural resource concerns, and submit the initial data compilation information and feedback from the advisory group to the appropriate permitting municipality(s). Local officials, citizens and stakeholders could be provided with an opportunity to provide initial comments on the proposal. The purpose of this consultation would be to:

- Make a preliminary assessment of the suitability of the proposal.
- Assess the relative level of concern for the various resources issues (see Appendices) and identify those issues that are of greatest concern.
- Recommend additional information and detailed studies that should be developed for the application. (Because the windpower advisory group is non-regulatory, any formal recommendations in these areas would need to come from the participating state regulatory agencies.)

Step 3 – Detailed field studies/project planning/application preparation.

Step 4 – Application submission and permitting at appropriate level.

OTHER PROCESS ISSUES

Several other issues have been raised regarding the review process as it applies to windpower development (and potentially other types of energy development as well):

- Projects not under SEC jurisdiction may create impacts to resources of recognized state significance. There is currently no provision for state review of these impacts, other than that required for specific permits from individual state agencies (such as Alteration of

⁵ The applicant shall determine when a proposal is sufficiently well-defined to begin this process. The erection of a meteorological tower or conducting other preliminary studies does not necessarily constitute a proposal under these guidelines.

Terrain or wetlands permits)⁶. The SEC's authority to exercise jurisdiction on its own volition over other proposals could address the issue of providing state review of smaller projects with the potential to impact resources of state significance. However, it is not clear under what conditions, or by what process, the SEC would exercise jurisdiction over other proposals that have not been petitioned.

- There is a difference of opinion regarding the relationship between state and municipal jurisdiction for projects petitioned to the SEC (i.e., does SEC jurisdiction supersede local authority or is it concurrent with it). This needs to be clarified.
- The SEC review process was developed primarily to address large energy generating projects. The process may be overly cumbersome for windpower projects (and other renewable energy projects). It has been suggested that an expedited review process for windpower (and other renewable energy) projects may be appropriate. Others believe that such an expedited review may be appropriate, but only for proposals that have been determined to be of relatively low concern regarding their potential impact on natural resource and other values based on an initial screening process.
- The state currently has no regulations or standards that would provide guidance as to how the issue of noise should be evaluated. (See Appendix A.11.)
- The SEC now has some experience in processing an application for commercial windpower development. This document was developed without reference to that application process. The lessons learned from that process should supplement the material presented in this document.
- There are a wide range of resources available to assessing site suitability spread among the various state agencies. (Many of these resources are described in the appendices.) However, there is no central repository of such information or guidance dedicated for use by parties to a windpower proposal. Future proposals may benefit from such a compositing of resources, which could be posted on the SEC Web page.
- There is disagreement as to whether the state should undertake an analysis that overlays wind resource data onto available data on natural resource values of concern. This analysis could provide guidance as to the relative level of resource conflict for different areas.

RESOURCE AND SOCIAL ISSUES TO BE CONSIDERED

The issues listed here are primarily issues of environmental or social concern. Other issues relevant to the permitting criteria listed under RSA 162-H also need to be considered but are not discussed here (for example, grid interconnection and system reliability, the financial capability of the applicant, the clean air benefits of a proposal, etc.).

- Rare plants (Appendix A.1)
- Rare and exemplary natural communities (A.2)

⁶ NH RSA 362-A (the Limited Electrical Energy Producers Act) does provide for consideration by the Public Utilities Commission of smaller projects. However, it deals primarily with producers not primarily engaged in electrical power production, but who generate electricity wholly or partially for on-site use. The statute addresses issues such as net metering, rates and exemption from utility regulations, but does not involve PUC review of siting issues or create PUC permitting authority.

- Soils and topography (A.3)
- Waters and Wetlands (A.4)
 - Wetlands
 - Streams and riparian areas
 - Water quality
- Wildlife (A.5)
- Existing land use (A.6)
- Existing infrastructure (A.7)
- Recreational use (A.8)
- Visual (A.9)
 - Views from recreational and scenic areas
 - Views from communities and residential areas
- Cultural, historic and archaeological features (A.10)
- Noise (A.11)
- Other “nuisance” issues (shadow flicker, hazardous waste, etc.) (A.12)
- Conservation status of land (A.13)
- Regional conservation plans (A.14)
- Municipal issues (A.15)
 - Compatibility with local land use plans and regulations
 - Support of local officials and citizens
 - Social and economic impacts

EVALUATION OF RESOURCE AND SOCIAL ISSUES

The initial data compilation should contain available information for each of the issues listed above. Some of these issues cannot be fully evaluated without detailed field work, analysis or consultation that would be included only in the final application. For both the initial data compilation and the final application, the appendices provide a tool for organizing the information so that all parties have a way of understanding the issues of greatest concern.

Appendices A.1 through A.15 contain the following information for each of the resource issues: a definition of the issue, a description of pertinent existing New Hampshire laws and regulations, a description of the grounds for concern relative to that issue, guidelines for information collection and assessment (separated into information to be collected for the initial data compilation and the final application), and guidance for assessing the relative level of concern for that issue. The appendices do not include guidelines for post-construction monitoring or mitigation, though these may also be an important part of the permitting process.

Several things should be kept in mind when using these appendices:

- They are not intended to be a “scorecard”, but to assist the applicant, permitting authorities, and stakeholders with understanding which issues may be of notable concern, and which need to be considered in site selection, project design and permitting review.

- They do not provide guidance as to how the benefits of a proposal should be assessed, though this information is critical to an overall evaluation of a proposal.
- They are not intended to propose or create any new regulatory requirements.
- Not all issues are of equal significance or concern.
- Evaluation of a proposal should consider the degree to which potential impacts to issues of concern can be avoided, minimized or mitigated.
- Where similar information is requested for several appendices, it should be assumed that the same information is intended unless specifically noted otherwise.

APPENDIX A.1 – GUIDANCE FOR EVALUATION OF INDIVIDUAL ISSUES

ISSUE: RARE PLANTS

- **Definition:** “Rare plant” shall mean any species included on the most recent version of the “Rare Plant List for New Hampshire” maintained by the New Hampshire Natural Heritage Bureau.
- **Pertinent Existing New Hampshire Laws and Regulations**

The New Hampshire Native Plant Protection Act of 1987 (RSA 217-A) sets forth a general program for the protection of native plants, including the establishment of the Natural Heritage Bureau and a process for listing of species as threatened or endangered. It prohibits the possession, transport or sale of listed species without a valid permit, but specifically does not prohibit the taking of listed species by landowners on their own property.

The Act also states (Section 217-A:7, Cooperation With Other State Agencies), “*All state agencies, consistent with their authority and responsibilities, shall assist and cooperate with the commissioner to carry out the purposes of this chapter. To the extent possible actions funded or carried out by state agencies shall not jeopardize the continued existence of any protected plant species.*” For any state regulatory review of windpower facilities, the state agency(s) conducting the review would need to comply with this provision.

The New Hampshire Energy Facility Evaluation, Siting, Construction and Operation Act requires that in order to permit a project under its jurisdiction, the Energy Facility Site Evaluation Committee must, among other findings, find that the project “*Will not have an unreasonable adverse effect on aesthetics, historic sites, air and water quality, the natural environment, and public health and safety.*” This implies that rare plants should be considered in permitting decisions.

- **Grounds for Concern**

Localized populations of rare plants may be directly eliminated or reduced due to clearing associated with development. Populations proximate to developed areas may be indirectly affected by changes in hydrologic regimes or microclimate or competition from invasive species.

- **Assessment Guidelines**

Initial data compilation

- The New Hampshire Natural Heritage Bureau should be consulted for information as to whether the site contains known or historical occurrences of rare plant species or contains habitat likely to support such species.
- If NHHNB consultation indicates no known or historical occurrences of rare species and a low likelihood of the presence of suitable habitat for rare species, a general assessment of the site shall be conducted to confirm the nature of the habitat.

Application information

- If NHHNB consultation indicates no known occurrences of rare species but the possible presence of habitat that could support such species, or if the initial assessment indicates the presence of habitat suitable for rare species, a targeted survey of this habitat will be conducted to map the habitat and determine whether any rare species are present. This survey shall be conducted at the time of year when such plants are most likely to be observed.

- If NHHNB consultation indicates that known or historical occurrences of rare species are located on the site, or if the habitat survey identifies the presence of rare species, then a detailed assessment will be undertaken to map the location of existing specimens and the extent of suitable habitat for these species.

- **Relative Level of Concern**

- **Low:** No known or historical occurrences of rare plants are present and the site does not contain habitat with a high likelihood of supporting such species.
- **Moderate:** Rare plant species or habitat with a high likelihood of supporting such species are present in the proposal area, but will not be directly disturbed by development activity.
- **High:** Rare plant species or habitat with a high likelihood of supporting such species are present in the proposal area and will be directly disturbed by development activity.

APPENDIX A.2 – GUIDANCE FOR EVALUATION OF INDIVIDUAL ISSUES

ISSUE: RARE AND EXEMPLARY NATURAL COMMUNITIES

- **Definition:** “Natural communities” are recurring assemblages of plants and animals found in particular physical environments as classified in the New Hampshire Natural Heritage Bureau publication *Natural Communities of New Hampshire*. Rare natural communities are those ranked S1 (critically imperiled), S2 (imperiled) or S3 (very rare and local). Exemplary natural communities are those that have had relatively little alteration from human activity and retain a relatively natural composition and structure, including high-quality examples of common natural communities (i.e., those ranked S4 or S5).

- **Pertinent Existing New Hampshire Laws and Regulations**

No statutes, including the Native Plant Protection Act specifically mention natural communities. However, the New Hampshire Energy Facility Evaluation, Siting, Construction and Operation Act requires that in order to permit a project under its jurisdiction, the Energy Facility Site Evaluation Committee must, among other findings, find that the project “*Will not have an unreasonable adverse effect on aesthetics, historic sites, air and water quality, the natural environment, and public health and safety.*” This implies that rare and exemplary natural communities should be considered in permitting decisions. In addition, New Hampshire Department of Environmental Services includes consideration of exemplary natural communities as a component of its regulatory process, at least for some of its permits, and has embedded exemplary natural communities directly into a number of their permits and Rules, including Env-Wt 302.04 (Wetland Rules) Requirements for Application Evaluation, and Env-Wt 803.06 Alternative Compensatory Mitigation Plans, and possibly others.

- **Grounds for Concern**

Rare or exemplary natural communities may be eliminated, fragmented or degraded by clearing associated with development. Communities proximate to developed areas may be indirectly affected and altered by changes in hydrologic regimes or microclimate or competition from invasive species.

- **Assessment Guidelines**

Initial data compilation

- The New Hampshire Natural Heritage Bureau should be consulted for information as to the site contains known or historical occurrences of rare or exemplary natural communities or contains geophysical features likely to support such communities.
- If NHHNB consultation indicates no known or historical occurrences of rare or exemplary natural communities and a low likelihood of the presence of suitable conditions for rare natural communities, a general assessment of the site shall be conducted to identify the communities that are present. Common communities shall be assessed as to whether they might qualify as “exemplary”.

Application information

- If NHHNB consultation indicates no known occurrences of rare or exemplary natural communities but the possible presence of suitable conditions for rare natural communities, or if the initial assessment indicates the presence of rare or exemplary communities, then the extent and condition of these communities will be mapped and assessed according to NHHNB protocols.

- **Relative Level of Concern**

- **Low:** No rare or exemplary natural communities are present within the proposal area.
- **Moderate:** Rare or exemplary natural communities are documented within the proposal area but will not be impacted by construction activity.
- **High:** Rare or exemplary natural communities are documented within the proposal area and will be directly impacted by construction activity.

APPENDIX A.3 – GUIDANCE FOR EVALUATION OF INDIVIDUAL ISSUES

ISSUE: STEEP OR FRAGILE SOILS

- **Definition:** “Steep or fragile soils” are any soils classified by the US Natural Resource Conservation Service as having moderate or severe hazard of erosion, soils which are classified as very poorly drained or which meet any of the criteria for hydric soils, and any slopes over 20%.
- **Pertinent Existing New Hampshire Laws and Regulations**

Soils *per se* have no legal protection under New Hampshire law or regulation. However, one of the primary concerns regarding steep or fragile soils is the potential they create for erosion and degradation of water quality, which is governed by an extensive body of law and regulation. In addition, very poorly drained or hydric soils may be classified as wetlands, which also have extensive legal protection (see Hydrology section). Any project involving “Construction, earth moving, or other significant alteration of the characteristics of the terrain” of over 100,000 square feet (which would include most windpower projects) requires an Alteration of Terrain permit from the NH Department of Environmental Services.

- **Grounds for Concern**

Excessive soil erosion associated with improperly designed or inadequately stabilized cleared slopes and road corridors may degrade water quality and aquatic habitat for considerable distances downstream of project areas. Large areas of cut and fill on steep slopes may increase a project’s visual impact.

- **Assessment Guidelines**

Initial data compilation

Existing NRCS soils maps should be examined to determine the nature of the soils in the proposal area, and to determine the extent of steep or fragile soils within the proposal area that may be disturbed by project construction.

Application information

NRCS or NHDES staff should be consulted to determine the extent of detailed field mapping of soils and topography necessary to properly evaluate the proposal. Requirements for detailed engineering plans and other information necessary for the permit application should conform to existing NHDES rules for the Alteration of Terrain permit.

- **Relative Level of Concern**

- **Low:** Construction of the project (including turbine strings, access roads and transmission lines) will create little to no disturbance of steep or fragile soils.
- **Moderate:** Construction of the project will create some disturbance of limited areas of steep or fragile soils.
- **High:** Construction of the project will create extensive disturbance of steep or fragile soils and involve significant terrain alteration (“cut and fill”).

APPENDIX A.4 – GUIDANCE FOR EVALUATION OF INDIVIDUAL ISSUES

ISSUE: WATERS AND WETLANDS

- **Definition:** “Hydrology” encompasses a range of issues related to the flow of water across and through the landscape, including impacts to streams, lakes, ponds, wetlands, seeps and springs and their associated shoreline or buffer (“riparian”) areas.
- **Pertinent Existing New Hampshire Laws and Regulations**

There is an extensive body of both state and federal law and regulation designed to protect the quality of surface waters, groundwater and wetlands. Projects may require permitting by NH Department of Environmental Services (e.g., Dredge and Fill permits or Section 401 Water Quality Certification) or U.S. Army Corps of Engineers (USACE). RSA 482-A regulates the conversion of wetlands and states that, “No person shall excavate, remove, fill, dredge or construct any structures in or on any bank, flat, marsh, or swamp in and adjacent to any waters of the state without a permit from the department.” Between the Army of Corps of Engineers definition of a wetland and that of the DES, there are few hydrologic impacts that do not involve wetlands. However, in those rare cases such impacts should be closely examined.

- **Grounds for Concern**

Lakes, ponds, streams, rivers and wetlands and their associated riparian areas are perhaps the most critical component of the state’s natural landscape. Degradation of water quality and aquatic habitats can affect a wide range of values important to the state’s economy and quality of life, included drinking water supplies, critical wildlife habitat and recreational uses.

- **Assessment Guidelines**

Initial data compilation

The initial data compilation should include a map showing all wetlands, stream courses and hydric soils as determined from existing data sources, as well as the general location of proposed project roads, transmission lines and facilities that might impact hydrologic features to the extent that they have been developed.

Application information

NHDES and USACE staff should be consulted for assistance in minimizing impacts to hydrologic features. The requirements for consideration of hydrologic and wetland impacts during the application process is well-developed under existing regulation. No changes to the existing procedures are proposed.

- **Relative Level of Concern**

- **Low:** Impact to wetlands, new stream crossings and disturbance of riparian areas are limited with no quantity, quality or secondary impact issues. No Army Corps or 401 permits are required. DES Dredge & Fill Permit is either not required or is classified as a Minimum Impact Project.
- **Moderate:** Project involves some impact to wetlands, streams or other jurisdictional areas sufficient to trigger one or more of the above permits.

- **High:** Project involves impacts to wetlands, streams or other jurisdictional areas and attendant resources that may trigger a quantity and/or quality threshold or a secondary impact issue in a state or federal permit review.

APPENDIX A.5 – GUIDANCE FOR EVALUATION OF INDIVIDUAL ISSUES

ISSUE: WILDLIFE

- **Definition:** Title XVIII Section 207.1.XXXV of the New Hampshire Revised Statutes defines wildlife as “all species of mammals, birds, fish, mollusks, crustaceans, amphibians, invertebrates, reptiles or their progeny or eggs which, whether raised in captivity or not, are normally found in a wild state.” Section 212-A:2 defines wildlife as “any member of any non-domesticated species of the animal kingdom, whether reared in captivity or not, including, without exception, any mammal, fish, bird, amphibian, reptile, mollusk, arthropod or other invertebrate, and includes any part, product, egg or offspring thereof, or the dead body or parts thereof.”

- **Pertinent Existing Laws and Regulations**

Federal

- Migratory Bird Treaty Act (16 U.S.C. 703-712) provides for the protection of migratory birds.
- Endangered Species Act (16 U.S.C. 1531-1544) provides for the protection of federally listed threatened and endangered plants and animals and their habitats.
- Bald and Golden Eagle Protection Act (16 U.S.C. 668) provides for the protection of Bald and Golden Eagles.

State

- Title XVIII, Section 207 of the New Hampshire Revised Statutes establishes State’s exclusive authority and jurisdiction over the wildlife of the state and the authority of the New Hampshire Fish & Game department to regulate, protect, restore, and conserve the wildlife resources of the state.
- The Endangered Species Conservation Act of 1979 (RSA 212-A) provides for the protection of wildlife species normally occurring within the state that are in jeopardy in order to maintain and enhance their numbers.
- The Nongame Species Management Act of 1988 establishes the state’s policy to maintain and manage the native wildlife resources of New Hampshire for future generations.
- The New Hampshire Energy Facility Evaluation, Siting, Construction and Operation Act requires that in order to permit a project under its jurisdiction, the Energy Facility Site Evaluation committee must, among other findings, find that the project “will not have an unreasonable adverse effect on aesthetics, historic sites, air and water quality, *the natural environment*, and public health and safety.”
- The Water Management and Protection Act of 1989 (RSA 482-A) finds that it is in the public good and welfare of the state to protect and preserve submerged lands under tidal and fresh waters and salt water and fresh-water wetlands from despoliation and unregulated alteration, because despoliation or unregulated alteration will, among other impacts, “adversely affect the value of such areas as sources of nutrients for finfish, crustacea, shellfish and wildlife of significant value, and will damage or destroy habitats and reproduction areas for plants, fish and wildlife of importance,” and requires a permit to fill or dredge jurisdictional wetland habitats. Permit applicants must assess impacts to plants, fish, and wildlife including rare, special concern species, state and federally listed threatened and endangered species, species at the extremities of their ranges, and exemplary natural communities identified by the NH Natural Heritage Bureau (NHDES Wt 302.04).

- **Grounds for Concern**

Wildlife issues of particular concern in wind energy development include: habitat loss for species of conservation concern, including threatened and endangered species; impacts to sensitive and high quality wildlife habitats; mortality risks for migrating birds and bats; fragmentation of large blocks of contiguous forest; degradation of wetlands and waterways, particularly perched wetlands and headwater streams; interference with auditory perception that affects critical life functions (e.g., detection of predators and prey; communication with mates, young and conspecifics); and loss of critical localized resources such as hard and soft mast.

- **Assessment Guidelines**

Reviewers of proposed projects shall include a Wildlife Advisory Committee⁷, consisting of qualified scientists or technical representatives from the following: the US Fish & Wildlife Service, the NH Fish & Game Department, the NH Department of Environmental Services, the developer or its consultants, an environmental non-governmental organization, and a representative from the municipality(s) in which the proposed project is located, compensated as appropriate by the applicant. The responsibilities of reviewing parties include review of data (initial data compilation and field study results) provided by the applicant, determination of adequacy of information (initial data compilation and field study results) provided by the applicant, recommending field study design for pre-construction studies and post-construction monitoring, assessing the level of potential wildlife impacts, providing site plan recommendations to minimize wildlife impacts, recommending any operational changes to reduce wildlife impacts, evaluating pertinent aspects of mitigation and decommissioning plans, and preparing reports of their findings. Reports from this committee shall become part of the final application.

Initial data compilation

The applicant should assemble the following existing baseline information in narrative and mapped forms, as appropriate, for natural resource features within the proposed development as well as access corridors and areas adjacent to the development that are reasonably likely to be affected by the project:

- Delineation of project area on USGS 7.5-minute quadrangles.
- Highly or moderately erodible soils within project area as identified by Natural Resource Conservation Service County Soils Surveys.
- Slopes in excess of 20% within project area as delineated from Digital Elevation Model data available from the NH GRANIT database.
- Mapped surface waters and wetlands from the NH Hydrography and National Wetlands Inventory data layers available from GRANIT.
- Delineation of areas above 2500 feet and above 2700 feet elevation within project area as identified from Digital Elevation Model data.
- Rare, threatened and endangered plants and animals and exemplary natural communities within project area documented in the NH Natural Heritage Bureau database.
- Delineation of project area and 3.5-mile radius on current NH Fish & Game Department maps of Highest Ranked Wildlife Habitat by Ecological Condition, Conservation Focus Areas, and Wildlife Habitat Land Cover.

Application information

⁷ This committee in no way supercedes the regulatory authority or responsibilities of participating state and federal agencies.

All wildlife studies are to be designed in consultation with the Wildlife Advisory Committee. Surveys to be performed for all sites include:

- Identification of wetlands, including seeps, springs, and vernal pools, and perennial, intermittent, and ephemeral streams within 400 meters of areas to be disturbed during project construction.
- Radar and acoustical surveys to develop an understanding of nocturnally migrating bird and bat activity and migration characteristics. Such studies should be conducted both during spring (April through May) and fall (August through October) migration periods for a minimum of one year. Results should be related to meteorological data (wind speed, wind direction, precipitation and cloud cover) from the site and from the two nearest ASOS (Automated Surface Observing System) stations (cloud ceiling and coverage). If initial surveys suggest a moderate or high level of risk for migrating birds or bats within the proposed rotor-swept zone, at least one and potentially two additional years of surveys are likely to be required to further assess site suitability.
- Visual surveys for diurnally migrating raptors, documenting species, numbers, pathways, and flight elevation for a minimum of one spring and one fall migration period. If initial surveys suggest a moderate or high level of risk for migrating birds or bats within the proposed rotor-swept zone, at least one and potentially two additional years of surveys are likely to be required.
- Breeding bird survey of the project area for a minimum of one breeding season.

Surveys to be performed only where deemed appropriate based on initial data compilation:

- Field surveys for the presence of rare, threatened, and endangered species and associated habitats.
- Identification of suitable habitat and key corridors linking high elevation ridgeline habitat for Lynx and Pine Marten.
- Field surveys for Small-footed Bat.
- Identification of March – August foraging areas and flight paths between breeding cliff and foraging areas for any Peregrine Falcons breeding within 5 kilometers of the site.
- Mapping of beech, oak, and mountain ash occurrence within and adjacent to area to be disturbed.

- **Relative Level of Concern**

Low:

- The proposed project area includes no suitable habitat for a state or federally listed threatened or endangered species, or for species of regional conservation concern within the pertinent Bird Conservation Region as designated by the North American Bird Conservation Initiative.
- The proposed project area is entirely below 2500 feet elevation.
- The proposed project includes no area ranked as Tier 1, 2, or 3 on the current Wildlife Habitat maps of the NH Wildlife Action Plan.
- First-year on-site radar and acoustic monitoring suggest low risk for migrating birds or bats as indicated by passage rates, flight elevations, and species composition of migrants during various weather conditions.

Moderate

- The proposed project area includes no documented occurrences of state or federally listed threatened or endangered species, or of species of regional conservation concern within the pertinent Bird Conservation Region as designated by the North American Bird Conservation Initiative.

- The proposed project area is entirely below 2700 feet elevation.
- The proposed project includes no area ranked as Tier 1 or 2 on the current Wildlife Habitat maps of the NH Wildlife Action Plan.
- First-year on-site radar and acoustic monitoring suggest moderate risk for migrating birds or bats as indicated by passage rates, flight elevations, and species composition of migrants during various weather conditions.

High

- One or more documented occurrences of state or federally listed threatened or endangered species, or species of regional conservation concern within the pertinent Bird Conservation Region as designated by the North American Bird Conservation Initiative, exist for the project area.
- The proposed project includes areas above 2700 feet elevation.
- The proposed project includes areas ranked as Tier 1 or 2 on the current Wildlife Habitat maps of the NH Wildlife Action Plan.
- First-year on-site radar and acoustic monitoring suggest high risk for migrating birds or bats as indicated by passage rates, flight elevations, and species composition of migrants during various weather conditions.

APPENDIX A.6 – GUIDANCE FOR EVALUATION OF INDIVIDUAL ISSUES

ISSUE: EXISTING LAND USE AND LAND COVER

- **Definition:** “Existing land use and land cover” refers to the current condition of the site. Land use refers to the general category of use, such as urban/commercial development, residential, agriculture, forested, etc. Land cover refers primarily to the type of vegetation on undeveloped land.

- **Pertinent Existing New Hampshire Laws and Regulations**

None

- **Grounds for Concern**

As a general rule, a wide range of impacts associated with development (including affects on wildlife habitat, recreational uses and scenic quality) are likely to be less severe if they take place on land that has already been altered by human use, and will be of greatest concern in areas that are the most “natural”.

- **Assessment Guidelines**

Initial data compilation

Current land use and land cover should be determined from the 2001 New Hampshire Land Cover Assessment available from the GRANIT database maintained by the UNH Complex Systems Research Center (or more recent data if available). This information should be supplemented by preliminary on-site assessment.

Application information

No additional information is required.

- **Relative Level of Concern**

- **Low:** Land already heavily altered by human uses (e.g. developed or agricultural land).
- **Moderate:** Undeveloped forested land consisting of common second-growth forest types showing extensive evidence of past and on-going timber management.
- **High:** Undeveloped non-forested land (wetlands, natural grasslands, etc.); undeveloped forest land consisting of uncommon or noticeably mature forest types with little indication of recent timber management.

Note: Developed or agricultural land may be well-suited for smaller or “community-scale” projects but may have limited availability for commercial-scale projects. Also, agricultural land may provide important wildlife habitat, and is an important component of the cultural and aesthetic fabric of rural communities. In some landscapes development of agricultural land may be of relatively higher concern, and development of common forest types managed for timber production may be of relatively low concern.

APPENDIX A.7 – GUIDANCE FOR EVALUATION OF INDIVIDUAL ISSUES

ISSUE: EXISTING INFRASTRUCTURE

- **Definition:** “Existing infrastructure” refers to the extent to which roads and transmission lines are available in close proximity to the proposed development site.
- **Pertinent Existing New Hampshire Laws and Regulations**

Existing infrastructure is not a specific resource value that is subject to regulatory oversight. However, it is a useful guideline as to the extent to which a project will be able to utilize existing roads and transmission lines or will require new infrastructure.

- **Grounds for Concern**

Impacts associated with windpower development include not only the construction of turbine strings but also the construction of associated infrastructure. The impacts will be reduced if projects are able to utilize roads or transmission lines (or their associated corridors) that are already in existence.

- **Assessment Guidelines**

Initial data compilation

Existing roads capable of providing access to the project area, as well as the location at which the project would access the existing electrical grid, should be identified on base maps. A general layout of proposed new or upgraded access routes and transmission lines should be provided if available.

Application information

Detailed engineering plans of existing, upgraded and new infrastructure should be provided as required by current rules.

- **Relative Level of Concern**

- **Low:** Suitable road access is available in close proximity to the project area (generally less than 1 mile). New road construction is limited to turbine string corridors and short access roads connecting to the existing road system. Transmission lines can be located along new or existing roads, requiring no new powerline corridors.
- **Moderate:** Suitable road access is available to lower elevations in the proximity of the project area, though construction of new road in excess of 1 mile to the project area will be required. Most transmission lines can be located along new or existing roads, though some construction of new corridor will be required.
- **High:** Project will involve extensive construction of new access roads and transmission line corridors through currently undeveloped land.

APPENDIX A.8 – GUIDANCE FOR EVALUATION OF INDIVIDUAL ISSUES

ISSUE: RECREATIONAL USE

- **Definition:** “Recreational use” refers to all types of public recreation associated with a relatively undeveloped outdoor environment, including but not limited to hiking, camping, canoeing, motorboating, hunting, fishing, snowmobiling, cross-country and downhill skiing, and wildlife viewing.

- **Pertinent Existing New Hampshire Laws and Regulations**

Protection of recreational uses is not specifically mentioned in the RSA 162-H or the Site Evaluation Committee administrative rules. However, there is a large body of state policy which is focused on or includes consideration of the importance of outdoor recreation to the state’s economy and quality of life. The inclusion of the Director of the Division of Parks and Recreation as a member of the SEC is an indication that recreational uses should be considered during permitting decisions.

- **Grounds for Concern**

Outdoor recreation is a major contributor to both the state’s economy and its quality of life. Ridgeline windpower development may eliminate or displace recreational trails, impact the scenic quality from developed or dispersed recreational areas, and reduce opportunities for dispersed recreation (such as hunting or bushwacking) if project areas are closed to public access.

- **Assessment Guidelines**

Initial data compilation

The initial data compilation should include a discussion of the general pattern of recreational use in the area, as well as a map showing all public recreational features, areas or facilities within 1 mile of the project area, including municipal, state or national parks and forests, hiking, skiing, snowmobile and ATV trails, campgrounds, picnic areas, boat launches, wildlife viewing areas, scenic overlooks, etc.

Application information

A more detailed evaluation may be required if the project is likely to cause a significant impact on public recreational facilities or uses in proximity to the project.

- **Relative Level of Concern**

- **Low:** Recreational use within and proximate to the project area is generally dispersed and not tied to any particular feature or facility. Project will not cause undue disturbance to recreational use patterns.
- **Moderate:** Specific recreational features, areas or facilities are located within 1 mile of the project area; however, project will not cause permanent disruption of the use of these areas.
- **High:** Project will have a direct impact on the use of specific recreational features, areas or facilities. (As used here, “impact” implies a disruption, loss or reduction of the public’s ability to use the feature, area or facility in question, for example, the closure or major relocation of a recreational trail. It is not intended to consider scenic impacts, which are addressed elsewhere.)

APPENDIX A.9 – GUIDANCE FOR EVALUATION OF INDIVIDUAL ISSUES

ISSUE: VISUAL IMPACTS

- **Definition:** “Visual impacts” refers to any change in the visual character of a landscape that degrades the aesthetic quality of the landscape from one or more viewpoints. As considered here, visual impacts fall into two basic categories: 1) impacts to public recreational or scenic sites or facilities that depend on a relatively naturally-appearing landscape, and 2) impacts to towns, village centers, and residential areas.

- **Pertinent Existing New Hampshire Laws and Regulations**

NH RSA 162-H specifically recognizes aesthetic quality as a factor that must be considered in permitting of energy facilities. The third of the four criteria set forth for approval is that the site and facility “Will not have an unreasonable adverse effect on *aesthetics*, historic sites, air and water quality, the natural environment, and public health and safety.”

- **Grounds for Concern**

Undeveloped forest landscapes are an important component of both the state’s economy (as they form the backdrop for outdoor recreation) and its quality of life (especially for rural communities). While there are diverse opinions on the aesthetic qualities of modern windpower facilities, they can be a dominant and potentially discordant element within undeveloped forested landscapes.

- **Assessment Guidelines**

Initial data compilation

Detailed visual simulations are not required for the initial data compilation. The assessment should include a map extending at least 10 miles in every direction from the turbine strings which includes:

- The general location of proposed project.
- Boundaries showing Foreground (<1/2 mile), Midground (1/2 to 4 miles) and Background (4 to 10 miles) zones from the proposed location of turbine strings.
- Areas, from which the turbines will be potentially visible, based on standard topographic viewshed analysis.
- The location of any sites or facilities from which the project will be visible, and for which visual impact may be considered a concern. These would include but not be limited to recreational trails; town, state or national parks or forests; campgrounds and picnic areas; scenic viewpoints; lakes, ponds and rivers that receive regular recreation use; scenic roads, town and village centers, and residential areas⁸.

The assessment should include a general description of those features and areas from which the project will be most prominently visible and describe the general visual context in which the project will be seen from these features and areas. Photographs of the project site from selected viewpoints that will assist with the assessment should also be included.

⁸ Mapping of all residential areas is not likely to be feasible. However, USGS 1:24000 quads include most structures, though they may not be up to date and do not specifically distinguish residences from other structures. However, if these maps are used as a base map, they will provide a general indication of residential patterns in the area.

Application information

The final application should include a detailed visual assessment based on professionally-accepted standards of landscape architecture. The assessment should include photosimulations or other representations that show the appearance of the project from major vantage points, including visually sensitive features from which the project will be prominently visible.

- **Relative Level of Concern**

Note: Evaluation of visual impacts is an inherently subjective process and the guidelines below are necessarily general in nature. Several tools have been developed by landscape architects that provide relatively objective standards for assessing the degree to which a proposed modification to a landscape can be considered a significant impact. These systems consider such features as the scale and shape of the project, its contrast with the surrounding landscape, nature of the landscape in which the project lies and the visibility of the project (considering both viewing distance and number of potential viewers). Most prominent is the Visual Management System developed by the U.S. Forest Service. The Maine Department of Environmental Protection has also developed a standard operating procedure for evaluating visual impacts.

- **Low:** Project would not be a prominent feature from any visually sensitive viewpoint. Where visible, it is either seen in the background and is not a dominant feature of the landscape, or is viewed in the context of other human development and landscape modifications.
- **Moderate:** Project may be visually prominent feature from one or more visually sensitive viewpoints but is not an incongruous element in an otherwise relatively naturally-appearing landscape.
- **High:** Project is a visually prominent feature within the Fore- or Midground of one or more visually sensitive viewpoints and may be considered an incongruous element within an otherwise relatively naturally-appearing landscape.

APPENDIX A.10 – GUIDANCE FOR EVALUATION OF INDIVIDUAL ISSUES

ISSUE: CULTURAL, HISTORIC AND ARCHAEOLOGICAL FEATURES

- **Definition:** NH RSA 227-C defines “historic property” as “any building, structure, object, district, area or site that is significant in the history, architecture, archeology or culture of this state, its communities, or the nation.” “Historic resource” has a somewhat broader definition and includes historic properties on or eligible for the National Register of Historic Places, objects associated with historic properties that enhance an understanding and appreciation of New Hampshire history, and skeletal remains (human and animal).
- **Pertinent Existing New Hampshire Laws and Regulations**

NH RSA 162-H specifically recognizes historic sites as a factor that must be considered in permitting of energy facilities. The third of the four criteria set forth for approval is that the site and facility “Will not have an unreasonable adverse effect on aesthetics, *historic sites*, air and water quality, the natural environment, and public health and safety.”

All federally funded, licensed, or assisted projects in New Hampshire are subject to the review requirements of Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470), implemented by the procedures of the federal Advisory Council on Historic Preservation (ACHP), Protection of Historic Properties (36 CFR Part 800). See www2.cr.nps.gov/laws/NHPA1966.htm and www.achp.gov for more information.

Federal agencies or their legal designees are required to take into account the possible impacts of their projects on historical resources, and to submit proposed projects to the Director/State Historic Preservation Officer (SHPO) of the Division of Historical Resources (NHDHR), for a determination of potential effects on properties that are listed, or are eligible for listing, in the National Register of Historic Places.

All New Hampshire state-licensed, assisted, or contracted projects, activities, and programs are subject to the review requirements of a similar state law, RSA 227-C:9, as implemented by state administrative rules. State agencies, departments, commissions, and institutions are required to submit such undertakings to the SHPO for a determination of whether such proposed actions are located in, or may affect, historical resources.

- **Grounds for Concern**

Cultural, historic and archaeological sites contribute to an understanding and appreciation of the process by which our current society and land use patterns have developed, both prior to and subsequent to European colonization. Sites of Native American use as well as sites and features from early colonial times may be unrecorded, dispersed throughout the landscape, and hidden or obscured by forest growth. Because use of ridgelines by both Native Americans and early settlers was generally intermittent and transient, areas or features of significance are most likely to be affected by access roads or transmission line corridors. Development of these corridors may disturb or destroy sites that can provide important scientific or cultural information.

- **Assessment Guidelines⁹**

- **Initial data compilation**

- Initial data compilation shall consist of the following:

- - A search of NHDHR records for recorded archaeological sites in the project area.
 - Consultation with cultural groups including local and regional Native American organizations.
 - A file search to locate properties listed on or eligible for the National Register of Historic Places (NRHP) within 5 miles of the project area.

- **Application information**

- In consultation with the New Hampshire Division of Historic Resource, a Phase 1a archaeological survey shall be conducted by a qualified archaeological consultant, including:

- - Field investigation of all areas of potential ground disturbing activity.
 - Based on the results of these investigations, shovel testing and analysis may be required at identified sensitive areas.

- A viewshed analysis will also be conducted to determine potential effects on historic properties, consisting of:

- - Preparation of an NHDHR Project Area Form to provide historical and architectural context for the project, in collaboration with towns in the project area.
 - A viewshed analysis for a 3-mile radius around the project area to indicate what areas would be within the viewshed of the project.
 - Identification and mapping of properties listed on or eligible for the NRHP that lies within the mapped viewshed.
 - A field survey to locate, record and evaluate the National Register eligibility of any other properties over 50 years of age within the 3-mile viewshed.
 - Providing NHDHR with photographs toward the project area from properties that are 1) within the 3-mile radius and 2) are listed on or eligible for the NRHP, or which have been identified through survey and evaluation as meeting the eligibility requirements for the National or State Registers.
 - Based on review of photographs by NHDHR, photosimulations may be required from properties identified as having a potential visual impact.
 - Providing NHDHR with photographs toward the project area from an example property (or properties that are listed on or eligible for the NRHP and which lie 3 to 5 miles from the project area, in order to provide NHDHR with an idea of potential viewshed impacts from that range.

- **Relative Level of Concern**

- - **Low:** There are no known historic resources in the project area (either in existing records or as determined from field survey), and no properties listed on or eligible for the National Register of Historic Places within the 3-mile project viewshed.
 - **Moderate:** There are known historic resources within the immediate project area, but they will not be impacted or disturbed by project activities; *or* there are properties listed on or eligible for

⁹ These guidelines are adapted from the “Memorandum of Understanding on Historic/Cultural Work Scope – April 2006 – New Hampshire Department of Historical Resources & Lempster Wind LLC” posted on the SEC web site as part of the Lempster project application.

the NRHP within the 3-mile project viewshed, but project development will not have a significant negative impact on the view from these properties.

- **High:** The project has the potential to directly impact or disturb known historic resources; *or* the project has the potential to have a significant negative impact on the view from properties listed on or eligible for the NRHP.

APPENDIX A.11 – GUIDANCE FOR EVALUATION OF INDIVIDUAL ISSUES

ISSUE: NOISE

- **Definition:** “Noise” refers to sound generated by the operation of a project that may have a negative impact on public health, safety, or quality of life for people who live, work, or recreate in the vicinity of the project, or on wildlife use of habitat in the vicinity of the project.
- **Pertinent Existing New Hampshire Laws and Regulations**

Regulation of noise levels in New Hampshire falls within the jurisdiction of individual municipalities (NH RSA 31:39). However, NH RSA 162-H requires the SEC to find that the project “Will not have an unreasonable adverse effect on aesthetics, historic sites, air and water quality, the natural environment, and public health and safety.” In addition, the SEC’s draft rules specifically require that applications address the issue of noise.

- **Grounds for Concern**

Wind turbines generate complex acoustic emissions. Several factors affect the level and spatial pattern of these emissions, including but not limited to atmospheric conditions, topography and synchronous arrival at a given location of sound waves from multiple turbines. The issue is technically complex and involves considerable uncertainty at the present time.

- **Assessment Guidelines/Relative Level of Concern**

There was no consensus within the working group as to whether noise levels or distance from source should be the basis for developing assessment guidelines or evaluating the relative level of concern. The group does not have sufficient expertise to resolve this issue.

APPENDIX A.12 – GUIDANCE FOR EVALUATION OF INDIVIDUAL ISSUES

ISSUE: OTHER “NUISANCE” ISSUES

- **Definition:** “Nuisance issues” refers to factors related to the construction or operation of a project that may have a negative impact on public health or safety or the quality of life of local residents and others in the vicinity of the project. These include but are not limited to shadow flicker, electromagnetic interference, ice or blade throw, dust, odor, traffic and the generation and disposal of waste materials.

- **Pertinent Existing New Hampshire Laws and Regulations**

NH RSA 162-H requires the SEC to find that the project “Will not have an unreasonable adverse effect on aesthetics, historic sites, air and water quality, the natural environment, and *public health and safety*.” In addition, the SEC’s draft rules require the application to address these issues, either by specific listing (waste disposal, odor) or under the general heading of “public health and safety”.

- **Grounds for Concern**

These issues are primarily of concern to residents and users of developed areas in relatively close proximity to the project. Some of these issues (such as traffic and waste disposal) are common to all major development projects and are generally well-addressed in the existing permitting process. Other issues (such as shadow flicker and ice throw) are unique to windpower projects and an understanding of their potential to affect public health or safety is still emerging.

- **Assessment Guidelines**

Initial data compilation

The initial data compilation should map residential areas and other areas or facilities that receive regular use (commercial facilities, developed recreational areas, etc.) that are in close enough proximity to the project to be affected by one or more of these issues, and generally describe the level of impact that the project may cause to these areas.

Application information

Depending on the specific issues and the concerns that they present, a detailed discussion of the issue, its potential to impact local residents and users of the area, and steps to address or mitigate the impact, may be required. Detailed application requirements should be developed through consultation with appropriate state regulatory agencies.

- **Relative Level of Concern**

- **Low:** Project is sufficiently removed from residential areas and other areas of regular use that no nuisance is expected.
- **Moderate:** Project may potentially cause some nuisance to local residents or other users of the area, but these impacts are either temporary (i.e., associated with construction), mitigatable, or of limited concern.
- **High:** Project may potentially cause long-lasting and unmitigatable nuisance to local residents or other users of the area.

APPENDIX A.13 – GUIDANCE FOR EVALUATION OF INDIVIDUAL ISSUES

ISSUE: CONSERVATION STATUS OF LAND

- **Definition:** “Conservation status of land” refers to and legally recognized restriction, goal, policy or plan intended to conserve natural resource values on a particular tract or tracts of land and which may prohibit or conflict with windpower development.
- **Pertinent Existing New Hampshire Laws and Regulations**

Some potential sites are legally unavailable for development because of deed restrictions (conservation easements) or statutes (Wilderness areas). Other sites lie on publicly-owned land and may legally be available for development, but such development may conflict with the goals of ownership as defined in statute or in management policies and plans developed by the managing entity. For example, NH RSA 227:H (Public Forest Lands) states, “It is hereby recognized and declared that state-owned reservations contribute to the conservation of natural resources and distinctive quality of life in the state. The public welfare of this state is served by the prudent acquisition and management of reservations to provide forest benefits and for the purposes of demonstrating sound forestry principles, protecting habitat for plants, animals, and other organisms, conserving forested watersheds, preserving areas of rare and exemplary natural beauty and ecological value, and providing for perpetual public access and use.” The statute authorizes the state to acquire and manage lands for these purposes. Other state and federal resource agencies that own and manage land have similar authorizing statutes. It is likely that development on public lands would require permitting by the management agency as well as the SEC or municipality.

- **Grounds for Concern**

Determining the legal availability of land being considered for development is an obvious early step that would be undertaken by developers. Most windpower projects are proposed for private land where this issue is not relevant. This issue will be relevant for projects proposed for public conservation land, where development has the potential to conflict with the conservation goals of public ownership, as well as with existing management plans and policies and public use of these lands.

- **Assessment Guidelines**

Initial data compilation

For sites on public land, the managing agency should be consulted so that a determination can be made as to whether windpower development is consistent with the ownership goals and management plans for the tract under consideration.

Application information

Specific requirements shall be determined by the managing agency.

- **Relative Level of Concern**

- **Low:** Unrestricted private land; developed public land (e.g., landfills, utility facilities).
- **Moderate:** Undeveloped public land where windpower development would not conflict with ownership purposes or management plans and policies.

- **High:** Undeveloped public land specifically owned and managed for the conservation of natural resource values.

APPENDIX A.14 – GUIDANCE FOR EVALUATION OF INDIVIDUAL ISSUES

ISSUE: REGIONAL CONSERVATION PLANS

- **Definition:** “Regional Conservation Plans” refers to the results of any planning process, whether conducted by governmental agency, non-governmental organization or multi-stakeholder group that identifies areas or features as priorities for conservation. The state Wildlife Action Plan and Statewide Comprehensive Outdoor Recreation Plan are examples of such process; others include The Nature Conservancy’s ecoregional assessments, the Audubon Society’s Important Bird Areas program, and the Quabbin-to-Cardigan planning process.

- **Pertinent Existing New Hampshire Laws and Regulations**

These plans are intended to provide guidance to local- and state-based land use planning and open space conservation efforts, but the specific results generally have no legal recognition or status. Plans developed by public agencies (such as the Wildlife Action Plan) may have some level of legal recognition in statute, rule, or policy.

- **Grounds for Concern**

Extensive efforts have been undertaken by both public agencies and non-profit organizations to assess the state’s landscape in order to develop priorities for conservation of the most important features or areas. These efforts can provide important information about resource values that might be adversely affected by development. Proposed development of areas or features identified as conservation priorities by these plans may create conflicts with existing state resource conservation policies and may lead to increased concern among stakeholders with an interest in these conservation priorities.

- **Assessment Guidelines**

Initial data compilation

State resource agencies and major non-profit organizations should be contacted for information regarding regional conservation planning efforts and how the proposed project relates to the results of these efforts.

Application information

Additional information may be required if the project has the potential to conflict with conservation plans developed by public agencies as part of a legally recognized public policy. The specific requirements shall be determined by the relevant agency.

- **Relative Level of Concern**

- **Low:** Proposed project lies outside priority areas identified in existing regional conservation plans.
- **Moderate:** Proposed project lies within a priority area identified in existing regional conservation plans, but would not have a significant negative impact on the features or values that were the basis for the designation of the area.
- **High:** Proposed project lies within a priority area identified in existing regional conservation plans and could have a significant negative impact on the features or values that were the basis for the designation of the area.

APPENDIX A.15 – GUIDANCE FOR EVALUATION OF INDIVIDUAL ISSUES

ISSUE: MUNICIPAL ISSUES

- **Definition:** “Municipal issues” include a wide range of issues including: 1) the fit between the proposed project and local land use planning ordinances, goals, policies and concerns; 2) property tax implications for the municipality; 3) the affect on energy costs and availability to municipality; 4) the interest of municipality in becoming involved in the project; and 5) local opinion and reaction to the project.

- **Pertinent Existing New Hampshire Laws and Regulations**

The role of municipalities in wind energy siting is outlined in RSA 162-H. Briefly, municipalities have the ability to request copies of long-range bulk power facility plans from utilities and are required to be given notice and copies of applications that are filed with the siting committee. Municipalities also have the ability to petition the siting committee to take jurisdiction over projects below the 30MW threshold. The siting committee is required to hold at least one public hearing in each county where the proposed facility would be located, and at the host municipality’s request, the applicant is required to hold informational meetings to inform the public about the proposed project. Most importantly, for the siting committee to approve an application, it must make four specific findings, one of which is that the “site and facility will not unduly interfere with the orderly development of the region with due consideration to views of municipal and regional planning committees and municipal governing bodies.”

- **Grounds for Concern**

Commercial windpower projects may be dominant features of, and create significant changes to, municipal landscapes (natural, social and economic), especially in small rural communities. These changes may be both positive and negative. Among the major concerns are aesthetic impacts to relatively undeveloped rural landscapes, impacts to local property values and tax bases, and impacts to the quality of life (due to noise or other nuisance issues) in residential areas and community centers.

- **Assessment Guidelines**

Initial data compilation

- Pre-site selection consultation with the municipal governing body, land use boards, and other involved municipal officials is encouraged.
- The master plan, ordinances, bylaws, and regulations of each municipality in which a proposed project site or alternative site would be located should be reviewed.
- A preliminary assessment of the public reaction to the project should be made.

Application information

- The tax status and history of the proposed location should be documented, along with the values of surrounding properties and the potential effect of the project on those values.
- The municipality’s energy costs, resources and needs should be evaluated to determine: 1) whether the project would help reduce energy costs to the municipality and its residents, and 2) whether the project will make energy more readily available to facilitate future growth that the municipality would like to encourage.

- **Relative Level of Concern**

- **Low:** Local regulations specifically permit such projects in the area being considered, project is in harmony with local land use and development goals, project will have a positive tax impact, will improve local energy costs and availability, and the general reception to the project by municipal government is positive.
- **Moderate:** Local regulations do not address such projects specifically or require a variance, waiver, special use permit or other process, the project is in harmony with some but not all local land use and development goals, the project may have mixed or neutral tax impacts, the project will have a negligible effect upon energy cost or availability, and/or the reception of municipal government and citizens is difficult to anticipate.
- **High:** Local regulations restrict or prohibit such projects, the project will conflict with several local land uses and development goals, the project will have a more negative than positive tax impact, the project will not lower energy costs or increase availability to the municipality, and/or the reception of municipal government and public is likely to be negative.