4.0 CONFORMANCE WITH LURC APPROVAL CRITERIA AND THE LURC COMPREHENSIVE LAND USE PLAN

To satisfy the criteria for D-PD rezoning, an applicant must demonstrate that the proposed project conforms to the objectives and policies of the CLUP as well as the standards set forth in 12 MRSA § 685-B(4), and the LURC Regulations (10.21(G)(8)).

The Kibby Wind Power Project will meet all applicable statutory and regulatory criteria due to careful site selection, detailed environmental analyses, and extensive consultation with scientific experts and regulatory authorities.

4.1 Consistency with the Comprehensive Land Use Plan

The CLUP expressly states that "Maine's wind resource is considerable, and much of it occurs along high mountain tops and ridges within the jurisdiction. These winds have the potential to power wind energy technologies that appear to compete with more traditional energy sources" (CLUP Ch. 3, p. 40). In addition, the CLUP acknowledges that "as a renewable form of energy, wind power offers an attractive alternative to the burning of fossil fuels" (CLUP, Ch. 3, p. 40). Clearly then, the construction of wind power facilities has been anticipated as a reasonable use of certain resource (wind)-laden regions within the unorganized territories of Maine.

The CLUP tasks the Commission with reconciling the need to protect the natural environment from degradation with the need for reasonable new economic growth and development, particularly natural resource-based development (CLUP, Ch. 4, p. 97). While some environmental impact is inevitable with any new construction, the economic and environmental advantages of the Kibby Wind Power Project are substantial. These include: new jobs, particularly in the field of construction; an increased local tax base; a diversified energy base; and, a supply of clean renewable energy to offset the burning of fossil fuels, and associated reductions in emissions of air pollutants and greenhouse gases.

The CLUP delineates four principal values most important to the jurisdiction. Those are:

- Economic value based on maintenance of its forest resources;
- Diverse and abundant recreational opportunities;
- Diverse, abundant and unique high-value natural resources, including mountain areas; and
- Natural character values, including vast undeveloped forested land (CLUP Ch. 4, p. 114).

As the following sections demonstrate, the Kibby Wind Power Project will help maintain these values through minimal impact upon the working forestland, provisions for the maintenance of and even the possible enhancement of abundant recreational opportunities in the region, and the mitigation of the effects of the project on the high mountain areas through proper planning, engineering and construction techniques.

Approval of the Kibby Wind Power Project is a step forward in reaching the Commission's goal of balancing natural resource-based development with environmental sensitivity. This is demonstrated through the project's compliance with the CLUP's guiding principals set forth in Chapter 4, and the additional specific goals set forth in Chapter 5 of the Comprehensive Land Use Plan.

4.1.1 Principal Values

4.1.1.1 Economic Value of the Jurisdiction for Fiber and Food Production, Particularly the Tradition of a Working Forest, Largely on Private Lands

The Kibby Wind Power Project is consistent with, and in fact will facilitate, the jurisdiction's principal value of ensuring economic value based on maintenance of forest resources. As noted in Section 4.1.1.5, the project will not interfere with timber and wood fiber production industries in the region. Out of the 2,908 acres proposed for the D-PD zone, less than 55 acres of permanent disturbance will be associated with wind turbines and roads between the turbines, leaving the vast majority of the D-PD zone available for commercial harvesting or other forest management activities. In addition, the project will have minimal impact on the area outside the D-PD zone, where forest management activities may continue without interruption. Moreover, as part of this project, TransCanada will improve and upgrade 18.8 miles of the existing logging roads in the area and will also construct approximately 17.4 miles of new roads. These improvements will facilitate existing and potential future logging and forest management activities in the region. The upgrades to existing logging roads and construction of new roads that will occur as part of the Kibby Wind Power Project will entail highly specialized construction techniques not typically utilized in more common road construction, which will have positive environmental benefits.

4.1.1.2 Diverse and Abundant Recreational Opportunities, Particularly for Primitive Purposes

Through careful siting and planning, the Kibby Wind Power Project will contribute to the jurisdiction's goal of ensuring diverse and abundant recreational opportunities. As discussed in Section 4.2.1.8, the project is not located in a unique or primitive recreational area and is well buffered from federal, state or locally designated recreational areas. Although most formalized recreational opportunities occur elsewhere, including along the Appalachian Trail and Flagstaff Lake to the south, the project area does offer recreational opportunities. Based on data collected both in connection with the earlier Kenetech application as well as by TransCanada in 2006, it appears that the majority of recreational use is focused on hunting, fishing, snowmobiling and ATV use. The results of recreation contact surveys and other interviews with businesses and individuals in the area suggest that the project is not expected to interfere with those existing recreational uses and, in fact, may facilitate recreational opportunities through improved access and benefits associated with utility corridor development. In addition, the presence of the wind turbines and a desire by some members of the public to view them may

result in a new recreational opportunity for the area. Thus, the project is not only consistent with existing recreational uses of the area, but will contribute to new recreational opportunities, thereby satisfying the jurisdiction's principal value of ensuring diverse and abundant recreational opportunities.

4.1.1.3 Diverse, Abundant and Unique High-Value Natural Resources and Features, Including Lakes, Rivers and Other Water Resources, Fish and Wildlife Resources, Ecological Values, Scenic and Cultural Resources, Coastal Islands, and Mountain Areas Other Geologic Resources

As discussed in Section 4.1.2, and throughout this application, TransCanada has undertaken extensive surveys to identify sensitive natural resources and features within and around the project area and has designed the project to minimize potential impacts to these resources and features. Unlike other types of activities that might otherwise occur in the region, the Kibby Wind Power Project will be subject to extensive regulatory and public scrutiny and will incorporate highly specialized construction techniques to ensure that these resources are protected. The careful siting and design of the project will ensure consistency with this important core value.

4.1.1.4 Natural Character Values, Which Include the Uniqueness of a Vast Forested Area that is Largely Undeveloped and Remote from Population Centers

The CLUP recognizes that this principal value is connected to the recreational opportunities, associated with a particular location (CLUP Ch. 4, p. 114), and as noted above, the project is consistent with and will facilitate existing and new recreational uses in the area. Unlike other areas of the jurisdiction that are distant from major roads and other development, the project is located just 1 mile off of Route 27, which, as discussed in Section 9.7.1, is a major travel route in the area. In addition, Gold Brook Road, a private logging road that serves the project area, is also a well-traveled road for both commercial and non-commercial vehicles because it provides access to lands that are actively managed for timber harvesting and also connects Route 27 to Spencer Road to the north. As discussed in Section 9.4, Gold Brook Road is actively used for commercial purposes during the week and experiences relatively high volumes of non-commercial traffic during the weekends, particularly during the fall hunting season. As also noted in Section 9.4, a significant percentage of the non-commercial users of Gold Brook Road are traveling through the project area. Thus, unlike more primitive locations within the jurisdiction that are relatively undisturbed, the project area is proximate to Route 27 and is directly accessed by Gold Brook Road, both of which experience significant volumes of traffic and related activity.

While remoteness and the relative absence of development is a core value of the jurisdiction, the CLUP recognizes the need to locate larger planned developments in areas that are not adjacent to existing developments. Indeed, the very purpose of the planned development

subdistrict is to allow for well-planned developments to be located away from existing developed areas and as such, the adjacency requirements do not apply to D-PD subdistricts (Chapter 10, Section 21.(G)(D-PD)(1)). Instead, the applicant must demonstrate that the site is the best reasonably available for the proposed use and that the goals and policies of the CLUP are served (Chapter 10, Section 21.(G)(D-PD)(1)). As discussed in Section 4.3.1.3, the project satisfies the best available site requirement. Moreover, it is particularly well-sited because it is located away from densely developed areas and as a result does not adversely impact residential uses or views. At the same time, it is located proximate to Route 27, one of the state's major roads, and is accessed by Gold Brook Road, which serves not only commercial forestry needs but is a major travel way for connecting Route 27 with Spencer Road to the north, which in turn connects to Route 201 near Jackman, to the northeast. As a result, the project is also consistent with the jurisdiction's goal of protecting remote areas from inappropriate development.

4.1.2 Natural Resources Goals

4.1.2.1 Air Resources Goal

Protect and enhance the quality of air resources throughout the jurisdiction.

Unlike almost any other type of development, the Kibby Wind Power Project will not only protect but will enhance air quality by displacing emissions from fossil fuel-fired power plants totaling approximately 200,000 tons of CO_2 each year, the equivalent of planting 36 square miles of forestland, or removing approximately 35,000 cars from the road, as well as 90 tons per year of NO_x, a precursor to acid rain and ground-level ozone (smog), and 350 tons per year of SO_2, a acid rain precursor (see Section 6 for more detail).

4.1.2.2 Coastal Resources Goal

Protect and conserve the natural and cultural resources of coastal islands.

This project does not impact the coastal islands of Maine.

4.1.2.3 Cultural, Archaeological and Historical Resources Goal

Protect archaeological and historical resources of cultural significance.

Cultural resources surveys completed for the project site have concluded that there are no known unique, rare, or representative cultural resources within the project area. A letter from the MHPC (Appendix 9-D) concurs that no further archaeological survey work is required for the proposed wind turbine and associated access road areas. Because the site is not proximate to structures, including historical structures, no locations have been identified as key visual receptors from a cultural resources standpoint (see Section 9.5 for more detail).

4.1.2.4 Energy Resources Goal

Provide for the environmentally sound and socially beneficial utilization of indigenous energy resources where there are not overriding, conflicting public values which require protection.

Global warming poses a critical threat to our planet's wellbeing. There is growing scientific consensus that most of the warming observed over the last 50 years is attributable to increased amounts of CO_2 and other greenhouse gas concentrations in the atmosphere, due in large measure to the burning of fossil fuels. The increasingly obvious effects of global warming illustrate the need for clean, renewable and sustainable energy resources.

The Kibby Wind Power Project exemplifies the use of indigenous renewable resources by utilizing wind energy in a region where that resource is plentiful. The project will generate 357 million kWh of electricity per year, enough to power 50,000 homes. This use of an indigenous energy resource satisfies the local, regional and global need to reduce fossil fuel emissions and meets federal, state and Commission policy objectives. See Section 2.1 for a more complete discussion of the need for the project.

In acknowledgement of the environmentally sensitive nature of the area proposed for development, TransCanada has conducted extensive engineering reconnaissance, surveys and data analysis to site this project appropriately. Of the seven named and several unnamed potential ridgelines approved by LURC for development in the Kenetech project, only two were selected as appropriate for development of the Kibby Wind Power Project (four of the original Kenetech ridgelines were studied in detail by TransCanada; two were rejected based on potentially greater environmental impacts due to the more challenging terrain, as discussed in greater detail in Section 2.2). Site-specific construction techniques are planned, as detailed in Section 2.5, in order to ensure the protection of the most sensitive natural characteristics of this area.

4.1.2.5 Forest Resources Goal

Conserve, protect and enhance the forest resources which are essential to the economy of the state as well as to the jurisdiction.

The Kibby Wind Power Project will not interfere with the timber and wood fiber production industries in the region. Out of the 2,908 acres of easement area, less than 55 acres of it will be developed with wind turbines and roads between the turbines, leaving most of the entire optioned area available for commercial harvesting or other forest management activities. Moreover, the project will not adversely impact forest resources outside the D-PD zone. Existing land management practices may continue unimpeded.

In addition, wind power development will help reduce harmful emissions from fossil fuel-fired power plants in and upwind of the region, which will lead to increased forest health and productivity, thus helping to preserve one of the LURC region’s most important industries.

4.1.2.6 Geologic Resources Goal

Conserve soil and geological resources by controlling erosion and by protecting areas of significance.

Through an extensive field program, and in consultation with the Maine State Soil Scientist, TransCanada completed a Class C Medium High-Intensity Soil Survey for the Kibby Wind Power Project. The conclusion of that survey is that the area can support the project through avoidance to the extent possible of the most vulnerable areas (steep slopes and hydric soils) and with the incorporation of appropriate soil erosion control methods and procedures in place during construction. See Section 5.2 for the details of this survey and analysis.

Drainage and erosion control have been carefully incorporated into the access road design, in consideration of the mountain terrain and typical winter snow and spring melt conditions. The project team has worked extensively with state agency representatives including the Maine State Soil Scientist to review and refine design measures appropriate for maintaining stability and hydrologic flow. The resulting construction measures are proposed for the project, as discussed in greater detail in Section 2.4.

The preliminary design for the stormwater management during operation has been based on:

- DEP's Chapter 500 Rules, Stormwater Management, Revised November 16, 2005 and December 7, 2006.
- DEP's Stormwater Management for Maine, Volume I – Stormwater Management Manual, January 2006.
- State of Maine, DEP, Stormwater Management for Maine, Volume III – BMPs Technical Design Manual, January 2006.
- State of Maine, DEP, Erosion and Sediment Control BMP Manual, March 2003.
- Maine Land Use Regulation Commission, Chapter 10 of the Commission's Rules and Standards, November 7, 2005.

With these construction techniques and operational stormwater management plans in place, soil and geologic resources will be protected.

4.1.2.7 Mountain Resources Goal

Conserve and protect the values of high mountain areas from undue adverse impacts.

The mountainous regions of western Maine possess unique vegetation, geology, slopes, soils and climate characteristics, as well as distinctive scenic values and recreational opportunities. Protection of these traits is a primary goal of the developers of the Kibby Wind Power Project, which is why TransCanada has conducted extensive studies of the resources at the proposed site since 2005. These studies have been completed in order to optimize the location and

design of the project to account for the slopes, soils and wildlife habitats (among other considerations) that exist in this part of the Boundary Mountains. For example, aerial flyover technology was used to topographically map the site to 5-foot contours; engineers walked the site and corridors to observe the pertinent and unique environmental features; Class C soils mapping has been completed along the ridgelines; significant design consultation has been undertaken to ensure necessary measures can be taken at turbine foundations and on roadways to help maintain natural drainage paths. In short, despite the fact that this very site was already approved by LURC for a much larger wind power project in 1995, extensive studies, surveys and analyses have been undertaken to ensure maximum possible protection of the mountain resources.

The data submitted within this application demonstrate that the site has the overall capacity to accept the proposed development without undue adverse impact on existing natural resources, as further discussed in Section 4.3.1.2.

4.1.2.8 Recreational Resources Goal

Conserve and protect the natural and recreational features of the area.

The wind turbine and utility line placements will be integrated into the existing landscape without degrading the current recreational land uses. Any impact on the natural environment will be kept to the most minimal extent practicable. See Section 7 for more detail on natural resource impacts as well as mitigation.

Not only will the utilization of clean renewable energy help protect the overall health of the environment, both locally and globally, but development of the project will not interfere with the public's ability to utilize the area for recreational purposes.

As discussed in Section 9.4, TransCanada conducted a recreation survey to understand better the extent and types of recreation afforded by the project area and the region. While the project site is well buffered from federal, state or locally designated recreation facilities, and most formalized recreational opportunities are well removed from the project site, the project area does offer recreational opportunities, including hunting, fishing, and snowmobiling. By maintaining the landowner's open access policy in the optioned area, the project will impose no restrictions on these activities. In fact, approximately 17.4 miles of new roads will be constructed in association with this project, as well as new corridors for utility lines. These areas will improve access and increase recreational opportunities for hunters, snowmobilers, hikers and ATV-riders, who constitute a large number of the recreational users in this region.

The majority of recreational users who responded to the survey indicated that they anticipate the proposed project would have either a positive impact or no impact on their recreation experience in that area. In addition, close to 90 percent of respondents who indicated that they were familiar with wind power projects stated they anticipated either no impact or a positive

impact of the project on recreational opportunities. Section 9.4 provides additional detail regarding this survey.

4.1.2.9 Wetland Resources Goal

Conserve and protect the aesthetic, ecological, recreational, scientific, cultural and economic values of wetland resources.

The project has been carefully designed to have minimal impact on wetland resources. Extensive wetland, vernal pool, and stream delineation and mapping surveys were conducted during the summer and autumn of 2006. Survey results, including delineation methodologies and boundaries have been confirmed by agency staff from the LURC, USACE and the Maine State Soil Scientist during field visits conducted following completion of survey activities.

Results of the vernal pool, wetlands and stream surveys were used to modify preliminary project plans to avoid or minimize impacts to these resource areas wherever practicable. As a result, no direct impacts to vernal pools identified within the project area will result from construction of the project. Similarly, turbine pads and the substation and control house structures were located to avoid direct impacts to wetlands. Collector lines were sited to avoid wetlands wherever possible, however some cutting of vegetation in forested wetlands and at stream crossings will be necessary for the stringing of the collector lines, resulting in permanent alteration of these areas. Temporary impacts to wetlands will result from construction of the wind turbines and collector lines; however, appropriate mitigation measures will be implemented to limit such impacts. The primary direct, permanent impacts to wetland areas will result from new access road construction and upgrades to existing access roads. Use of existing roads is an important tool for minimizing overall impacts and some impacts to adjacent wetlands along existing roads is unavoidable and minimizes overall environmental impacts. Where wetland areas along these roadways could not be avoided, TransCanada's engineers have incorporated appropriate design features to ensure the continued hydrological viability of impacted wetland and stream areas as well as limit the potential for adverse impacts associated with stormwater runoff from road surfaces as detailed further in Section 2.4.3.2. See Section 8.5 for more detail on wetland impacts.

4.1.2.10 Wildlife Resources Goal

Conserve and protect the aesthetic, ecological, recreation, scientific, cultural and economic values of wildlife and fisheries resources.

While the project area does include some unusual habitats and several species adapted to those habitats, the project will affect only a small area relative to the amount of available habitat that will remain unaltered, providing adequate habitat for displaced wildlife. Temporary and permanent habitat loss will occur from construction of the project. However, project impacts associated with collision mortality and habitat loss are not expected to significantly impact the existing communities when considered on a landscape scale. As it is proposed, the project is

expected to have no undue adverse impact on local wildlife and fisheries and their preferred habitats, as regulated under Natural Features by LURC (Chapter 10.25, E, 2, a).

Because the project area is mountainous, with relatively high elevations, and the climate considerably cooler than most of the state, several rare species of wildlife may inhabit the project area. Through consultation with MDIFW and USFWS, surveys have been undertaken by TransCanada to provide additional information to the agencies on Canada lynx, rare raptors, rare small mammal habitat, and Bicknell's thrush in the project area. No evidence of the presence of Canada lynx or of nests of protected raptor species has been noted on the site. Habitat for protected rare small mammal species, where present, has been avoided by the project. It has also been determined that suitable habitat for Bicknell's thrush will not be impacted by the project. These studies are described further in Sections 7.4 and 7.6.

Identification of avian usage of the wind power project area has been the subject of considerable effort by the TransCanada team. Building on the earlier work done by Kenetech in 1992 and 1993, and conducted in consultation with the relevant resource agencies and stakeholder groups, TransCanada's consultants have completed an additional full year of avian and bat surveys. Specifically, TransCanada's consultants have completed:

- Fall 2005 and spring 2006 nighttime migration (bird and bat) radar surveys;
- Fall 2005 and spring 2006 morning migrant surveys;
- Fall 2005 and spring 2006 daytime migration surveys;
- Spring 2006 breeding bird surveys (with special focus on the Bicknell's thrush); and
- Spring 2006 and fall 2006 bat surveys.

Potential impacts to avian species include direct habitat loss as well as the potential for injury or mortality from collisions with the turbine structures. However, the avian studies did not identify passage rate or flight height characteristics that would suggest that unusually high mortality rates would be expected. Given the relatively small area that the project encompasses within the broader region, the impacts of the project on migrating avian species would be expected to be insignificant.

Although most studies of the potential wildlife impacts of wind power facilities have focused on collisions of birds with turbines, bats are also vulnerable to collisions with wind turbines. TransCanada's bat surveys have found very low usage of the project area by bats; therefore, no significant impact to bat species is expected to occur.

Finally, TransCanada will continue to work with the appropriate natural resource agencies to design and implement post-operational monitoring studies, as discussed in Section 2.6.

4.1.2.11 Scenic Resources Goal

Protect scenic character and natural values by fitting proposed land use activities harmoniously into the natural environment and by minimizing adverse aesthetic effects on existing uses, scenic beauty and natural and cultural resources.

A comprehensive visual impact analysis of the project was undertaken (see Section 9.6). From a visual point of view, Kibby Mountain and Kibby Range are relatively indistinct horizontal ridges, difficult to see from most locations, and are relatively low in elevation in relation to many surrounding mountains in the region. In addition, they are well removed from more scenic and popular recreational resources. The highest summit in the range and the site of the Kibby Mountain fire tower would remain undisturbed while the lower elevation ridges to the south would be developed. These ridges are lower than many surrounding mountains and considerably lower than the much more prominent mountains to the south such as the Bigelow Range, Black Nubble, Redington, Crocker, Sugarloaf, and Saddleback, many of which are close to or over 4,000 feet (1,220 m) in elevation. Indeed, Kibby Mountain is ranked as only the 90th highest peak in Maine at 3,658 feet (1,115 m) in elevation at its highest point. The project turbine at the highest elevation (Turbine B-1) is at 3,210 feet (979 m). Numerous mountains surrounding the Kibby ridges would not be developed and would continue to provide intact high elevation environments. Visually there is an inherent fit when wind power projects are located on sites where there is an excellent resource, especially when the ridges involved are not visually distinctive in form or location, and are not unreasonably visible or prominent from surrounding sensitive use areas.

The project is located within a scenic but not spectacular area that includes numerous mountain peaks, streams and ponds. Forest harvesting is an integral part of the landscape historically and today. While portions of the project are visible from many ponds in the area, views of turbines will not dominate the views in the region generally or from any particular viewing locations. Where views do occur, in most cases only a few of the turbines will be visible and the project will not dominate the viewscape. Neither the ridges themselves, nor views of the project ridges are unique or distinct.

The visual impact analysis concludes that while the project would affect views from a few locations, it by no means reaches a level of undue aesthetic impact. The project will not detract from important regional focal points and would generally be a subordinate element in nearly all views around the area. See Section 9.6 for details on scenic resources.

4.1.3 Development

4.1.3.1 Location of Development Goal

Guide location of new development so as to protect and conserve forest, recreational, plant or animal habitat and other natural resources.

The CLUP recognizes the need to accommodate appropriately sited wind power development; this project is sited to take advantage of a premier wind resource. Additionally, the project will sustain one of the principal values of the jurisdiction in maintaining forest land, because minimal clearing is required for this project. The Kibby Wind Power Project is a well-planned development that will benefit the local economy, will not unduly harm the productivity of existing forest or agricultural resources or animal or plant habitats, and that will need minimal public services so as to represent little cost to the public.

4.1.3.2 Economic Development Goal

Balance the economic benefit that Maine people derive from the natural-resource based industries, especially the maintenance and creation of jobs, with protecting the environmental quality and special values of this area.

According to the DOE, wind energy provides more jobs per dollar invested than any other energy technology. Every time a wind energy project is installed, it creates new jobs for people who set up and maintain the turbines. Employment opportunities range from meteorologists and surveyors to structural engineers, assembly workers, and mechanics and operators.

The Kibby Wind Power Project will provide approximately 250 construction jobs during the peak construction period, most of which are expected to come from the local area. There will also be approximately 10 permanent positions created in relation to the project. In addition, there will likely be a significant increase in tourism, science and educational opportunities. This project will be instrumental in meeting the demonstrated employment needs of the community; the current average unemployment rate in Franklin County is 5.6 percent, well above the Maine's average of 4.3 percent.

The project will also contribute to the economy through payment of taxes, and through a significant annual host benefit payment to the town of Eustis. The project is expected to become one of, if not the, largest taxpayer in Franklin County. See Sections 2.1 and 9.2 for more details on the economic benefits of the project.

4.1.3.3 Site Review Goal

Assure that development fits harmoniously into the existing natural environment.

As described throughout the application, the project has been carefully designed to fit harmoniously into the existing natural environment. In particular, as discussed in

Section 4.3.2.3 below, the project has been well-sited to minimize its visual impact on surrounding areas, including from existing roadways or other sensitive public viewing areas.

4.1.3.4 Infrastructure Goal

Ensure that the infrastructure improvements are well planned and do not have an adverse impact on the jurisdiction's principal values.

The project has been particularly well-sited to take advantage of a substantial network of existing and planned logging roads. Although improvements to existing roads and some construction of new roads will be required, the project will utilize existing roads to the maximum extent practicable.

Existing logging road improvements will include some grade adjustments, widening, and clearing of brush growth that encroaches on the roadway. Road improvements may also include permanent or temporary widening of curves at intersections to allow turning radius for long loads required to deliver the wind turbine components, and the establishment of pull-off areas to safely accommodate construction traffic with ongoing forestry operations.

Any new roads that are constructed will be of the same nature as those land management roads that are already prevalent in the area. New utility lines will be located along or adjacent to existing rights of way to the most practicable extent. In those places where utility line placement is new, every precaution has been taken to minimize disturbance to natural growth and to harmonize the utility line placement with the surroundings.

4.1.3.5 Development Rate, Density, Type Goal

Ensure that development is of a rate, density and type conducive to maintaining the jurisdiction's principal values.

The wind turbines represent "low impact structures" that will have minimal adverse effects on the surrounding land. This development is energy efficient and incorporates some of the best practical technologies available to assist the state in attaining its energy goals. In addition, 132 MW of power will be produced by only 44 wind turbines along two ridgelines; this is a significant density decrease when compared with the 639 turbines along seven named and several unnamed ridgelines approved by LURC for the Kenetech project in 1995, 400 of which, in Kenetech's first phase, would have generated essentially the same electrical output as will be accomplished with only 44 turbines in the proposed project.

4.2 Consistency with Statutory Development Criteria (12 MRSA §§685- A(8-A) and B(4))

LURC will review an application to ensure that the applicant has demonstrated compliance with all applicable statutory development criteria. The Kibby Wind Power Project will satisfy each of those standards as set forth below.

4.2.1 Proposed Land Use District is Consistent with the CLUP and Satisfies a Demonstrated Need in the Community

As noted in Section 4.1, the Kibby Wind Power Project is consistent with the CLUP. In addition, pursuant to 12 MRSA § 685-A(8-A)(B), the rezoning associated with the Kibby Wind Power Project will satisfy several demonstrated needs within the local as well as the regional and national community.

The recent emphasis on the present and future effects of global warming illustrates the need for renewable and sustainable energy resources that are not dependant upon the burning of fossil fuels. If left unchecked, the effects of continued increase of fossil fuel emissions on Maine's natural resources (and subsequently, its economy) could be devastating. The Kibby Wind Power Project will help satisfy the need to decrease fossil fuel use by displacing approximately 200,000 tons of CO_2 each year, the equivalent of removing approximately 35,000 cars from the road. This clean source of energy is renewable and sustainable, representing an important tool in the battle against the effects of global warming. Many national and state policy directives have addressed the need to reduce fossil fuel emissions and utilize cleaner energy sources. Approval of the Kibby Wind Power Project will help the state achieve the goals set forth in recent climate change legislation as well as those expressed in the Regional Greenhouse Gas Initiative compact signed by the governor. See Section 2.1 for more detail on this issue.

This project will also help decrease Maine's over-dependence upon natural gas to meet its increasing electricity demands. Such reliance on one source of energy for electricity supplies (currently 40 percent) has resulted in large increases in electricity prices, price volatility and reliability risks, particularly when demand is high and natural gas supplies are low. The project will utilize an indigenous and renewable energy resource to generate 357 million kilowatt-hours of electricity per year, enough to power 50,000 homes. See Section 2.1 for more detail regarding the project's ability to address this regional need.

Finally, the project represents an important economic investment in Franklin County primarily through payment of substantial property taxes, the creation of 250 construction jobs and 10 or more permanent positions in an area with a higher than average unemployment rate, and a significant annual host community benefit payment to the town of Eustis. See Section 9.2 for more detail on community issues.

Also see Section 4.2.2, which describes the impact the project will have upon the existing uses and resources, as well as the applicant's demonstration that such impact will not have an undue or adverse effect on the area. A different district designation is not more appropriate for the protection and management of existing uses and resources within the affected area.

4.2.2 Proposed Land Use District Will Not Have an Undue Adverse Impact on Existing Uses or Resources

As discussed throughout this section and demonstrated in Sections 7 and 9, the Kibby Wind Power Project has been carefully sited to ensure that the rezoning will not adversely impact

existing uses or resources in the area. The area is currently used for commercial harvesting and that use may continue essentially unimpeded. The existing recreational uses may also continue and are not expected to be adversely impacted by the project. Indeed, the improved access and utility corridor development may improve existing recreational opportunities. In addition, new recreational opportunities may be created by the presence of the turbines, which are a draw for some people. The layout of the turbines and roads has taken into account and avoided to the maximum extent practicable impacts to sensitive habitat and resources such as wetlands. Finally, the project incorporates specialized construction techniques to maintain hydrology of the area and otherwise ensure there are no undue adverse impacts to the resources in the area.

4.2.3 Adequate Technical and Financial Provision for Complying with State Environmental Laws and Regulations

TransCanada Maine Wind Development Inc. is a wholly-owned subsidiary of TransCanada Corporation. TransCanada is one of the largest energy infrastructure companies in North America. Its financial strength is reflected in its "A" credit rating and it has over 50 years of developing, constructing, owning and operating complex energy projects. TransCanada's approximately 2,350 employees provide industry-leading expertise in pipeline and power operations, and have unparalleled project management skills, industry experience and financial acumen. See Section 1.5 for details regarding the applicant's technical and financial ability.

4.2.4 Adequate Parking/Traffic Provisions

Once constructed, there will be limited need for parking or loading on the site, and very limited circulation of traffic. The site will be accessed using existing and 17.4 miles of new access roads for operation and maintenance purposes. Adequate worker and visitor parking will be provided at the proposed service building.

The most intense period of use of local roadways for access to the site will be during the construction phase, which is planned to occur over two construction seasons. Effects on surrounding roadways are anticipated to be minimal. TransCanada will work with the landowner to make improvements to Gold Brook Road and other private logging roads to ensure safe and efficient movement of traffic. Adequate areas for construction worker parking will be provided. It is anticipated that construction personnel will travel to the site from the south via Routes 27 and 16, and will not overburden these corridors. The limited numbers of additional trips generated due to construction are not anticipated to result in any adverse impacts to these roadways or traffic conditions at impacted intersections. TransCanada will work with MDOT to ensure that construction traffic is coordinated with any ongoing MDOT highway improvement projects to avoid/minimize impacts. TransCanada will provide any additional traffic control personnel or equipment determined to be needed for safe traffic control on area roadways during construction. See Section 9.7 for details regarding transportation and traffic management plans.

4.2.5 Adequate Provisions for Harmonious Fit into Existing Natural Environment

The project will not have an undue effect on the existing uses, scenic character and natural and historic resources in the area. The project area is part of a working forest. The viewshed from the proposed wind tower locations includes large tracts of recently harvested forests and a network of existing land management roads. Additionally, very little timber land will be displaced for the turbine placements; therefore, there will be no noticeable decrease in the existing use of the land for timber harvesting.

This region is not known for any particularly unique natural resources or views. There are not large roadless areas that will be disturbed by the development. The project area is not within or near protected public lands, nor does it contain any of Maine's most well-known and highly valued mountains, such as are found in Saddleback, Redington, Sugarloaf, Katahdin, and Baxter State Park, for example.

One of the predominant natural resources of this area, besides timber, is its wind resource. This project will effectively harvest this resource and provide clean renewable energy for the region, while having little impact on the existing uses or scenic character. See Section 9.1 for a summary of existing land uses; Section 9.4 for a discussion of recreational use of the area; Section 9.6 for a discussion of scenic character; Section 4.1.2.8 for a discussion of recreation resources; and Section 4.3.2.3 for a discussion regarding scenic character.

4.2.6 No Unreasonable Soil Erosion

There will be a total of approximately 287.6 acres of clearing within the proposed D-PD for the construction of turbines, access roads and other ancillary project features. Of this, approximately 233 acres will be temporary disturbance. Only 55 acres of permanent disturbance will occur within the D-PD. This represents 1.9 percent of the total 2,908-acre easement area that will be cleared for this development; the rest will maintain its natural status as a working forest. Therefore, there will be a negligible reduction in the capacity of the land to absorb rain water. During construction all appropriate soil erosion measures will be taken in accordance with BMPs. These construction techniques have been selected with considerable input from the Maine State Soil Scientist and other resource agencies. See Section 5.6 for more detail.

4.2.7 In Conformance with Statutes and Regulations

As discussed throughout this application, the project will be in full conformance with all applicable statutes and regulations. See Section 4.1 and Section 4.3 for further discussion.

4.2.8 Public's Health, Safety and Welfare are Adequately Protected

The Kibby Wind Power Project has been carefully sited and designed and will be engineered, constructed and operated in a manner that will present no significant health or safety threats to the public. In fact, by displacing hundreds of thousands of tons of emissions from fossil fuel-

fired power plants per year, the Kibby Wind Power Project will have an overall long-term positive effect on public health, safety and welfare.

4.2.9 Evidence of Economic Benefits

The Kibby Wind Power Project will have a significant economic benefit on the region, primarily through payment of substantial property taxes, the creation of jobs in an area with a higher than average unemployment rate, and a host community benefit payment to the town of Eustis. See Sections 2.1 and 9.2 for more detail.

4.2.10 Evidence of Impact on Energy Resources

Currently, approximately 40 percent of New England's electricity supply depends upon natural gas. Such over-reliance on natural gas has resulted in large increases in electricity prices, price volatility and reliability risks, particularly when demand is high and natural gas supplies are low. Natural gas consumption in New England is growing while adequate future supplies are uncertain. Reducing the region's dependence on natural gas through the diversification of energy sources is critical to the future of this area. The project will generate 357 million kWh per year of clean, renewable energy, which will help to diversify the regional energy supply, while reducing dependence on imported fossil fuels. See Section 2.1 for additional detail.

4.3 Consistency with LURC Regulatory Criteria

4.3.1 Chapter 10.21, D-PD Regulations

The purpose of the D-PD subdistrict is to allow for large scale, well planned developments that are separated from existing developmental areas where those developments are of high quality, not detrimental to other values established in the CLUP, and depend upon a unique natural feature of the site. The Kibby Wind Power Project meets these criteria, in that the project's configuration requires wind turbines to be built along ridge lines in order to effectively capture the wind. The nature of the construction is solely because of the unique natural features found in the proposed area, just as contemplated by the D-PD subdistrict.

4.3.1.1 Conforms with CLUP and LURC Enabling Statute

As discussed in this section, the project fully conforms with the CLUP and LURC's enabling statute. See Sections 4.1 and 4.2 for further discussion.

4.3.1.2 Incorporates Substantially Equivalent Environmental/Resource Protection as Existing Zoning

Protection of Mountain Areas Zone, P-MA

The purpose of the P-MA zone is to preserve the natural equilibrium of vegetation, geology, slope, soil and climate in order to reduce danger to public health and safety posed by unstable

mountain areas, to protect water quality, and to preserve mountain areas for their scenic values and recreational opportunities.

Although this is a unique protection zone, it is not a no-development zone and the rules expressly allow by special exception certain development activities, including utility facilities, roads, mineral exploration, and structures related to downhill skiing. The activities proposed here for the P-MA zone will have no greater impact on the fragile mountain environment than those activities expressly allowed and, in fact, in light of the careful siting and construction measures being proposed, will likely have less of an impact than might otherwise occur with some of the allowed uses. For example, utility facilities include:

Structures normally associated with public utilities, including without limitation: radar, radio, television or other communication facilities; electric power transmission or distribution lines, towers and related equipment; telephone cables or lines, poles and related equipment; municipal sewage lines; gas, oil, water, slurry or other similar pipe lines or above ground storage tanks (Chapter 10 Subchapter I, 10.02(191) (definition of utility facilities).

While the Commission has concluded that wind turbines do not fit within the definition of utility facilities, there is little difference in impact between the utility facilities that are allowed by special exception in the P-MA zone, such as communication facilities, gas pipelines and storage tanks, and the wind turbines, particularly given the careful construction measures proposed for this project. Likewise, Level B mineral exploration allows bulk sampling of up to two acres of land, which would in many instances have a potentially greater impact on the fragile mountain environment than is proposed here. Similarly, downhill skiing structures, which are also allowed, have an obvious affect upon the scenic landscape and fragile mountain environment.

There will not be extensive vegetative clearing necessary for the project; in fact, within the proposed D-PD rezoning area that is currently within the P-MA zone, approximately 227 acres of the easement area will require clearing for turbine placement and access road construction. An additional 61 acres proposed to be rezoned that are outside of the P-MA zone are also proposed to be cleared. That leaves the great majority of this land in its current natural state. Most of the wildlife species that have been observed in the ridgeline areas are not dependent on mature stands of trees and so will be minimally affected. Extensive studies have been completed in order to optimize the location and design of the project to account for the slopes, soils and wildlife habitats that exist in the Boundary Mountains. All necessary steps will be taken to minimize on-site impacts and to buffer any off-site uses and resources that may be affected.

In addition to the turbines, there will be some new road construction within the P-MA zone. Level C road projects are allowed by special exception in the P-MA zone and both the siting of the new roads within the P-MA zone as well as the construction techniques proposed for these new roads will ensure that there is minimal impact to the resources in the area. Unlike many road construction projects, the methods proposed here are the result of comprehensive on-site surveys and investigation and consultation with regulatory agencies to ensure that the hydrology

is maintained and appropriate erosion and sedimentation control and storm water management measures are employed to minimize potential adverse impacts.

As noted above, one of the important values of the P-MA zone is to ensure that the unique scenic values and recreational opportunities are preserved. As discussed in Section 4.1.2.11, the Kibby Wind Power Project has been sited in an area that although scenic, is not unique or spectacular, and the visual impact analysis demonstrates that the project will not have an undue aesthetic impact or compromise unique scenic values. Similarly, as discussed in Section 4.1.2.8, the project area is not located within any unique recreational or conservation areas and is well buffered from such high-value areas, including the Appalachian Trail which is located approximately 15.5 miles to the south. The predominant recreational use of the area is for hunting, fishing, snowmobiling and ATV use, and the project will not interfere with those uses and in fact may improve such recreational opportunities.

Finally, the level of protection afforded by the proposed D-PD subdistrict is equivalent to or exceeds that provided by the P-MA subdistrict in large part because as part of the D-PD process TransCanada has undertaken detailed surveys to identify resources, assessed potential impacts to those resources, sited the project to avoid or minimize impacts to resources, and developed construction methods to minimize overall project impacts. See Section 2.2 for a more detailed discussion of the site selection process; Section 2.5 regarding construction techniques to ensure protection of existing hydrology; Sections 7.7 and 7.8 regarding construction and operation impacts and mitigation; and Sections 9.4 and 9.6 regarding recreational and visual impacts.

General Management Zone, M-GN

The purpose of the M-GN subdistrict is to permit forestry and agricultural management activities to occur with minimal interferences from unrelated development in areas where the Commission finds that the resource protection afforded by protection subdistricts is not required.

The construction of wind turbines in the M-GN zone will not interfere with the forestry activities that already exist in that area. Tree removal will be kept to a minimum to the fullest extent practicable, and properly managed timber harvesting may continue largely to the same degree it always has. There are no known agricultural developments on the land proposed for turbine placements, nor is there any other sort of development or industry with which the project will interfere.

Any buildings that will be located within the M-GN zone will be similar to those structures already allowed within that zone pursuant to Section 10.22(A)(3) of the LURC Land Use Regulations.

4.3.1.3 Utilizes Best Reasonably Available Site

In 1995, the Commission concluded that the proposed site, and including an additional area that encompassed significantly more ridgelines than is proposed here, was the best reasonably available site for a proposed wind power project. Specifically, the Commission concluded that the unique features of elevation, orientation to prevailing winds, the lack of significant incompatible uses in the area, and relatively remote yet accessible locations of the ridgelines, were the best reasonably available locations for the proposed project (Kenetech Decision, ZP 536 at 29). The comprehensive site selection process detailed in the Kenetech application and the follow-up analysis undertaken by TransCanada more recently, as well as the conclusions reached by the Commission in 1995 with respect to the project site, have equal applicability today: As discussed in Section 2.2, the Kibby Wind Power Project is ideally located to take advantage of a premier wind resource without adversely impacting any unique or high value recreational areas or other potentially incompatible uses.

As detailed in Section 2.2, the key criteria for developing a utility scale wind power project include: favorable and consistent wind resource; reasonable access to the regional electrical transmission system; compatibility with existing land ownership, land uses in the area, and environmental resources; and, community support. As discussed below, the Kibby Wind Power Project is particularly well-sited and designed to maximize each of these considerations.

First, the single most important criterion for selecting a viable wind energy site is the wind resource. Without a robust wind resource, a potential site will be unlikely to support a viable wind project, despite factors such as proximity to transmission, accessibility, or other favorable attributes. Moreover, it is not just wind speed, but wind consistency and persistence that impact the suitability of a particular site for a utility scale wind power project. The broad-based wind resource mapping for New England indicates that the majority of Class 5 wind resources are located off-shore or in the mountain regions. While this mapping provides a general indication of potentially viable wind power sites, on-site data collection is required to determine whether in fact conditions are favorable. As discussed in Section 2.3, TransCanada has collected on-site data over a period of approximately eight months and retained a recognized world leader in the field of wind energy assessment to evaluate that data. This analysis confirms the existence of an excellent wind resource at the project site.

While off-shore wind resources are potentially significant, current technology limits off-shore development to locations with a strong wind resource, shallow depths, and relatively low ocean waves Very few off-shore locations in New England would meet these criteria. Moreover, off-shore wind power projects have not gained widespread public or regulatory acceptance in New England due largely to their visual impacts in sensitive locations as well as navigational concerns. To date, TransCanada has not pursued development of off-shore wind power sites and does not believe that they provide a preferable alternative to a well-sited and designed on-shore project such as is proposed here.

The strong on-shore winds in Maine are located mainly in the mountainous areas due to regional weather patterns and the topographical features of the area. As discussed in Section 2.2, only the northwest portion of Maine has winds at Class 5 and above, and only a small percentage of that area is deemed adequate to support a commercial wind project. While other areas in Maine may be able to support smaller wind projects, the macro scale map demonstrates that there are very limited areas within Maine that, absent site-specific information indicating the presence of a favorable wind resource, are unlikely to be candidates for further analysis by wind developers. The areas on-shore in Maine that support a wind resource of Class 5 or greater, which is what the data indicates exists at the Kibby Wind Power Project site, are extremely limited.

Second, when proximity and access to the regional transmission system is taken into account, the areas where viable wind power projects could be sited in Maine is further reduced. The northern portion of the state is not connected to the New England electrical grid and has very limited transmission capacity. Locating a project there would require the power to be sold in an area with very little native load (demand), exporting the power to New Brunswick, or would require substantial new transmission infrastructure to bring the power into the southern portion of the state. In addition, some areas with potentially favorable wind resources that might be close to existing transmission infrastructure may not be viable due to challenging terrain and mountainous conditions that preclude reasonable access to such transmission infrastructure.

Third, even with strong winds and proximity to transmission lines, potential sites are further restricted due to existing or proximate incompatible land uses. The Kibby Wind Power Project site is particularly well sited because it does not adversely impact high value recreation or scenic areas or conservation areas that may be incompatible with wind development. According to the Boston Globe (December 27, 2006), Maine is second nationwide in the amount of privately owned conservation lands, according to a recent national census, with 1.72 million acres. This is in addition to approximately 1.2 million acres of publicly owned open space. Therefore, when the wind map is superimposed over a map identifying the state's public and private conservation areas, additional potential sites are eliminated. In addition, the project is compatible with the existing commercial land management activities, which may continue essentially unimpeded, and will not adversely impact the predominant recreational uses in the area.

Finally, severe slopes or other construction restrictions must be taken into account in accessing a potential wind site. Severe slopes make construction difficult or impossible. And crossing ridgelines for transmission access makes more remote sites economically infeasible as commercial wind projects. Indeed, TransCanada eliminated two of four ridgelines initially under consideration due to the existence of conditions that were simply infeasible from an engineering and environmental impact standpoint.

In summary, the economics of a wind power project are extremely site-specific and are influenced by regional weather, local topography, elevation, orientation, land cover and nearby structures. New England has a number of locations with strong winds suitable for commercial-

scale wind power development. The best of these are along the ridgelines of northwest Maine. However, many of those are distant from transmission lines, highly valued for other uses, or so challenging and costly to access as to be infeasible. As a result, New England's true wind power potential is limited to a subset of locations where the wind resource is adequate, access to utility lines is feasible, and harmonizing the turbines within the natural environmental is possible. The Kibby Wind Power Project site is ideal for all of these reasons. The site is not one which is known as rich in scenic value. No turbines will be observable in close proximity to the Appalachian Trail or from any other popular scenic destinations. In addition, no turbines will be placed upon the highest portion of Kibby Mountain. Also, distances from the turbines to utility lines will not be economically prohibitive, and most of the needed access to the site is already in existence via an extensive network of land management roads in the region.

4.3.1.4 Conserves Productive Forest/Farm Land

The entire project is sited over a large geographic area, but the actual “footprint” covers only a small portion of the land. For example, only about 55 acres of the entire proposed D-PD zone will be permanently altered for placement of turbines and road development. The remaining land will remain essentially in its current state. (Although there will be an additional clearing of approximately 288 acres during construction, these areas will be allowed to revegetate following construction.) All areas within the D-PD zone (including those portions above 2,700 feet to the extent the landowner seeks regulatory approval) remain available for commercial harvesting activities. Indeed, the uses proposed for the D-PD zone specifically include timber harvesting. Finally, productive forest land outside the proposed D-PD zone will be entirely unaffected by the Kibby Wind Power Project and will remain as productive forest land. In summary, almost all of the area currently utilized as a working forest will remain in that state and available for appropriate forestry activities; the project will not cause any disruption to the forested status of the land in question.

There are no farmlands in this particular region that will be impacted by the project.

4.3.1.5 Incorporates High Quality Site Planning/Design

This application has been prepared after the completion of extensive studies surveys, field visits, and consultations with experts and regulatory authorities, all the data from which is incorporated in various sections of the application and associated appendices. The consultants on this project include licensed professional engineers, a landscape architect, soils engineers, wildlife biologists and a rare plant specialist, among others. The engineering and construction professionals have extensive experience with wind power facilities in other areas of the country.

4.3.1.6 Project is Reasonably Self-Sufficient Regarding Services

There will be no requirement for school services or significant solid waste disposal associated with the project. Any need for fire or police protection for a facility such as this one is expected to be minimal. Although there will be more people on site during the construction phase, any

need for these services would be temporary and would present a *de minimis* overall burden. This issue will continue to be discussed in greater detail with local authorities, who will be provided with the opportunity to review and comment on the full Kibby Wind Power Project application (see Exhibit F).

4.3.1.7 Provides for Safe/Efficient Traffic Circulation

The project will be located on private land and will utilize an existing network of land management roads. Given the magnitude of timber harvesting traffic in the area, the additional traffic in the area due to construction of the project will be negligible. There are no expected traffic safety concerns associated with the project, including during the construction phase, which will constitute the most intense daily use of the existing road system. Indeed, the road upgrades will improve safety and provide a significant benefit to the many commercial and non-commercial users of Gold Brook Road. There will be coordination with MDOT to ensure that construction traffic is coordinated with any ongoing highway improvement projects to avoid/minimize impacts, and to provide any additional traffic control personnel or equipment needed for safe traffic control on area roadways during construction.

4.3.1.8 Utilizes Best Practical Technology to Reduce Pollution/Waste/ Energy Consumption

Wind energy is one of the most competitively priced renewable energy technologies available today. The project will generate 132 MW of clean, renewable electrical energy, displacing hundreds of thousands of tons of emissions from fossil fuel-fired facilities in the region.

By using state-of-the-art turbine technology, the Kibby Wind Power Project will generate as much electrical output using 44 wind turbines as would have been generated by the 400 turbines that comprised the first phase of Kenetech project, which was approved by LURC in 1995 (see Table 1-4 for further detail comparing the Kibby Wind Power Project to the former Kenetech project).

The evidence is overwhelming that wind power is an innovative, non-polluting source of energy that will reduce the region's dependence on other polluting energy forms. The project will produce virtually no waste, emit no pollutants and can produce energy at a small fraction of the marginal cost of coal, oil, or natural gas plants.

4.3.1.9 Minimum Continuous Acreage

A D-PD subdistrict proposed for predominantly commercial and/or industrial land uses shall include at least 50 contiguous acres and, except wind energy generation facilities, shall contain a minimum of 30,000 square feet of gross building floor area.

The Kibby Wind Power Project area to be rezoned contains well over 50 contiguous acres (see Section 2.4.1 for more detail).

4.3.1.10 Setback Requirements

No development, other than access roads and utility lines, shall be less than 400 feet from any property line. (This dimension may be increased or decreased, at the Commission's discretion, provided good cause can be shown.)

Table 2-2 identifies the distance of the turbine foundations and rotor swept area for three turbines that are located within 400 feet of the edge of the proposed D-PD zone. The foundation of one turbine, B-15, is 355 feet from the edge of the proposed D-PD zone. To the extent the 400 foot setback applies to the rotor swept area as opposed to the edge of the turbine foundation, TransCanada requests a reduction in the setback requirements for turbines A-13, A-20 and B-15. The surrounding land use consists of commercial forestry operations, and in no case will the minimum distance from the proposed boundary of the D-PD and the rotor-swept area be less than 216 feet. As a result, the reduction in the minimum set back in these three locations will not adversely impact operations on the surrounding property or otherwise interfere with any existing or potential uses of the adjacent land.

4.3.2 Chapter 10.25, Development Standards

The following applicable review standards are met by the Kibby Wind Power Project.

4.3.2.1 Technical and Financial Capacity

See Section 1.5 for details regarding the applicant's technical and financial ability.

4.3.2.2 Vehicular Circulation, Access and Parking

The most intense period of use of local roadways for access to the site will be during the construction phase, which is planned to occur over two construction seasons. Effects on surrounding roadways are anticipated to be minimal. Clearing, grading and road preparation efforts are similar to typical construction efforts. Adequate areas for construction worker parking will be provided. It is anticipated that construction personnel will travel to the site from the south via Routes 27 and 16, and will not overburden these corridors. The limited numbers of additional trips generated due to construction are not anticipated to result in any adverse impacts to these roadways or traffic conditions at impacted intersections. TransCanada will work with MDOT to ensure that construction traffic is coordinated with any ongoing MDOT highway improvement projects to avoid/minimize impacts. TransCanada will provide any additional traffic control personnel or equipment determined to be needed for safe traffic control on area roadways during construction.

Once the wind turbines are operational, very limited traffic volumes will be generated by TransCanada staff and contractors to conduct routine maintenance and inspection activities. Adequate parking for workers and visitors will be provided at the proposed service building.

4.3.2.3 Scenic Character

The project is located within a scenic but not spectacular area that includes numerous mountain peaks, streams and ponds. Forest harvesting is an integral part of the landscape historically and today. While portions of the project will be visible from some of the ponds in the area, views of turbines will not dominate the views in the region generally or from any particular viewing locations. Where views do occur, in most cases only a few of the turbines will be visible and the project will not dominate the viewscape. Neither the ridges themselves, nor views of the project ridges are unique or distinct.

Other more specific review criteria are:

a. *The design of a proposed development shall take into account the scenic character of the surrounding area. Structures shall be located, designed and landscaped to reasonably minimize their visual impact on the surrounding areas, particularly when viewed from existing roadways or shorelines.*

Siting is critical with wind energy projects, and the proposed Kibby Wind Power Project is extremely well sited to minimize views from sensitive public viewing areas. The wind turbines cannot be hidden from view, but intervening hills, mountains and ridges will minimize the numbers of turbines that can be seen from viewing areas, and in most cases block views entirely. Site terrain is generally moderate in slope so that roads and transmission lines can be constructed with minimal site alterations and with very little off-site visibility.

b. *To the extent practicable, proposed structures and other visually intrusive development shall be placed in locations least likely to block or interrupt scenic views as seen from traveled ways, water bodies, or public property.*

The project will not block or interrupt scenic views or be visually intrusive from any public viewing locations. Views from public roads are intermittent and infrequent. From areas accessible from hiking trails, the project occupies only a small portion or the overall views; and in most cases is seen at a considerable distance. From the shorelines and water bodies from which the project will be visible, it would not dominate views. Because the project is located along two ridgelines, and is surrounded by numerous other mountains and hills, its visibility is extremely limited and most often only portions of the project will be visible, if at all, especially from nearby viewing areas.

c. *If a site includes a ridge elevated above surrounding areas, the design of the development shall preserve the natural character of the ridgeline. (LURC Rules Section 10.25.E.1 Scenic Character, Natural and Historic Features)*

Viewed from offsite locations, the wind turbines will be seen emerging from the forested ridgeline. One exception will be the top of Kibby Mountain, from which the project will be seen below the viewer receding to the south. This will be the only vantage point from which project

infrastructure including some roads and site clearing will be visible. Even from this vantage point, most of the ridge forest will remain intact. Existing logging roads and clear cuts are currently visible from this vantage point.

The Kibby Wind Power Project will not have undue adverse impacts on the scenic and natural beauty of the surrounding area. The project is very well sited and designed. No wind project can be hidden from view, but this project will result in no undue impacts to highly valued or unique scenic resources. The Boundary Mountains consist of abundant mountains, lakes and streams. It is a scenic but not unique landscape with none of the mountains exceeding 4,000 feet (1,220 m), and neither of the project ridges is among the highest, even within its surroundings. The highest portion of Kibby Mountain, the site of a fire tower overlook, will not be developed as part of the project. The complex system of numerous mountains limits visibility from most viewpoints. The proposed project will be over 15.5 miles from the closest point along the Appalachian Trail. The spectacular Bigelow Mountains form the dominant focal point in the region and most views are oriented in that direction. The numerous lakes and ponds are the primary scenic resource surrounding the project site and visibility from these is limited. Where there are views, they are generally of only a portion of the project. The proposed project will not be a dominant element in any views. Project infrastructure such as roads and transmission lines will be minimally visible off site. See Section 9.6 for additional details on visual resources.

4.3.2.4 Noise and Lighting

As discussed in Section 9.3.3.1, noise limits established for D-GN subdistrict provide a useful reference in assessing impacts of the proposed project. Based on conservative noise modeling, noise levels reflecting the most stringent D-GN standards (55 dBA) would not be exceeded beyond the D-PD subdistrict property lines, with the exception of a few very small areas. Given this, worst-case turbine noise levels will be consistent with existing LURC noise standards.

Moreover, the project is located within a broader region where the predominant use is for commercial forestry activities. The project turbines will be located approximately 1.2 miles from the nearest residence. Results of the acoustical analysis also showed that project noise levels are well within guidelines for acceptable levels of environmental noise within residential land uses, and will not have a perceptible impact at the closest residence. See Section 9.3 for more detail.

TransCanada will continue to work with the FAA relative to their guidelines for lighting of the turbines and will ensure regulatory compliance balanced with a minimal impact on the surrounding area. Current plans are that some of turbines will be lit at night with one red nighttime strobe.

4.3.2.5 Soil Suitability

Based on the results of the soil survey activities and analysis, soils in the proposed project area are considered to be suitable for the proposed development. See Section 5.4.2 and Exhibit C for more details.

4.3.2.6 Solid Waste Disposal

After the construction phase is complete, solid waste generation will be limited to insignificant amounts of office waste associated with the service building. Any commercial waste generated will be transported by a commercial company pursuant to a private waste disposal contract. See Section 9.8 regarding solid waste disposal details.

4.3.2.7 Erosion and Sedimentation Control

TransCanada has undertaken significant survey activities over the last year to assess site conditions and develop appropriate construction techniques that reflect those site conditions and will minimize potential impacts to the surrounding environment. TransCanada will continue to work with the Maine State Soil Scientist and appropriate resource agencies to ensure proper erosion control structures and engineering methods are applied where hydrologic connection should be maintained (e.g., streams, wetlands, seeps or seasonal/storm event drainages). See Sections 2.5 and 5.6 for more detail.

4.3.2.8 Groundwater Quality

The project will have an insignificant impact on groundwater. Temporary dewatering of excavations for foundations may occur in high groundwater table areas. However, this will have only negligible, short-term impacts on the groundwater table, and will be limited to within a few feet of the excavation itself. Appropriate BMPs will be used to ensure that discharge of dewatered groundwater is controlled for erosion and sedimentation potential.

Following construction, water use from the on-site well will be limited to potable needs associated with the service building. Water demand for these uses will be extremely low.

Sanitary wastewater disposal from the service building will be treated via an on-site septic system, designed in accordance with LURC standards. Further measures to ensure that groundwater quality is protected from accidental spills are addressed in Section 8.2.

4.3.2.9 Air Quality

The project will result in a significant net air quality benefit to Maine and the region by displacing a portion of regional electricity generation using fossil fuels or other combustion sources

The project will displace: approximately 200,000 tons per year of CO_2, a greenhouse gas; over 350 tons per year of SO_2, an acid rain precursor; and approximately 90 tons per year of NO_x, an

ozone precursor; that would otherwise be emitted by fossil-fuel-fired power plants in the region. The approximately 200,000 tons of CO_2 offset per year by the Kibby Wind Power Project is equivalent to removing about 35,000 cars from the road. See Section 6 for more details on the project's air quality benefits.

4.3.2.10 Wetland Alterations

As discussed earlier, the project has been carefully designed to have minimal impact on wetland resources. The primary direct, permanent impacts to wetland areas will result from upgrades to existing access roads and construction of new access roads. Where wetland areas along these roadways are unavoidable, TransCanada's engineers have incorporated appropriate design features to ensure the continued hydrological viability of impacted wetland and stream areas as well as limit the potential for adverse impacts associated with stormwater runoff from road surfaces. See Section 8.5 for more details regarding wetland impacts.