

Friends of the Boundary Mountains

Analysis and Comments Submitted to Maine's Land Use Regulation Commission with Regard to
TransCanada's Amended Version of DP 4860

October 12, 2010

INTRODUCTION

TransCanada's amendment to DP 4860 states that reducing the Kibby Expansion by four turbines with a slight modification to associated roads will reduce the proposal's impacts on the environment enough to avoid the threshold of "unreasonable adverse impacts" to the Fir-Heart-leaved Birch Subalpine Forest, Bicknell's thrush habitat, and the visual impacts to the Chain of Ponds and other viewsheds of significance. It does not even attempt to address all the other negative impacts and questionable practices in the original application.

Friends of the Boundary Mountains questions whether reducing the number of turbines by four with a short reduction in the ridge road can truly reduce impacts to any appreciable extent. Does elimination of four pads and towers make the remaining eleven mountaintop turbines and miles of roads and transmission lines innocuous and without impacts to the natural resource base? Are these comparatively minor changes enough for TransCanada to slide under the definition of "unreasonable adverse impact" to the environment?

The capital cost for the amended project is \$92 million or \$8.37 million per turbine for eleven turbines. LURC needs to question the viability, both economic and environmental, of this project. Consider the amount of energy that may actually be generated against the environmental damage that will be an inevitable result, and the cost to Maine's tax and ratepayers once all subsidies; Tax Incentive Financing agreements, and upgrades of power transmission are factored in. In addition, keep in mind the expected life span of this type of industrial project. Weigh the alleged benefits of the power generated over the coming 20 to 25 years against the permanence of the disruption to the ecology, the existing power transmission grid, and the chaos that the intermittent nature of wind generation will cause to the power generation systems of Maine and northern New England.

In the Location of Development section of Chapter Four of LURC's Comprehensive Land Use Plan (CLUP), it defines the most important issue LURC faces as dispersed residential development or sprawl. In fact, the most pressing issue LURC now faces is the sudden rush of industrial wind power generation projects. These are predominantly located in the high country of the State, "characterized as an area of the most rural part of the second-most rural state containing some of the highest natural resource values in all of New England." (CLUP, 2010, Section 4.8, page 123).

The ownership of the forest has changed in the last 30 to 40 years due to pressure to maximize profit. It is no longer owned by paper companies or industrial loggers harvesting timber for mills. The new owners or leaseholders are more and more often financial investors, seeking the maximum revenue from their holdings. They demand this from timberlands and now from non-timber sources

where they face less overhead, less expense, less taxes and can generate greater profits. Industrial wind development results in far greater pressure than dispersed residential development, generating a loss of Maine's "Quality of Place," erosion of the unique economic and cultural role of the jurisdiction, and the degradation of many high value natural resources. The increase in development is no longer just along Maine's shorelines; it extends into hills and ridgelines. Now sprawl is made up of homes and camps and... these huge cluster developments of industrial wind facilities with enormous cumulative impacts on the environment.

The siting of energy and utility facilities will only increase in LURC's jurisdiction as organized towns enact wind ordinances to assure public and environmental protection. The Commission's challenge is not only to judge the site-specific impacts against the jurisdiction's principal values. LURC must weigh the cumulative impacts from multiple facilities in an area against the need to protect the natural environment from degradation and loss of the quality of place that so many people live for in Maine and come to Maine to experience, even briefly.

In July, after hearing closing arguments from the Parties, the LURC Commissioners deliberated on DP 4860 and took a vote to direct the LURC staff to prepare a Draft Denial. The Denial is very detailed as to why the Commission reached its conclusion to deny this application. TransCanada's subsequent amended version of DP 4860 still does not meet the criteria for approval, which the applicant bears the burden of proving, nor does it overcome the detailed objections and concerns set forth in the Draft Denial. In the following pages Friends of the Boundary Mountains presents a comparison of TransCanada's original and amended DP 4860 applications on an impact by impact basis to demonstrate why this is so.

Comparison of TransCanada's original and amended DP 4860 applications

ENVIRONMENTAL IMPACTS:

IMPACTS	ORIGINAL	AMENDED	DIFFERENCE
<p style="text-align: center;">Road construction</p> <p>2010 CLUP confirms one of the greatest threats to the fragile environment above 2,700 feet is the impact of erosion from road construction (see also 1997 CLUP ch3 p. 56)</p>	<p>Ridge Road 7.1 miles Crane Road 3.6 miles</p> <p>New/ improved roads = 3.3 miles</p> <p>Blasting and altering the mountain ridge for wind turbines, roads and transmission lines will permanently scar the area and create an industrial cluster in the expanse of Chain of Ponds-Sisk- Kibby.</p>	<p>Ridge Road 5.6 miles Crane Road 2.1 miles</p> <p>New/improved is the SAME</p> <p>Blasting and altering the mountain ridge for wind turbines, roads and transmission lines will permanently scar the area and create an industrial cluster in the expanse of Chain of Ponds-Sisk- Kibby.</p>	<p>1.5 miles less 1.5 miles less</p> <p>No change in impacts because most impacts to wetlands and vernal pools are from the Mile 5 road upgrade, which stays the same. The Mile 5 road needs significant widening and many culvert upgrades and two bridges.</p> <p>This proposed expansion is not consistent with the CLUP, required regulations and statutes.</p>
<p style="text-align: center;">Wetlands Impact</p> <p>90 wetland areas found, 21 are wetlands of special significance</p>	<p>4.27 acres of permanent and 0.08 acres of temporary</p>	<p>4.34 acres of wetland impact</p>	<p>Increase of 0.07 acres or +/- 3,000 SF</p> <p>Wetland impacts include Bog Lemming habitat, listed as threatened and already impacted by Kibby project. Spring Salamander and Roaring Brook Mayfly will still be impacted by modified proposal</p>

IMPACTS	ORIGINAL	AMENDED	DIFFERENCE
<p align="center">Vernal Pool Impact</p>	<p align="center">14 "Potential"</p>	<p align="center">SAME</p>	<p align="center">NO CHANGE</p> <p>TransCanada did its vernal pools survey during wrong time of year (should be done in the Spring)</p> <p>In its amendment TransCanada claims it can identify vernal pools during dry seasons!!</p> <p>This doesn't pass the straight-face test! Vernal pool protocols call for mapping pools in Spring since vernal pools disappear in dry seasons, <u>even for big multi-national corporations.</u></p>
<p align="center">Collector Corridor</p> <p align="center">Home Run to Substation</p>	<p align="center">8.9 miles</p> <p align="center">5.8 miles</p>	<p align="center">7.5 miles</p> <p align="center">5.8 miles</p>	<p>1.4 miles less but still results in 7.5 miles of cleared forest.</p> <p align="center">NO CHANGE</p> <p>Home run to the substation is 5.8 miles and 60 foot wide, with periodic herbicide application to maintain low canopy. The Homerun impacts to wetlands, vernal pools, and streams are extensive</p>

IMPACTS	ORIGINAL	AMENDED	DIFFERENCE
<p align="center">Cut and Fill [Cubic Yards (CY)]</p>	<p>Cut total is 722,150 CY Fill total is 639,025 CY Total earth moved 1,361,175 or 90,000 per turbine</p>	<p>Cut total is 573,500 CY Fill total is 437,525 CY <u>Total earth moved is 1,011,025</u> <u>or 91,000 per turbine</u></p>	<p>Total savings is 350,150 CY for the removal of 4 turbines or 87,537.5 CY savings per turbine removed</p>
<p align="center">Bicknell Thrush</p> <p align="center">Bicknell's thrush is recognized by MDIFW as a "Species of Special Concern"</p>	<p align="center">8 acres of habitat to be completely cleared</p>	<p align="center">5 acres of habitat to be completely cleared</p>	<p align="center">Significant impacts remain</p> <p>88 acres in the project area are Bicknell's thrush preferred habitat. 3 acres less to be cleared but population remains at risk from strikes from turbines 9 to 11 and overall disturbances to habitat.</p>
<p align="center">Subalpine Forest</p> <p>Subalpine Fir Forest natural community is ranked S3 (rare) by the Maine Natural Areas Program, with only 19 documented occurrences in the state encompassing 0.2% of the State's land area</p>	<p>39 acres of direct impact and 63 acres of indirect impacts</p>	<p>20 acres of direct impact and 35 acres indirect impact</p>	<p align="center">Still a major threat to this rare natural community. Fragmentation and edge effects will be significant along turbines 8 to 11</p>

IMPACTS	ORIGINAL	AMENDED	DIFFERENCE
<p>Raptors, bats and terrestrial wildlife</p>	<p>Breeding survey documented seven species of special concern listed by the MDIFW. The Canadian Lynx has been documented in and around the Kibby project area as well as the migration of the Golden and Bald Eagle.</p>	<p>SAME</p>	<p>NO DIFFERENCE</p> <p><u>TransCanada has not done a comprehensive, seasonal, mammal survey in the area other than for the Canada lynx.</u></p>

DISCUSSION

Edge Effect

In the amended application construction will result in the complete removal of approximately 20 acres of Subalpine forest and indirect impact to another 35 acres. In Exhibit 4 it indicates a current total of 358 acres of contiguous Subalpine Forest. After placement of the 11 turbines the natural community remaining will be 313 acres. This is a significant impact to 45 acres of forest by the combination of turbine placement, roads, collector lines, fragmentation of habitat and edge effect.

The applicant has failed to acknowledge the comments made by the Consolidated Parties (CP) on Edge Effect. Edge effect from a logging road is minimal compared to the large-scale project proposed. TransCanada admitted that the habitat adjacent to large clearings would change. This was made evident in the Kibby Series A footprint during the site visit organized by LURC on May 11, 2010.

In TransCanada's amended proposal for the Kibby Expansion, Turbines #8 through #11 will cause significant Edge Effect on the Subalpine forest on the Sisk Mountain Range. In the decision making process for this permit, the LURC Commissioners need to take into account the combined amount of current and future acreage adversely impacted due to Edge Effect by both of the Kibby complexes and by the proposed expansion on Sisk.

Vegetative Cover

From the third party inspector, Steve Roberge, PE dated September 15, 2010, Inspection Report 79, section 16 on vegetative cover brought up an original concern of the Friends of the Boundary Mountains. The applicant's basis for claiming that much of its

disturbance of forest and ridgeline is only temporary stems from TransCanada's expectation that these areas would re-vegetate reasonably rapidly. They predicted that native species would quickly reseed and grow. FBM placed little or no hope in this prediction, knowing as we do that the conditions above 2,700 feet are not conducive to rapid recovery, and in many cases, allow little or no recovery at all. FBM calls on LURC to re-categorize temporarily impacted areas into permanently impacted ones.

Unbiased researchers understand that at the elevation of the Kibby Range the plant and intertwined animal communities are unique and very fragile, and once disturbed take a very long time to recover, if they can at all.

Below are Inspector Roberge's comments on the re-vegetation efforts on the Kibby project:

16. Vegetative Cover: There was much discussion pertaining to the soil material used for the pad sites and native soil material to narrow the crane road. Erosion of this material is not an issue. However, gaining native vegetative plants (fir-birch-hobble bush) to grow in this material is questionable. The soil was supposed to be supplemented with additional woody material, but did not contain sufficient woody debris to breakup the soil cover or keep it from compacting. The intent was to provide a material that would resemble the native organic duff layer in the surrounding areas. It was Rocque's opinion that pad site B13 is the only site on the B series that may have a chance for vegetative growth.

We visited three of the "A" series pad sites that had been installed with a similar soil material to observe the growth of these sites with a 1 year growing season. This was inconclusive as one of the sites had very little growth (A15), one had no growth (A14), and one had established growth (A16). It was observed that (A17) pad site area had been covered with erosion control mix and did not have an established vegetative growth.

TransCanada's prior assurances of vegetative re-growth was a major rebuttal point they have raised throughout these proceedings to counter the concerns of numerous commentary about disturbance of the fragile mountain soils. We see in Roberge's on-the-ground report why such assurances are meaningless and need to be dismissed as so much empty glowing rhetoric by TransCanada. They couldn't pass the straight-face test when originally proclaimed and certainly cannot do so now.

Bringing to light the failure of TransCanada's re-vegetative efforts casts significant doubt on the totals for permanently and temporarily impacted acreage given by TransCanada in the amended proposal. It has been established that temporarily impacted areas will take years to recover, if they do so at all. Slow or absent re-growth leaves areas open to invasive species. Leaving a pad site "as is" is permanent impact, not temporary, and should be documented correctly for the true overall permanent impacts. TransCanada's attempt to "window dress" its destruction of the natural communities on Sisk Mountain is now open for all to see whether its 15 or 11 turbines.

Bicknell's Thrush Habitat

The Bicknell's thrush habitat is an integral part of the fragile Sub-alpine forest and is directly impacted by the 45 acres of alteration or clearing. Exhibit 5 compares the original proposal's impact with the amended proposal's area of impact for Bicknell's thrush. Turbines #8 through #11 will still have a direct impact on the habitat and flight patterns for Bicknell's thrush. A savings of three acres of core habitat by the removal of turbine #12 does not appreciably reduce the amount of damage to this habitat and does not fulfill TransCanada's obligation to meet the burden of no undue adverse impact on a species of special concern.

In LURC's DP 4860 Draft Denial it is noted that the Consolidated Parties claimed that the applicant grossly overestimated the amount of potential thrush habitat in Maine and specifically on this ridge. Suitable habitat for the Bicknell's thrush includes west-facing ridges, ridgelines, fir-waves and areas adjacent to fir waves, and experts have urged caution to avoid development in these areas. All of the area removed from the application is only 'potential' habitat of comparatively low significance when compared to the proven habitat areas nearly right under turbines #10 and #11.

Birds and Bats

The potential of bird collision for all eleven turbines is moderate but the average flight height is one of the lowest recorded in the northeast for forested ridges, resulting in an overall high number of targets passing through the rotor swept area per hour. (DP 4860, Denial, page 30) Also in Chapter 661, Sec. B-13, (4), it emphasizes the concerns for harm to avian and bat species by wind development.

The Hoary Bat and the Silver Haired Bat, two species of concern throughout the US, are most likely in and around the Sisk project footprint. Collisions between turbine blades and bats are a well-known fact with recent studies documenting mortality rates at one bat per turbine per day during a swarming period survey. New studies show that tree roosting species or migratory tree bats, like the Hoary and Silver Haired Bats, are attracted to insects that are drawn by the lighting and heat of the nacelle, causing an increase in bat strikes with blades.

An additional stress to bats is White-Nose Syndrome, a cold climate fungal infection that has been confirmed in New Hampshire, Vermont and in twelve other states as well as two Canadian Provinces. This fungal infection has killed an estimated one million bats since 2007. (www.batconservation.org). Each additional stressor and the cumulative impacts these species of special concern have already encountered throughout Maine's expedited area, weigh strongly against approval of DP 4860 on ecological grounds, whether designed with 15 or 11 turbines.

Wetlands

The amended proposal includes a reduction of impacted wetlands. An inconsequential wetland non-disturbance of 0.007 acres (305 square feet), leaves the total impact at 4.34 acres. Most of the wetland impacts are on the Mile 5 Road expansion and upgrades. This has not been altered by the amendment at all!

The Mile 5 Road will have tremendous impacts, given its location in the drainage pattern of the area. Reconnecting the hydrology and diverting run-off accumulation from upland will be a challenge and will require extensive maintenance. The possibility of the Roaring Brook Mayfly and the Spring Salamander occurring on four of the five stream crossing on the Mile 5 Road is a concern noted by the MDIFW. Simply using bigger culverts does not insure safe passage of fish or decreased impact to other species of concern.

In TransCanada's application to the Army Corp of Engineers (ACE) the company proposed a \$32,594.00 contribution to the Maine Natural Resource Mitigation Fund as compensation for the project's unavoidable indirect impacts to aquatic resources. Additional information was required by the ACE from TransCanada with regards to their permit application. Item three requests assistance in preparing an Environmental Assessment, a required document for the Kibby project due to the amount of impacts to wetlands. Other concerns were also noted. See attached FBM Exhibit A (ACE public notice NAE-2009-00892).

No amount of mitigation can replace the unique ecology of the subalpine biophysical region. In the Kibby project over 35 acres of forested wetland have been altered to Scrub-Shrub like wetland. With the additional new roads, ditching, and clearing of wetlands and turbine pads and their near surroundings proposed for Sisk Mountain, invasive species can take hold and replace the native vegetation. Invasive aquatic species can impact wetlands thru their ability to adapt to new environments and reproduce. This can and will stress and threaten native species, disrupt food webs, alter the biodiversity and degrade habitats. Wetland habitats support many threatened, endangered or species of special concern. Common terrestrial invasive species found in wetlands are Purple Loosestrife, Common Reed and Glossy Buckthorn. Fanwort, Hydrilla and the Eurasian milfoil are aquatic invasive threats.

Vernal Pools

Vernal pool impacts will remain the same under the amended proposal, with significant alteration and possible impacts from disconnected hydrology due to road construction on Mile 5 Road. Impacts to Gold Brook, where the Roaring Brook Mayfly and the Spring Salamander were documented, are also expected.

Phosphorus Loading

Flagstaff Lake's watershed area is +/- 241,820 acres. The Kibby project footprint within the watershed is 0.04 percent of the total watershed area. The computed export rate of Phosphorus from the Kibby Project to Flagstaff Lake is 13.4 pounds per year. The DEP allowable export rate is 26.4 pounds per year. The calculation of 13.4 is based on the design of and maintenance of erosion control measures throughout the project area. It is also based on 20-foot wide roads and only 0.27 acre gravel surface for each turbine site.

The Kibby Expansion project (original) for Flagstaff Lake watershed export rate is 1.30 pounds per year with the allowable at 1.88 pounds per year. Cumulatively over 14 pounds of Phosphorus can be deposited into Flagstaff Lake. Flagstaff Lake is a part of the hydro-dam system and can have frequent drops in the water levels up to 25 feet and can significantly impact the aquatic life and temperature of the lake. There is no mention or data in the proposed project on cumulative impacts from phosphorus loading into Gold Brook and the Flagstaff Lake watershed or the cumulative load of phosphorus from logging operations, and industrial wind facilities.

SCENIC IMPACTS

IMPACTS	ORIGINAL	AMENDED	DIFFERENCE
Scenic Value	Adverse Visual Impacts on Scenic Resources of State and National Significance in the Surrounding Area	Adverse Visual Impacts on Scenic Resources of State and National Significance in the Surrounding Area	Little practical difference. Remaining turbines will still mar the beauty and character of the area forever Kibby Stream has potential for large cumulative impacts due to visibility of turbines on Kibby and Sisk. LURC stated the cumulative impacts to the Chain of Ponds and the Arnold Trail demonstrate that the project would not meet the standards for no undue adverse impacts to the scenic value in the area (Denial, pg. 32)

DISCUSSION

A review of the cumulative impacts of the existing Kibby A and B series combined with the proposed Kibby project expansion for Sisk Mountain demonstrates extensive visual impacts. Below is an explanation of which turbines are, or will be, visible from various sites of statewide significance in the viewshed. Source of these observations are from LURC’s visual consultant Jim Palmer's evaluation listed in Table 1 of his most recent review of the Kibby expansion application and from FBM own observations. The existing Kibby project data are from ZP 709, Section 9, page 73.

Visibility of turbines depending upon where on a given viewer is located:

-From the southwest bay of Bag Pond: portions of six existing turbines are visible. Add partial visibility of 10 turbines from the amended proposal produces a total of 16 visible turbines.

- From the southeast corner of Lower Pond: up to 13 turbines are visible, no added impact from amendment.
- From Long Pond at the southern end: up to three turbines are visible, plus ten of the eleven proposed turbines visible. Total of 13 visible turbines.
- From Natanis Pond: two existing turbines are visible, add three turbines to be visible from the amended proposal. Total of 5 visible turbines.
- From Arnold Pond: Kibby's existing turbines are visible from a distance of up to 10.7 miles. Number of turbines visible will vary depending on location on the Pond. Add up to ten turbines from the amended proposal that will be somewhat visible.
- From the Bigelow Preserve from campsites newly built along Flagstaff Lake and the Appalachian Trail there currently are multiple turbines visible from the Kibby project. And there will be more visible if Sisk Mountain is approved.
- From the Bigelow Preserve the Kibby project's ridgeline is visible from the Safford Brook campsite from a distance of twenty miles.
- From the Bigelow Range, from Horns Pond, from West Peak and from Avery Peak all have clear visibility of the Kibby project's turbines on clear days. Observers have counted at least 20 turbines from the Horns. At night the blinking red lights of Kibby's turbines are clearly visible to wilderness hikers, including AT thru hikers, from the Horns Pond's lean-tos.

These points in the Bigelow Preserve, while outside the 8-mile evaluation criteria of Chapter 661, are more than just scenic views of statewide significance. They represent the most outstanding points of Maine's "jewel" in its inventory of public lands.

From the open summits all along the Appalachian Trail, located only 15 miles or so from Kibby, there will be more views of the turbines, from Cranberry Peak to Little Bigelow, from Saddleback Junior and from Mount Abram at a distance of 30 miles.

Compromising these outstanding views is a tremendous disservice to all those who have worked so hard to keep the Bigelow Preserve preserved and to the thousands of future hikers who look forward to one day transverse the Bigelow ridgeline and the other summits of Maine's High Peaks region.

- Some points on Jim Pond, 5.1 miles from the Kibby Project, will have potential views of all turbines from Series B; at some points 8 or 10 turbines at a time will be in view. The Pond is a management class 2, resource class 1A, noted for its outstanding fisheries and wildlife values.
- Flagstaff Lake is the most used lake in the region and is considered a management class 2, resource class 1A, with outstanding fisheries and wildlife values and significant scenic and shore character. Potential views of the Kibby Project are visible at 10 miles away.
- In Coburn Gore, Crosby Pond, located 10 miles from Kibby, have views of up to six turbines due to the changing ridgeline. Add all eleven turbines from amended proposal. Total of 17 visible turbines.
- Tim Pond has views up to 18 turbines, depending on the viewer's location on the Pond.
- From the Arnold Trail: add 10 of the proposed eleven turbines, blade tip or hub will be visible.
- The North Branch of the Dead River, a Class A flowing water, will have three blade tips visible along the river's edge.
- Kibby Stream, a class A waterway, listed in the Maine River Study in Appendix G for outstanding scenic river values, will have cumulative impacts, both visual and physical, from the Kibby project and from all eleven of the turbines in the amended proposal.
- From the Canadian side of the border: A letter from Andre Blais, a Canadian citizen and founder of Sentiers Frontaliers (hiking club), which has been working with The Arnold Expedition Historical Society (ME) and the Cohos Trail (NH) in creating the first International Loop Trail in North America, provides LURC with several significant adverse impacts on the Canadian landscape and the panoramas of the township across the border from the 8 northern turbines in the amended proposal. Jim Palmer recognized the Canadian situation by noting in his first report that it might be a good neighbor policy for LURC to inventory and consider the impacts on the Canadian landscape. Consideration must also be given to the ramifications of international law under the North American Agreement on Environmental Cooperation, as previously pointed out by Friends of the Boundary Mountains in its Post-Hearing Brief on DP 4860.

Based on Maine's Chapter 661 (Wind Energy Act) an applicant is required to demonstrate no unreasonable adverse impact to state or national scenic resources located within an eight mile radius. What is the exact definition of "unreasonably adverse?" One example can be drawn from the U.S. Environmental Protection Agency's regulations that govern pesticide registration, which explicitly defines "unreasonable adverse effects" as being determined by a risk/benefit balance analysis.

- Unreasonable: exceeding reasonable limits.
- Adverse: harmful or unfavorable.

To interpret these together one needs to do an analysis of the benefits and harms, i.e. net effect, of the activity or project. TransCanada has not done such an analysis and has not demonstrated that there won't be unreasonable adverse impacts upon state or national scenic resources.

"If the applicant fails to demonstrate the applicable scenic standard has been met, the project is not approvable through resort to compensation intended to redress the unreasonable scenic impact." (Deliberative notes)

Lost scenic value cannot be compensated for because of the subjective nature of the experience. A destroyed or severely impacted scenic vista cannot be replaced with another one in another location. The burden of proof for *no unreasonable adverse impact* on the scenic character of this area has not been met by TransCanada in its original application or in its amended version.

CUMULATIVE IMPACTS

IMPACTS	ORIGINAL	AMENDED	DIFFERENCE
<p>The Commission must review the expanded project as a whole (Kibby + Sisk) and ask whether the expanded development can fit harmoniously into the natural environment.”</p>	<p>Contrary to the intent of LURC’s third principle goal to “Maintain the natural character of certain areas within the jurisdiction having significant natural values...”</p> <p>Goal #2 in the new 2010 CLUP vows to, ‘prevent the degradation of natural and cultural values resulting from cumulative impacts of incremental development’ (2010 CLUP, p. 8; also 1997 CLUP, p. 142)</p>	<p>SAME</p>	<p>NO DIFFERENCE</p> <p>The adverse effects of the proposal on the Subalpine Fir Forest on Sisk Mountain, combined with the existing impacts due to the Kibby Project (44 turbines), reaches the tipping point in being able to fit such industrial development harmoniously into the natural environment.</p>

DISCUSSION

Cumulative impacts, visual as well as environmental, from the existing Kibby wind facilities on Kibby Mountain (22 turbines), Kibby range (22 turbines), combined with the proposed Kibby expansion as amended (11 turbines), will transform this area of the undeveloped Boundary Mountains into an industrial cluster far more intense and sprawling than anything contemplated in LURC’s CLUP or in the State of Maine’s historic vision or intentions for the Boundary Mountains. Whether considering 11 or 15 turbines, the

cumulative impacts of the Kibby development and the proposed Sisk Mt. development are substantial and need to be recognized by LURC in weighing TransCanada's proposal.

The importance of considering cumulative impact has been emphasized by the Army Corp of Engineers (ACE) in weighing TransCanada's application for a permit under Section 404 of the Clean Water Act. ACE requires TransCanada to seriously consider cumulative impact in ACE's request to TransCanada for additional information with regards to their permit application. Item #3 specifically urges TransCanada to pay attention to cumulative impact. Other concerns are also noted. See FBM Exhibit A: ACE letter to TransCanada.

The Council on Environmental Quality (CEQ) acting under "Considering Cumulative Effects Under the National Policy Act" provides federal agencies a guidance document for analyzing cumulative impacts for an Environmental Assessment or an Environmental Impact Statement. Cumulative impacts can be determined through an overview of all the agencies' required studies, assessments, comments on specific resources, ecosystems, watersheds, etc. (such as that found in the Flagstaff Management Plan). Secondary or indirect impacts can be partially determined by the initial analysis of direct impacts over time. Among the things to watch and study are edge effect, fragmentation, alterations of wetland habitat over time, stable re-vegetation or growth from temporary impacts and invasive species introduction.

Analyzing for cumulative effects on the full range of resources, ecosystems and human communities provides a mechanism for addressing sustainable and responsible development. Applying these imperatives to the Kibby expansion, in combination with the earlier two phases of development at Kibby, will enable LURC to understand the full impact on the region, today as well as down the road. By recognizing and considering cumulative impacts, Friends of the Boundary Mountains believes the Commission will realize the combined impacts are just too great to be allowed in such a significant setting of what Maine has to offer.

PROTECTION OF HIGH MOUNTAIN AREA

IMPACTS	ORIGINAL	AMENDED	DIFFERENCE
<p>RISK TO HIGH MOUNTAIN AREAS</p> <p>‘Mountain areas’ are specifically listed among the ‘unique, high-value natural resources’ included in the principal values of the LURC jurisdiction. Throughout the 1997 CLUP mountains are consistently listed as one of the specific resources that give the jurisdiction its special character. [LURC’s 1997 Comprehensive Land Use Plan (CLUP)]</p>	<p>Jeopardizes the natural equilibrium of vegetation, geology, slope, soil and climate, water quality, vegetative communities, unique wildlife communities and low-impact recreational opportunities.</p>	<p>SAME</p>	<p>NO DIFFERENCE</p> <p>Both the original and amended version of TransCanada’s proposal are a violation of LURC’s stated policy to “Protect high-mountain resources with particularly high natural resource values or sensitivity, which are not appropriate for most development.”</p>

TANGIBLE BENEFITS

IMPACTS	ORIGINAL	AMENDED	DIFFERENCE
<p>ENERGY PRODUCTION</p> <p>TransCanada claims Kibby and Sisk are highest value windpower sites (“premier wind sites”) whose capacity factor (actual production) will be above 30%.</p>	<p>Actual production for first 8 months of Kibby phase 1 (10/31/09 thru 6/30/10) = 19.4% [Source: FERC]</p>	<p>SAME</p> <p>Annual production from Kibby will probably be under 19% due to shut down for maintenance during August</p>	<p>SLIGHT DIFFERENCE (LESS production under amended proposal)</p> <p>Both Kibby and Sisk are unsuitable for windpower due to severe winter weather and high elevations.</p>

DISCUSSION

Performance of the Kibby Wind Energy Facility (Series A)

Although LURC has given TransCanada until 2011 to submit its annual report on the first year's performance of the Kibby Wind Energy Facility (Series A), which began producing electricity on 10/31/09, there is really no need to wait until then for the Commissioners to examine Kibby's performance. The data on Kibby's performance since its inception is available on a month-to-month basis grouped in downloadable quarterly spreadsheets for TransCanada Maine Wind Development Inc. on the website of the Federal Energy Regulatory Commission (FERC). Indeed, this data is available for all windpower generation in the United States and can be used to compare Kibby with other windpower generation facilities in Maine and elsewhere.

In deliberating on the need and efficacy of permitting an *expansion* of Kibby, the Commissioners have expressed the necessity to determine whether the existing Kibby facility is performing as promised and planned by TransCanada. This was made clear by the LURC Commissioners at the hearing on TransCanada's petition to expand the expedited area on Sisk Mountain, held at the Sugarloaf Inn on March 17, 2009. When Kibby I was permitted, LURC had to rely on unproven estimates as to the actual generation of electricity. When the LURC Commissioners deliberate and vote on the proposed Kibby expansion for Sisk Mt. they will have the benefit of over a year of actual figures.

It should be kept in mind that TransCanada has continually used the status of the Boundary Mountains as "premier" wind sites as justification, in its applications and testimonies to LURC, for its proposed intrusions into the fragile and rare natural environments of Kibby and Sisk, regardless of the number of turbines being proposed. TransCanada has claimed that the Kibby project will have a capacity factor of at least 30%, meaning it will be producing at least 30% of the 132 MW it is designed to generate. While 30% must be considered a poor return given the project's costs, both in taxpayer and ratepayer dollars and in environmental degradation, the actual production over the first 8 months is far worse, both in absolute and relative terms.

FBM Exhibit B Kibby actual electricity production 2009 -2010 presents month-by-month production data for Kibby's first 8 months of operation. It shows the actual amount of electricity produced in megawatt hours as compared to the capacity of Kibby Series A (22 turbines) in megawatt hours. It goes from Oct 31, 2009 through June 30, 2010.

The average for the first 8 months of Kibby's operation is 19.4% of capacity. Looking at the month-to month-numbers, the only "good day" (50.4%) was 10/31, the day it started up production. After that 1 day it was all downhill. By Dec. it was at 16.8% and then it dropped to 6.7% in Jan. 2010! Even though it regained some ground after Jan., it dropped to 16.6% for the month of June 2010.

FBM Exhibit C MarsHill Stetson I Kibby SIX MONTHS COMPARISON provides a comparison of Kibby for the first 6 months of 2010 with the Mars Hill and Stetson I wind energy facilities. As can be readily observed, Kibby has produced far less of its rated capacity than either Mars Hill or Stetson I. Mars Hill, at nearly 40% of capacity, is twice as efficient as Kibby at 19%.

These figures certainly argue against approving any **additional** capacity for Kibby (whether 11 or 15 turbines), given its poor performance thus far and all the negative impacts to a very special and rare natural environment on Sisk Mountain and Chain of Ponds, and all the other undue adverse impacts it will generate, even to the Bigelow Preserve.

IMPACTS	ORIGINAL	AMENDED	DIFFERENCE
REAL ESTATE VALUES	Property values are going to decrease in an area like Sisk where there is little development and where such encroachments into the wild mountaintops will be visible, audible and influential on the quality of place, which these mountains symbolize. This is born out by studies of changes in property values impacted by windpower sitings that FBM has submitted into the record.	SAME	NO DIFFERENCE
PUBLIC SUBSIDIES FROM TAXPAYERS AT THE FEDERAL, AND, PROBABLY, THE COUNTY LEVEL.	An array of subsidies and tax write-offs are available to windpower developers	SAME	NO DIFFERENCE

IMPACTS	ORIGINAL	AMENDED	DIFFERENCE
<p>NET TANGIBLE BENEFITS</p>	<p>TransCanada claims payments (i.e., bribes) from its corporate treasury to various organizations and town of Stratton represent the "tangible benefits" of the project, not the windpower.</p> <p>TransCanada's approach to the tangible benefits requirement is to ignore all public costs and only look at the supposed public benefits. The Legislative goal, however, is for expedited wind projects to benefit the public.</p>	<p>SAME</p>	<p>NO DIFFERENCE except slightly less bribe money that we know of under the amended proposal.</p> <p>TransCanada continues to ignore the requirement that benefits must be "attributable to the construction, operation and maintenance" of the windpower project, not come from the applicant's wealth.</p>



DEPARTMENT OF THE ARMY
NEW ENGLAND DISTRICT, CORPS OF ENGINEERS
696 VIRGINIA ROAD
CONCORD, MASSACHUSETTS 01742-2751

REPLY TO:
ATTENTION OF:

Regulatory Division
CENAE-R-51

March 8, 2010

Dana Valleau
TRC Solutions
14 Gabriel Drive
Augusta, Maine 04330

Dear Mr. Valleau:

This concerns your client's application for a Department of the Army permit to place temporary and permanent fill in numerous waterways and wetlands at Kibby and Chain of Ponds Township, Maine in order to develop a 45 MW mountain top wind energy project. It has been assigned number NAE-2009-00892 to which all future correspondence should refer.

The application form is complete, however we require additional information to process your application. (See attached sheet for information required.)

This additional information is necessary so that we can properly evaluate your proposed activity and reach a decision on your application. Hence, no further action will be taken until you have complied with our request. Failure to provide this information within thirty days will result in your application being considered withdrawn.

Please do not begin any work in our jurisdiction without the required Corps of Engineers permit. It is illegal to do so, and will only delay your project and may subject you to civil or criminal liability; fines can be as high as \$10,000 or \$25,000 per day of violation respectively.

If a permit is to be issued, a \$100 fee will be required. Do not send the fee at this time. A separate request will be made after we have made our decision.

If you have any questions, please contact me at our Manchester, Maine Project Office at 207-623-8367. Your reply should be addressed to this office at: US Army Corps of Engineers, 675 Western Avenue #3, Manchester, Maine 04351.

Sincerely,

A handwritten signature in black ink that reads "Jay L. Clement".

Jay L. Clement
Senior Project Manager
Maine Project Office

ADDITIONAL INFORMATION REQUIRED
FOR DEPARTMENT OF THE ARMY PERMIT
APPLICATION NO. NAE-2009-00892

1. Thank you for assisting in the preparation of a preliminary jurisdictional determination form for the project. Could you please email a copy of the draft in word format so that it can be slightly revised prior to final signature. Also, please verify which tables from the LURC application you intended to reference in the JD form.
2. We have received a copy of the adverse effect finding of the Maine Historic Preservation Commission (“MHPC”) for a portion of the Benedict Arnold Trail to Quebec Historic District. Please submit information that thoroughly documents your efforts to avoid and minimize impacts to this resource. If MHPC determines that mitigation, and by association a Memorandum of Agreement (“MOA”), is required, please include the Corps in your coordination with MHPC. As you know, any MOA must be cosigned by the Corps and requires a number of formal steps be taken between MHPC, the Advisory Council on Historic Preservation, and the Corps.
3. For the Kibby project you assisted in the preparation of our environmental assessment (“EA”). It would be equally helpful if you did the same for this project. I ask that you pay particular attention to the cumulative impact section since this project is linked to Kibby. As you know, the cumulative impact of windpower development is gaining a lot of press.
4. Alternatives Analysis.
 - a. Although at a number of points in your alternatives analysis, you incorporate the Section 404(b)(1) Guidelines, you do not do so consistently. The Corps encourages that all alternatives be analyzed and dismissed in accordance with the Section 404(b)(1) Guidelines. With a minimum of additional wording, the language in the guidelines could be added to make the analysis more fully compatible with the requirements of the Corps, the Maine DEP, and the federal resource agencies (US EPA, USFWS, and NMFS). Rather than rewrite the analysis at this time, I suggest that you do so in the EA.
 - b. The discussion of the no action alternative needs to be expanded. What are the consequences of no action? The fact that it doesn’t meet state goals and policies is interesting but not really germane.
 - c. Beyond expanding the capacity of the Kibby project, isn’t the project purpose to provide additional wind energy in the region? The alternatives analysis needs to include an analysis of stand alone project alternatives.
 - d. The analysis could be improved by adding a map of alternative sites/alignments and a comparative table.
5. Plans. The plans for the Corps application should follow the format of the Kibby project to include location map, schematic plan views, utility corridor sheets, and typical detail sheets.

6. For purposes of the public notice, please provide the Corps with two sets of standard size mailing labels for the project abutters.

7. Table 1.1. The 4.4 acres of wetland affected is not the sum of the 0.8 acres filled and the 3.5 acres cleared as temporary impact. Was there some rounding up?

8. Exhibit B8. What percent of the affected area is currently in active forest management. Provide any available details on the history of this activity – last cut, % removed, projection for next cut, etc. Presumably your goal would be to demonstrate that your clearing is not unlike past and ongoing practices and is expected to have minimal short-term, long-term, and cumulative impact (for determining mitigation burdens).

9. It is our understanding that LURC will hold a public information meeting or a public hearing or both for the project. Please let us know when these have been scheduled so that we can attend if possible. This may allow us to avoid a similar Corps meeting/hearing later in the process.

10. Mitigation. It is our understanding that you are preparing a draft mitigation plan for the project. Please be aware that we'll need this before we are able to go out for public notice. Mitigation will be required for permanent wetland impacts over 20,000 s.f. and for temporary and clearing impacts. For the latter, please refer to the updated indirect impact mitigation table in the following web link (<http://www.nae.usace.army.mil/reg/2009Guidance10Dec09PN.pdf>) For any mitigation other than in lieu fee, please include a location map of the mitigation site(s) so that it can be included in a public notice.

11. Table B15-1. It seems appropriate that this table should be included in the Corps public notice. For our purposes, it would be cleaner to either remove reference to LURC wetland designators or to add Cowardin references. This is equally important if you intend to attach this table to the preliminary JD form.

YEAR	MONTH	Total Capacity of Kibby turbines (in Megawatts, MW*)	x days	x 24 hrs	Total Kibby capacity in Megawatt Hours (MWH)	Kibby Actual Production in MWH	Kibby Monthly Capacity Factor
2009	1 day in Oct. (10/31)	66	1	24	1,584	798	50.38%
2009	Nov	66	30	24	47,520	11,280	23.74%
2009	Dec	66	31	24	49,104	8,260	16.82%
2010	Jan	66	31	24	49,104	3,299	6.72%
2010	Feb	66	28	24	44,352	11,806	26.62%
2010	March	66	31	24	49,104	9,744	19.84%
2010	April	66	30	24	47,520	11,432	24.06%
2010	May	66	31	24	49,104	10,277	20.93%
2010	June	66	30	24	47,520	7,892	16.61%
Totals for 8 months of operation [10/31/09 - 6/30/10]		66	243	24	384,912	74,788	19.43%

* capacity based on 22 of 44 turbines (1/2 of 132 MW total project) in operation.

Source: FERC website

<http://ferc.gov/docs-filing/eqr/data.asp>

RespondentCompanyName	RespondentID	Transaction Begin Date	Transaction End Date	Product Name	Transaction Quantity	Capacity (MW)	Capacity in MWH Jan - June 2010	Capacity Factor
STETSON I								
Evergreen Wind Power V, LLC	2133	1/1/2010	6/30/2010	ENERGY	78104	57	247,608	31.54%
MARS HILL								
Evergreen Wind Power, LLC	1783	1/1/2010	6/30/2010	ENERGY	72302	42	182,448	39.63%
KIBBY phase I [Series A]								
TransCanada Maine Wind Development Inc.	1964	1/1/2010	6/30/2010	ENERGY	54450	66	286,704	18.99%

SOURCE: FERC database