

Supplement to Petition to Add to the Windpower
Expedited Permitting Area

Submitted to the
Maine Land Use Regulation Commission

by

TransCanada Maine Wind Development, Inc.

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ATTACHMENTS

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| Attachment A | Map of Existing Expedited Permitting Area |
| Attachment B | Map Showing Revised Petition Area and Proposed Kibby Expansion Project Footprint |
| Attachment C | Wind Resource Map |
| Attachment D | Map Depicting Environmental Survey Results |
| Attachment E | Photographs |

1. Introduction

On March 3, 2010, the Commission adopted Guidelines for Review of Petitions for the Addition of Lands to the Expedited Permitting Area for Wind Power Development (“Guidance”), which will be used by the Commission in applying the statutory criteria for expansion of the expedited permitting area found in 35-A M.R.S.A. § 3453. This Guidance will be used for the first time in connection with the Commission’s review of TransCanada’s Petition to Add to the Expedited Permitting Area. In response to the Guidance, TransCanada is providing this supplement to its June, 2009 Petition to Initiate Commission Rulemaking to Add to the Expedited Permitting Area.

2. Revised Petition Area

As reflected on Attachment A, the existing expedited permitting area includes all of Kibby Township, a portion of the northern end of Chain of Ponds Township, and all of Alder Stream and Jim Pond Townships located south of Kibby and Chain of Ponds Townships. TransCanada is proposing to add an area within Chain of Ponds Township that is adjacent to the existing expedited permitting area, and which includes the continuation of the Sisk ridgeline. Specifically, as shown in Attachment B, the Sisk ridgeline begins along the international boundary strip in the northern end of Chain of Ponds Township, which is in the existing expedited permitting area, and continues in a generally southeasterly direction where it extends into Kibby Township, which is also within the existing expedited permitting area. The ridgeline then turns west where it crosses the township line back into Chain of Ponds Township, in the portion of Chain of Ponds Township that is not currently within but which TransCanada proposes to add to the expedited permitting area.

In response to the Guidance and continuing consultation with interested stakeholders, TransCanada is reducing the area requested for inclusion in the expedited permitting area from 630 acres to 156 acres (the “Revised Petition Area”). Specifically, the original Petition Area has been modified to exclude the southernmost peak of Sisk Mountain, which is an important visual focal point in the surrounding landscape, and has been refined to include only the area along the ridgeline most suitable for wind development based on the wind resource, instead of following the 2,700 foot contour line used to delineate a significant portion of the boundary of the original Petition Area. The original and Revised Petition Areas are depicted on Attachment C.

Although the Revised Petition Area is reduced in total acreage, it includes a portion of the Sisk ridgeline and wind resource that would accommodate viable wind energy generation. While the Revised Petition Area would continue to accommodate a modest future expansion project beyond the fifteen turbines proposed as part of the Kibby Expansion project, importantly, it would also provide flexibility for micro-siting of turbines proposed as part of the Kibby Expansion project to further reduce resource impacts. As reflected on Attachment B, a number of the Kibby Expansion turbines are located on the westerly edge of the existing expedited permitting area. Additionally, a

small portion of the road associated with the Kibby Expansion project extends into the Revised Petition Area and is an allowed use there. As occurred in the Kibby Project, TransCanada will continue to evaluate options for reducing resource impacts throughout the permitting and post-permitting process. A decision to include wind power generation as an allowed use within the Revised Petition Area would facilitate that process.

3. Supplemental Information

a. Petition Area Wind Resource.

As set forth in Section B.2 of the Petition, macro-level wind mapping indicates that the Sisk region is classified as Wind Power Class 5, which represents an excellent wind resource potential. Additionally, in July of 2008, TransCanada engaged Helimax Energy, Inc., a wind energy consultant, to collect wind data and produce an estimate (model) of the wind resource along the Sisk ridge. Using wind data collected from three (3) meteorological towers on the Kibby site over a twenty-six (26) month period, Helimax produced wind flow models of the proposed expedited expansion area (and the area currently in the existing expedited zone). The results of the wind resource assessment indicate that wind speeds along the extent of the Sisk ridge are between 7.5 m/s and 9.5 m/s at a height of 80 m above grade. The results of the simulation are represented visually on the wind resource map included as Attachment C.

The modeling indicates that the wind resource along the Sisk ridgeline is comparable to wind speed estimates seen at the Kibby site, which hosts an excellent wind resource. The data gathered from the meteorological tower installed as part of the Kibby Expansion project will be used to verify these macro-level indicators and facilitate micro-siting of turbines.

b. Petition Area Environmental Surveys

TransCanada conducted environmental surveys of the area that is proposed for development as part of the pending Kibby Expansion application as well as the Revised Petition Area. Attachment D depicts the results of those surveys, including surveys within the Revised Petition Area. Consistent with TransCanada's approach in the Kibby and Kibby Expansion projects, any development within the Revised Petition Area would minimize environmental and other impacts through careful design and project micro-siting.

Soils and Wetlands

Soil survey and wetland delineation work was performed between June and November 2009. The soil survey was performed following methods required to prepare a Class "L" Soil Survey, the methodology determined in consultation with the Maine State Soil Scientist. The method used to identify and map wetlands was the same as that used for the Kibby Project, and consisted of the "Routine On-site Determination Method" as described in the Army Corps Wetland Delineation Manual. Use of this methodology was

confirmed as appropriate by the LURC, Army Corps, and Maine State Soil Scientist. The survey area covered approximately 1,084 acres and included 105 acres of the total 156 acres proposed to be added to the Expedited Permitting Area. See Attachment D for the survey area, soil test pit locations, and wetlands delineated.

A total of 16 soil test pits were observed within the Revised Petition Area, and soils typical of the entire ridge were found in this area and include Ricker, Saddleback, Surplus, Enchanted, and Abram soil series. Wetlands delineated within the Revised Petition Area consisted of 33 wetlands, totalling 9 acres. One stream was also identified and mapped within this area. Sufficient suitable upland area is found in the Revised Petition Area to avoid wetland and stream impacts.

Rare Plants and Natural Communities

Plant surveys were performed in July and August 2009 within and adjacent to the same survey area used for the soil and wetland work. The methodology used to survey the area was similar to that used for the Kibby Project, and consisted of surveying the potential development area for habitats that have a moderate or high potential to contain rare plants and performing intensive searches in those habitats. Wetland and soil mapping crews were also trained in identifying the rare plants typically found in the region. Locations of rare plants were located with GPS. Rare plants observed include two well known plants that were found during the Kibby surveys: boreal bedstraw (*Galium kamschaticum*) and lesser pyrola (*Pyrola minor*). Boreal bedstraw is abundant in this area, as it was on Kibby Mountain and Kibby Range. Lesser pyrola appears to be well dispersed throughout the area, also similar to the distribution found during the Kibby Project surveys.

Identifying natural communities on the mountain was performed in consultation with Maine Natural Areas Program (MNAP), and utilized a combination of field data and aerial photography interpretation. MNAP Natural Community Survey Forms were completed for several representative sites and were also shared with MNAP. Initial mapping was done in close consultation with MNAP, however MNAP has since revised initial mapping of a fir-heart-leaved birch subalpine forest (S3) on the Sisk ridgeline to encompass an area beginning approximately 2,900 feet in elevation on the southern slope of Sisk Mountain in Chain of Ponds Township and continuing northward approximately 2.5 miles and generally following the ridgeline. There is a total of 358 acres of mapped subalpine along the Sisk ridgeline, and approximately 97 acres of the mapped subalpine forest on this ridge is located within the Revised Petition Area.

Breeding Birds

Breeding bird surveys were performed during June and July of 2009 on Sisk Mountain. A survey protocol similar to that used for the breeding bird survey on the Kibby Project, which is based on the Vermont Center for Ecostudies (VCE), formerly Vermont Institute of Natural Science (VINS) *Mountain Birdwatch* program and *Bird Studies Canada's High Elevation Landbird Program* protocols was followed. Close

consultation with MDIFW determined that this methodology was appropriate. Three kilometer long survey transects were established on the ridge from near the southern peak of the mountain extending north beyond the northern peak. Survey points were located every 250 meters along the transect, for a total of fifteen survey points on the ridge. Surveys were augmented to identify the presence of Bicknell's thrush through playback of Bicknell's vocalizations.

Bicknell's thrush were detected at the six northern most points. More intensive survey consisting of spot mapping Bicknell's thrush use within 10 hectare plots around each of these six points demonstrated higher use within four of these plots. Five of the fifteen breeding bird survey points are located within the Revised Petition Area. Bicknell's thrush were not detected at any of these survey points.

Northern Bog Lemming

Wetlands within the entire project survey area with characteristics of suitable habitat for bog lemmings were searched for sign or evidence of use by bog lemmings (runways, toilets), using the same methodology as used for the Kibby Project and deemed as appropriate by MDIFW. A total of three wetland complexes were identified as having suitable habitat and evidence of use. The watersheds of these wetland complexes were delineated and mapped through use of two-foot topographic data to identify the habitat areas for bog lemmings.

One of these wetland complexes is located within the Revised Petition Area. The habitat area is approximately 9 acres in size. Sufficient suitable upland area is available to avoid impacts to this habitat.

c. Petition Area Visual Information

In the course of preparing visual impact assessments for the Kibby Wind Power Project and more recently for the proposed Kibby Expansion Project, Jean Vissering, a visual assessment expert, studied the area's scenic resources in detail. The existing expedited permitting area includes both the northern ridgeline of Sisk Mountain and the summit of Mount Pisgah. Mount Pisgah is a distinctly shaped peak that forms a focal point in views from many vantage points, including Chain of Ponds, Arnold Pond and Crosby Pond. The southern end of the Sisk ridgeline is also a prominent scenic feature and is visible from both Arnold Pond and Chain of Ponds. In response to continuing stakeholder consultation, TransCanada has removed the peak of Sisk Mountain and its southern slope from the Revised Petition Area. Only the portions of the Sisk ridgeline north of this more prominent foreground peak are included in the Revised Petition Area.

The attached photographs, submitted in connection with the Kibby Expansion Project application, show the views from Natanis Pond of the southern peak of Sisk (Photographs 3 and 4) and the prominence of Mount Pisgah and the southern peak of Sisk from the south end of Long Pong (Photograph 11). From Arnold Pond, Mount Pisgah screens most of the expedited ridgeline with the southernmost peak visible just to the

south. Some of the northern turbines would be visible however from portions of Arnold Pond at distances between 7 and 7.5 miles away. Similarly, from Crosby Pond only the northernmost portion of the Sisk ridgeline can be seen and this portion is already within the expedited permitting area. A copy of a photograph from Arnold Pond (Photograph 17) is also attached. See Attachment E for referenced photographs.

Views of turbines within the Revised Petition Area would be primarily from Long Pond. To the extent any turbines were located in the southern most end of the Revised Petition Area, a small number of turbines would also be visible from the southeastern half of Natanis Pond and a south-western bay of Bag Pond. Wind turbines would appear lower in elevation and height than either of the two more prominent foreground peaks. Mount Pisgah and Sisk Mountain would continue to dominate views from Chain of Ponds and Arnold Pond. Thus, the prominence of turbines located within the Revised Petition Area would be greatly reduced, thereby minimizing adverse aesthetic effects on existing uses, scenic beauty and natural and cultural resources. Allowing placement of turbines within the Revised Petition Area also concentrates development in a logical manner by placing it south of the existing expedited ridge and in close proximity to the existing Kibby Wind and proposed Kibby Expansion projects.