Maine Natural Areas Program

17 Elkins Lane

State House Station #93

Augusta, Maine 04333

Date: February 24, 2010

To: Marcia Spencer-Famous, Senior Planner, LURC

From: Sarah Demers, Environmental Review Coordinator

Re: Rare and exemplary botanical features, DP 4860, Trans Canada Wind Development Application, Chain of Ponds Twp, Kibby Twp. Maine.

I have searched the Natural Areas Program's Biological and Conservation Data System files for rare or unique botanical features in the vicinity of the proposed site in response to your request of December 30, 2009 for our agency's comments on the project.

According to our current information, there is a natural community of statewide ecological importance, a Fir – Heart-leaved Birch Sub-alpine Forest, located within the project site on Sisk Mountain. The Fir – Heart-leaved Birch Sub-alpine Forest natural community is ranked S3 in Maine which means that it is considered a rare community type with between 20 – 100 occurrences documented in the state. Fir – Heart-leaved Birch Sub-alpine Forest should, therefore, not be considered common anywhere in Maine. Currently 18 sites statewide have been documented as supporting this natural community type. The total acreage known for this type (~40,000 acres) is less than 1/5 of 1 percent of Maine's land area.

The Fir- Heart-leaved Birch Subalpine Forest community at Sisk Mountain covers 358 acres and is considered a good quality example of the type with an element occurrence rank of B. The element occurrence rank is derived from a system used to rank the overall quality (i.e. condition, landscape context and size) of a natural community or rare plant occurrence. The table below provides information on the unique natural community in terms of state rank and element occurrence rank (see attached explanation of ranks).

Scientific Name	Common Name	State rank	Element Occurrence Rank
Fir-heart-leaved birch subalpine forest	Subalpine Fir Forest	S3	BC- Good to Fair

Based on the project shape provided by the applicant, it is estimated that 42 acres within the Fir – Heart-leaved Birch Sub-alpine Forest will be cleared. The clearing for the project will fragment portions of the northern half of the natural community effectively isolating some areas so that their natural value as Fir – Heart-leaved Birch Sub-alpine Forest will be lost. Clearing will also create unnatural edges within the natural community that will alter the habitat immediately adjacent. Expected impacts to the edge of the natural community include increased light and wind, and will likely change the habitat by removing moisture and damaging trees. To account for the impacts along

the edges that will be created within the natural community, MNAP added a 50' buffer to the proposed clearing. In sum, MNAP estimates that the total impact to the Fir – Heart-leaved Birch Sub-alpine Forest from site clearing, impacts caused by creating edges, and from fragmentation will be approximately 80 acres.

Due to the rarity of this forest type, the Maine Natural Areas Program recommends that every effort be made to minimize impacts to this system. Therefore, we respectfully request that the LURC Commissioners include in their consideration the removal of Turbine 11.

As currently designed, Turbine 11 effectively fragments the remaining core of the northern portion of the Fir – Heart-leaved Birch Sub-alpine Forest into two smaller areas. Removal of Turbine 11 would considerably decrease impacts to the Fir – Heart-leaved Birch Sub-alpine Forest and result in a northern core of approximately 62 contiguous acres. The removal of Turbine 11 reduces the impact from 80 to 75 acres but considerably reduces fragmentation of the remaining northern portion of the natural community.

If a wind powered electric generation facility is approved for construction on this site the project plan should specifically demonstrate how the facility has been designed to cause the least impact to sensitive plant and animal habitat, and the development plan should address each of the following considerations in the design, construction, and management of the facility:

1. **Disturbance Minimization:** Inadvertent impacts to soil and vegetation should be avoided because high elevation habitats are extremely slow to recover to a natural condition after soil and vegetation disturbances. This will be best accomplished by setting out strict no disturbance zones adjacent to the construction zones. These should be clearly marked.

2. **Erosion Control:** Erosion is a chronic problem on steeply sloped mountain roads. An erosion control plan addressing long term prevention of erosion on roads and cleared areas should be required.

3. **Off-site Disposal:** Construction debris and cleared vegetation should be disposed of off site.

4. **Access Plan:** A plan to prevent access to the site by unauthorized motorized vehicles such as ATV's and four-wheel drive trucks should be required and implemented. The irresponsible use of off-road vehicles in sensitive habitats such as high elevation terrain can lead to long lasting environmental damage. As part of this plan gates should be erected on access roads from the outset of the project and any temporary roads needed for construction should be reclaimed as soon as they are no longer needed.

5. **Invasive Plant Control:** A plan to prevent the introduction of invasive plants to the site should be required and implemented. The plan should address preventing construction vehicles and heavy equipment from introducing invasive plants. It should include monitoring for the presence of invasive species over a period of three years after construction is finished.

6. **Restoration Plan:** A restoration plan should be required and implemented that addresses how the site will be rehabilitated at the time the facility is decommissioned or if the project is terminated before completion. The restoration plan should address all areas within the zone supporting the Fir – Heart-leaved Birch Sub-alpine Forest that have been cleared for any part of the project including roads, structures, power lines, and storage areas. All materials brought into the subalpine zone should be removed as part of the restoration. Ideally a fund should be set up in advance to cover the cost of restoration.

To ensure that protecting the natural integrity of this site is a priority during construction, we recommend there be frequent site inspections as well as the opportunity for the Maine Natural Areas Program staff to participate in one or more of the inspections.

The Natural Areas Program is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We welcome the contribution of any information collected if a site survey is performed.

Thank you for using the Natural Areas Program in the environmental review process. Please do not hesitate to contact our office if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.