1.0 INTRODUCTION

TransAlta Corporation dba Canadian Hydro Developers Inc. (TransAlta) operates a 50 turbine, 150 MW Kent Hills wind farm facility in the southeastern section of Elgin Parish in Albert County, New Brunswick. The first phase (Kent Hills 1) was constructed in 2007 and commissioned on December 31, 2008 and the facility was later expanded, and commissioned December 31, 2010 (Kent Hills 2). Kent Hills 1 was approved in fall of 2007 under the New Brunswick *Environmental Impact Assessment (EIA) Regulation - Clean Environment Act* (EIA file number 4561-3-1128), and Kent Hills 2 was later approved in late 2009 under the EIA file number 4561-3-1238. Collectively, both phases are referred to as the Kent Hills Wind Farm. For this Registration, TransAlta wishes to expand the facility by five turbines for an additional 17.25 MW of capacity (Kent Hills 3 Wind Project; the "Project"). While approval for nine potential turbine locations is sought, only five sites are proposed to be used, based on wind resource, environmental, socio-economic, and geotechnical constraints.

This report includes the following information for review and consideration by NBDELG for approval under the *EIA Regulation*.

- A description of Kent Hills 3 Wind Project, including its location and details regarding its construction, operation and decommissioning
- Existing environmental conditions and socio-economic features of the area to which the Project could potentially cause a significant environmental effect
- A summary of specific environmental concerns, identified through data collection efforts, consultation with agencies and the public, and/or based on professional opinion
- An assessment of the positive and/or negative environmental effects associated with the Project
- An assessment of cumulative environmental effects of the Project in combination with the existing wind farm and other past, present and likely future projects and activities
- An assessment of the environment's effect on the Project
- A summary of supplemental mitigation, impact management and monitoring measures of the Project

1.1 PROJECT PROPONENT

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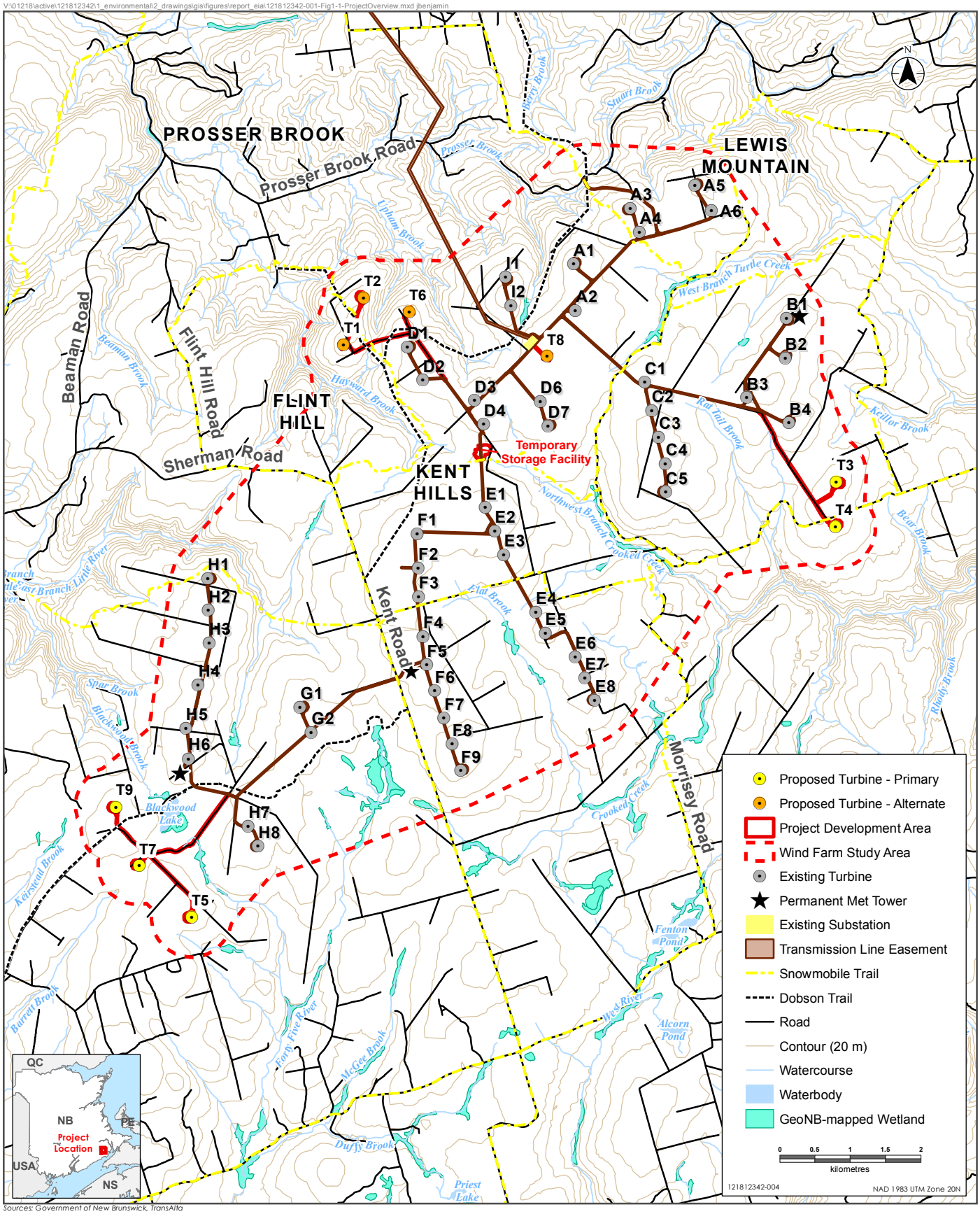
1.2 NAME OF PROJECT

Kent Hills 3 Wind Project

1.3 OVERVIEW OF PROJECT EXPANSION

The Kent Hills 3 Wind Project includes five turbines and associated infrastructure, with nine locations under consideration, including four alternate locations and associated access roads. Alternate locations may be required in cases where site-specific geotechnical conditions for the primary locations are considered unacceptable from an engineering perspective. The nine potential turbine locations are located in three clusters plus one single-turbine alternate location across from the existing substation. Infrastructure required to support the proposed turbines includes additional access roads and electrical collection system, and will include the upgrade of existing forestry roads, where necessary. An existing laydown area used during construction of the original phases of the wind farm will be used during Project construction. Expansion of the substation is not required. The proposed turbine locations in the three clusters are all located within 1 km of the original EIA Study Area, to the north, southwest, and east (Figure 1.1). It is not considered necessary to upgrade the 138 kV transmission line, constructed and operated by NB Power Corporation (NB Power), and substation; these have sufficient capacity to handle the load of 167 MW once the five proposed additional turbines are commissioned. Construction and operation details are expected to be similar to the existing wind farm. The proposed Vestas V126 turbines are larger than the existing turbines (Vestas V90) and capable of producing 3.45 MW each, compared to the 3 MW capacity of each of the existing turbines.



Project Overview

1.4 CONSTRUCTION SCHEDULE

Table 1.1 presents a proposed construction schedule for the Project, contingent on receiving necessary approvals. Further details on the Project are presented in Section 2.

Table 1.1 Construction Schedule

Activity	Timing
Clearing	April 2018
Topsoil stripping and salvage, and grading	May 2018
Development of access roads	May 2018
Foundation work	May/June 2018
Construction of underground and overhead collection system	June/July 2018
Turbine delivery	July 2018
Turbine assembly	July/August 2018
Turbine commissioning	August 2018
In-service	September 2018

1.5 ENVIRONMENTAL APPROVALS

This report addresses updates to the provincial EIA as per applicable guidelines. However, additional environmental and land use permits, licenses and approvals may be required for the Expansion. Expected requirements are listed in Table 1.2.

Table 1.2 Required Environmental and Land Use Approvals

Approvals Required	Summary
Federal	
Fisheries Act (Section 35)	It is anticipated that no in-water work will be required. If in-water work is required, the DFO measures to avoid serious harm will be followed as applicable. If serious harm cannot be mitigated or avoided, an Authorization under Section 35(2) of the Fisheries Act may be required, in consultation with regulators.
Canadian Aviation Regulations Standard 621.19	Approval for lighting requirements for Kent Hills 3 Wind Project are to be determined subject to consultation with Transport Canada.

Table 1.2 Required Environmental and Land Use Approvals

Approvals Required	Summary
Provincial	
NB Regulation 89-32 Crown Lands and Forest Act Crown Land Licence	Required by the Crown Lands Branch of the New Brunswick Department of Energy and Resource Development (NBDERD), as the Project is located on Crown Land. The lease for the original wind farm was obtained April 1, 2008, and a License of Occupation for Exploration for the new areas of interest was achieved in June. A License of Occupation for Construction will follow once EIA Determination has been made. Upon completion, the existing wind farm lease will be amended to include the additional turbine sites and, the existing License of Occupation for Access and Distribution will be amended to include the additional land required for the upgraded access roads and electrical collection system.
NB Natural Resources Work Permit under Section 18 of the Forest Fires Act, 1970	Permit authorizes work identified as Industrial Operations of Forest Lands and stipulates requirements for firefighting equipment.
Harvesting Permit for Crown Lands – Permit for Harvesting Timber	Required by the Crown Lands Branch to allow for clearing and harvesting timber on Crown Lands.
NB Regulation 2002-78 Quarriable Substance Act and Regulations (O.C. 2002-340) – Quarry Permit	Required to take or remove borrow quarry materials for forest road maintenance and construction on and from Crown Land .
New Brunswick's Environmental Impact Assessment Regulation (Regulation 87-83)	Required to identify the environmental impacts associated with development proposals. Under the Regulation certain types of projects (listed as Undertakings in Schedule "A" of Regulation 87-83) are required to register information about the proposal with the Department of the Environment and Local Government.
Municipal	
Southeast Regional Services Board under Section 6 (1)(b) of the Provincial Subdivision Regulation #80-159 – Unincorporated Area	Wind farm turbine locations and collection system – Subdivision Approval to allow for the collection system corridor and turbine pad locations to be subdivided from crown land parcels.
Southeast Regional Services Board under local Building Bylaw and Section 59(1) of the Community Planning Act (CPA)- Unincorporated Area	Turbine Development Permits and Turbine Building Permits are required to allow for the development and construction of the wind towers to ensure that each meets community planning requirements and objectives and that construction meets with local building bylaws.

Introduction