

## Ontario Energy Board

### Notice of Proposal under Sections 80 and 81 of the *Ontario Energy Board Act, 1998 (the "OEB Act")*

#### PART I: GENERAL MINIMUM FILING REQUIREMENTS

All applicants must complete and file the information requested in Part I.

##### 1.1 Identification of the Parties

###### 1.1.1 Applicant

<b>Name of Applicant</b> Grand Renewable Wind Limited Partnership	File No: (Board Use Only)	
<b>Address of Head Office</b>  Grand Renewable Wind LP c/o Grand Renewable Wind GP Inc 55 Standish Court Mississauga, ON L5R 4B2	<b>Telephone Number</b> 905.285.1851	
	<b>Facsimile Number</b> 905.285.1852	
	<b>E-mail Address</b> leejt@samsung.com	
<b>Name of Individual to Contact</b>  Jeong Tack Lee	<b>Telephone Number</b> 905.501.5652	
	<b>Facsimile Number</b> 905.285.1852	
	<b>E-mail Address</b> leejt@samsung.com	

###### 1.1.2 Other Parties to the Transaction or Project

*If more than one attach list*

<b>Name of Applicant</b> Grand Renewable Solar Limited Partnership	File No: (Board Use Only)	
<b>Address of Head Office</b>  Grand Renewable Solar LP c/o Grand Renewable Wind GP Inc	<b>Telephone Number</b> 905.285.1851	
	<b>Facsimile Number</b> 905.285.1852	

55 Standish Court Mississauga, ON L5R 4B2	<b>E-mail Address</b> leejt@samsung.com	
<b>Name of Individual to Contact</b>  Jeong Tack Lee	<b>Telephone Number</b> 905.501.5652	
	<b>Facsimile Number</b> 905.285.1852	
	<b>E-mail Address</b> leejt@samsung.com	

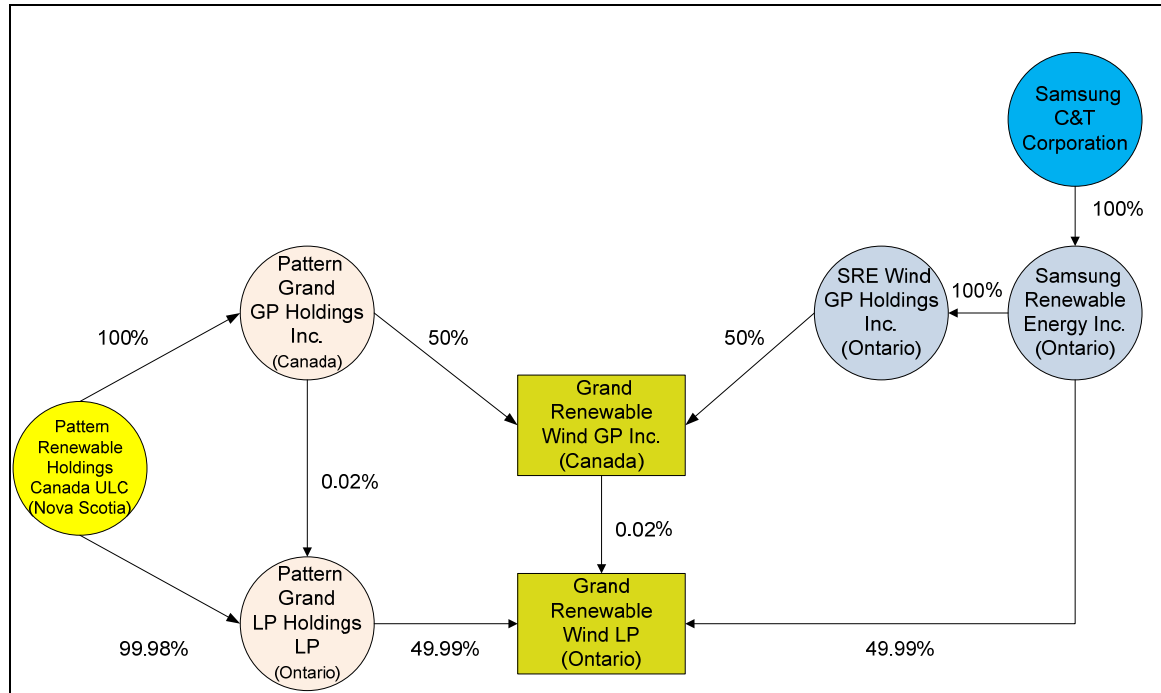
## 1.2 Relationship between Parties to the Transaction or Project

1.2.1	<p><b><i>Attach a list of the officers, directors and shareholders of each of the parties to the proposed transaction or project.</i></b></p> <p>For the purposes of this application, the term “project” shall refer collectively to the Wind Project, Solar Project and Transmission Facility, all as further defined below.</p> <p>Grand Renewable Wind LP has no directors or officers. The holders of its limited partnership shares are:</p> <ol style="list-style-type: none"> <li>(1) Pattern Grand LP Holdings LP; and</li> <li>(2) Samsung Renewable Energy Inc.</li> <li>(3) Grand Renewable Wind GP Inc., (“GRW GP Inc.”) as general partner. The general partner has four directors and two officers. Directors are Jeong-tack Lee, Gun-Young Yoo, Daniel Elkort, Colin Edwards. Officers are Jeong-tack Lee (President) and Daniel Elkort (Executive Vice President).</li> </ol> <p>Grand Renewable Solar LP has no directors or officers. The holders of its limited partnership shares are:</p> <ol style="list-style-type: none"> <li>(1) Samsung Renewable Energy Inc.; and</li> <li>(2) Grand Renewable Solar GP Inc., as general partner. The directors and officers for the general partner are identical to those directors and officers of GRW GP Inc.</li> </ol>
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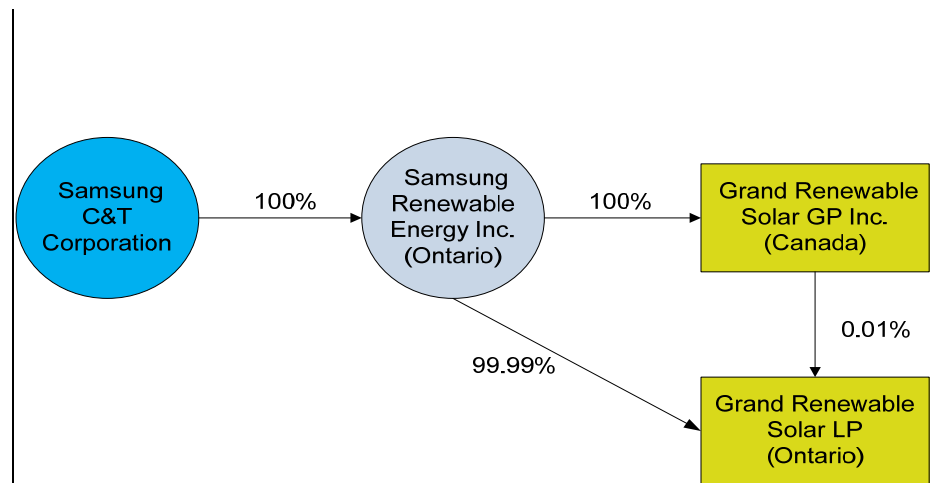
1.2.2

**Attach a corporate chart describing the relationship between each of the parties to the proposed transaction or project and each of their respective affiliates.**

**Grand Renewable Wind LP Ownership Structure**



**Grand Renewable Solar LP Ownership Structure**



### 1.3 Description of the Businesses of Each of the Parties

1.3.1	<b><i>Attach a description of the business of each of the parties to the proposed transaction or project, including each of their affiliates licenced under the OEB Act to operate in Ontario for the generation, transmission, distribution, wholesaling or retailing of electricity or providing goods and services to companies licenced under the OEB Act in Ontario ("Electricity Sector Affiliates").</i></b>
	<p>The Applicant, Grand Renewable Wind LP, is a special purpose vehicle established for the purpose of developing, constructing and operating the Grand Renewable Wind Project (the "Wind Project").</p> <p>The Applicant has entered into a power purchase agreement (the "Wind PPA") with the Ontario Power Authority ("OPA") for the energy generated by the Wind Project. The Wind Project is a 153 MW wind power generating facility that is to be located in Haldimand County. Upon completion of the Wind Project the Applicant will be the licenced owner and operator.</p> <p>The Applicant's affiliate, Grand Renewable Solar LP, is a special purpose vehicle established for the purpose of developing, constructing and operating the Grand Renewable Solar generating facility (the "Solar Project").</p> <p>Grand Renewable Solar LP entered into a power purchase agreement (the "Solar PPA") with the OPA for the energy generated by the Solar Project. The Solar Project is a 100 MW wind power generating facility that is to be located in Haldimand County within close proximity to the Wind Project.</p> <p>In addition to the Wind Project, the Applicant will own and operate the interconnection facilities (the "Transmission Facility") used to connect both the Wind Project and the Solar Project to the IESO-controlled grid. Details of the Transmission Facility are below. The Wind Project, Solar Project and Transmission Facility are collectively referred to as the Grand Renewable Energy Park, or GREP for short.</p> <p>Grand Renewable Solar LP is not currently licensed under the OEB Act. However, both the Applicant and Grand Renewable Solar LP will apply for a generator licence with the Board in due course. The Applicant does not have any Electricity Sector Affiliates.</p>
1.3.2	<b><i>Attach a description of the geographic territory served by each of the parties to the proposed transaction or project, including each of their Electricity Sector Affiliates, if applicable, and the geographic location of all existing generation facilities.</i></b>
	<p>Neither the Applicant nor Grand Renewable Solar LP currently service a geographic territory. There are no existing generation facilities.</p>
1.3.3	<b><i>Attach a breakdown of the annual sales (in C\$, and in MWh) as of the most recent fiscal year end of the existing generation output among the IESO Administered Markets ("IAM"), bilateral contracts, and local distribution companies.</i></b>
	<p>As of the most recent fiscal year end, the Applicant had no electricity sales in Ontario.</p>

1.3.4	<b><i>Attach a list identifying all relevant Board licences and approvals held by the parties to the proposed transaction or project and each of their Electricity Sector Affiliates, and any applications currently before the Board, or forthcoming. Please include all Board file numbers.</i></b>
	<p>Applicant</p> <p>i. EB-2011-0063: The Applicant applied for a leave to construct approval under section 92 of the OEB Act on April 13, 2011. The Board granted the leave to construct, with conditions, on December 8, 2011. A review of the Board's decision was initiated pursuant to Procedural Order No. 5 dated December 22, 2011. The date for submissions from the parties closed on January 23<sup>rd</sup>, 2012.</p> <p>ii. An application for a generating licence will be submitted to the Board in due course.</p> <p>Grand Renewable Solar LP</p> <p>i. An application for an electricity generator licence will be submitted to the Board in due course.</p>

#### 1.4 Current Competitive Characteristics of the Market

1.4.1	<b><i>Describe the generation capacity (in MW), within the Province of Ontario, of the parties to the proposed transaction or project, including each of their respective Electricity Sector Affiliates, prior to the completion of the proposed transaction or project.</i></b>
	<p>The generating capacity of the Applicant prior to completion of the Wind Project is 0 MW.</p> <p>The generating capacity of Grand Renewable Solar LP prior to completion of the Solar Project is 0 MW.</p>
1.4.2	<b><i>Describe the generation market share based on actual MWh production as a percent of the Annual Primary Demand, within the Province of Ontario, of the parties to the proposed transaction or project, including each of their respective Electricity Sector Affiliates, prior to completion of the proposed transaction or project.</i></b>
	<p>Prior to the completion of the Wind Project and Transmission Facility the Applicant will have zero percent generation market share in Ontario.</p> <p>Prior to the completion of the Solar Project and Transmission Facility, Grand Renewable Solar LP will have zero percent generation market share.</p>

## 1.5 Description of the Proposed Transaction or Project and Impact on Competition - General

1.5.1	<b><i>Attach a detailed description of the proposed transaction or project, including geographic locations of proposed new transmission or distribution systems, or new generation facilities.</i></b>
	<p>The GREP includes (i) the Wind Project and Solar Project (solar panels, wind turbines, access roads, underground and overhead electrical collector lines, an operation and maintenance building), and (ii) the Transmission Facility.</p> <p>The Wind Project will consist of 68 Siemens model SWT-2.221 wind turbine and one Siemens model SWT-2.126 wind turbine. The Solar Project will be comprised of approximately 425,000 solar panels covering 325 hectares of land.</p> <p>The Transmission Facility is comprised of the following four elements:</p> <ul style="list-style-type: none"> <li>(a) Collector Substation: The substation will collect distribution lines from both the Wind Project and the Solar Project. Protection and control systems, two step-up transformers and the SCADA system will be included. The step-up transformers will transform the power from a 34.5 kV collection voltage to a 230 kV transmission voltage. The wind power transformer is rated 100/133/166 MVA while the solar power transformer is rated 65/86/108 MVA. Each transformer is mounted on a concrete base foundation within an oil containment facility that would capture all of the oil insulating fluid within each transformer in the event of a leak. A sound attenuation wall will be constructed around the perimeter of the two power transformers to minimize the escape of transformer noise into the surrounding environment. The sound attenuation wall will be constructed with a minimum density of 20 kg/m<sup>2</sup> that will break the line of sight with any noise receptors.</li> <li>(b) Transmission Line: an overhead 19 km long 230 kV electricity transmission line, consisting of single, 3-conductor aluminium circuit. At kilometre 12.8 along the Transmission Corridor, the Transmission Line will be placed underground for a linear distance of approximately 700 m. The Transmission Line is being buried since adequate clearances cannot be maintained from the existing built structures. The underground portion of the Transmission Line will be encased in a 230 kV ductbank, which will be constructed a minimum of 1.2 m below grade and will be backfilled with thermal fill to dissipate heat of cable power losses throughout the ground.</li> <li>(c) Transition Stations: There will be two transition stations that will be constructed to redirect the overhead Transmission Line into the underground duct banks for a distance of 700 m under the hamlet of Nelles Corners. The Transition Stations are located at (i) eastern border of Nelles Corners at kilometre 12.8 of the Transmission Corridor, and (ii) the western border of Nelles Corners at kilometre 13.5 along the Transmission Corridor, respectively.</li> <li>(d) Interconnection Station: The Interconnection Station will be constructed at Regional Road 20 and 1st Row Road and will be directly adjacent to the existing Hydro One transmission corridor providing 2 – 500 kV circuits and 4 – 230 kV circuits from the Nanticoke TS to the Middleport TS. Based on initial discussions with Hydro One and the IESO, it has been proposed that the Project will connect to Hydro One's existing 230 kV N5M circuit contained within this transmission</li> </ul>

	<p>corridor. The Interconnection Station will consist of disconnect switches, lightning arrestors, 230 kV circuit breaker, associated protection and control equipment and incoming and outgoing termination gantries. Communication interface to Hydro One for the transfer trip control of the 230 kV circuit breaker will also be provided at the Interconnection Station. The specific 230 kV circuit (confirmation of the N5M circuit) and any requirements of Hydro One at the Interconnection Station are to be confirmed in the completed SIA/CIA.</p> <p>The approximate centre of the GREP is situated at 4748952 N, 601102 E, Zone 17, NAD 83 Datum, all within Haldimand County. The GREP site is generally bounded by provincial Highway 3 to the north, Fisherville Road to the west, the Grand River to the east and Lake Erie to the south. The Transmission Facility is being constructed to connect the power generated by the GREP to Hydro One's N5M Circuit, at a connection point located at 579429, 4756378 UTM 17, south of Hagersville, Ontario. The Transmission Line will be located along Regional Road 20 within the Haldimand ROW. The Collector Substation will be located near Regional Road 20 and Mt. Olivet Road within the Solar Project site area. The Transition Stations, which are required to facilitate underground construction of the Transmission Line beneath the small hamlet of Nelles Corners, will be located at the eastern and western borders of Nelles Corners. The Interconnection Station will be located at the north side of Regional Road 20, just east of the N5M Circuit transmission corridor, east of Hagersville. The Interconnection Station will be used to facilitate the connection of the Transmission Line to Hydro One's existing N5M circuit originating at the Nanticoke Power Generating Station.</p> <p>A map of the GREP and existing transmission and distribution infrastructure can be found at Exhibit B-2-2 of the Applicant's application for a leave to construct, Board File No. EB-2011-0063. A copy of Exhibit B-2-2 has been attached hereto as <b>Schedule 'A'</b> for ease of reference.</p>
1.5.2	<p><b><i>Describe the generation capacity (in MW), within the Province of Ontario, of the parties to the proposed transaction or project, including each of their respective Electricity Sector Affiliates, after the completion of the proposed transaction or project.</i></b></p> <p>The Wind Project is projected to have a nameplate generation capacity of 153 MW upon completion. The Solar Project is projected to have a nameplate generation capacity of 100 MW upon completion.</p>
1.5.3	<p><b><i>Describe the generation market share based on anticipated MWh production as a percentage of the Annual Primary Demand, within the Province of Ontario, of the parties to the proposed transaction or project, including each of their respective Electricity Sector Affiliates, after the completion of the proposed transaction or project.</i></b></p> <p>According to IESO market data, the total electricity consumption for 2011 reached 141.5 TWh, down from 142 TWh in 2010.</p> <p>The output from the Wind Project will represent a nominal percentage of the Annual Primary Demand once the project is fully operational.</p> <p>The output from the Solar Project will represent a nominal percentage of the Annual Primary Demand once the project is fully operational.</p>
1.5.4	<p><b><i>Attach a short description of the impact, if any, of the proposed transaction or project on competition. If there will be no impact on competition, please state the reasons. Cite specifically the impacts of the proposal on customer choice regarding generation, energy</i></b></p>



	<p><b><i>wholesalers, and energy retailers.</i></b></p>
	<p>The Project will not have any impact on competition in the Ontario electricity market since the Project only involves the connection of the Wind Project and Solar Project to the IESO-controlled grid. The Project does not impact any other generator or load customer whatsoever. The Project will not serve load customers, but rather is serving essentially as a gen-tie for the two projects to connect to the IESO-controlled grid. If anything, the use of the same Transmission Facility to connect the two projects may facilitate additional generator connections to the Hydro One transmission system than if two separate transmission facilities were to be built (one for each of the Wind Project and the Solar Project). Use of the same Transmission Facility to transmit the power from both projects is the most efficient use of land and resources and greatly reduces impact to landowners and the natural environment.</p> <p>The development of the Wind Project and Solar Project will not affect the choice of consumers regarding generation since power generated from these projects is being flowed directly to the IESO-controlled grid for general consumption.</p> <p>Neither the Applicant nor Grand Renewable Solar LP are seeking to apply for a electricity retailer license or an electricity wholesaler license or retain a market share of either the wholesale or retail market. Consumer choice regarding wholesale electricity or energy retailers will therefore not be affected.</p>
1.5.5	<p><b><i>Provide confirmation that the proposed transaction or project will have no impact on open access to the transmission or distribution system of the parties or their affiliates. If open access will be affected explain how and why.</i></b></p>
	<p>The Project will not affect open access requirements. In particular, the voluntary sharing of the Transmission Facility does not deprive any other generator or load customer of access they would not otherwise have. Apart from the reduced capacity at the Hydro One N5M circuit<sup>1</sup>, the competitive situation of third party generator or load customers seeking to connect to the IESO-controlled grid will be the same both before and after the Project. Access to the IESO-controlled grid by third party generators or load customers both before and after the completion of the Project will not be affected either. Furthermore, the Applicant will not have any market power over Grand Renewable Solar LP since Grand Renewable Solar LP had the option to build a separate line. Grand Renewable Solar LP's access to the Transmission Facility will be guaranteed pursuant to a commercial agreement with the Applicant.</p>

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<sup>1</sup> The capacity of the Hydro One N5M circuit is not at issue here. It should be noted however that capacity was awarded to the Applicant in its role as generator pursuant to the access requirements stipulated in the Transmission System Code.

**1.6 Other Information**

1.6.1	<b><i>Attach confirmation that the parties to the proposed transaction or project are in compliance with all licence and code requirements, and will continue to be in compliance after completion of the proposed transaction or project.</i></b>
	<p>Neither the Applicant nor Grand Renewable Solar LP are currently licensed or subject to code requirements. In particular, pursuant to <i>O. Regulation 161/99, Definitions and Exemptions</i>, Section 4.0.2(1)(d)(i), the Applicant is exempt from the requirement to obtain a transmitter licence. The Applicant relies on the Board's approval of this Section 80/81 application as confirmation of same.</p> <p>The Applicant and Grand Renewable Solar LP will be applying to the Board for generator licenses in due course. Should the Board grant the Applicant or Grand Renewable Solar LP a generator license, both the Applicant and Grand Renewable Solar LP will comply with their respective licenses and the referenced codes after completion of the GREP.</p>

**PART II: SECTION 80 OF THE ACT – TRANSMITTERS AND DISTRIBUTORS ACQUIRING AN  
INTEREST IN GENERATORS OR CONSTRUCTING A GENERATION FACILITY**

**Not applicable**

**PART III: SECTION 81 OF THE ACT - GENERATORS ACQUIRING AN INTEREST IN OR CONSTRUCTING A TRANSMISSION OR DISTRIBUTION SYSTEM**

All applicants filing a Notice of Proposal under section 81 of the Act must complete and file the information requested in Part III.

**3.1 Effect on Competition**

3.1.1	<b><i>Provide a description of the transmission or distribution system being acquired or constructed.</i></b>	
	Please see 1.5.1. for a description of the Transmission Facility being constructed.	
3.1.2	<b><i>Provide details on whether the generation facilities owned by the acquiring company are or will be directly connected to the transmission or distribution system being acquired or constructed.</i></b>	
	The Wind Project will be directly connected to the Transmission Facility.	
3.1.3	<b><i>Provide details of whether the generation facility is expected to serve a “load pocket”, or is likely to be “constrained on” due to transmission constraints.</i></b>	
	Neither the Wind Project nor the Solar Project are expected to serve a load pocket.  As an intermittent generator or “variable generator” <sup>2</sup> , neither the Wind Project nor the Solar Project are expected to be constrained on due to transmission constraints.	
3.1.4	<b><i>Provide details on whether the generation facilities are expected to sign a “must-run” contract with the IESO.</i></b>	
	Neither the Solar Project nor the Wind Project are expected to sign a “must-run” contract with the IESO.	

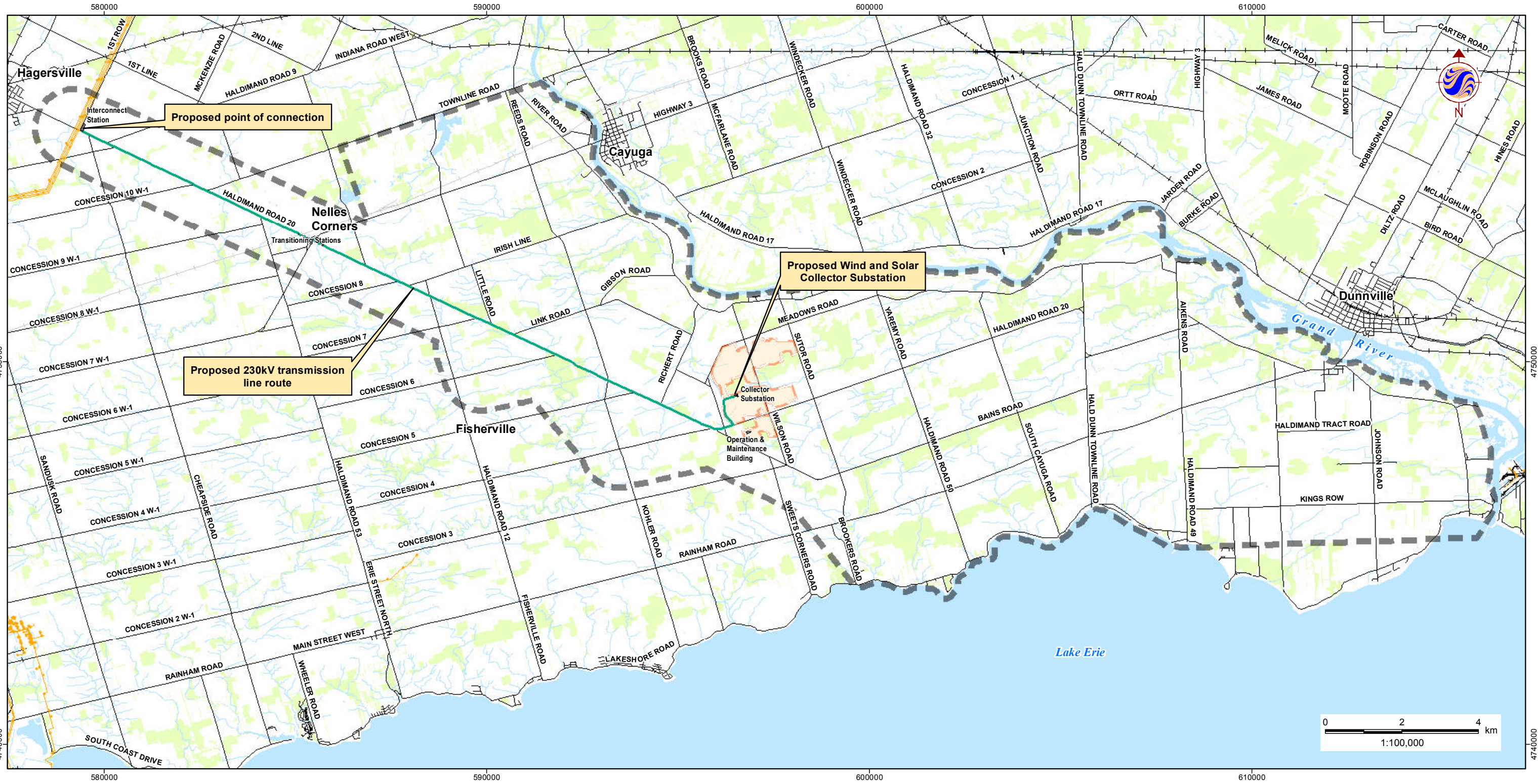
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<sup>2</sup> “Variable Generator” is the new category of generators that has been defined under the IESO market rule amendment procedure in *Stakeholder Engagement 91, Renewable Integration*.

**SCHEDULE 'A' – MAP OF GREP**



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Stantec

#### Legend



Study Area

#### Solar Project Location



Solar Lands

#### Transmission Line

Overhead Transmission Line

Underground Transmission Line

Electrical Transmission Component

#### Existing Features

Road

Railway

Abandoned Railway

Existing Transmission Line

Watercourse (MNR)

Waterbody (MNR)

Wooded Area (MNR)

#### Notes

- Coordinate System: UTM NAD 83 - Zone 17 (N).
- Base features produced under license with the Ontario Ministry of Natural Resources © Queens Printer Ontario, 2011; © Samsung, 2011.

Client/Project

SAMSUNG, PATTERN & KEPKO (SPK)  
GRAND RENEWABLE ENERGY PARK

Figure No.

1.0

Title

**PROPOSED PROJECT**

February 2011  
160960577

**DRAFT**