

**Table 1.1 McCann Solar Project – Table of Proposed Modifications, Rationale for Change, Potential Environmental Effects and Mitigation Measures**

Item Number	Item	Report and Page Number	Existing Design	Design Change	Rationale for Change	Altered Effect	Additional Mitigation Required	Additional Environmental Effects Monitoring
1	Array Design	Construction Plan Report – p. 5  Design and Operations Report – p.5, 8  Decommissioning Plan Report – p.3	The solar modules will be arranged in the form of eight arrays, each of 1.25 MW. Each array is divided into two sub-arrays of 630 kW	There will now be seven arrays, each of 1.6-MW AC. Each array is divided into two sub-arrays of 800 kW. For further clarification the nameplate capacity of the Project will be 10 MW AC.	Refinement of design requirements.	Slightly increased footprint within previously identified Project boundaries	N/A	N/A
2	Module Selection	Design and Operations Report – p. 8	Module selection had not been finalized. A representative 280-W module had been selected.  The representative 280-W module's dimensions are 1956 mm by 992 mm by 50 mm, and each weighs 27 kg. Each module contains 72 multi-crystalline silicon solar cells (6 by 12), and the cells occupy an area of 156 mm by 156 mm. The module is covered by a 4-mm thick tempered glass, and framed in anodized aluminum alloy. Modules will be connected together in series into "strings", and these strings will be brought to combiner boxes	MEMC 280-W multi-crystalline solar modules will be utilized for the Project. The dimensions of the modules are 1976 mm by 990 mm by 50 mm, and each weighs 23 kg. Each module contains 72 multi-crystalline silicone solar cells, and is covered by a 3.2-mm thick tempered glass, and framed in anodized aluminum alloy. Modules will be connected together in series into "strings", and these strings will be brought to combiner boxes  At this stage, Northland is negotiating with different construction contractors and conducting further optimization studies for the Project. As such, specific details such as exact number of modules, spacing and setting of the modules are not available.	Final selection of modules.	No change	N/A	N/A
3	Module Selection	Construction Plan Report – p. 12  Decommissioning Plan Report – p.4	PV modules weigh approximately 27 kg each.	PV modules will weigh approximately 23 kg	Final selection of modules.	No change	N/A	N/A
4	Inverter Selection	Construction Plan Report – p. 12, Appendix A  Design and Operations Report – Appendix A  Noise Assessment Study Report	There will be two 630-kW inverters at the center of each array. The Project will have sixteen 630-kW inverters, in eight inverter clusters.  Weatherproof NEMA 4X cabinets will be used.  There will be sufficient modules for each inverter to optimize inverter loading and meet a 1.2 DC-to-AC conversion ratio.	There will be two 800-kW inverters associated with each array, for a total of fourteen, in seven inverter clusters.  Weatherproof cabinets, not necessarily restricted to NEMA 4X cabinets, will be used.  The exact conversion ratio is still being determined, and may not be 1.2.	Refinement of design requirements.	Revised noise study has been prepared and is available for review on the Project website. The Project meets MOE requirements for noise.	N/A	N/A

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5	Medium-voltage Transformer Selection	Construction Plan Report – Appendix A  Design and Operations Report – p. 9, Appendix A  Noise Assessment Study Report	There will be a 1250-kVA (1.25-MVA) transformer at each inverter cluster. The transformers will “step up” the power from 480 V to 27.6 kV.	There will be a 1600-kVA (1.6-MVA) transformer at each inverter cluster. The transformers will “step up” the power from 360 V to 27.6 kV.	Refinement of design requirements.	Revised noise study has been prepared and is available for review on the website. The Project meets MOE requirements for noise.	N/A	N/A
6	Construction Schedule	Construction Plan Report – p. 4, 6, 7, 23	The construction period is estimated to be approximately 6 months in duration, starting in early summer 2011.	The construction period is estimated to be approximately 12 months in duration, starting in late winter 2012.  Table 2.1 in the Construction Plan report has been updated to reflect these modified dates	Refinement of construction requirements	Longer construction period than originally anticipated.	N/A	N/A
7	Landscaping	Construction Plan Report – p. 9, 12	The Project does not propose any major alteration to the existing landscape for construction purposes.	The construction contractor will determine whether any alterations to the existing landscape are required for construction purposes. If required, a grading plan will be produced.  Additional drainage features (culverts, ditches) may be installed to restore the natural drainage prior to the Project development and will have minimum impact to the local flora and fauna.	Contractor requirement	Should grading be required, a grading plan will be produced to ensure that there is no net effect on the surrounding landscape.	N/A	N/A
8	Vegetation control	Design and Operations Report – p.10	No hazardous chemicals will be used for this vegetation control.	Approved control procedures will be used for this vegetation control.	Operations requirements to ensure ability to control weed/vegetation growth on the Project location	As MOE approved control methods would be used there is no altered effect	N/A	N/A
9	Panel Maintenance	Design and Operations Report – p.11		Other panel maintenance activities required to ensure proper functioning will be completed as required.	Operations requirement	No change	N/A	N/A
10	Internal Access Roads	Construction Plan Report – p. 11  Design and Operations Report – p.7	The proposed 5-m wide access road will be constructed with a granular ‘B’ base and a finished surface of granular ‘A’ material, sourced from a local aggregate quarry.  In addition to the main access road, a number of smaller access roads will be constructed. These will be approximately 3 m wide.	The proposed 5-m wide access road will be constructed with a granular ‘B’ base and a finished surface of granular ‘A’ material, or other similar materials, sourced from a local aggregate quarry.  Internal access roads will be 5 m wide.  Final road dimensions may be adjusted to take into account the final drainage and civil design as well as any jurisdictional requirements.	Refinement of design requirements	Slightly increased footprint within previously identified Project boundaries	N/A	N/A

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11	Maintenance Shed	Construction Plan Report – Appendix A  Design and Operations Report – Appendix A	There are no buildings currently proposed in the design	A 7-m x 7-m maintenance building will be constructed adjacent to the existing parking lot. The building will include a single man door and steel rollup door constructed entirely of non-combustible material.	Operations requirement for storage of maintenance equipment/materials. It is anticipated that there will be no storage of chemicals, such as transformer oil, within the maintenance shed.	New building on Project location. This will not have an impact on the surrounding environment.	N/A	N/A
12	Teleprotection Antenna Tower	Construction Plan Report – Appendix A  Design and Operations Report – Appendix A	There are no communications towers proposed in the design	A tower is required to mount antennas required for Hydro One teleprotections. Design of the towers is being completed in consultation with Hydro One Networks Inc. and the EPC contractor. The tower will be located adjacent to the main transformer substation. Towers will be constructed on either a wooden pole or steel lattice structure, placed on a concrete foundation. Depending on the local topography, tower height will range from 9 to 40 m tall, with most towers typically around 15 metres tall. At the present time, it is not anticipated that the structures will be lit.	The communications tower is required to provide a communication path for Hydro One teleprotections. This is a requirement of Hydro One Networks Inc.,	This represents an alteration to the visual appearance of the facility, but will be consistent with the overall appearance of the Project and utility poles in the area.	N/A	N/A
14	Layout Changes	Construction Plan Report – Appendix A  Design and Operations Report – Appendix A		Revised locations of solar panels	Refinement of design requirements.	Revised location of solar panels within Project boundaries.	N/A	N/A
15	Cabling	Construction Plan Report – p. 11, 12  Design and Operations Report – p. 10	Where trenching is not possible due to encountered rock or other reasons, aboveground cable-trays will be used.	Where trenching is not possible due to encountered rock or other reasons, aboveground cable-trays or cable mounding techniques may be used.	Refinement of design requirements.	No change.	N/A	N/A
16	Switchgear	Design and Operations Report – p. 9	An AC switch will be provided to integrate power flowing from the eight arrays into the substation. The switch is likely to be an S&C Vista switch or equivalent, and will sit on a concrete pad in an enclosed casing.	Medium voltage switchgear will be provided at the substation to couple the electrical output of the Intermediate Transformers onto a common electrical bus, and to facilitate subsequent connection to the Main Step-Up Transformer.	Refinement of design requirements	No change.	N/A	N/A
17	Foundation	Construction Plan Report – p. 11  Design and Operations Report – p. 7	PV modules will be securely mounted on a lattice type structure supported by either a driven pile foundation, helical pile, ground screw and/or Cast-In-Drilled-Hole (CIDH) pile depending on the soil conditions within the site.	Micro-piles are also being considered to support the structures	An additional foundation option has been identified through the Project design process	No change.	N/A	N/A