11.0 GLOSSARY

Aboriginal Community: A community where most of the residents are Aboriginal (i.e., Indian, Métis or Inuit) and that has a separate form of government, provides some level of service to its residents, and has clear community boundaries.

Aboriginal Peoples: Individuals who are Aboriginal (i.e., Indian, Inuit or Métis).

Aboriginal Traditional Knowledge: Knowledge that is held by and unique to Aboriginal peoples. It is a living body of knowledge that is cumulative and dynamic and adapted over time to reflect changes in the social, economic, environmental, spiritual and political spheres of the Aboriginal knowledge holders. It often includes knowledge about the land and its resources, spiritual beliefs, language, mythology, culture, laws, customs and medicines. The term Traditional Ecological Knowledge (TEK) is often used interchangeably with the term ATK. However, TEK is generally considered to be a subset of ATK that is primarily concerned with knowledge about the environment (Also see TEK).

Access Road: A road that affords access into and out of a construction area.

Access Trail: A trail that affords access into and out of a construction area.

Access: The ability to enter an area or reach a particular location.

Activity: Activity in relation to a project means actions carried out for construction, operation and eventual decommissioning; and in relation to human presence, actions carried out for domestic and commercial purposes including hunting, fishing, trapping, forestry, mining etc.

Adverse Effects: Negative effects on the environment and people that may result from a proposed project.

Aesthetics: Characteristics relating to the appearance or attractiveness of something.

Amphibian: Animal of the Class Amphibia that typically lives on land but breeds in water (e.g., frogs, toads, salamanders).

Alluvium: A general term for clay, silt, sand, gravel, or similar unconsolidated detrital material, deposited during comparatively recent geologic time by a stream or other body of running water, as a sorted or semi sorted sediment in the bed of the stream or on its floodplain or delta, as a cone or fan at the base of a mountain slope. Sediment deposited by flowing water, as in a riverbed, flood plain or delta.

Alternating Current (ac): The oscillating (back and forth) flow of electrical current; direct current (dc) is the unidirectional continuous flow of electrical current. AC is the common

household electrical current and is used in transmission lines; dc is the form of current produced by battery (e.g., in a flashlight).

Aquatic Peatland: A peatland adjacent to a water body or waterway. The peat adjacent to the water‘s edge is usually floating.

Aquifer: A body of rock or sediment that is sufficiently porous and permeable to store, transmit, and yield significant or economic quantities of groundwater to wells and springs.

Bedrock: The solid rock that lies beneath the soil and other loose material on the Earth's surface.

Biophysical Land Classification: A delineation of distinct areas on a map based on soil, surficial deposits, landforms, permafrost and water.

Black start: Black start is the process of restoring a power station to operation without relying on the external electric power transmission network or grid.

Boreal: Of or relating to the cold, northern, circumpolar area just south of the tundra, dominated by coniferous trees such as spruce, fir, or pine. Also called taiga.

Boreal Shield Ecozone: As classified by Environment Canada; an ecological land classification consisting predominantly of boreal forest on soils overlying Precambrian shield rock. It extends as a wide band from the Peace River area of British Columbia the northwest to the southeast corner of Manitoba.

Broad Habitat Types: The third coarsest level in the hierarchical habitat classification used for the terrestrial assessment. From coarsest to finest, the levels in the habitat classification system are land cover, coarse habitat type, broad habitat type and fine habitat type.

Canadian Shield: A broad region of Precambrian rock that encircles Hudson Bay. In total it covers 8 million km^2 and is made up of some of the planet’s oldest rock, largely granite and gneiss.

Canadian Standards Association (CSA): Organization that sets standards and criteria for operation of the project.

Circuit (Electric): The complete path of an electric current or a distinct segment of it. In the transmission context, circuit refers to the three conductors that transmit the electricity between station terminals. Transmission lines and structures may carry one or more circuits.

Classification: The systematic grouping and organization of objects, usually in a hierarchical manner.

Clearing: The act of cutting and removing trees or other vegetation from a construction area. Vegetation may be cut by machine or hand methods.

Climate Change: A long-term change in the statistical distribution of weather patterns over periods of time that range from decades to centuries. It includes changes the average weather conditions or a change in the distribution of weather events with respect to an average, such as the amount and frequency of extreme weather events. Climate change is due to both natural causes (i.e., natural processes of the climate system) as well as human based environmental effects (e.g., increase in concentrations of greenhouse gases resulting from human activity) (Natural Resources Canada 2007).

Committee on the Status of Endangered Wildlife in Canada (COSEWIC): Committee established by the *Species at Risk Act* as the authority for assessing the conservation status of species that may be at risk of extinction in Canada.

Conductor: Any material that will readily carry a flow of electricity. In the context of transmission lines, each of the two conductors or conductor bundles comprising a dc circuit, or the three comprising an ac circuit, is referred to as a conductor.

Conservation: Any of various efforts to preserve or restore the earth‘s natural resources, including such measures as: the protection of wildlife, the maintenance of forest or wilderness areas, the control of air and water pollution and the prudent use of farmland, mineral deposits, and energy supplies.

Construction: Includes activities anticipated to occur during Project development.

Contaminant: As defined by *The Manitoba Dangerous Goods Handling and Transportation Act;* “any solid, liquid, gas, waste, radiation or any combination thereof that is foreign to or in excess of the natural constituents of the environment and that effects the natural, physical, chemical or biological quality of the environment; or that is or is likely to be harmful or damaging to the health or safety of a person.”

Contamination: The act or process of contaminating or changing the level of a contaminant in the natural environment.

Converter Station: The terminal equipment for a high voltage direct current transmission line, in which alternating current is converted to direct current or direct current is converted to alternating current.

Core Area: A natural area that meets a minimum size criterion after applying an edge buffer on human features. Two minimum sizes (200 ha and 1,000 ha) after applying a 500 m buffer on human features were used in the fragmentation effects assessment.

Cumulative Effects: The effect on the environment, which results when the effects of a project combine with those of the past, existing and future projects; and the incremental effects of an action on the environment when the effects are combined with those from other past, existing and future actions.

Danger Trees: Danger trees are trees located outside a cleared transmission line right-of-way but which may pose a risk of contact or short circuit with the line or structures.

Decommissioning: Planned shutdown, dismantling and removal of a building, equipment, plant and/or other facilities from operation or usage and may include site clean-up and restoration.

Density-dependence: Regulation of size of a population by mechanisms whose effectiveness increases as population size increases.

Development: as defined under *The Environment Act* – Any project, industry, operation or activity, or any alteration or expansion of any project, industry, operation or activity which causes or is likely to cause: a) The emission or discharge of any pollutant to the environment, or b) An effect on any unique, rare or endangered feature of the environment, or c) The creation of by-products, residual or waste products not regulated by *The Dangerous Goods Handling and Transportation Act,* or d) A substantial utilization or alteration of any natural resource in such a way as to pre-empt or interfere with the use or potential use of that resource for any other purpose, or e) A substantial utilization or alteration of any natural resource in such a way as to have an adverse effect on another resource, or f) The utilization of a technology that is concerned with resource utilization and that may induce environmental damage, or g) A significant effect on the environment or will likely lead to a further development which is likely to have a significant effect on the environment, or h) A significant effect on the social, economic, environmental health and cultural conditions that influence the lives of people or a community insofar as they are caused by environmental effects (Manitoba Laws 2012).

Diatoms: A single-celled alga (Class Bacillariophyceae) that has a cell wall of silica. Many kinds are planktonic.

Direction or Nature of the Effect: Describes the nature of the residual effect and the difference or trend of the effect compared with existing baseline or pre-Project conditions.

Duration: The temporal boundary or length of time within which the predicted residual environmental effect would last.

Ecoregion: A geographical area characterized by a distinctive regional climate as expressed by vegetation (Cauboue *et al.* 1996).

Ecosite type: A classification of site conditions that have important influences on ecosystem patterns and processes. Site attributes that were directly or indirectly used for terrestrial habitat

classification included moisture regime, drainage regime, nutrient regime, surface organic layer thickness, organic deposit type, mineral soil conditions and permafrost conditions.

Ecosystem: A functional unit including the living and the non-living things in an area, as well as the relationships between those living and non-living things. For example, a decaying log comprises the ecosystem for a microbe because the log provides everything that the microbe needs to survive and reproduce.

Ecozones: An area of the earth‘s surface representing large and very generalized ecological units characterized by interacting abiotic and biotic factors; the most general level of the Canadian ecological land classification (Cauboue *et al.* 1996).

Electric and Magnetic Field (EMF): EMFs are invisible lines of force surrounding any wire carrying electricity, and are produced by all electric tools and appliances, household wiring and power lines. The strengths of EMFs depend on the voltage level and the amount of current flow. Fields fall off sharply with increasing distance from a transmission line; electric fields are easily blocked by vegetation, buildings or other obstacles, while magnetic fields are unaffected by such objects. Electric fields are measured in volts per metre. Magnetic fields are measured in milliGauss.

Electric Current: See Current.

Endangered: A species facing imminent extirpation or extinction (COSEWIC 2012).

Enhance: To improve by increasing in number or quality.

Environmental Assessment (EA): Process for identifying project and environment interactions, predicting environmental effects, identifying mitigation measures, evaluating significance, reporting and following-up to verify accuracy and effectiveness leading to the production of an EA report. Used as a planning tool to help guide decision making, as well as project design and implementation.

Environmental Effect: In respect of a project, a) Any change that the project may cause in the environment, including any change it may cause to a listed wildlife species, its critical habitat or the residences of individuals of that species, as those terms are defined in subsection 2(1) of the *Species at Risk Act,* b) Any effect of any change referred to in paragraph a) on i) health and socio-economic conditions, ii) physical and cultural heritage, iii) the current use of lands and resources for traditional purposes by aboriginal persons, or iv) any structure, site or thing that is of historical, archaeological, paleontological or architectural significance, or any change to the project that may be caused by the environment; whether any such change or effect occurs within or outside Canada (Department of Justice 2012a).

Environmental Management System: Part of an organization‘s overall management practices related to environmental affairs. It includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining an environmental policy. This approach is often formally carried out to meet the requirements of the International Organization for Standardization (ISO) 14000 series.

Environmental Protection Plan (EnvPP): Within the framework of an Environmental Protection Program, an Environmental Protection Plan prescribes measures and practices to avoid and minimize potential environmental effects of a proposed project. A “user friendly” guide for the contractor and Manitoba Hydro that includes: information such as a brief project description; updated construction schedule; summary identifying environmental sensitivities and mitigation actions; listing of all federal, provincial or municipal approvals, licenses, or permits that are required for the project; a description of general corporate practices and specific mitigating actions for the various construction and maintenance activities; emergency response plans, training and information; and environmental/engineering monitoring plans and reporting protocols.

Environmental Protection Program: Provides a framework for delivery, management and monitoring of environmental protection activities in keeping with issues identified in the environmental assessment, regulatory requirements and public expectation.

Erosion: Natural process by which the Earth's surface is worn away by the actions of water and wind.

Fine Habitat Type: The most detailed level in the hierarchical habitat classification used for the terrestrial assessment. See habitat type.

Fish Habitat: Spawning, nursery, rearing, food supply and migration areas upon which fish depend (*Fisheries Act).*

Follow-up Program: A program for: a) verifying the accuracy of the environmental assessment of a project, and b) determining the effectiveness of any measures taken to mitigate the adverse environmental effects of the project (Department of Justice 2012a).

Footprint: The surface area occupied by a structure or activity.

Forest: A relatively large assemblage of tree-dominated stands.

Fragmentation: The breaking up of contiguous blocks of habitat into increasingly smaller blocks as a result of direct loss and/or sensory disturbance. Eventually, remaining blocks may be too small to provide usable or effective habitat for a species.

Freshet: The occurrence of water flow from a sudden rainfall or snowmelt.

Furbearer: Referring to those mammal species that are trapped (e.g., marten, fox) for the useful or economic value of their fur.

Habitat Type: For the terrestrial habitat, ecosystems and plants assessment, habitat types refers to combinations of vegetation type and ecosite type. The vegetation and ecosite types are hierarchically classified based on level of detail. From coarsest to finest, the nested levels in the terrestrial habitat classification system are land cover, coarse habitat type, broad habitat type and fine habitat type.

Indicator Species: Species, groups of species or species habitat elements that focus management attention on resource production, population recovery, population viability or ecosystem diversity; these species often have narrower habitat requirements that can be used to indicate the relative suitability of habitat for other species that share a similar preference e.g., marten is primarily a denizen of mature or over-mature forest dominated by spruce.

Infrastructure: The basic features needed for the operation or construction of a system (e.g., access road, construction camp, construction power, batch plant).

Igneous: A rock formed by the crystallization of magma or lava.

Invertebrates: Organisms lacking a backbone or vertebral column.

Generating Station (GS): A structure that produces electricity. Its motive force can be provided in a variety of ways, including burning of coal or natural gas, or by using water (hydro) power. Hydroelectric generating stations normally include a complex of powerhouse, spillway, dam(s) and transition structures; electrical energy is generated by using the flow of water to drive turbines.

Geographic Extent: The spatial boundary within which the residual environmental effect is expected to occur.

Guyes or Guy Wires: Supporting wires that are used to stabilize some transmission line structures.

Granite Gneisses: Gneiss composed of a high degree of granite.

Granite: A common, coarse-grained, light-coloured, hard igneous rock consisting chiefly of quartz, orthoclase or microcline and mica.

Greywacke Gneisses: Gneiss consisting of any of various dark gray sandstones that contain shale.

Groundwater: The portion of subsurface water that is below the water table, in the zone of saturation.

Habitat: The place where a plant or animal lives; often related to a function such as breeding, spawning, feeding.

Habitat Zone of Influence: Spatial extent of direct and indirect Project effects on terrestrial habitat.

Hibernacula: A protective case, covering, or structure, such as a plant bud, in which an organism remains dormant for the winter.

Horizontal Peatland: A flat, featureless peatland where the water table is close to the surface.

Hydrology: The science dealing with the properties, distribution and circulation of water.

Keystone Species: Species that have an effect on many other species in an ecosystem disproportionate to their abundance or biomass – can be predators, prey, plants, mutualists and habitat modifiers (e.g., beaver, pileated woodpecker).

Lacustrine: Referring to freshwater lakes; sediments generally consisting of stratified fine sand, silt, and clay deposits on a lake bed.

Lentic: Situated in still, fresh water.

Line Conductors: Conductors or conductor bundles suspended from transmission line structures.

Lotic: Inhabiting or situated in rapidly moving fresh water.

Magnitude: The predicted severity or degree of disturbance the residual effect has on a component of the biophysical or socio-economic environment.

Metamorphic: Rocks that have been transformed by extreme heat and pressure.

Mitigation: With respect to a project, the elimination, reduction or control of the adverse environmental effects of the project, and includes restitution for any damage to the environment caused by such effects through replacement, restoration, compensation or any other means (Department of Justice 2011a).

Monitoring: Continuing assessment of conditions at and surrounding an activity. This determines if effects occur as predicted or if operations remain within acceptable limits and if mitigation measures are as effective as predicted.

Overburden: The soil (including organic material) or loose material that overlies bedrock.

Passerine: Of or relating to birds of the order Passeriformes, which includes perching birds and songbirds such as the jays, blackbirds, finches, warblers, and sparrows.

Peat: Material consisting of non-decomposed and/or partially decomposed organic matter, originating predominantly from plants.

Peatlands: Lands consisting largely of peat or peat bogs.

Permafrost: A condition where soil temperature remains below 0°C for at least two consecutive years. Perennially frozen material underlying the solum, or a perennially frozen soil horizon. Permafrost is subdivided into continuous and discontinuous permafrost, while sporadic permafrost is confined to alpine environments.

Precambrian bedrock: Bedrock formed in the Precambrian era, which began with the consolidation of the earth's crust and ended approximately 4,000 million years ago.

Preferred Route: The best balanced choice of route based on public input, biophysical, socio-economic, and cost and technical considerations. Preferred routes are generally identified during a Site Selection and Environmental Assessment process.

Priority Birds: A native species that is rare, plays a highly disproportionate role in ecosystem function, is highly sensitive to Project features or is highly valued by people.

Priority Plant: A native plant species that is rare, plays a highly disproportionate role in ecosystem function, is highly sensitive to Project features, or is highly valued by people.

Project (Canada): Means: a) In relation to a physical work, any proposed construction, operation, modification, decommissioning, abandonment or other undertaking in relation to that physical work; or b) Any proposed physical activity not relating to a physical work that is prescribed or is within a class of physical activities that is prescribed pursuant to regulations made under paragraph 59(b) (Department of Justice 2012a).

Project Description: Any information in relation to a project that includes, at least: (a) a summary description of the project; (b) information indicating the location of the project and the areas potentially affected by the project; (c) to the extent possible, a summary description of the physical and biological environments within the areas potentially affected by the project; and (d) the mailing address, e-mail address and phone number of a contact person who can provide additional information about the project (*Canadian Environmental Assessment Act,* Federal Coordination Regulations).

Project Footprint: The land and/or water surface area affected by a project. This includes direct physical coverage and direct effects. Consequently, a project footprint may be larger than its physical dimensions if off-site activities are involved.

Proponent: A person who is undertaking, or proposes to undertake a development or who has been designated by a person or group of persons to undertake a development in Manitoba on behalf of that person or group of persons (Manitoba Laws 2011).

Raptor: A predatory bird species with the physical traits adapted for grasping prey, sharp talons, and tearing flesh, hooked beak. The group of birds termed raptors includes the owls, falcons, eagles and hawks.

Rare Species: Any indigenous species of flora that, because of its biological characteristics, or because it occurs at the fringe of its range, or for some other reasons, exists in low numbers or in very restricted areas of Canada but is not a threatened species (Cauboue *et al.* 1996).

Regulatory: Pertaining to legislated requirements (i.e., statues, laws, regulations).

Reptile: Cold-blooded animal of the Class Reptilia that includes tortoises, turtles, snakes, lizards, alligators and crocodiles.

Resource Management Area (RMA): An area to be jointly managed by a Resource Management Board established by agreement between Manitoba and a First Nation or a local Aboriginal community.

Right-of-Way (ROW): Area of strip of land controlled and maintained for the development of a road, or transmission [or distribution] line (including construction, operation, and maintenance of the facility).

Riparian: Refers to terrain, vegetation or simply a position adjacent to or associated with a stream, flood plain, or standing body of water.

Scat: Excrement, especially of an animal.

Significance: A conclusion about whether adverse environmental effects are likely to be significant, taking into account the implementation of appropriate mitigation measures. Significance is determined by a combination of scientific data, regulated thresholds, standards, social values and professional judgment.

Site Selection and Environmental Assessment (SSEA): Site Selection and Environmental Assessment process used to select a site or route for a transmission facility (e.g., a station or a transmission line) and assess any potential environmental impacts of that facility on the biophysical environment and socio-economic conditions.

Socio-economic: Involving both social and economic factors.

Stewardship: Refers to general environmental care and protection.

Stratigraphy: The science of rocks: It is concerned with the original succession and age relations of rock strata and their form, distribution, lithologic composition, fossil content, geophysical and geochemical properties-all characters and attributes of rocks as strata-and their interpretation in terms of environment and mode of origin and geologic history.

Study Area: The geographic limits within which environmental effects are assessed.

Substrate: The medium on which plants grow.

Substrate: The medium on which plants grow.

Surface Permafrost: Permafrost that occurs within the top 2 m of the surface materials.

Sustainability: Capacity of a thing, action, activity or process to be maintained indefinitely in a manner consistent with the spirit of Manitoba‘s Principles and Guidelines of Sustainable Development.

Sustainable Development (SD) (Canada): Development that meets the needs of the present, without compromising the ability of future generations to meet their own needs (Department of Justice 2012a).

Sustainable Development (SD) (Manitoba): Meeting the needs of the present without compromising the ability of future generations to meet their own needs.

Switchyard: An area within a substation used for switching (see Switching Station).

Switching Station: A station used to terminate transmission lines operating at the same voltage, and enable individual lines to be taken out of service or connected to other lines to redirect or control the flow of power.

Terrestrial Ecosystems: Any terrestrial environment, from small to large, in which plants and animals interact with the chemical and physical features of the environment.

Till: An unstratified, unconsolidated mass of boulders, pebbles, sand and mud deposited by the movement or melting of a glacier.

Topography: General configuration of a land surface, including its relief and the position of its natural and manmade features.

Tributary: Any secondary stream or river that flows into a larger waterbody.

Transmission Line: A linear arrangement of towers and conductors which carries electricity from generating stations and transmission stations to load centres like communities and industries to meet electrical needs**.**

Transmission System: The towers, conductors, substations, and related equipment involved with transporting electricity from generation source to areas for distribution — or to the power systems of out-of-province electrical utilities.

Umbrella Species: Species with large area requirements. Conservation of these species should automatically conserve a host of other species e.g., grizzly bear.

Unit Transmission Lines: Transmit power from the seven generators located at the Keeyask Generation Station to the new Keeyask Switching Station.

Ungulates: Any of a number of mammals with hooves that are superficially similar but not necessarily closely related taxonomically.

Valued Environmental Components: Any part of the environment that is considered important by the proponent, public, scientists and governments involved in the assessments process. Importance may be determined on the basis of cultural values or scientific concern.

Varved: A layer or series of layers of sediment deposited in a body of still water in one year. Varves are typically associated with glacial lake deposits and consist of two layers: a lower, light-coloured layer that consists primarily of sand and silt, and a darker upper layer that consists primarily of clay and organic matter.

Vegetation: The general cover of plants growing on a landscape.

Vegetation Type: In phytosociology, the lowest possible level to be described.

Veneer bog: A thin type of bog occurring on gently sloping terrain underlain by generally discontinuous permafrost.

Waterbody: Any location where water flows or is present, whether or not the flow or the presence of water is continuous, intermittent, or occurs only during a flood. This includes, but is not limited to, wetlands and aquifers.

Waterfowl: Ducks and geese (game birds that frequent water).

Watershed: The region draining into a river, river system or other body of water.

Water Quality: Description of the chemical, physical, and biological characteristics of water, usually in regard to its suitability for a particular purpose or use.

ACRONYMS

AADT – Annual Daily Traffic

ac – Alternating Current

ATK – Aboriginal Traditional Knowledge

ATV – All Terrain Vehicle

BFM – Biophysical Monitoring Framework

CEA – Canadian Electrical Association

CEAA – *Canadian Environmental Assessment Act*

CNP – Cree Nation Partners

CRD – Churchill River Diversion

CSA – Canadian Standard Association

dBA – Decibels

dc – Direct Current

DFO – Department of Fisheries and Oceans

DNC – Direct Negotiated Contract

EAPF – Environment Act Proposal Form

EA Report – Environmental Assessment Report

EMF – Electric Magnetic Field

EMS – Environmental Management System

EnvPP – Environmental Protection Plan

EPIMS – Environmental Protection Information Management System

FLCN – Fox Lake Cree Nation

FMU – Forest Management Unit

GOT – Generation Outlet Transmission

GS – Generating Station

HBC – Hudson's Bay Company

HRIA – Heritage Resource Impact Assessment

HVdc – High Voltage direct current

ISO – International Organization for Standardization

JKDA – Joint Keeyask Development Agreement

KIP – Keeyask Infrastructure Project

kV – Kilovolt

LGD – Local Government District

MIT – Manitoba Infrastructure and Transportation

MISO – Midwest Independent System Operator

MOU – Memo of Understanding

MRO – Midwest Reliability Organization

MW – Megawatt

MTS – Manitoba Telecom Services

MWQSOG – Manitoba Water Quality Standards, Objectives, and Guidelines

NCFZ – Non-Commercial Forest Zone

OPGW – Optical Ground Wire

PIP – Public Involvement Program

PR – Provincial Road

SDA – Sustainable Development Act

SPSA – Socio-economic Project Study Area

SSEA – Site Selection and Environmental Assessment

VEC – Valued Environmental Component