TERMS OF REFERENCE FOR
MANITOBA HYDRO'S CAPITAL PORTFOLIO MANAGEMENT PROGRAM

1. PURPOSE

The purpose of Manitoba Hydro's Capital Portfolio Management Program (the Program) is to support the standardization of capital investment planning processes through the implementation of Asset Investment Planning technology (Copperleaf C55) in the Transmission, Customer Service & Distribution and Information Technology lines of business.

This program will leverage the Corporation's recently completed Corporate Value Framework (also from Copperleaf) as an evaluation tool within the C55 software to support capital investment decision-making and portfolio prioritization across organizational functional boundaries.

2. BACKGROUND

In 2011, Manitoba Hydro successfully implemented the Copperleaf C55 technology application into its Generation Operations (GenOps) business unit and it is being used today to sequence its capital projects in a manner that optimizes its business unit values. In 2014, Manitoba Hydro completed a partial implementation of the C55 technology in Customer Service & Distribution (CS&D) for its larger capital projects to streamline its capital approval process. Recently, the Corporation completed a project to create a Corporate Value Framework that will allow the organization to prioritize projects across all lines of business. This framework is an input into the C55 application; therefore, to fully realize the benefits of asset investment planning Manitoba Hydro will extend the use of this technology and framework across the Corporation.

This asset investment planning technology will also enhance current project evaluation methodologies by providing a systematic framework that defines investment value in a consistent manner across the organization. It will also facilitate adjustments to its capital projects in light of changing financial and labour resource constraints. This common technology platform will also afford the opportunity to be integrated with Manitoba Hydro's SAP Business Warehouse for proper business analytics, and will align Manitoba Hydro's electric and natural gas asset management practices with industry standards such as ISO 55000.

3. **SCOPE**

The scope of the Program is to implement Copperleaf's C55 asset investment planning technology into the remaining capital intensive business units:

- Transmission;
- Customer Service & Distribution;
- Human Resources & Corporate Services (HR&CS) – for information technology capital investments

A final component of the Program will follow with the implementation of related reporting software to integrate C55 data into SAP Business Intelligence / Business Warehouse.

Out of scope: The HR&CS Corporate Facilities and Fleet Services business areas, and Customer Care & Energy Conservation (CC&EC) business unit C55 implementation and associated business process change will be implemented at a later date. Given the smaller proportion of capital funds allocated to these areas, this is not expected to impact Manitoba Hydro's schedule to advance its capital investment planning and prioritization techniques.

4. **TIMING & DELIVERABLES**

The following deliverables are expected:

- Project management - detailed project plan, schedule, costs, and regular updates.
- Process mapping – mapping of the current state of the capital portfolio management processes and development of future state process.
- System configuration and data loading – configuration of C55 for the business areas' use based on specifications developed through workshops with the business areas' subject matter experts.
- Investment Decision Optimization – includes training on the use of the Corporate Value Framework, assistance with evaluation of the portfolio of projects in each business area, and assistance with each business area's portfolio optimization.
- Asset Analytics – condition-based analysis of individual assets and recommendation of economically optimal replacement dates.
- Program Analytics – condition-based analysis of asset populations (e.g. poles, cables, switchgear, etc.) and recommendation of replacement levels.
- Documentation and user training manual.

Implementation of the above started in April 2016 and is expected to be completed by December 2017. The expected completion dates by organization are: Transmission Business Unit (April 2017), HR& Corporate Services Business Unit for information technology investments (June 2017) and Customer Service & Distribution Business Unit (October 2017).