

MANITOBA HYDRO
INTEROFFICE MEMORANDUM

FROM Jason Beer C.E.T.
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TO Darryl Stocki
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Customer Relationship
Customer Energy Services Department
360 Portage Ave(14), Wpg, MB, R3C 0G8

Date: 2023-12-12

Customer Information

Name: WINNIPEG TRANSIT
Address: 600 BRANDON AVE, WINNIPEG, MB

Source Information

Station: Harrow
Feeder: H58

Supply Transformer Information SEQ# 21020

kVA: 750KVA
Secondary Voltage: 347/600V
Connection: Grounded Wye - Grounded Wye
Minimum Impedance: 3.5%
Primary Protection¹: Cooper 25A 358C10 Bayonet Fuses


Fault Levels at Supply Transformer^{2, 3}

Switching Configuration	Voltage (kV)	LLL (Amps)	LG (Amps)	R1 (pu)	X1 (pu)	R0 (pu)	X0 (pu)
H58 Normal System Operation ⁴	24.0	7021	7168	0.0726	0.3348	0.2164	0.2693
H58 Horizon Source, All Banks Paralleled	24.0	11639	11202	0.0649	0.1962	0.2131	0.1526

Impedances are per unit on a 100MVA base

Notes

1. Manitoba Hydro sources replacement protection from various manufacturers, therefore the protection stated above is only representative of the protection installed.
2. These values are reflective of the normal and expected maximum available fault levels at the customer location, depending on the configuration of the supply, and can be used for arc flash hazard calculation.
3. These values are valid for the system configuration at the time of this study. These fault levels and impedances can change in the future as a result of changes to the Manitoba Hydro system, including feeder reconfiguration or reconductoring, increasing the size of substation transformers and from new or reconducted subtransmission lines. While these changes are infrequent in nature, they are not uncommon and Manitoba Hydro does not communicate changes in fault level or impedance information to customers unless a new request is initiated.
4. The Normal switching configuration is intended for overcurrent protection coordination studies, power quality studies, harmonic assessment and mitigation reports, or power factor correction studies only.
5. This memo is not to be used for new equipment rating purposes.


Jason Beer C.E.T

