

OEB Stakeholder Workshop on Low Voltage Adjustments in Benchmarking

William Cheng

Hydro One Network

Team Lead – Transmission & Distribution

Settlements

Oct. 7, 2013

Definition of Transmission (TX/HV) and Distribution (LV) at Market Open May 200

- Transmission – all assets >50 kv including the step down transformers transforming power from >50 kv to <50 kv
- Distribution – all assets <50 kv

Ontario LDCs Connection Scenarios

Eg. A Transmission Connected LDC

	Direct Connection			Embedded Connection		
	TX <small>(Transmitter Owned)</small>	HV <small>(Distributor Owned)</small>	LV <small>(Distributor Owned)</small>	TX <small>(Transmitter Owned)</small>	HV <small>(Host Distributor Owned)</small>	LV <small>(Host Distributor Owned)</small>
Physical	Yes	No	Yes	No	No	No
Cost	50%	0%	50%	0%	0%	0%

Hydro One Sub Transmission(ST) Rate Background

- OEB approved Hydro One distribution new Sub-Transmission rate effective February 1st, 2009.
- The classification refers to
 - Embedded supply to LDC's, "Embedded" meaning receiving supply via Hydro One Distribution assets, and where Hydro One is the Host distributor to the Embedded LDC. Situations where the LDC is supplied via the Specific Facilities are included.

ST Rate Components

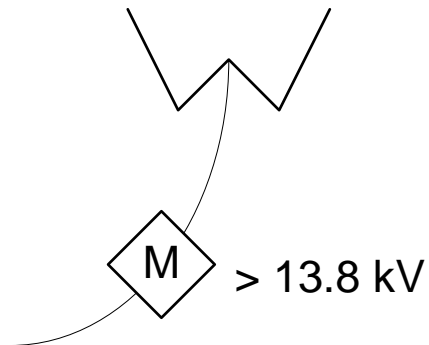
Component	Charge Determinant per Billing Month
HVDS High	\$/KW
HVDS Low	\$/KW
LVDS	\$/KW
Meter Charge	\$/Meter
Service Charge	\$/Delivery Point
Specific ST Lines Charge	\$/KM
Specific Primary Lines Charge	\$/KM
Common ST Lines Charge	\$/KW

HVDS High/Low

HVDS High Rate < HVDS Low Rate

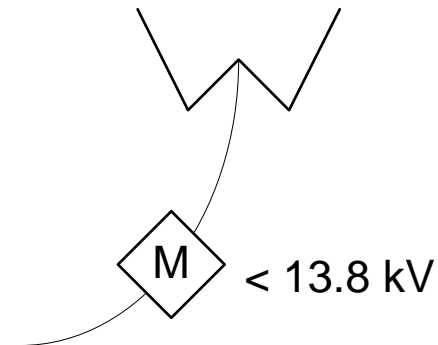
Scenario A

High



Scenario B

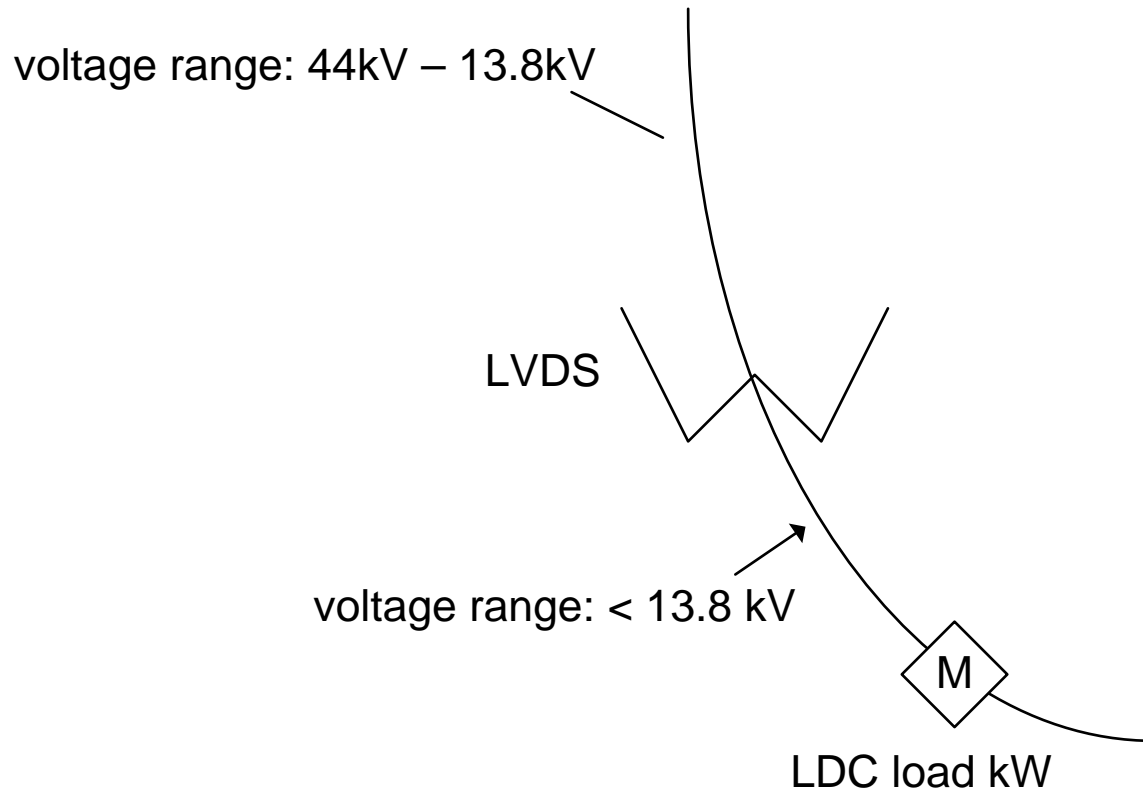
Low



LVDS

LVDS Rate:

\$/kW



Meter Charge Rate:

Meter Charge

\$/Meter

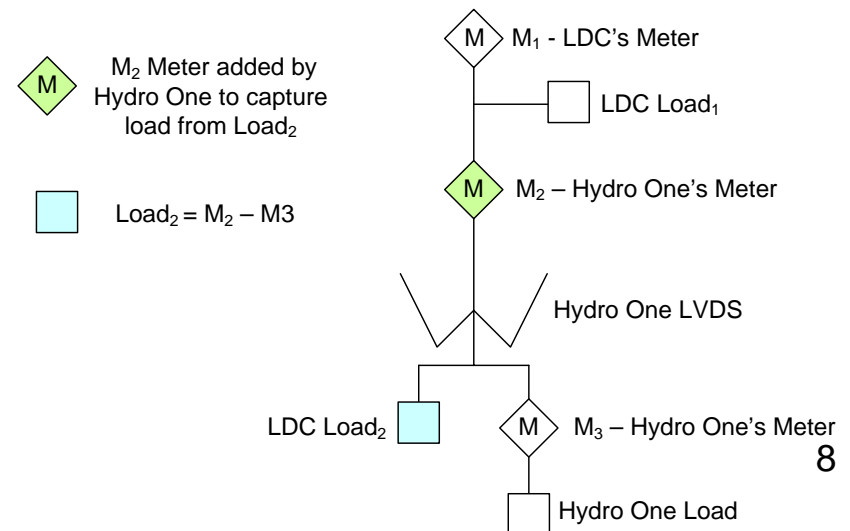
- The Meter Charge is applied to delivery points for which Hydro One owns interval metering.

Scenario A:

Hydro One purchases energy for the Embedded LDC.

Scenario B:

Meter installed to attract Embedded LDC load from Hydro One owned LVDS.



Service Charge

Service Charge Rate:

\$/Delivery Point

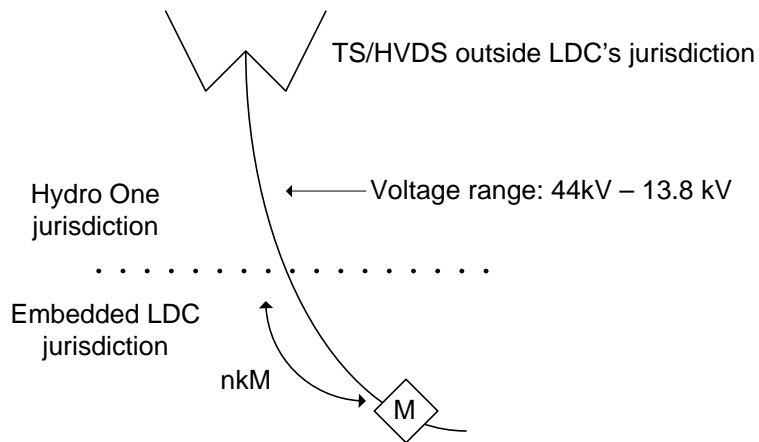
- The service charge is applied to each delivery point

Specific ST Line

Specific ST Line Rate:

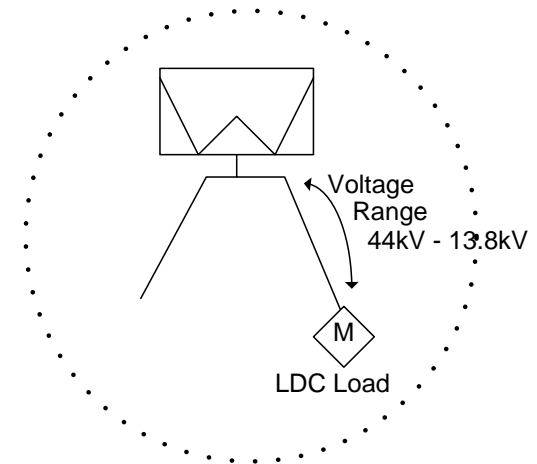
\$/km

Scenario A



Scenario B

TS/HVDS Inside LDC's Jurisdiction



For Specific Line Charge, there are two criteria:

1) A section of the line is inside the LDC jurisdiction.

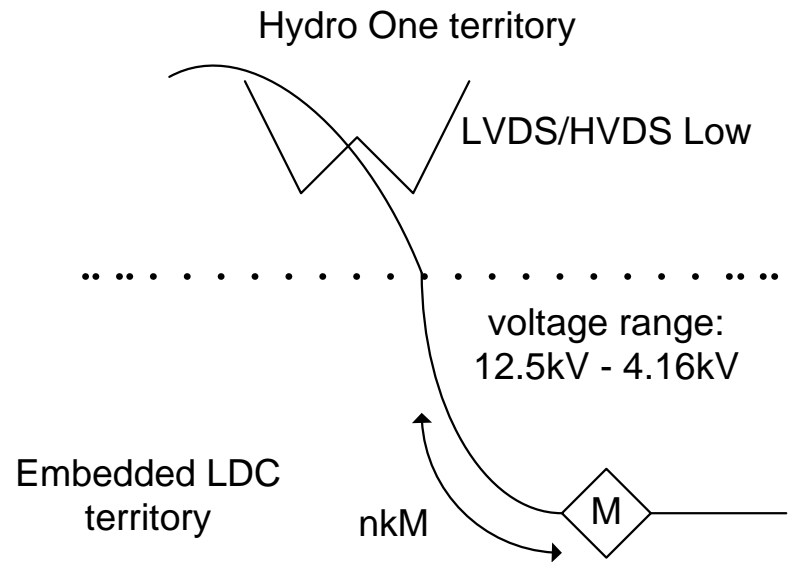
AND

2) A section of the line is not shared.

Specific Primary Line

Specific Primary Line Rate:

\$/km



Common ST Charge

Common ST Line Rate:

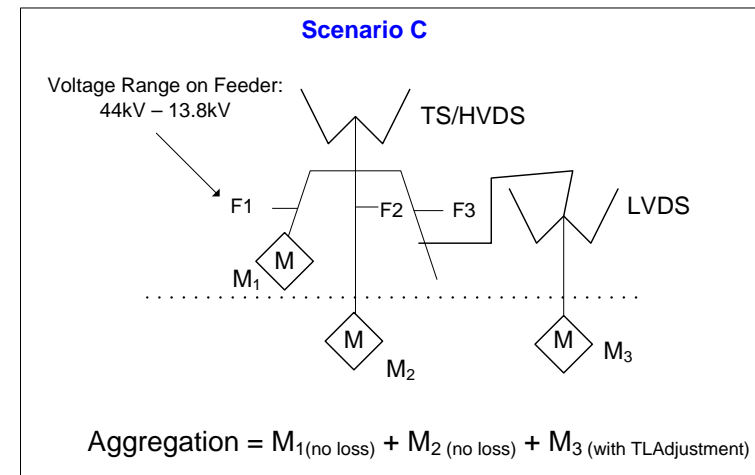
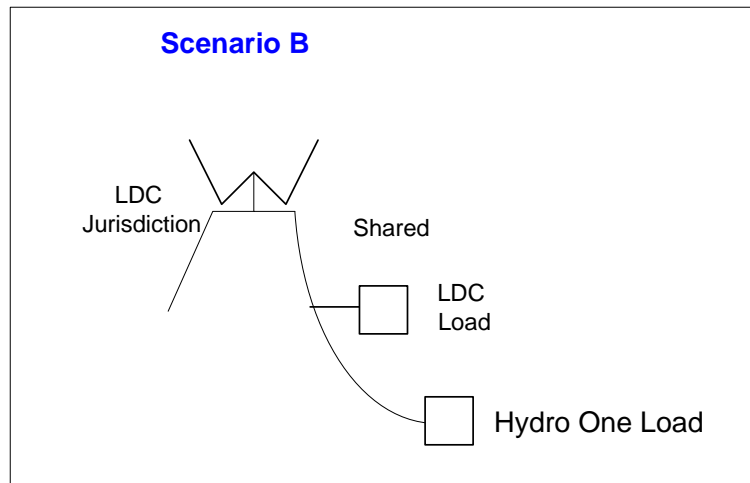
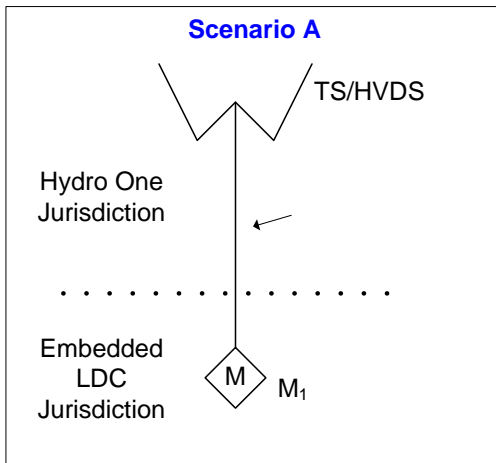
\$/ kW

- Aggregate per Transformer Station (TS)/HVDS
- Common ST Lines rate also applies to the small amount of supply to LDC's in the 12.5 kV to 4.16kV range from HVDS or LVDSs

Common ST Charge

Common ST Line Rate:

\$/ kW



- Common ST has two criteria:**
- 1) Station outside the LDC jurisdiction.**
 - OR**
 - 2) Station inside the jurisdiction but shared.**