



**Ontario Energy Board**  
Commission de l'énergie de l'Ontario

# **Distribution Network Investment Planning**

(EB-2010-0377)

Materials for Working Group Meeting 3

January 14, 2013

- *Welcome*
- Review of Dec. 13<sup>th</sup> WG discussions
- Straw man: investment categories for FRs
- Investment planning metrics for FRs & ‘scorecard’
- System capability assessment methods/terminology
- Planning information ‘updates’ considerations
- Matters arising from today’s discussion
- Next meeting
- *Adjourn*

- synthesizes
  - slide 35 of staff's proposal
  - information provided by
    - Horizon Utilities
    - Hydro One
    - Hydro Ottawa
    - Thunder Bay Hydro

# straw man: investment categories & descriptions for FRs

Category	Description	Drivers	Projects / Activities	Code Ref
A	<p>System modifications to meet customer service obligations</p> <p>- Investment expenditures related to providing a customer or group of customers (including generator customers) with access to electricity services via the distribution system.</p>	Customer Service Requests	<ul style="list-style-type: none"> <li>- new customer connections</li> <li>- modifications to existing customer connections</li> </ul>	connection
			<ul style="list-style-type: none"> <li>- system expansions for customer connections or property development</li> </ul>	expansion
		3 <sup>rd</sup> Party Infrastructure Relocation Request	<ul style="list-style-type: none"> <li>- system modifications for property or infrastructure development</li> </ul>	expansion
		Other Mandated (DSC; CS; etc.) Service Obligations	<ul style="list-style-type: none"> <li>- metering</li> <li>- LTLT</li> </ul>	connection or expansion

# straw man: investment categories & descriptions for FRs

Category	Description	Drivers	Projects / Activities	Code Ref
B	<p>System asset replacement or refurbishment at end of useful service life</p> <p>- investment expenditures related to the ability of existing assets or asset systems to provide customers with electricity services via the distribution system where this ability is a function of: failure; failure risk; substandard performance; high performance risk; functional compatibility with new related and/or interdependent assets or asset systems; etc.</p>	<p>Risk/impact of asset condition, performance and/or technical compatibility on electricity service delivery</p>	<p>batteries  cable (by type)  cable splices  civil works  conductor  elbows &amp; inserts  insulators  Poles (by type)  physical plant  relays  switchgear  transformers (by type)  other equip (by type)</p>	<p>enhancement</p>

# straw man: investment categories & descriptions for FRs

Category	Description	Drivers	Projects / Activities	Code Ref
C	<p>System modifications to meet expected spatial and/or volumetric changes in load or to meet distributor operational objectives, including safety, reliability and power quality performance targets</p> <p>- investment expenditures related to meeting future requirements for electricity services from the distribution system.</p>	Forecast Load Growth	<p>property acquisition</p> <p>capacity upgrade (by type):</p> <ul style="list-style-type: none"> <li>- phases</li> <li>- circuits</li> <li>- conductor</li> <li>- voltage</li> <li>- transformation</li> <li>- regulation</li> </ul> <p>line extensions</p>	enhancement or renewable enabling improvement
		Network operational objectives	<p>protection &amp; control upgrade</p> <ul style="list-style-type: none"> <li>- reclosers</li> <li>- tap changer controls/relays</li> <li>- transfer trip automation (new/upgrades)</li> <li>- by device type</li> <li>- by function</li> </ul>	

# straw man: investment categories & descriptions for FRs

Category	Description	Drivers	Projects / Activities	Code Ref
D	Non-system investments related to the land, structures, depreciable improvements, equipment and tools needed to carry out the day to day activities that enable the provision of electricity services to customers	<p>Sustaining network maintenance &amp; inspection activities</p> <p>Sustaining business administration and customer relationship activities and systems</p>	<p>business equipment</p> <p>business supplies</p> <p>business software</p> <p>rolling stock</p> <p>tools</p>	n.a.