

Toronto Local Advisory Committee Meeting

Toronto Hydro Grid Pressures and Relief Plan
January 28, 2016



How We're Managing Grid Pressures

Ramping Up Renewal

- Toronto Hydro received a decision to its 2015-2019 rate application from the OEB
- Toronto Hydro's proposed capital budget will be reduced by 10% annually on the proposed \$2.5 B
- The 2015 base OM&A increase should be 2.1%, approximately the rate of inflation over the 2014 actual spending, providing a base OM&A of \$246 million.



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

DECISION AND ORDER

EB-2014-0116

TORONTO HYDRO-ELECTRIC SYSTEM LIMITED

Application for electricity distribution rates effective from May 1, 2015 and for each following year effective January 1 through to December 31, 2019

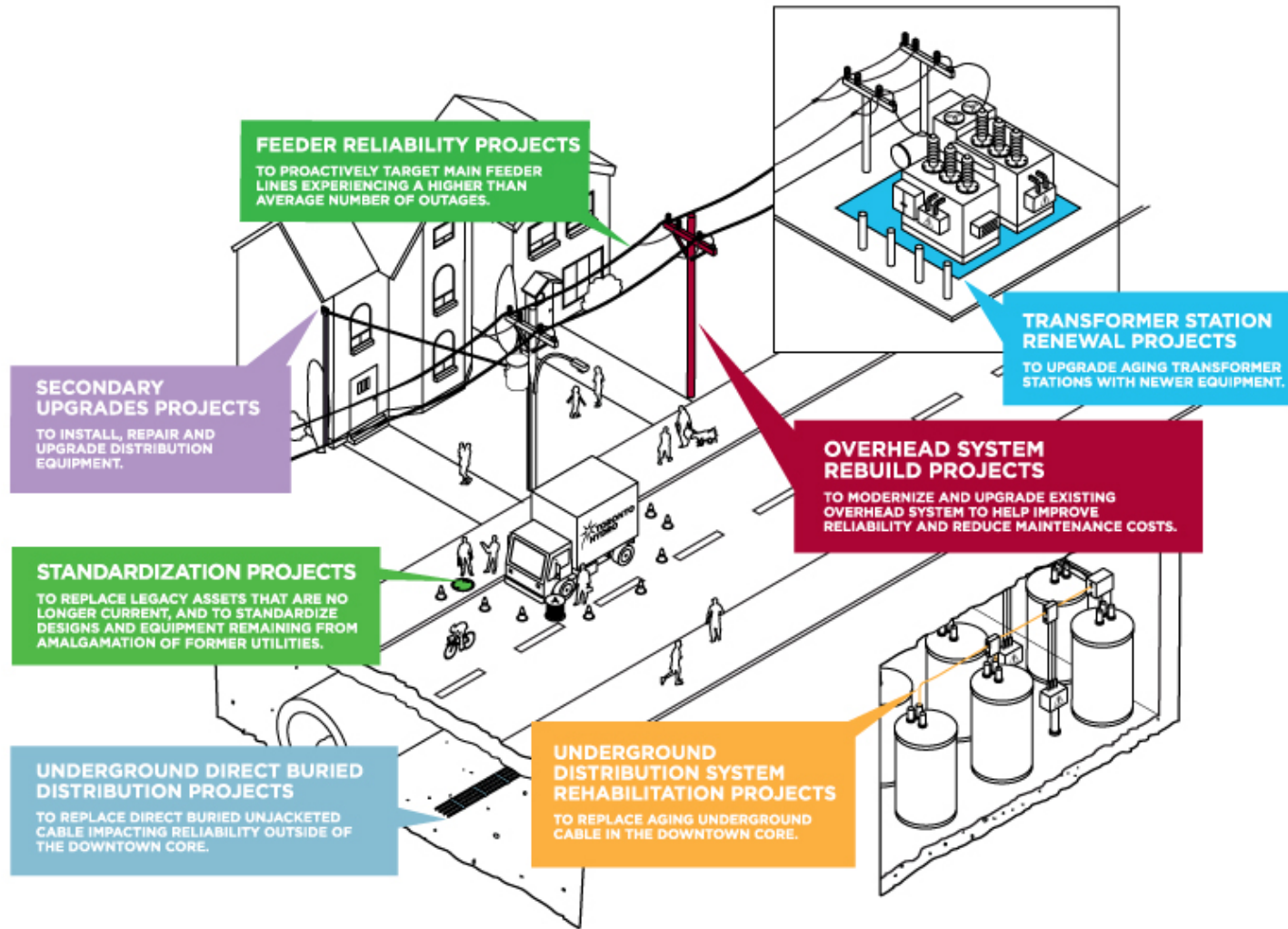
BEFORE: Christine Long
Presiding Member

Ken Quesnelle
Vice Chair and Member

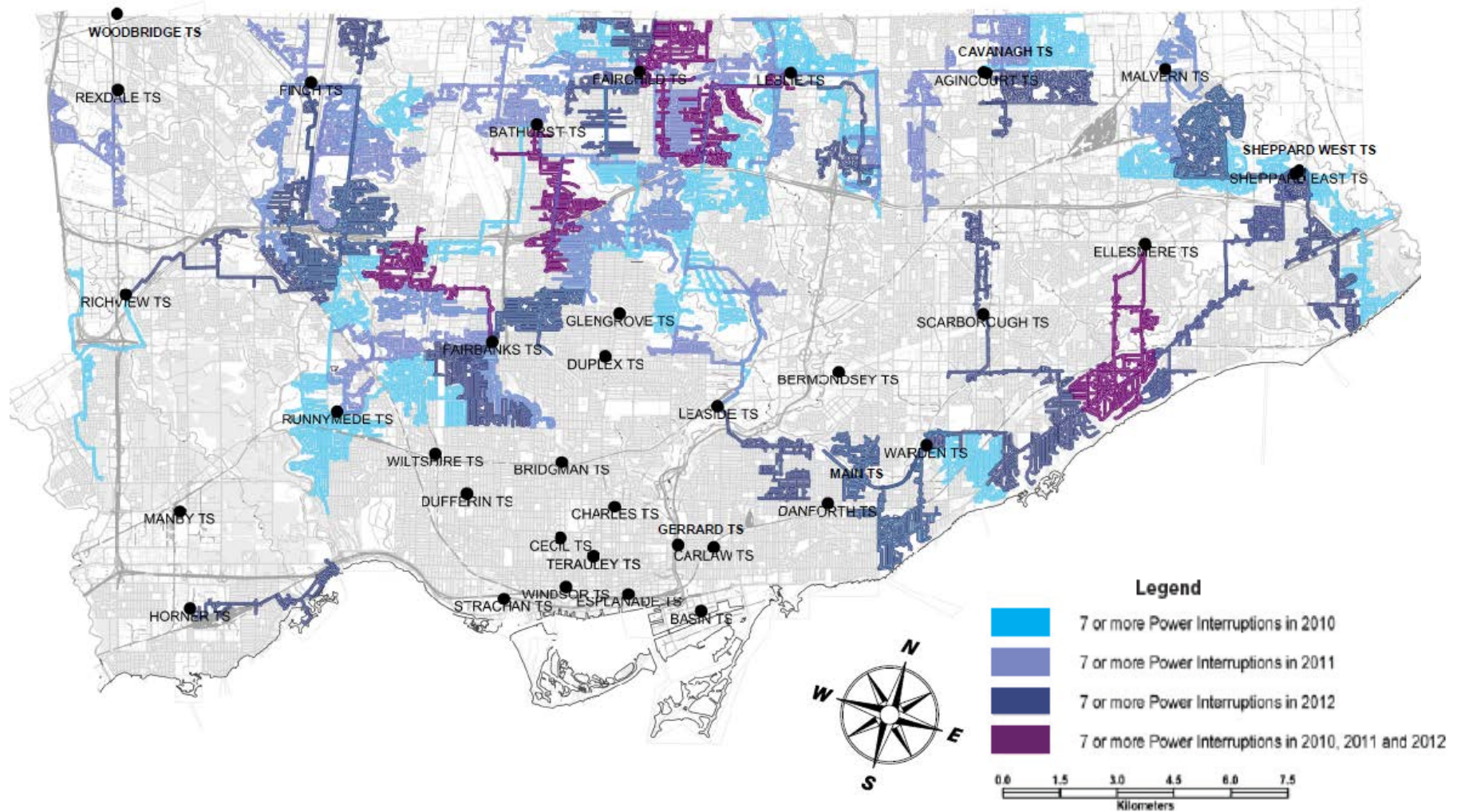
Cathy Spoel
Member

December 29, 2015

Renewal Projects



Example Program: Worst Performing Feeders

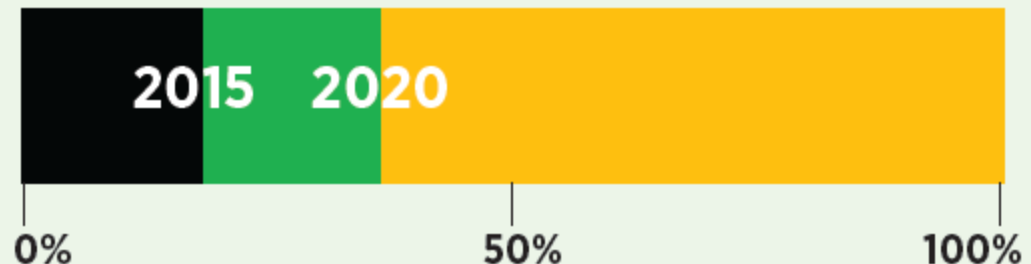


Example Program: Direct Buried Cable Replacement

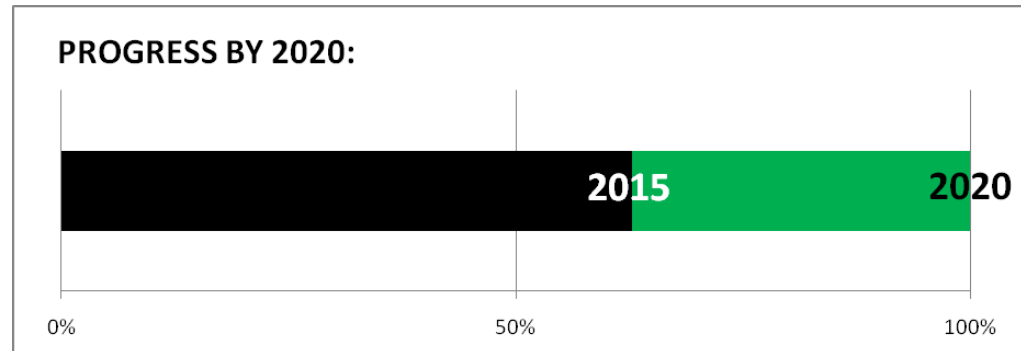


- Cables in parts of the former suburbs (Scarborough especially) were once laid directly in trenches with no protective barrier.
- These cables have proven very susceptible to repeated outages.
- Toronto Hydro is replacing these cables with water resistant cables in concrete-encased ducts.

PROGRESS BY 2020:



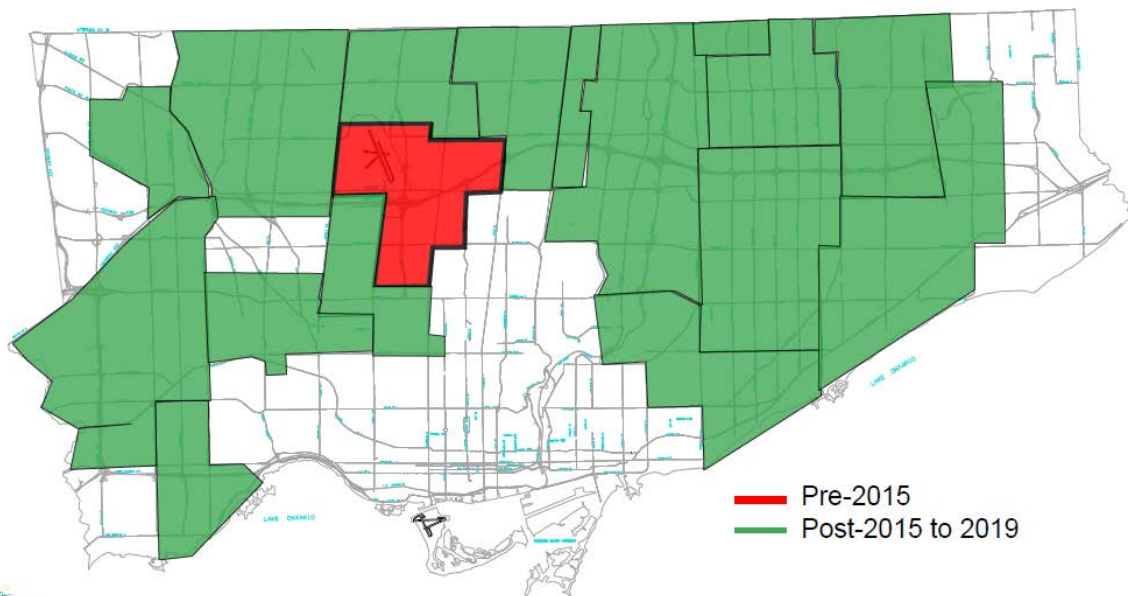
Example Program: Replacing Legacy Network Equipment



- Toronto Hydro is gradually replacing old and worn-out ‘fibretop’ network units in the downtown area.
- These units were installed in the original system.
- Failure can result in vault fires and extensive outages.

Example Program: Feeder Automation

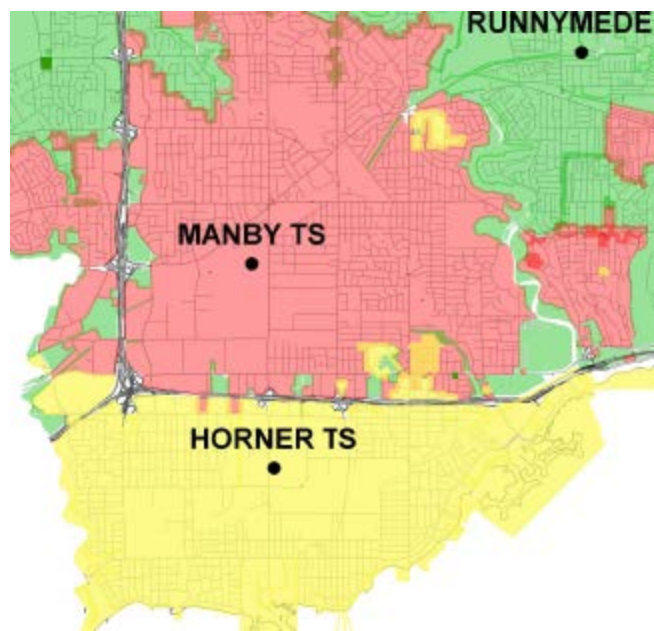
- Toronto Hydro is installing intelligent overhead switches in the former suburbs.
- These switches isolate an outage to one section of a feeder in a matter of seconds, significantly improving outage restoration time for most customers on the feeder.
- By 2019, Toronto Hydro expects to install feeder automation throughout much of the former suburbs.



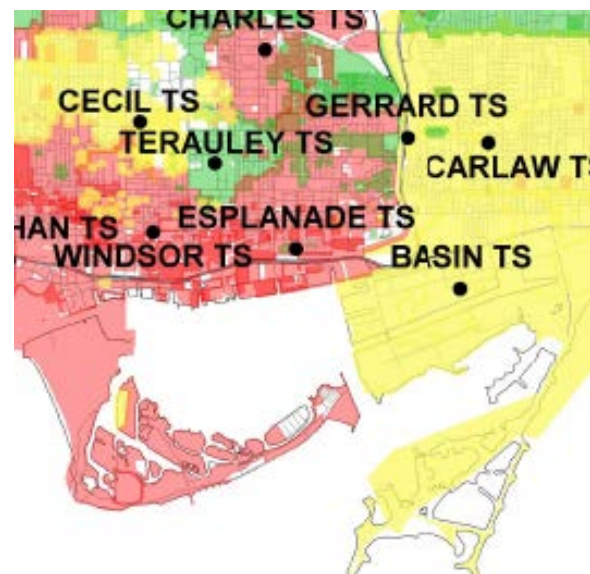
Example Program: Stations Expansion

- Toronto Hydro is expanding the capacity of its distribution grid through stations upgrades and expansions.

Eg. West Toronto Capacity



Eg. Copeland Ph.2 Capacity



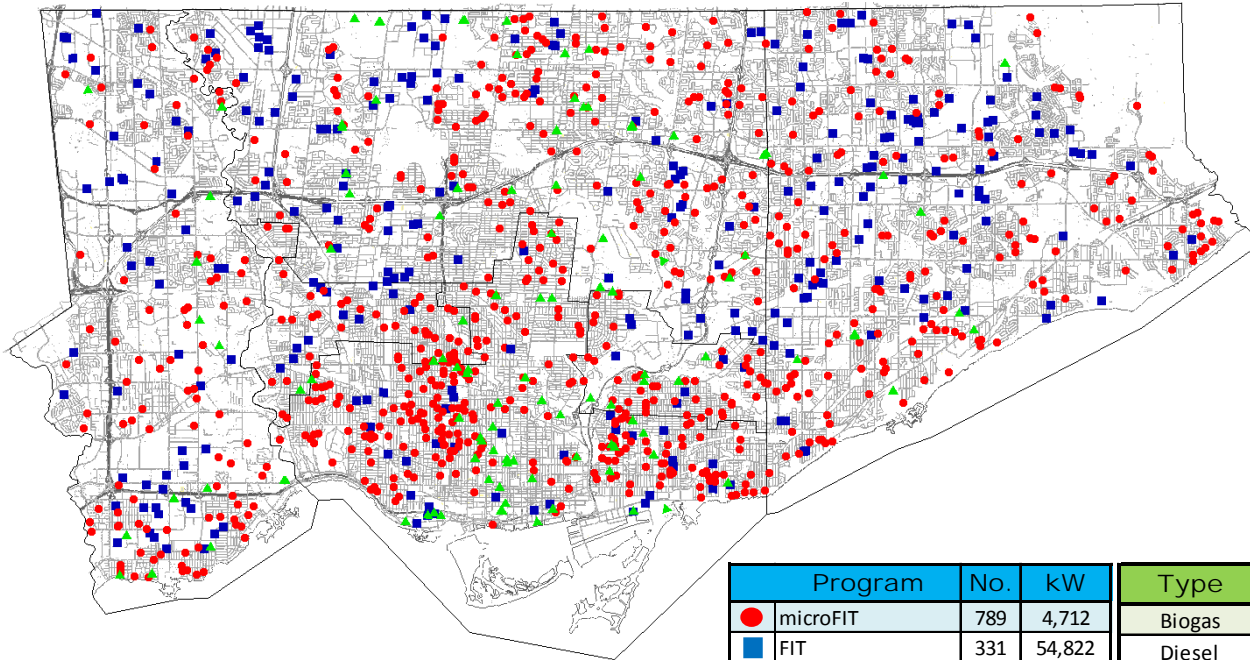
Conservation, Demand Management (CDM)

- Toronto Hydro is implementing conservation programs for the period 2015-2020 (6 years).
- The conservation targets for Toronto Hydro total 1.58 TWh, out of a total of 7 TWh target for LDCs.
- Various-province-wide programs are underway (e.g. Energy Manager Program, Process and Systems Upgrades Program, Retrofit, Heating and Cooling Program, etc.)
- Custom programs are also in development which are intended to relieve capacity in special high-growth areas of Toronto.

Distributed Generation (DG)

- Toronto Hydro provides interconnection for embedded generators across our distribution system.
- These DG resources total 140 MW in aggregate from approx. 1,200 facilities.
- Toronto Hydro is implementing an energy centre to monitor/forecast/control these DG resources.
- These DG resources are projected to increase by about 150 MW by the year 2019 and is expected to reach 750 MW in aggregate by 2025.

Generation Resources (Nov.2015)



System Demand = 5000 MW

DG Resource = 3.3% (2015)

DG Resource = 15% (2025)

Program			Type		
	No.	kW		No.	kW
● microFIT	789	4,712	Biogas	1	4,700
■ FIT	331	54,822	Diesel	13	32,100
▲ Net Metering	63	1,380	Natural Gas	18	60,020
▲ RESOP	8	919	Photovoltaic	1190	61,139
▲ Load Displacement	25	51,943	Wind Turbine	2	753
▲ Closed Transition	9	31,750	Other	7	4,987
▲ Other	6	18,150			
TOTAL	1231	163,699	TOTAL	1,231	163,699

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