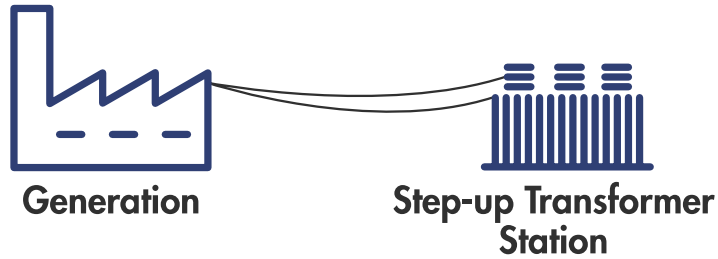


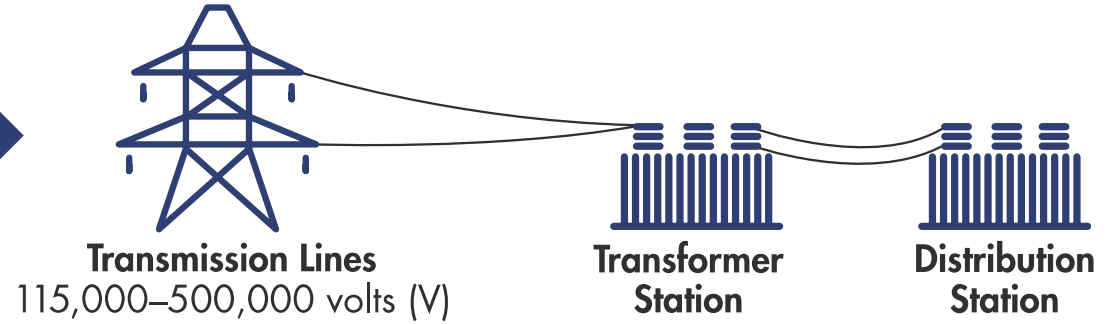
Hydro One – Vegetation Management

How the system works

ONTARIO POWER GENERATION AND PRIVATE GENERATION COMPANIES



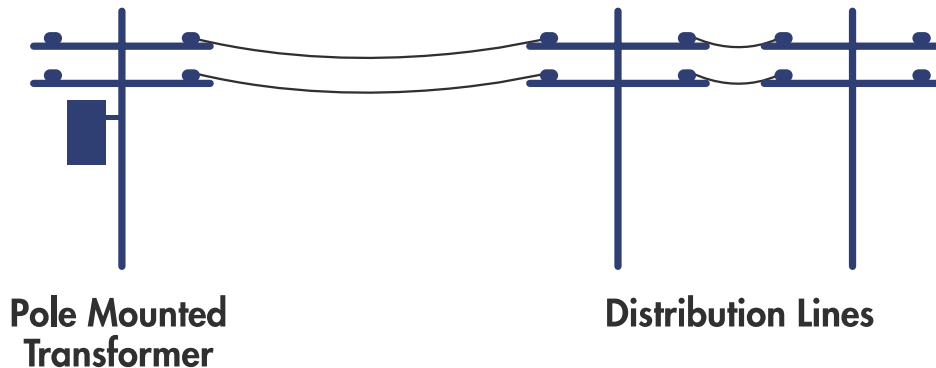
HYDRO ONE OR LICENSED TRANSMITTER



Hydro One Distribution System – 125,000 KM of R.O.W.

Hydro One Transmission System – 30,000 KM of R.O.W

HYDRO ONE OR LOCAL DISTRIBUTION COMPANY

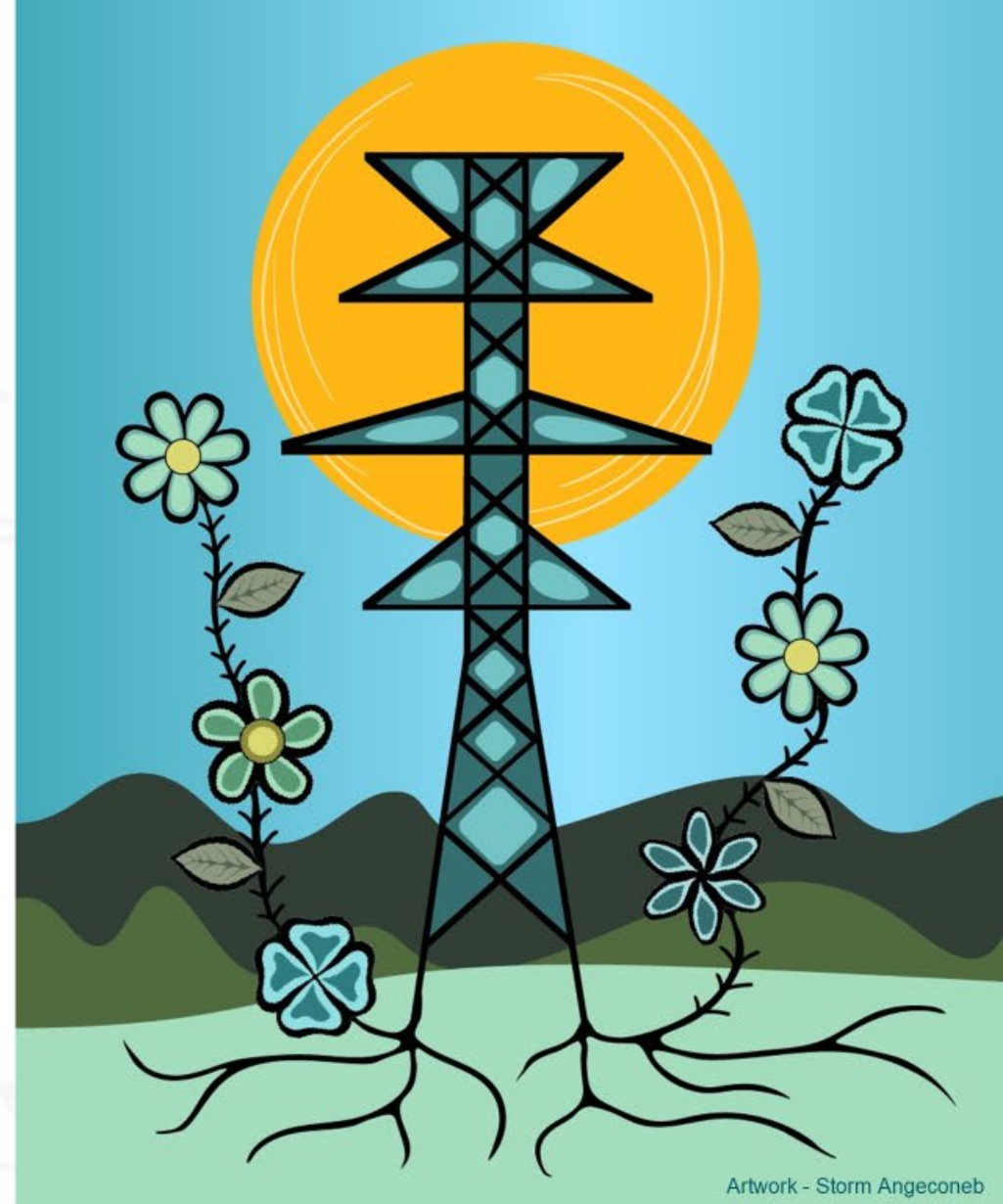


Why is this work needed?

It's our responsibility to ensure that trees and other vegetation remain within a safe distance to the high-voltage power lines and towers that power your community.

This important work ensures that:

- ✓ lights remain on
- ✓ the corridor is safe for public use
- ✓ our crews have safe access to perform emergency and routine repairs on the power lines
- ✓ Forest Fire prevention
- ✓ Timely restoration



Artwork - Storm Angeconeb

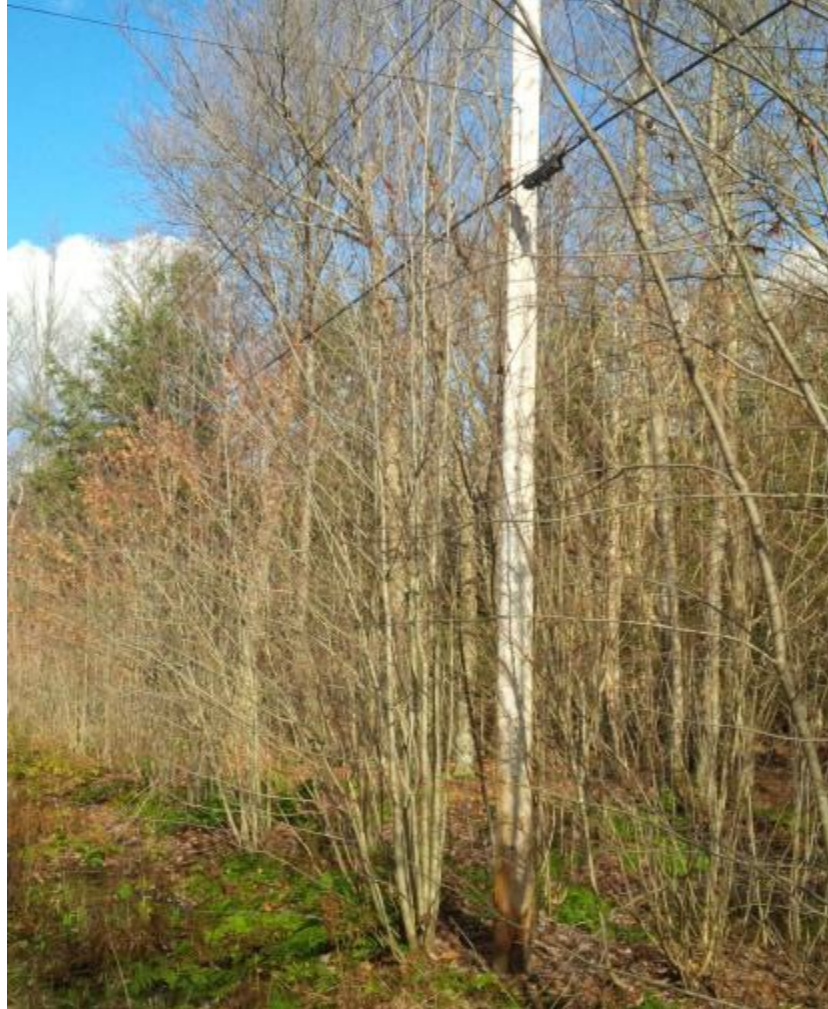
Vegetation Classes....

Compatible Vegetation

Vegetation due to its growth pattern will never grow to the height of the infrastructure

- Berries
- Sumac
- Alder
- Dogwood
- Ferns and grasses
- Wild flowers

Could even be tall vegetation such as pines or poplar if they are growing in deep ravine with no chance of reaching line after full maturity



Incompatible Vegetation

Vegetation which will require maintenance at some point in it's lifecycle to comply with standing and falling clearances.

- Pine
- Spruce
- Poplar
- Maple
- Balsam Fir

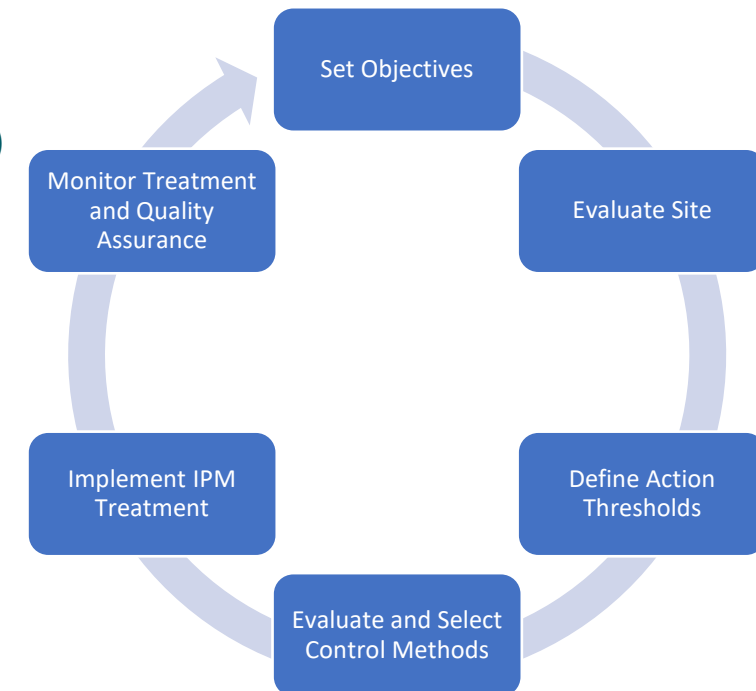
Species recognized as incompatible may vary on local growing conditions, topography and circuit design

Principles of Integrated Vegetation Management (IVM)

IVM is defined as a system of managing plant communities where compatible and incompatible vegetation are identified; action thresholds are determined; control methods are evaluated; and selected control(s) are implemented to achieve a specific objective. Choice of control method(s) is based on effectiveness, environmental impact, site characteristics, security, economics, current land use and other factors.

Control methods include:

- cultural – planting desired plants (grass seed or pollinator plots)
- biological – use of live organisms (goat trial)
- physical – Manually cutting (chainsaws and brush saws)
- mechanical – Grinders or mowers
- chemical - Herbicides



Deciduous Stumps – Basal /Root Resprouting

Why root disturbance is important



Same year after manual cut



1 year after manual cut



10 years later

Drawbacks of manual or mowing

Mechanical Brush Removal Non-selective



Before



After



Selective Herbicide Treatment

Key Points:

- No Aerial spray whatsoever
- Targeted to treat incompatible species
- Compatible species are left on ROW to outcompete natural gemination from ROW edge trees
- Applied every 8 years in northern Ontario (6 yrs rest of province – faster growing season)
- Hydro one staff – utility arborist who are licensed exterminators through the MOECC
- Only use approved herbicides by Health Canada and the Pest Management Regulatory Agency (PMRA)
- Hydro One adopted herbicides to fit our purpose from the agricultural industry
- Hydro One increases the buffer to water and other sensitive areas beyond HC recommendations

Products used by Hydro One

Garlon RTU (basal/ cut stump)

- Ready to use formulation
- Pre mixed with mineral oil
- Triclopyr

Navius (foliar)

- Granular mixed with H2O
- Mixed on site
- Aminocyclopyrachlor & Metsulfuron

Aspect (foliar)

- Liquid mixed with H2O
- Mixed on site
- Picloram & 2,4-D

What is looks like....

Garlon RTU

Cut stump application – residential areas



Basal application – difficult to access areas



Navius or Aspect

Foliar application



Compatible Vegetation Conditions



Cut and Treated with herbicide – 7 years later

IVM Considerations

- Site-specific
- Understand current and future vegetation pressures, and risk posed to utility infrastructure
- Assessment of specific potential environmental impacts
- Assessment of social and cultural elements that may be impacted
- Understanding of the available treatment options relative to identified constraints



Results of IVM



Species at Risk



Wood Turtle



Whippoorwill

Mechanical vs, Chemical



- Removes all natural habitat
 - 7.5L/Ha of Diesel



- Retains natural landscape only removing non compatible species
- 500g/Ha of active ingredient



**Thank You!
Miigwetch!**

