



Electrical  
Safety  
Authority

# Public Safety

older deteriorated assets



# Deteriorating Assets Consequences

## Consequences & Potential Consequences:

- Increased safety risks to public and workers
    - Fires/explosion
    - Exposure to electrical shock
    - Exposure to falling parts
  - Increased outages – increased public concerns & increased operating costs due to emergency responses
  - Increased Liability
  - Increased pressure for government to address these concerns – increased regulatory oversight
-

- Risk = hazard x severity of incident - LDC
- Risk = hazard x outrage - PUBLIC

Government responds to public outrage –  
increased regulation

Eg: Walkerton, Sunrise Propane explosion,  
Bloor St gas explosion, Listeria - brought  
about major regulatory changes

In the November 2008 Speech for the Throne and subsequent budget, the Government of Canada committed to "keeping Canadians safe by putting in place new rules for food safety."

# **Ontario Incidents**

## **Transformer Vaults**

# Ontario Incidents Transformer Vaults

- 11 reported incidents of vault fires and explosions
- all over 30 years of age.







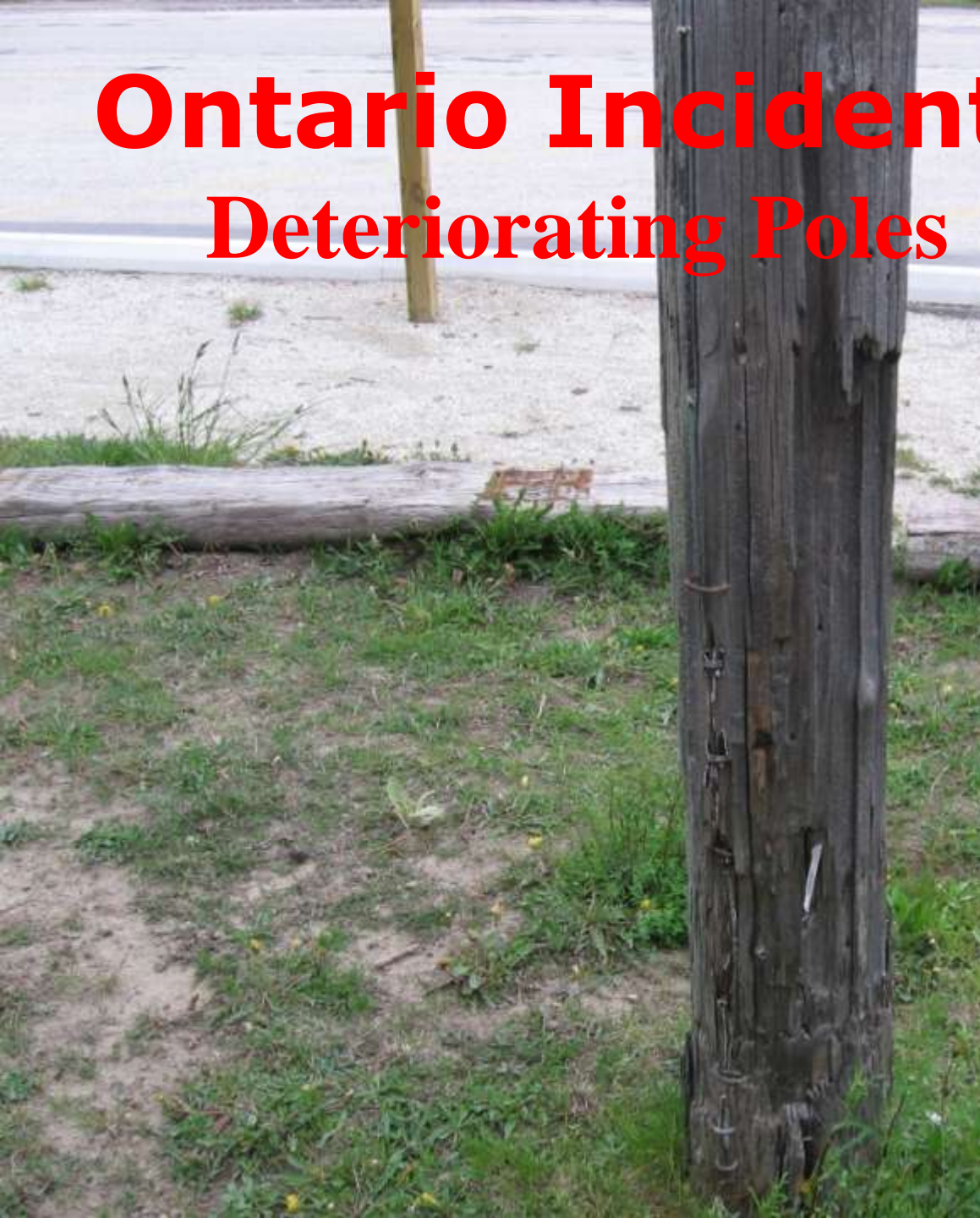
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# Ontario Incidents

## Deteriorating Poles



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# Ontario Incidents

## Deteriorating Poles

- 86 reported instances of rotted, cracked, damaged poles in the province.



# **Ontario Incidents**

## **Submarine Cables**

- **2 reported incidents**
- **Concentric neutral becomes corroded**
- **Both over 30 years of age.**

# Ontario Incidents

## Submarine Cables

- Critical Injury to a 12 year old girl
- She received a severe shock and went into convulsions.
- Submarine cable was 35 years of age.



# Ontario Incidents

## Line Equipment Failure



# Ontario Incidents

## Line Equipment Failure

- #6 solid cu fell during normal weather conditions - 2 tourist were taken to hospital

# Ontario Incidents

## Substations

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# Ontario Incidents

## Substations



**There were 7 reports of lack of maintenance of infrastructure at or near substations.**

An aerial photograph showing a large, rectangular concrete structure, likely an electrical substation, that has been severely damaged. The structure is filled with dark, charred debris and a large, irregular fire pit. A yellow caution tape is stretched across the area. In the background, there are residential houses and bare trees, suggesting a winter or late autumn setting. The overall scene depicts the aftermath of a significant incident, likely a fire or explosion.

# **Ontario Incidents Substations**

**4 of those substations were over 40 years old and resulted in a fire or explosion.**

# Ontario Incidents Substations





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# Ontario Incidents Substations

- Many substations are located in residential areas or public areas



# Safety Issue

## Electrical Distribution Safety Concerns Attributed to Infrastructure > 25 years:

Issue – What options could be considered to address safety concerns regarding the aging electrical distribution systems in Ontario?

ESA seeking advice from stakeholders, develop potential options to address the identified safety concerns.

# Proposed Process to move forward

- Determine format for informal stakeholder input
- Undertake additional research and analysis upon which options can be developed
  - Jurisdictional analysis
  - Best practices( Asset Management)
  - Stakeholder input
- Draft options paper circulated for broader stakeholder review
- ESA staff recommend viable options to RAC for consideration