

Adaptation Information Needs

SIMMER Workshop
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Agenda

1. Chronology
2. Case Study: Electrical Sector
3. Identified climate information needs
4. Importance of Infrastructure
5. Climate information customers and allies

Chronology

- 2007** **Climate Change Clean Air & Renewable Energy Strategy**
- 2008** **Forum on Infrastructure and CC Adaptation**
- 2010** **Formation of WeatherWise Partnership**
- 2011** **Electrical Sector Core Project Team**
- 2013** **Resilient City Working Group**

Electrical Team Terms of Reference

- 1. Identify & understand extreme weather events**
- 2. Identify the risk tolerance of major stakeholders to power disruption**
- 3. Quantify potential impacts on a sample of key components of electrical system**
- 4. Identify a general prioritized set of potential short, medium and long-term adaptation measures for the electrical system and/or customers.**

Survey Results

- 50% can't function for more than an hour of electrical disruption
- 50% not up to date emerg & business continuity plans
- Disruption >3 days would have a major impact on over 80% of respondents
- 41% concerned about GTA's vulnerability
- 54% have no back-up power
- Only 36% of back up power will function over 8 hours

Sample Climate Info Needs

Transport	Climate Information Needs
Transmission	Critical hot and cold temperatures - thresholds; Extreme winds; Ice accretions (freezing rain, wet snow); Ice + wind loads; Extreme lightning; Tornadoes; Forest fires
Distribution - Overhead	Similar to Transmission, but with lower thresholds
Distribution - Underground	Extreme rainfall – various durations; Severe weather for access
Demand Management	Extreme temperatures; Extreme Humidex, humidity's; Accumulated heat and cooling degree day indices; Solar insolation and sunshine hours
All	Weathering (wetting, freeze-thaw); UV radiation; salt deterioration; CO ₂ levels (carbonization of concrete)

Seeking Best Advice

- Consider existing historical data & models relevant to Toronto
- Common Understanding of extreme weather assumptions
- Level of confidence
- Next steps to get better information

Like New York City Panel on Climate Change

Remember Chicago.....

8 Core Functions: a determinant of public health

- 1) Sustenance
- 2) Drainage / sanitation
- 3) Shelter
- 4) Transportation
- 5) Means to pay
- 6) Emergency services
- 7) Medical services
- 8) Telecom

INTERDEPENDENCY

Clients for Weather and Health Impact Info

Not just health units.....

Infrastructure providers !

How to get some uniformity / common approach: Associations

- Engineers Canada
- Transportation Association of Canada
- Cdn Association of Planners
- Cdn Electricity Association
- Cdn Water & Wastewater Association
- Insurance Bureau of Canada
- Federation of Cdn Municipalities
- Building Code
- BOMA / Greater Toronto Apartment Assoc.

Other missing information

- Monitoring stations
- Weather warnings (public & professional)
 - Technical content & communication
- Tailored advice prior & during events
- Adaptation best practices

Resilience Plan

- Public health / vulnerable populations key consideration
- Need for governance structure between government & private sector

General Risk Assessment

- All hazards approach
- Focus on vulnerable populations
- GIS based
- Extreme weather will be key

Contact

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