

## ENVIRONMENT INDUSTRY WEEK 2021

# BRIEFING NOTE: The challenge of building climate resilient infrastructure

### What is the issue?

Ontario's climate is changing rapidly. While many organizations and government policies have rightly focused on mitigation (e.g. how to reduce the amount of greenhouse gases we are emitting into the atmosphere), we also need to focus on adaptation measures that will address the significant negative impacts (e.g., flooding, extreme heat and weather events, power outages) that are expected to increase in the coming decades. A particular focus of these adaptive measures will be making Ontario's infrastructure more resilient to climate impacts.

### What is the potential benefit?

**1) Preventing economic disruption and higher future costs:** Resilient infrastructure makes the supply chains that support Ontario industry more reliable. When such essential elements as energy grids, roads, railways and bridges are damaged by climate-induced events, entire industries can come to a halt. Investments that are made now will save the province, municipalities and companies considerably more in recovery costs in the future, as a \$1 investment in resilient infrastructure now is estimated to save between \$3 and \$10 in recovery costs in the event that non-resilient infrastructure fails.

**2) Boosting investor confidence and competitiveness:** Resilient infrastructure is a factor in making Ontario an attractive international investment destination, as global capital flows will increasingly be attracted to jurisdictions that have considered and addressed the risks of a changing climate. Failing to address resiliency may place Ontario at a competitive disadvantage to jurisdictions with more resilient infrastructure.

**3) Encouraging economic growth and export-ready innovation:** Making infrastructure more resilient to climate change is a global challenge. A resiliency investment strategy will encourage these companies to develop solutions that will not only make our infrastructure more reliable, but those solutions can be readily exported to other global jurisdictions, driving a new area of made-in-Ontario economic growth.

**4) Safeguarding Ontario residents and their communities:** Building the next generation of climate-resilient infrastructure will safeguard lives, homes and communities across Ontario. Better planning and mitigation measures for events such as extreme rainfall and extreme heat waves, for example, will prevent basement flooding, property damage and address a direct public health threat to isolated seniors and other medically vulnerable populations.

### What do we need the Province to know (or do)?

The Province needs to consider the following measures to promote resiliency and realize the economic, environmental and social benefits of a more climate-resilient society:

- Improve the reliability of the energy supply (e.g., electrification), the resilience of energy infrastructure, and increase energy efficiency of buildings, equipment, and processes.
- Encourage resiliency in vital water, wastewater and stormwater infrastructure by supporting municipalities to a) adopt digital tools for ongoing management using, for example, real-time controls to identify and respond to threats more quickly, and 2) ensure new investments in infrastructure meet new standards of resiliency given changing climate models;
- Incorporate climate resilience into policies that govern our built infrastructure, such as engineering design, building codes, and other codes of practice;
- Encourage a proactive design, use and expansion of natural infrastructure (e.g. shade trees, swales to absorb extreme rainfall) on private and public lands;
- Fund studies of the potential impacts of climate change on Ontario infrastructure to provide a common evidence base and risk understanding for governments, investors and impacted industries;
- Support municipalities and utilities in asset mapping to support long-term investments to increase resiliency, sustainability, and innovation and reduce asset lifecycle costs.

### For more information

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