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**Re: Building Better Lives: Ontario's Long-Term Infrastructure Plan 2017**

**EBR Registry Number: 013-1907**

**Clean Economy Alliance Comments**

The following submission provides the Clean Economy Alliance's response to *Building Better Lives: Ontario's Long-Term Infrastructure Plan 2017*. The Clean Economy Alliance (CEA, or the Alliance) is a group of over 100 organizations representing a broad cross-section of Ontarians that united in 2015 to urge Ontario to show leadership in addressing the crucial issue of climate change. The CEA includes prominent Ontario businesses, industry associations, labour unions, farmers' groups, health advocates, and environmental organizations. The Alliance supports the Ontario government's commitments to develop and implement a climate change strategy and action plan. We recognize that reducing pollution will bring many benefits, including cleaner air, improved public health, and more jobs and business opportunities in the clean economy.

**Summary**

We strongly support the commitment in this plan to considering long-term value rather than up-front cost. For too long we have prioritized short-sighted infrastructure, meant not to stand the test of time, but to achieve immediate goals with the lowest possible short-term cost. This approach leads to greater financial costs over time as infrastructure crumbles and must be rebuilt far sooner than if it was built to last initially. More importantly, the current process largely fails to take into account environmental and social costs of different infrastructure alternatives – a failure that works against efforts to build a resilient, low carbon future in Ontario.

A commitment of \$190 billion over 13 years to expand and renew Ontario's infrastructure through the lens of long-term value shows a willingness to invest in our future. That investment must be consistent with the vision for Ontario's low-carbon economy. In fact, if this investment builds infrastructure that is inconsistent, meeting our climate goals will be more expensive if not impossible. However an investment consistent with climate goals will pay dividends for decades to come.

The LTIP proposes integrating climate change considerations into infrastructure planning, and a commitment to build infrastructure to withstand more extreme weather both now and in the future.



**We strongly support the focus on Life Cycle Assessment, and would like to see this implemented as soon as is feasible.** With an approach that employs an accurate social cost of carbon, this shift will establish Ontario as a leader in environmental sustainability and greenhouse gas mitigation.

**We also support greater investment in green infrastructure, and tools to encourage broader use of green infrastructure in provincial and municipal projects.** These tools can include green infrastructure first policies, valuing and protecting natural vegetation as infrastructure, and funding specifically for inclusion of green infrastructure in projects funded by the province.

We agree that “Ontario needs to make sure decisions are based on facts and evidence and enable services at the right time in the right place.” Furthermore, **the facts and evidence behind these decisions should be transparent and provided to the public for all major infrastructure decisions.**

**Building infrastructure for the right time in the right place must also incorporate the anticipated needs of the future, aligning infrastructure decisions with land-use planning and broader goals in Ontario’s Growth Plan and Greenbelt Plan.** Choosing the location and scope of projects to best serve Ontarians should align with population growth, transit planning, and plans to protect ecologically and hydrologically significant natural environments.

When infrastructure proposals and plans do not align with Ontario’s broader goals of mitigating climate change, reducing impacts on the natural environment, and incorporating land-use planning, **there must be strong mechanisms to modify or reject infrastructure those projects and plans.** If we do not give proper weight to Life Cycle Assessments and other tools to shape this vision, we risk creating liabilities associated with stranded assets, unanticipated retrofits, repair and replacement of infrastructure not built for a changing climate, and other significant future costs.

**We applaud the inclusion of the goal to promote social benefits and inclusive growth,** so that “infrastructure is accessible and supports economic and social development in all communities across the province, including Indigenous communities and for people with disabilities.”

### **Comments by Subject Area**

#### **Life-cycle Assessment (LCA)**

LCA will measure the costs of everything from original construction to eventual retrofits and decommissioning. This assessment will determine the best materials to use from the start to achieve a lower-carbon design and promote environmental sustainability. This is a crucial step, and we would support adoption as soon as possible.

The proposed timeline for LCA rollout includes plans to integrate LCA into some large projects in 2018, roll out more fully in 2019, and require LCA for all “major” infrastructure projects by mid-2020.



**We support expanding this work further, and setting a target date to include LCA in smaller infrastructure projects in order to achieve broader impact.**

If there are no plans to require LCA for projects under the threshold for “major” projects (\$50 million for transportation expansion, \$75 million for transportation rehabilitation, and \$20 million for other sectors), we strongly recommend lowering this threshold. **The CEA would support significantly lowering the threshold to trigger the LCA requirement, while smaller projects below the threshold could be offered a simpler, more template-based approach to fulfilling the obligation based on established best practices.** For example, Metrolinx’s 2017 decision to build a battery energy storage system instead of a gas-fired power plant for an LRT facility in Mount Dennis incorporated air quality considerations after a strong push from local residents and advocacy groups. An LCA early in the process incorporating broader long-term costs, greenhouse gas emissions, and environmental impacts would have significantly improved the decision-making process for all involved.

**In establishing LCA requirements, we stress the need for an assessment of the full lifecycle of all materials used and the final built form. That is, it should include both embodied and operational impacts. We also need to ensure that the direct, indirect, and induced impacts of infrastructure projects are incorporated into assessments.** We need to assess not just the materials we use, but the actual impacts of what we are building and the knock-on impacts of that infrastructure. For example, when evaluating whether to build a new highway, there needs to be consideration of the impacts of increased sprawl, increased GHG emissions from vehicles, and other indirect impacts now and in the future. When considering whether to build a new transit project, there needs to be consideration of the emissions impact of removing vehicles from the road, benefits of increased spending in transit hubs, and other important considerations.

**We highlight the need to ensure a robust valuation of the broader social cost of carbon,** and incorporating that cost into the bidding process. This cost is a real cost – one which is already material thanks to cap-and-trade and should be expected to rise into the future. Only this can ensure that procurement decisions actually reflect the need to address climate change mitigation and adaptation and resiliency. Ontario should set an explicit goal to base its procurement decisions on a robust social cost of carbon, in line with the Province’s 2030 and 2050 GHG reduction targets.

**We support expanding LCA to projects funded by the provincial government and implemented by municipalities.** This could help push municipalities away from “lowest-bidder” policies which move in the wrong direction and stifle longer-lasting, better quality projects with lower carbon footprint.



## Climate Resilience

Climate change is already putting a significant strain on existing infrastructure. Recent extreme weather has caused billions of dollars worth of damage to public infrastructure and private properties.<sup>i</sup> Ontario needs to build infrastructure properly from the start, and invest in long-term resilience.

Scientists are starting to model impacts of climate change in 2030, 2050, even 2080, and have some idea of what our infrastructure will need to withstand. More data is expected as the Climate Change Adaptation Strategy moves forward and major risk assessments are planned across the province. **We recommend incorporating data from risk assessments and regionally-specific modeling in all major infrastructure decisions. This will ensure projects can endure impacts specific to where they are built.**

We support the province's plan to establish a new organization that will provide municipalities, Indigenous communities, and businesses with up-to-date and critical information and data, as well as practical services to build resilience. We hope that this will guide evidence-based decisions, and we hope that this process will incorporate ways for these communities to provide localized knowledge to feed back into this process.

Failure to fully incorporate climate resiliency using available data will result in potentially catastrophic infrastructure failures, and unanticipated costs far higher than the initial investment to build resilient infrastructure in the first place. For example, if a bridge over a creek is washed away due to flooding, we need to not simply rebuild this bridge as it was before, but plan and invest in building a stronger bridge to withstand predicted increases in flooding specific to this creek bed. This plan should be based on evidence and modeling, rather than pressure to build quickly and cheaply. Cutting corners and cutting upfront costs will inevitably mean replacing the bridge again when another storm hits, resulting in much higher costs.

## Green infrastructure

Green infrastructure is emerging as an important tool for climate resilience, long-term value, and environmental sustainability. Incorporating natural features like bioswales, permeable pavement, rain gardens, green roofs, and green boulevards to reduce climate impacts such as flooding can be an innovative, effective, responsible, and cost-effective way to build infrastructure, with fewer impacts to the natural environment. Green infrastructure can also play a role in climate change mitigation by sequestering carbon, presenting a unique opportunity to combine climate change adaptation and mitigation in one approach.

In addition to building new green infrastructure, using and protecting natural vegetation such as existing wetlands, creeks, and other natural features can sometimes avoid the need for traditional infrastructure entirely. Consider the role of an existing wetland in improving stormwater management: why not simply



protect an adjacent wetland while planning a new infrastructure project, rather than removing it and building a costly flood management plan? We recommend exploring environmental protection through an infrastructure lens as a way to incorporate environmental sustainability goals in future infrastructure projects.

**We recommend implementing a 'green infrastructure first' policy for infrastructure funding.** This is similar to a 'conservation first' lens in energy planning. When assessing project scope, the first consideration would be whether green infrastructure can meet some or all of the project's goals at the same or lower long-term cost. Green Infrastructure Ontario Coalition notes that "green infrastructure can be anywhere from 5% to 30% less costly to construct, and approximately 25% less costly over its life cycle, than traditional infrastructure that performs comparably."<sup>ii</sup>

**We would like to see a dollar amount and real budget commitments to supporting innovative green infrastructure techniques, and incorporating them into small and large infrastructure projects.** We suggest including municipalities in any funding initiatives, due to the large role they play in planning and building infrastructure in population-dense areas vulnerable to the impacts of extreme weather.

Farmers also have an important role to play in ensuring more cost-effective alternatives to built infrastructure are incorporated into the Province's infrastructure spend. Altering agricultural practices to ensure better moisture absorption in the soil, for example, can act as an effective flood mitigation measure. The LTIP should recognize the role that farmers can play in providing environmental goods and services that eliminate or reduce the need for built infrastructure.

We support the province's work to develop a municipal asset management planning regulation to further improve practices and support the long-term sustainability of municipal infrastructure throughout Ontario. To further support this goal, **we recommend allotting funds to cash-strapped municipalities to include green infrastructure in municipal projects, and requiring that provincial funding for municipal projects be tied to meeting provincial goals as stipulated in the LTIP.**

Capital projects at the municipal level represent a massive proportion of Ontario's infrastructure, and include local roads, sewer systems, parks, and many other opportunities for incorporation of green infrastructure. However, due to lowest-bidder policies and cost constraints, climate considerations and green infrastructure elements are rarely included in capital projects, or abandoned later in the process as budgets are narrowed down. Specific funding for green infrastructure would go a long way in encouraging more resilient municipalities, where we often see the highest density and highest potential for damage from extreme weather. In fact, if municipalities are not required to meet higher standards, Ontario will fail to meet its ambitious climate targets.



## Contact Information

Thank you for your consideration in reviewing the CEA's comments. The CEA looks forward to continuing to work with the Province on the proposed regulations and related climate change strategy.

If you have any questions or require any clarification on the contents of this submission, please contact:

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<sup>i</sup> Insurance Bureau of Canada. <http://www.ibc.ca/yt/resources/media-centre/media-releases/canada-inundated-by-severe-weather-in-2013-insurance-companies-pay-out-record-breaking-3-2-billion-to-policyholders>

<sup>ii</sup> From <http://greeninfrastructureontario.org/our-coalition/>