

Introduction

The CSCE is a learned society created to develop and maintain high standards of civil engineering practice in Canada and to enhance the public image of the civil engineering profession. As part of CSCE's Strategic Direction: Leadership in Sustainable Infrastructure, the *Award for Governmental Leadership in Sustainable Infrastructure* was established. The Award is given to provide recognition to a Canadian public sector¹ that has shown true innovation and leadership to advance the practice of this Strategic Direction. These Submission Guidelines should be used to direct the nomination of projects or programs for the Award.

How the CSCE Views Sustainable Infrastructure

Civil Engineers are the stewards of Canadian Infrastructure. We are largely responsible for all aspects of infrastructure projects, including planning, designing, constructing and maintaining. Sustainable infrastructure needs to consider the economic, social and environmental factors that are influenced by the specific project/program along its entire life cycle.

Sustainable Infrastructure Best Practices

The following section summarizes a series of best practices – broken down into various themes – that can be applied to advance the sustainable contribution of infrastructure projects or programs. **These best practices should be used as a guide when preparing the submission package for nominations for the Award for Governmental Leadership in Sustainable Infrastructure.**

Planning, Decision Making and Leadership

- Consideration of all options for addressing the relevant issues, such as non-infrastructure solutions, demand management, rehabilitation of the infrastructure, etc.
- Clear justification for the need for the infrastructure project/program.
- Leadership to advance the sustainable performance of the project/program.
- Inclusion and collaboration with all stakeholders to work together toward optimizing sustainable performance.
- Cooperation or sharing of information to benefit other communities.
- Demonstration of how the project/program has contributed to a change in the corporate culture of the organization.

1- All levels of government, including federal, provincial, municipal, territorial or First Nations (or combinations thereof), are eligible to receive the award. This includes publicly controlled or owned utilities or development corporations.

Financial and Risk Management

- Integration with asset management processes to demonstrate the benefit of the project/program to reducing long term costs, reducing risk exposure of the organization, or increasing social/environmental service levels.
- Consideration for the impact of the project/program on the affordability of infrastructure systems in the community.
- Demonstrate the anticipation for future changes during the design process, such as the risks associated with climate change or the potential for changing modes of transportation.
- Demonstrate the economic contribution of the project/program to the local/regional/national economy.

Society

- Community engagement and approval of the project/program.
- Improve or enhance public health and safety (pollution reduction, improved accessibility, improved ability to use alternative transportation, etc.).
- Preserve/add to the community culture.
- Preserve/add to the access to natural environment.

Resources

- Reduce the impact of waste by using recycled materials during construction or diverting waste from landfills.
- Reduce the energy consumption during construction by using regional materials, using processes to recycle/reduce wasted energy, or using renewal resources for energy.
- Reduce the use of water during the project life cycle.
- Use a monitoring program to track the reduction in resources (water, energy, gas, etc.) used during construction and in normal operation/maintenance of the project over its life cycle.

Environment

- Protect and enhance all aspects of the natural environment.
- Implement low impact development measures to manage storm water runoff.
- Reduce greenhouse gas emissions.
- Reduce the impacts of urbanization (i.e. heat island effect)

Closing

The Best Practices included in this document are not intended to be a comprehensive list of factors that contribute to sustainable infrastructure projects/program. The Award submissions should discuss any other relevant aspects that advance the sustainable performance of the initiative. The CSCE is working with our industry partners to provide leadership to the Canadian Civil Engineering community to define and describe Sustainable Infrastructure – these Best Practices represent our first step in this process.