

Investing in Public Infrastructure

Canada's growing demand for energy and transportation



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As right of way professionals around the world help create and maintain public infrastructure, the related challenges and opportunities in Canada are as vast and varied as our land and people.

Although considered one of the world's largest countries in terms of physical size, Canada is not densely populated. Rather, it is a country dominated by mountains, prairies, forests, lakes, seashores and rivers. Home to 35 million people, Canada has 3.5 people per square kilometer. For perspective, the United States has 32.5 and China has 141.3.

Expanding the Transportation System

However, studies now suggest that the Canadian population is urbanizing, due in part to an aging demographic moving to urban areas where public transit ensures ease of movement and where social programs, recreational opportunities, and healthcare are more readily accessible. Increasing population density will inevitably put stress on the urban transportation network, and

all three levels of Canadian government—federal, provincial and municipal—are meeting this challenge by investing in and expanding transportation systems across the country.

An example of this can be found in the province of Ontario. In an effort to integrate road transport and public transportation, a provincial government agency called Metrolinx, created an ambitious long-term transportation plan that is being implemented in the greater Toronto and Hamilton areas. The plan will service 30 municipalities with a population that is expected to grow from 6 million to 8.6 million by 2030. The costs are significant.

The initial phase of the regional transportation plan was recently completed and represents an investment of \$16 billion. The next phase of capital projects is estimated to cost \$34 billion. Dedicated revenue

streams, as well as creative funding strategies across all levels of government, will be necessary in order to meet the challenges presented by the anticipated population growth.

Hydropower Megaprojects

Ease of mobility is part of a formula that creates growth and prosperity for Canadians, and as populations grow, so does the need for more electricity. Canada ranks third in global hydroelectricity generation, and hydro is used to generate 63 percent of electricity across the country. It is not surprising that the top four mega-projects in the country this year are all energy projects costing over \$28 billion.

Currently, the single largest Canadian public infrastructure project is an \$8.3 billion hydro project called the Site C Clean Energy Project. It is a large-scale earth fill hydroelectric dam on the Peace River in northeastern British Columbia, the third of its kind on that river system. The project proponent, BC Hydro, estimates that over the next 10 to 15 years, the demand for electricity in that province will grow by up to 40 percent. This project will help to meet the growing demand and provide clean reliable renewable power for more than 100 years.

There are numerous challenges, especially given that the proposal is considered to be controversial. It will require flooding approximately 57,000 acres of land along 83 kilometres (51.5 miles) of the Peace River Valley and expanding the width of the river to two or three times its current width. The impact on communities, aboriginal groups, agricultural land, fish and wildlife were all considered, and an extensive consultation process and environmental impact assessment was necessary to address those impacts. Despite the obstacles, the plan was approved in July 2015, and the project is targeted for completion in 2024. Once in service, it will become the province's fourth largest electricity producer.

Universal Challenges

Our challenges are universal—public needs must be met and creative, collaborative solutions are necessary to address those demands. Canada's economy and future global impact will not thrive without a strong public infrastructure framework.



During a 2015 press conference, West Kelowna Mayor Doug Findlater, and British Columbia Premier Christy Clark are pictured with B.C. Hydro President and CEO Jessica McDonald, who said, "We will work closely with First Nations, the public and stake holders to determine the best route option for the community while delivering the project efficiently and prudently."

“Dedicated revenue streams, as well as creative funding strategies across all levels of government, will be necessary in order to meet the challenges...”

The Canadian Chamber of Commerce reflected on the many challenges ahead, commenting that, "Modern and efficient infrastructure is a core component of a competitive economy. Public infrastructure such as roads, bridges, highways, water systems and the electrical grid provides services critical to economic competitiveness, sustainability and quality of life. Without sufficient investment and upkeep of public infrastructure, countries rapidly fall behind."

IRWA members play an integral role in the planning and execution of infrastructure projects across Canada. The BC Hydro Site project and the regional transportation plan created for the Metrolinx and Ontario Ministry of Transportation are just two examples of how our members contribute to public infrastructure growth and improvement.

Still, the demand for energy continues to grow, and public infrastructure in Canada is in continual need of updating and expansion. Federal, provincial, and municipal governments, as well as

industry leaders, strive to address these demands with limited resources and high public expectations. IRWA members in the public and private sectors are working to help the Canadian economy grow, while providing essential services. Above all, right of way professionals remain focused on sustaining and improving the quality of life for all Canadians. ⚡



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