Community-based Infrastructure

Nunavut has 25 communities that span an arctic landscape that is 20 per cent of Canada’s land mass. Providing municipal infrastructure to Nunavut’s communities is a challenging task – vast distances, growing populations, high construction costs and the inability to share services are all constraints in providing infrastructure that supports the social, cultural, environmental and economic needs of communities.

While challenging, the Government of Nunavut (GN) is committed to ensuring essential programming and service needs are provided to all communities. Through the development and ongoing application of Integrated Community Sustainability Plans (ICSP), communities identify short and long-term infrastructure investments that will help produce strong and healthy communities. ICSPs are ‘living’ documents that evolve with the community and ensure future growth meets the vision and needs of all citizens.

Roads

Nunavut does not have roads connecting any of its communities. Within communities, most roads are unpaved. The GN is exploring potential roads linking the north to southern Canada. Among the options being considered is an all-weather road from the Kivalliq region to Manitoba.

Ports

Nunavut has few marine infrastructures. Nunavut has the longest shoreline of any province or territory in Canada, and all but one of its communities is on the coast. This hinders the territory’s ability to expand its economy, increase its fishing industry, and strengthen its self-reliance.

Airports

In the absence of roads and marine infrastructure, air links provide Nunavut with a lifeline to the south. Although each community has an airstrip, smaller communities are limited in the number and size of aircrafts they can accommodate. With assistance from the Government of Canada, Nunavut is investing in airport infrastructure at community airports and exploring options for expanding the capacity of the Iqaluit airport, a key gateway to the territory.
Water/Sewage Treatment/Waste Management

Clean water and effective waste management are essential for a healthy community. The GN invests in core municipal services that strive to provide communities with access to safe sources of potable water, treated wastewater that has minimal impacts to the environment, and solid waste facilities that utilize best practices for managing waste.

The GN is committed to ensuring appropriate infrastructure is in place so core municipal services can be effectively provided in all communities. A solid waste study was recently completed, which provided the GN with direction on the best practices for the design and management of solid waste facilities. Additionally, the GN is currently planning a long-term initiative to study wastewater systems under northern conditions. This will help establish simple technological and management solutions to guarantee effective wastewater treatment.

High-speed Communications Networks

Nunavut relies exclusively on satellite networks for its connectivity needs. The vast geographic area and Arctic conditions present significant challenges in building land-based communications infrastructure. Because of this, Nunavut relies on established satellite services for connectivity.

There are both capacity and cost implications for bandwidth delivered via satellite. The social and economic development of Nunavut depends on a reliable, affordable high-speed telecommunications network that makes communications possible. The GN is already using innovative approaches to program delivery with the use of high-speed communications - the Telehealth system, which uses video teleconferencing between doctors and health centres, is one example. Broadband access has been established in all Nunavut communities.

Energy

Nunavut is completely dependent on imported petroleum products to support everyday living. The four main products shipped are 114 million litres of diesel P50 for heating, 33.4 million litres of diesel for electrical generation, 17.8 million litres of gas for vehicles and 43.8 million litres of jet fuel for aircrafts. Petroleum products are shipped to communities in the summer months and stored in tank farms for distribution and use throughout the year.

The GN pays for this energy use both as a consumer and through subsidies to Nunavummiut. The GN spends a significant portion of their budget on energy.

The GN energy strategy sets out several measures for controlling costs, reducing usage, and promoting greater self-sufficiency in energy. These include exploring alternate electrical power production on a large scale, such as hydro electricity, and solar and wind power generation on smaller scales. Finally, the GN is also exploring energy conservation initiatives to reduce energy consumption to reduce overall dependency on oil.