

Green Building Technology Network (GBTN)

The construction and operation of buildings in Canada contributes to a quarter of its greenhouse gas emissions and as much as 2/3rds of emissions in Alberta's major cities. The GBTN will identify the energy conservation measures to reduce this amount by 40% while creating jobs and enhancing economic development to help the province profitably transition to a low carbon economy.

It will accomplish this by creating a testbed of buildings across Alberta where collaborative teams of designers, engineers, technology developers, and owners can demonstrate and evaluate the innovations validating building performance. In the process we will reimagine green buildings as a platform technology of inter-connected products and services; and prepare these innovations for market expansion with a virtual incubator and upskilling the workforce.



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**RECIPIENT:**

**Smart, Sustainable
and Resilient
Infrastructure
Association**

**TOTAL BUDGET:**

\$20,170,000

**PROJECT DATES:**

**MAR 2019 -
FEB 2022**

**PARTNERS:**

**Western Economic
Diversification;
SSRIA Members**

**AI FUNDING:**

\$3,000,000

**PROJECT TRL:**

**Start: 7
End: 9**

APPLICATION

The Technology developed and tested for the project will be targeted to large Architecture, Engineering and Construction (AEC) firms for integration into their normal supply chains, as well as building owners who will benefit from the energy savings delivered by the innovation. Trades and professionals from the AEC industry benefit from training developed to leverage the learnings of the innovation and building owners and occupants will be targeted with energy savings data and opportunities in their buildings.

ALBERTA INNOVATES CLEAN RESOURCES

CLEAN TECHNOLOGY

ENERGY EFFICIENCY / GREEN BUILDINGS

PROJECT GOALS

The key goals of the project are to:

- Stimulate the commercialization of innovative energy conservation measures across the built environment through demonstration and validation in an operational built environment.
- Facilitate partnerships amongst small, medium and large firms across the multiple disciplines of the AEC industry to ensure energy conservation technologies and solutions are integrated into buildings for optimal effectiveness and can move to expanded market adoption with less resistance.
- Build capacity in the AEC industry by developing competency-based training linked to the energy conservation measures being demonstrated

BENEFITS TO ALBERTA

The successful implementation of this technology or use of the knowledge generated could result in:

- Reductions in carbon emissions by 40% by 2030 and the creation of a zero-carbon built environment by 2050
- Expanding on the current contribution of the construction sector to Alberta's economy and GDP by \$4-\$8 for every \$1 spent
- Support the growth of technology and building products sector in Alberta while increasing the export potential of these technologies and products that will be validated through this project.
- Increased diversity in the AEC Industry and the addition of the competencies and skills needed to develop the workforce of tomorrow



3 Publications



**2500 Students
and Professionals
Trained**



50 Project Jobs



>1000 Future Jobs



**5-10 New
Products/Services**



**1,500 T/yr Project
GHGs Reduced**



**12,000 kT/yr Future
GHGs Reduced**

CURRENT STATUS

MAY 2020 – PROJECT INITIATION

SSRIA is laying the groundwork to move the industry towards a low-carbon strategy for multiple building typologies. A Corporate Capacity Inventory has been completed to identify the Alberta companies operating in this area and their capacity to expand. A network of organizations representing the private sector, post-secondary institutions, government agencies and industry associations is being formed in order to foster the collaborative partnerships necessary to achieve the project goals.