

Project 4: Improving Conditions for Green Building Construction in North America		Operating Year(s): 2013–2014
Planned Budget for two years: \$310,000 Year 1: C\$220,000 Year 2: C\$90,000		
Strategic Priority/Objective: Greening the Economy in North America / Improved Private Sector Environmental Performance in North America		
Project Summary This project aims to increase the environmental and economic performance of the built environment in North America by focusing on green workforce training and resource use efficiency, and building capacity for benchmarking in Mexico (EnergySTAR). Building on the project “Improving Green Building Construction in North American” (OP 2011–2012), workshops and recommendations on improvements to professional green workforce and improved best practices in energy efficiency will be carried out. The Environmental Protection Agency (EPA) and Natural Resources Canada will provide training and support to <i>Instituto Nacional de Ecología y Cambio Climatico</i> (INECC) and <i>Comisión Nacional para el Uso Eficiente de la Energía</i> (Conuee) to facilitate the adoption of the EnergySTAR portfolio manager tools and methodology in Mexico. This project will also explore opportunities to increase the accessibility of green buildings to isolated communities throughout North American to improve health and resource management.		
Short-term Outcomes (at halfway point) <ul style="list-style-type: none">• Recommendations to implement workforce training and energy efficiency needs throughout North America.• Harmonized benchmarking efforts focused on the introduction of EnergySTAR methodology to assess and improve energy performance for commercial buildings in Mexico.• Identified trends, market drivers and benefits, and types of products and services contributing to growth in North America.		
Long-term Outcomes (by the end of the project) <ul style="list-style-type: none">• Work plan between INECC and EPA/NRCAN to facilitate the adoption of the EnergySTAR portfolio manager tools and methodology in Mexico.• Country-level executive summary reports that assess the activities, trends and preferences among construction professionals influencing the green building market.• Needs and options to improve access of green building to isolated communities across North America.		
Longer-term, environmental outcome (post project) <ul style="list-style-type: none">• Improved training of the North American green building workforce and best practices in energy efficiency.• Adoption of the EnergySTAR program in Mexico.• Improved environmental performance of the built environment in North America.		

Tasks necessary to reach the environmental outcome:

- 1) Improved training and capacity in green building construction, commissioning and operation
- 2) Review of non-residential green building market trends
- 3) Improve green building access to isolated communities

Task 1) Improved training and capacity in green building construction

Subtask	Project outputs	How does the subtask/output move the project towards the environmental outcome	Timing	Budget (activities)
1.1 Conduct workshops on two focus areas: 1) workforce and professional training and education, and 2) strategies, innovative technologies, and best practices and approaches focused on energy efficiency in water usage, and heating and cooling in North America.	<p>Outcomes of the workshops will include:</p> <p><i>Workforce and professional training:</i></p> <ol style="list-style-type: none"> 1) Discussions on how to implement recommendations from the report “Workforce Training and Education: Opportunities for Enhancing the Capabilities of the North American Building Sector to Create High-Performance Buildings and Communities” (OP 2011–2012) regarding North American training needs, 2) Outreach material (e.g., videos, curriculums, and documentation), and 3) Discussions on creating a network of green workforce and professionals. <p><i>Energy efficiency:</i></p> <ol style="list-style-type: none"> 1) Take lessons learned from water and heating, ventilation, and air conditioning (HVAC) and consider how best practices might 	This task will build upon the work carried out in OP 2011–2012 regarding improvements to professional green workforce training, and best practices in energy efficiency. These trainings will support the improvement of environmental performance of the built environment in North America.	Fall 2013	Year 1: C\$70,000

	be applied to other elements of the built environment that could yield energy efficiency gains, and 2) discussions on how to more effectively promote energy efficiency in North America.			
1.2 Conduct workshops and technical meetings focused on the introduction of EnergySTAR methodology in Mexico.	<p>Build capacity for Mexico to harmonize benchmarking efforts focused on the introduction of EnergySTAR methodology in order to assess energy performance for commercial buildings.</p> <p>Establish work plan between INECC and EPA/NRCAN to facilitate the adoption of the EnergySTAR portfolio manager tools and methodology in Mexico.</p> <p>Meetings will be held between the National commission of efficient use of energy (Conuee) and the National Institute of Ecology and Climate Change (INECC), with counterparts in the Environmental Protection Agency (EPA) and Natural Resource Canada.</p>	This task will build upon the work carried out in OP 2011–2012 regarding capacity development in Mexico to adopt EnergySTAR by supporting efforts to improve energy efficiency in buildings in Mexico.	Winter 2014	Year 1: C\$20,000
1.3 Meeting of key stakeholders and officials to discuss the implementation of financing solutions in green building.	A review and discussion of the models and recommendations from the 2013 CEC report on financing green building construction in North America.	This task will build upon the work carried out in OP 2011–2012 regarding improvements to financing options in green building construction.	Winter 2014	Year 1: C\$20,000

Task 2) Review of non-residential green building market trends				
Subtask	Project outputs	How does the subtask/output move the project towards the environmental outcome	Timing	Budget (activities)
2.1 Reporting on the trends, market drivers and benefits, and types of products and services contributing to growth in North America.	Create country level executive summary reports that assess the activities, trends and preferences among construction professionals influencing the green building market, including owners/facility managers, architects and contractors in each country. Address shifts from new construction to retrofitting in the global economic downturn.	Recommendations on ways to facilitate green building can lead to greater use of green building practices and materials in the North American market, contributing to energy and other resource savings.	Fall 2013 – Fall 2014	Year 1: C\$60,000 Year 2: C\$60,000
2.2 Dissemination of results to concerned stakeholders.	Presentation of results and discussion to concerned stakeholder groups in each country.		Spring 2015	Year 2: C\$30,000
Task 3) Improve green building access to isolated communities				
Subtask	Project outputs	How does the subtask/output move the project towards the environmental outcome	Timing	Budget (activities)
3.1 Identify stakeholders and hold a meeting to 1) discuss the role of green building systems in improving health and environmental conditions in isolated communities, 2) identify needs and factors limiting the implementation of green building developments in isolated communities, and 3) identify	Identification of needs, limiting factors, and options (green systems and cooperation) to improve access of green building to isolated communities across North America.	Encouraging green building in isolated communities will simultaneously increase their access to services, increase resource use efficiency, improve waste management, and create a healthy environment, while decreasing the overall environmental footprint associated with new construction.	Winter 2014	Year 1: C\$50,000

options to overcome the barriers identified.				
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Explain how this project meets the selection criteria adopted by Council in the Strategic Plan (See below)

The goal of all projects funded by the CEC will be to support the efforts of the Parties to conserve, protect and/or enhance the North American environment. The following criteria will guide the Secretariat, Working Groups, Committees, and other appropriate officials of the Parties in considering cooperative activities for Council approval under operational plans. These selection criteria do not apply for activities to be funded through the NAPECA grant program.

- **How does the project contribute to achieving Council's strategic objectives as described within the current Strategic Plan, or as related to other priorities subsequently confirmed by Council?**

Increasing green building construction in North America will contribute to decreasing greenhouse gas (GHG) emissions, reducing resource use and waste, and will promote public-private strategies for improving green innovations and construction across the building sector. The trilateral project supports the CEC's objective to improving private sector environmental performance in North America through gaining enhanced understanding of current green building market trends, increasing the adoption of best practices in benchmarking and construction. The collaborative nature of this project is expected to enhance green building partnerships between the member countries and to improve the effectiveness of private sector activities to further the environmental goals.

- **Are the proposed objectives North American in scope? In other words, how are the proposed results relevant to protecting the environment in North America? (For example, what would Council members announce to the press at the successful completion of this project?)**

Yes. The project's objective is to identify opportunities and determine the best way to drive changes needed to support the construction of green buildings and the use of green building materials across North America. To do so, opportunities, gaps, and areas for capacity building and knowledge sharing will be identified and built upon to facilitate to adoption of best practices.

- **What are the specific, clear and tangible results that will be achieved and how will progress toward each result be measured over time? Identify performance measures to be used to indicate success at reaching all outcomes and/or performance.**

Yes, the project description identified clear outputs. Performance measures may include:

- Number of workshops and participants involved.
- Number of green technologies identified and promoted.
- Quantitative indicators for GHG emissions, water use, energy use, and waste production.

- Number of workforce members trained and/or informed.
- Number of North American companies to whom the resulting information is disseminated.

- **Explain why the CEC is the most effective vehicle for the Parties to undertake the project, considering:**

The CEC is an excellent vehicle to serve stakeholders within a North American context, working together to help stakeholders seize green building opportunities in North America. There are several organizations promoting the use of sustainable building materials and green construction. Most are national or local in scope. This project affords an opportunity to build bridges across the North American marketplace. Representatives of these organizations, as well as other experts in this sector have been, or will be engaged in the project's activities. Moreover, the Task Force will be participating at a number of events related to green building construction in North American in order to build support amongst private and public sector stakeholders.

- **Does the project propose a clear timeline for implementation of the activities, including a target end date for CEC's involvement? Where applicable, describe how the work will continue after CEC involvement ends.**

Opportunities for improvements identified by workshops and other activities, and the network of stakeholders created during the project will be carried over by private and public organizations.

- **Where applicable, identify with reasonable specificity:**
 - **Linkages with other relevant CEC projects, past or present, in order to create synergies, capitalize on experience, or avoid duplication**

This project will build upon previous work of the CEC (i.e., Green Building in North America: Opportunities and Challenges; 2008) but will now look at achievements and capacity from a quantitative perspective. There are also important linkages with other past and present CEC projects.

- **The target audience, as well as its receptivity and capacity to use the information that may be produced as a result of the project**

The target audience in all three countries includes companies offering both products and services in the Green Building sector, multiple federal, provincial, state and municipal government agencies, and the Green Building Councils.

- **The beneficiaries of capacity building activities that the project may include**

The various beneficiaries of the project's capacity building activities will include NGOs, green professionals and workforce, and various levels of governments and the private sector.

- **The relevant stakeholders, with particular attention to communities, academia, NGOs and industry, and their involvement and contribution to a successful outcome**

The project stakeholders include building product manufacturers, architects, engineers, facilities/building managers, developers, green business owners, technology developers and providers (including universities and R&D companies), energy sector, and environmental non-governmental organizations.