



THE UNITED STATES' EXPERIENCE

TITLE:
SUSTAINABLE NORTHERN COMMUNITIES CENTER (SNCC)

GENERAL INFORMATION

Country: USA

Coordinating Institution: US Department of Commerce, Economic Development Administration

Other institutions involved: Cold Climate Housing Research Center, Wallace Research Foundation, Rasmuson Foundation

Duration of the experience: 2014-2015

Webpage: www.cchrc.org



COLD CLIMATE HOUSING RESEARCH CENTER

CCHRC

1) Objectives

The Sustainable Northern Communities Center creates a platform for partners, agencies and individual communities to collaborate to reduce construction costs, create healthy living environments, stimulate local economies, and ensure durable, regionally appropriate design in Circumpolar climates. The world's farthest north LEED Platinum facility has the classroom and workspace to train building professionals, trades, and the general public on the construction and operation of high-performance buildings. The collaborative research and training conducted here will have a positive impact on Alaskans and Circumpolar people for decades ahead.

2) Relevance

CCHRC is working with governmental and private sector stakeholders to develop new cost-effective and efficient building techniques and apply them in prototypes across Alaska. These prototypes are helping change the pattern of building in rural Alaska by influencing construction practices and community planning. CCHRC is also engaged with partners in developing local manufacturing to meet needs of the housing industry.

3) Concrete activities and actions

CCHRC works with housing authorities, governmental entities, and private sector companies in every region of Alaska. A number of prototypes have been designed and constructed through a community engagement process, ranging from single and multi-family residences to replacement homes for communities impacted by flooding and other natural disasters. These housing prototypes demonstrate experimental technologies tailored to a specific climate and environment that reduce the construction and energy costs. An effort to bring prototypes to production has been very successful in expanding these buildings into general use.

4) Achievements and results

CCHRC has developed more than a dozen prototype houses throughout Alaska that provide templates of affordable, super-efficient, climate-appropriate housing. Each project emphasizes local labor and materials. Monitoring the performance of these homes has shown an 80% reduction in energy use and 30-50% savings in construction. CCHRC transfers these techniques and technologies into broader construction practices through partnering with housing authorities, industry, and local communities.. CCHRC has developed the building science and practical approaches to retrofitting existing buildings to a much higher energy standard. Twelve percent of Alaska's total housing stock has been retrofitted through a state program. CCHRC has also been instrumental in developing a housing needs assessment that informs policy and decision makers of the current condition and priorities for action.

5) Sustainability

Sustainable Northern Communities projects address sustainability at the economic, environmental and cultural level: through lowering energy costs and creating local capacity, through minimizing the amount of resources needed to build and heat homes, and through incorporating traditional knowledge into housing designs and promoting affordable housing. This effort is having a significant influence on the ability of a number of communities to literally survive. SNC projects also focus on retrofitting existing homes and buildings to improve their energy performance and extend their service life, which provides returns to homeowners and communities into the future. Occupant health is always an element of the CCHRC process.

Alaska suffers from the highest incidence nationwide of upper respiratory distress in children and the elderly. Healthy interior environments are critically important to improve this challenge.

6) Lessons learned

Overall our programs have been very successful. Early in the organization’s founding, a more focused outreach effort to involve all stakeholders in the process would have been beneficial. Our ability to share these successes statewide have greatly improved.

7) Capacity for the exchange of this experience

| Cooperation modality | Cooperation modalities the institution can provide to others | The institution may be able to provide this cooperation to others by |
|---|---|--|
| Information Sharing | x | ongoing |
| Conference Calls | x | ongoing |
| Videoconferences | x | ongoing |
| Workshops | x | ongoing |
| Technical and Experts Visits | x | ongoing |
| Other(s) – please describe Network building and facilitation | Resources including building plans, construction manuals, detailed instructional videos, integrated design consulting including energy modeling, plan review, and building recommendations. | ongoing |

8) Author of this story

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9) Key persons involved in the design, implementation, and evaluation of the experience

9 a.

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9 b.

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The Signs of Competitiveness in the Americas Report 2014 is a product developed by the Government of Trinidad and Tobago as RIAC Chair Pro Tempore 2014 and the OAS as RIAC Technical Secretariat with contributions received by the countries in the region, multilateral and academic institutions, and world-renowned experts.

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