

Frequently Asked Questions

Sustainable Construction in Indian Country

What is the Sustainable Construction in Indian Country initiative?

This is a Congressionally mandated initiative to support and increase sustainable construction in Native communities.

Who is the program sponsor?

The program is sponsored by the U.S. Department of Housing and Urban Development (HUD), Office of Policy Development and Research (PD&R), in partnership with the Office of Native American Programs (ONAP).

What is sustainable construction?

Sustainability can have many meanings and is often called “green construction” or “green building.”

The U.S. Environmental Protection Agency defines green building as “the practice of creating structures and using processes that are environmentally responsible and resource-efficient throughout a building's life-cycle from siting to design, construction, operation, maintenance, renovation and deconstruction. This practice expands and complements building design concerns of economy, utility, durability, and comfort. A green building is also known as a sustainable or high performance building.”

When it comes to residential buildings, the U.S. Green Building Council believes that green homes are generally “healthier, more comfortable, more durable, and more energy efficient and have a much smaller environmental footprint than conventional homes.” The Sustainable Native Communities Collaborative defines sustainable housing as: “culturally appropriate, green, and affordable.”

What are the benefits of sustainable construction?

It is generally accepted that there are environmental, economical, and social benefits to building more sustainably:

Environmental benefits—Sustainable construction enhances and protects biodiversity and ecosystems, improves air and water quality, reduces waste streams, and helps conserve and restore natural resources.

Economic benefits—Green building practices help to reduce operating costs (such as fuel costs); create, expand, and shape markets for green products and services; and optimize life-cycle economic performance of buildings.

Social benefits—Sustainable design practices enhance occupant comfort and health, minimize strain on local infrastructure, and improve overall quality of life.

What are examples of sustainable construction practices?

The following are some examples of sustainable construction practices for different categories:

Energy Efficiency

-Blown cellulose, foam, or other insulation (not fiberglass batts) meeting Department of Energy thermal resistance (R-value) standards

-Structural Insulated Panels (SIPS)

-Façade differentiation designed for passive solar heating/cooling

-Aerated Concrete

-Advanced Wood Framing

-Insulated Concrete Forms (ICF)

-Straw bale technology

-Adobe

-Geothermal heating/cooling

- Modular construction

-Low-E windows (low emissivity windows)

-Heat and Energy Recovery Ventilators (HRVs and ERVs)

-High efficiency heating and cooling systems (heat pumps)

- Photovoltaic panels (solar panels)

-Solar water heating

-Radiant floor heating

-Thorough caulking and weather-stripping

Materiality

-Long-term, durable materials such as metal roofs, cementitious siding, masonry, etc.

- Recycled/waste products incorporated into construction materials and interiors

-Low volatile organic compound (VOC) products and paints

-Use of regional or local materials and labor

Water Efficiency

-Green roofs

-Landscaping to reduce water usage/plants that thrive in regional conditions

-Gray water systems/wastewater systems

-Rainwater harvesting and storage

-Xeriscaping

-Rain barrels/cisterns

-Permeable pavement

-Bioswales

-Low-flow plumbing fixtures

Site Planning/Synthesis

-Project on a brownfield site

-Building orientation

-Project near public transportation or car sharing implemented to minimize car trips to and from the site for everyday needs

-Project part of larger master plan that includes other non-residential uses

-Low-impact development

-Soil erosion control

-Plan for future expansion

-Green maintenance plan

-Educational programs for residents, maintenance staff

Who can participate in the demonstration projects?

This initiative is open to projects of tribes and/or tribally designated housing entities.

What types of projects are sought?

There are two types of demonstration projects.

HUD is seeking tribes or tribally designated housing entities (TDHEs) with completed projects which demonstrate sustainable construction practices. These may be eligible to be featured in best practice case studies. The best practices case studies will highlight the sustainable construction practices carried out by the tribe or TDHE. These case studies will be made widely available to Native communities, allowing others to benefit from local adaptation of these best practices.

HUD is also seeking tribes or TDHEs with projects in the planning or early construction phases that would be interested in incorporating sustainable construction practices into the project. Such projects may be eligible for technical assistance and inclusion in a best practice case study.

Demonstration projects in the planning stages may have "green" construction practices already included, but that is not a requirement. They must simply be interested in including sustainable construction practices in their project.

Demonstration projects may be new construction or rehabilitation projects.

Does a demonstration project need to have sustainable construction practices in it already?

No. If a tribe has interest in sustainable construction, our technical assistance experts can work with them to suggest sustainable practices that could be incorporated in order to develop the sustainable potential within the project.

What activities does the Sustainable Construction initiative include?

This initiative includes four major tasks.

- Identification of Native communities that are working on sustainable construction projects.
- Identification of barriers to sustainable construction practices and opportunities for technical assistance and training for Native communities.
- Selection of demonstration projects that can be featured in best practice case studies. These case studies will be made widely available to Native communities.
- Training for Native communities.

What are the benefits of being a demonstration site?

Demonstration projects receive different services based on their need, the stage of their project, the types of sustainable construction practices being implemented, and the cost and availability of technical assistance providers. Demonstration projects may be eligible to:

- Be featured in a best practice case study. These case studies will be made widely available to Native communities.
- Receive free technical assistance to help incorporate sustainable technologies into the construction or rehabilitation projects. These include, but are not limited to:
 - Cultural sustainability
 - Material and construction practices
 - Site analysis
 - Energy efficiency strategies/renewable energy resources
 - Water efficiency strategies
- Receive post-construction evaluation assessment of performance upon completion.
- Have a promotional event, such as a ribbon cutting ceremony.

Technical assistance will be determined based on specific demonstration projects needs including regional, geographical, and climate features.

Construction and all other funding costs will be the responsibility of the participating communities. The technical assistance services would supplement architecture and engineering services to expand or broaden the project's sustainable potentials.

What type of technical assistance will be provided?

Technical assistance will depend on the needs of the demonstration site. Technical assistance is meant to supplement the work of the tribe's project team. The Sustainable Construction Technical Assistance Experts will not be responsible for taking the lead on any part of the demonstration project, but instead will assist the project team. Technical assistance may include, but is not limited to:

- Participatory design workshops with community members
- Sustainable/cultural design charrettes
- Site analysis
- Site selection & design
- Schematic building design and site planning
- Analysis/critique of existing plans
- Development of model construction document/specification Sets (unstamped)
- Building energy modeling services
- Programming to include cultural & environmentally sensitive designs

- Specification development/assistance
- Green materials/technologies analysis and selection
- Life cycle cost analysis
- Assistance in certifying the project as an Enterprise Foundation Green Communities, LEED for Homes, Energy Star, and/or other green certification programs
- Procurement and bid announcement language
- Assistance in seeking additional funding for sustainable building practices that are beyond the building budget

Some technical assistance may be offered to the demonstration project during the post-construction period including, but not limited to:

- Building energy analysis
- Building cost analysis
- Services to upgrade or redevelop some existing structures
- Development of maintenance manuals and training for residents to optimize the use of the building.

What is the selection process and what are the selection considerations?

A member of the Sustainable Construction in Indian Country team will contact you to discuss your project. The team will make recommendations to HUD and HUD will select which sites should become demonstration projects. Even if a project is not selected as a demonstration project, the sustainable construction team may stay in contact with the applicants to check the status of the project.

The initiative seeks all scales of residential housing projects with broad geographic, climate, and technological representation. Demonstration projects will be considered on a case-by-case and as it affects the demonstration projects ability to show broad representation. However, the following are issues HUD will consider when selecting demonstration projects:

Initiative-wide considerations:

- Demonstration projects that represent all HUD Office of Native American Programs regions and differing climates.
- Demonstration projects that represent different housing types and reach different groups of residents. (This may include single-family, multi-family, multigenerational, supportive housing, elderly housing, etc).
- New construction and rehabilitation residential projects at various scales and phases of completion.
- Demonstration projects that represent a range of sustainable construction technology opportunities. Refer to “**What are examples of sustainable construction practices?**” for examples of sustainable construction practices.

Project-based considerations:

- Projects that have stable construction funding in place.
- Tribes willing for the Sustainable Construction in Indian Country team to write up the project as a best practice case study, which will be made available to other tribes and will be included in the initiative's final report.
- Tribes interested in technical assistance.
- Projects that are supported from the tribal council to include or incorporate sustainable construction practices.
- Tribes interested in making the project more "green."
- Projects where there are sustainable construction practices that can be appropriately added in.
- Projects that will train and/or hire from within the tribe during the construction process and will support future economic development.
- Projects that support cultural sustainability and wish to incorporate culturally appropriate features.
- Projects that plan to earn Green Communities, LEED for Homes, Energy Star, or other local green certifications. Projects that are sited on brownfields.
- As appropriate, projects are sited near public transportation or implement car sharing to minimize car trips to and from the site for everyday needs.
- Projects that are part of a larger master plan that includes other non-residential uses.
- Projects that reflect traditional technologies and/or traditional culture of the tribe and the region.
- Projects designed to improve indoor air quality and reduce/eliminate the use of toxic finish materials.
- An interest in post-occupancy analysis of the project to determine actual building performance, resident satisfaction, and maintenance/operations outcomes.
- Projects that are part of a larger tribal initiative to build greener homes now and in the future.
- Does the project team have experience with projects of a similar scale?
- Does project team have experience with sustainable construction projects?
- Is it likely that project will be completed within timeframe?
- Does the tribe have the ability to build on the proposed site?
- Is infrastructure in place?
- Has tribe selected a project team?
- What is the cost and availability of sustainable construction technologies in the project's geographic area?
- What State, utility, or other additional incentives are available for this project?

Does a demonstration project have to already been started?

No. HUD is looking for new construction and rehabilitation residential projects at various scales and phases of completion.

What type of housing project can apply to become a demonstration site?

All types of new or rehabilitation residential housing projects are encouraged to apply. This may include single-family, multi-family, multigenerational, supportive housing, and elderly housing.

Does construction funding have to be in place and stable?

Priority will be given to those projects that have already stabilized the majority of their funding. However, as part of the technical assistance provided, projects may receive assistance in locating additional funding for green features that are beyond the building budget.

How can a tribe learn more about this initiative?

Tribes interested in this opportunity and the selection process, or in asking additional questions, please contact Mike Blanford at michael.d.blanford@hud.gov or at 202-402-5728.