

**DRAFT**  
**Impediments to Sustainable Construction in Indian Country**

**White Paper**

**Sustainable Construction in Indian Country Initiative**

**January 20, 2012**



## **Table of Contents**

EXECUTIVE SUMMARY .....	3
INTRODUCTION .....	6
FOCUS GROUP FINDINGS .....	7
ANALYSIS OF FINDINGS.....	12
RECOMMENDATIONS .....	13
SUMMARY .....	17
APPENDIX A: MEETING NOTES .....	19
APPENDIX B: ORIGINAL INVITEES.....	41

## **SUSTAINABLE CONSTRUCTION IN INDIAN COUNTRY INITIATIVE**

### **DRAFT Impediments to Sustainable Construction in Indian Country White Paper**

#### **EXECUTIVE SUMMARY**

The Sustainable Construction in Indian Country initiative is a congressionally mandated effort of the U.S. Department of Housing and Urban Development (HUD) Office of Policy Development and Research (PD&R), in partnership with the HUD Office of Native American Programs (ONAP). The initiative seeks to promote and support sustainable construction practices in Native communities. One task under this initiative was to conduct a meeting to explore impediments to sustainable construction practices and solutions to these impediments. Participants from a governmental, a nongovernmental, and a tribal focus group offered observations regarding impediments to sustainable construction in Native communities. Participants in a follow-up coordination meeting ranked the impediments associated with sustainable construction and brainstormed about potential solutions. Appendix A offers the detailed notes from each focus group and the analysis meeting with participants.

Working from a wide variety of impediments identified by the focus groups, these four impediments to sustainable construction ranked most important:

- Building codes
- Costs/funding
- Capacity building
- Planning

The graphic on the next page provides a brief summary of these impediments.

## Highest Ranking Impediments to Sustainable Construction in Indian Country

### **Building Codes:**

Communities develop building codes to protect health and safety, but also to show commitment to particular issues. Minnesota and Washington States, for instance, require compliance with green building codes or standards. Tribes have the ability to adopt existing green building codes or standards, or to create their own. The balancing act with a building code is to avoid being overly strict or posing undue cost burden and, thus, inhibiting desired growth.

### **Cost/Funding:**

Sustainable construction is perceived as more expensive, but this is not always true. Some sustainable construction technologies require more expensive upfront costs; however, the energy savings and more durable housing can offset the higher costs or lead to savings later. Some sustainable construction technologies are more expensive and lack a payoff time that is practical for communities with a strong need for affordability. Some sustainable construction technologies do not add additional construction costs. Education can change the perspective and life cycle assessments and benefit analyses can provide tools to determine the technologies that provide the greatest bang for the affordable buck.

### **Capacity Building:**

Tribal housing authorities may have difficulty building capacity or even maintaining levels of capacity due to understaffing and staff turnover. New elections in tribal council or decreased Federal budget funds can lead to enormous changes in staffing. Some smaller tribes may not have the staffing on a regular basis to carry out the housing development their community needs to keep pace with housing need. Repeated training, onsite training, and partnerships with other organizations are ways to build lasting capacity.

### **Planning:**

Sometimes tribes find themselves planning projects simply because Federal funds are suddenly available. This can lead to a mismatch in community need and available resources—land, staff time, housing, funds, etc. Long-term planning, on the other hand, can help rebalance that mismatch, and support a tribe's overall goals, such as creating a cohesive “place” with increased opportunity for all residents, increasing healthier housing, supporting economic development, and moving toward energy self-sufficiency.

Since the participants in the coordination meeting were primarily from Federal agencies, they developed recommendations, primarily, of what Federal agencies may do to assist in resolving these impediments. A brief summary of these recommendations follows:

### **Building codes**

Tribes have the ability to develop building codes and standards or adapt codes such as the International Green Construction Code to their own needs. They may not have always taken up this opportunity because, historically, they have been excluded from Federal assistance for building code development. Additionally, many tribes are located in rural areas, which are less likely to have existing building codes. Federal agencies can provide incentives that encourage tribes to implement green practices/meet green standards. Federal agencies are already supporting tribes in reducing this form of barrier with their participation in the interagency Tribal Green Building Codes Workgroup.

### **Costs/Funding**

To assist tribes in making the most of funding resources and cutting costs, Federal agencies can help tribes and the housing industry move beyond a perception of cost or luxury in sustainable housing. One strategy is to demonstrate how to calculate benefits of sustainable construction practices and link audiences to tools, such as cost benefit analyses, that can help them develop sustainable projects most effectively. Benefit analysis tools, including free software, is available at [http://apps1.eere.energy.gov/buildings/tools\\_directory/](http://apps1.eere.energy.gov/buildings/tools_directory/) on the Department of Energy (DOE) Web site. Cost analyses might also be adapted to factor in social and cultural benefits of sustainable construction, which are not traditional components of cost-benefit analyses.

Federal funding programs may be diminished, but they offer the flexibility and credibility to leverage funds. Grants may be written to provide matches for sustainable construction activities. Tribes are eligible to apply for a variance to go above the total development cost (TDC), the ceiling for cost per unit construction, with Area Office approval based on the incorporation of sustainable building technologies (Notice PIH 2010-47).

### **Capacity building**

The suggestions related to tribal capacity building focused on expanding the services provided by nongovernmental organizations (NGOs) and increasing the number and capability of community development corporations. Additional suggestions included encouraging adoption of sustainable practices through rebates and incentives, dissemination of analyses on sustainability in other communities as adapted for tribal communities and of model tribal projects. One suggestion was for a tribal college version of the solar decathlon, where college teams compete to build innovative, affordable houses—often rooted in their regional culture or meeting a specific need – e.g. homes for victims of natural disasters, southern examples featuring large porches. Additionally, Federal agencies encourage specific capacity building by incentivizing green building in existing programs and prioritizing tribal green building in program development and delivery.

### **Planning**

Some funds are available to assist tribes in planning for long-term community development. The Federal government has relationships and methods of dissemination that can inform tribes about available planning resources and funding opportunities. Federal agencies might also partner to

create a tribal version of the Mayor's Institute on City Design, a National Endowment for the Arts initiative that helps transform communities through design by preparing mayors to be the chief urban designers of their cities.

## INTRODUCTION

HUD's Sustainable Construction in Indian Country initiative, administered by PD&R, in partnership with ONAP, seeks to ensure that tribes have access to and support in using sustainable construction practices. The initiative includes four tasks:

- Identifying Native communities that are working on sustainable construction projects. This task was completed.
- Identifying impediments to sustainable construction practices and opportunities for technical assistance (TA) and training for the Native communities. This task is on-going.
- Seeking demonstration projects that can be featured in best practice case studies. These case studies will be made widely available to the Native communities, allowing others to benefit from these best practices. This task is on-going.
- Making training available to tribal communities. This task has not begun.

This report provides a summary of the comments and recommendations of participants involved the second task. HUD conducted a meeting exploring impediments to sustainable construction practices and solutions to these impediments. The meeting was held in conjunction with the 2011 HUD Greener Homes National Summit.

The meetings consisted of three focus groups and a follow-up meeting to analyze focus group findings and make recommendations. HUD invited participants to two of the focus groups: a governmental and a nongovernmental group. The third focus group, the tribal focus group, was open to any tribal member attending the Summit. To ensure that tribes were aware of this opportunity, HUD conducted outreach to the regional Indian housing associations and also to the tribal communities which were award winners at the Greener Homes National Summit.

Invited representatives attended the follow-up coordination meeting. Many of these representatives had also participated in the focus groups. As part of this meeting, participants prioritized the impediments identified by the focus group by importance based on the potential negative impact on the development of sustainable housing in Native American communities., and also sorted them into impediments to residential construction in general and impediments to green construction in particular. They also brainstormed about some areas where change could be undertaken. Appendix B contains a list of invited participants for each group.

When discussing impediments, the focus groups identified both general residential construction process and green residential construction process impediments without distinguishing between them. It is reasonable to assume that impediments to residential construction also will affect any green construction process. Nonetheless, to make the best use of their time, members of the coordination meeting, separated general construction and green concerns, and focused their discussion on the impediments to green construction.

Specific to green construction practices, participants across the focus groups identified the need for an increased availability of sustainable construction models adapted to tribal needs and tribal communities. This included not only providing access to case studies of tribal communities with sustainable construction projects, but also providing hands-on training and identifying model houses that tribes can visit and examine in the field.

This report contains an executive summary of the meeting and the detailed summary and recommendations. The appendices contain full notes from each focus group and the analysis meeting with participant lists, and a list of invited participants for each group.

## **FOCUS GROUP FINDINGS**

The three focus groups—governmental, nongovernmental, and tribal—received similar questions to answer. Both the questions and their responses were influenced by their relationships to construction projects in tribal communities—some as funding sources and grant administrators, housing developers, housing administrators, trainers and technical assistance providers.

Discussion covered many areas, reflecting the complexity of construction in Indian Country and its association with community development and community well-being.

### **Governmental Focus Group**

Governmental focus group participants identified two major categories of impediments to developing sustainable construction projects in native communities: lack of education about the benefits of green building and internal tribal impediments.

Tribal leadership and tribal members need to be educated about the long-term benefits of green construction. While green construction is more expensive initially, it is more cost effective in the long run, over the life cycle of the homes. In addition to the energy savings, green homes can be healthier homes. Families can reduce health care costs by living in homes that are free of mold, mildew, and other health hazards – and green homes can reduce the contributing factors to those hazards. Green construction typically can be higher quality as well, so that the goal of the design and construction of the homes is to be more sustainable and longer lasting. These are important lessons to teach when working with mutual help or rental unit residents: it is difficult to gain homeowner or resident buy-in for the maintenance of energy efficient upgrades or amenities in situations where the occupant is not paying for the upgrade or amenity. Tribes and homeowners also need to be educated about what someone referred to as “presolarizing”: that there is a lot they can do in small steps and for little cost. They can implement relatively inexpensive options into new construction, and modify existing homes.

In addition to educating tribal leadership on the long-term benefits, a related concern that combined both education and internal tribal impediments was that although the Native American Housing and Self Determination Act (NAHASDA) is more than 10 years old, tribes do not always recognize the full extent of their sovereignty with regard to housing and community development. Tribal leadership may not realize that, to promote the tribe’s own vision of sustainable construction and reflect cultural values, the tribe could enact building codes or conduct long-range planning beyond the requirements of the Indian Housing Plan (IHP).

Other impediments related to education include the perception of green housing as a want or luxury rather than a need; issues related to planning and budgeting where Federal agencies might be able to influence change, such as looking at life cycle costs as a way to balance higher upfront costs; weighing quantity vs. quality; standardization of rules and regulations, permitting, etc. across agencies; and need for green building codes or standards.

Another impediment to sustainable construction in Native communities is tribal capacity. Turnover among tribal leaders and tribal staff is often high; this can necessitate multiple efforts to educate leadership about the advantages of green building and decreased housing development as new leaders and staff may also need additional time to develop capacity. Other issues related to tribal capacity include:

- The large number and broad diversity of tribes decreases the ability of Federal agencies to provide adequate support to tribes.
- Remoteness, especially in Alaska, means that in some cases there is no or insufficient infrastructure for green building.
- More generally, remote housing locations increase the cost of transporting materials to construction sites, also increasing the cost of on-site technical education, and reducing the availability of knowledgeable contractors.

Given these impediments to developing sustainable construction projects, native communities need location specific assistance which is not being addressed.

The most important gaps include:

- Providing more information and support to tribes in planning for and funding green construction.
- Greater interagency collaboration and cooperation in educating tribes and providing technical assistance in all aspects of green construction.
- Generally more and better coordination of services to tribes.

Solutions that the team came up with where Federal expertise could be utilized include:

- Increasing formal and informal interagency cooperation to promote opportunities for tribes, incentivizing sustainability.
- In grant programs, increasing reciprocity across agency lines and regularizing requirements.
- Creating combined funding for grant programs.

Participants also suggested promoting the White House Executive Order which allows greater flexibility for tribes in terms of paperwork requirements. While that involves ensuring more documents are available on-line to facilitate affordability, the other side of the equation is bridging the digital divide to ensure that tribes have access to the Internet. The technology theme appears again when considering ways to provide training or capacity building that allow for cost-effective reach to remote communities, such as webinars. The tribal focus group later noted that, while webinars are available, some tribes may need to be walked through use of this unfamiliar technology.

One suggestion that also promotes economic development and self sufficiency included providing increased training in areas such as energy analysis and weatherization. This can assist tribes in 1) providing green collar jobs for residents and 2) conducting their own testing for energy efficiency. Labor force training is a critical component as many communities lack the expertise/skilled labor force to make sustainable construction practices a reality. Bringing in outside labor increases construction costs.

### **Nongovernmental (NGO) Focus Group**

Nongovernmental focus group participants identified unmet community assistance needs. These needs fall into two basic areas: education and training, and funding. Tribes need support in development planning and green building, especially through technical assistance that is provided in-person and on-site. Training and TA providers cited the need for flexible, targeted, one-on-one TA from HUD and specific industry groups that can provide a type of capacity building that regional off-site training sessions cannot. Training and technical assistance should be targeted to specific projects, and ideally the consultants/TA providers will stay with the project until it is completed. The U.S. Army Corps of Engineers provides a similar service to tribes in Oklahoma that allows smaller tribes to take on projects they otherwise lack capacity to perform; see sidebar page 16. In addition, a tribal community often may send only one person to a training session. That person then has the responsibility for “translat[ing] it back” to the rest of the community. In contrast, with on-site training there is an opportunity for broader, immediate tribal buy-in. Participants emphasized the importance of repeated and on-site training again during the coordination meeting, where they noted that such training increased the likelihood of community acceptance of energy efficiency and other sustainable construction practices which are not always priority issues.

Participants said that, if HUD doesn't offer a specific kind of TA or training, tribes need to be allowed to pay other sources for the training and TA that they need.

Specific areas where communities need education include:

- Home maintenance
- On-site models that communities/builders can examine, information about how to build homes, and providing house plans
- Long-term planning/master planning
- More NAHASDA training

The other major gap in community assistance is in financing. Tribes need to be educated about the construction loans that are available, and given assistance in grant writing and throughout the application process. Tribes also need technical assistance in how to leverage funding sources.

Consistent with the above needs, NGO participants' suggestions about what Federal agencies can do to support them in helping tribes implement sustainable construction generally focused on funding. Participants want the Federal government to provide:

- More funding for all phases of green construction, including matching grants.
- Federal and private partnerships to develop creative funding.

- Money from veteran's agencies, labor departments, etc. for employing construction workers.
- Directing funding toward self-sufficiency (sweat equity, self-help training).
- Create pilot/demonstration projects with project evaluation/testing to provide technical data on payback, savings, etc.
- Setting aside money for tribes rather than making them get funding through their State or municipality.

In addition, participants reiterated the importance of helping tribes get funding and of building local capacity to fund projects. One way to do this is for Federal agencies provide a TA person like a Community Builder to assist tribes with developing local capacity to obtain program money.

Participants suggested that Federal agencies should provide Federal support for sustainable policies by requiring that projects reach a “standard” for sustainability or encouraging performance-based development, such as the Environmental Protection Agency’s (EPA’s) green labeling programs.

Further, some NGO focus group participants stated that Federal policymakers needed to revive previous interest in the institutional, physical, and structural infrastructure of rural America. The group noted that the training and education organizations once focused on rural community policy and development have been disbanded or defunded – while the need in Native communities remains.

The NGO focus group identified the following major impediments to working with tribes on sustainable construction:

- Cultural concerns – green building needs to reflect cultural values.
- Need to build community consensus around green building.
- Lack of master planning; communities need to develop comprehensive housing plans rather than plans that meet requirements for specific funding sources.
- Turnover of personnel at key tribal agencies and also in Federal agencies hampers having a consistent voice/direction.
- Land issues.
- “Low bid” requirements.
- Insufficient funding.

The areas where the NGOs felt they could provide increased education included a range of financial areas (housing loans and financing, leveraging Federal funds, using innovative funding tools, understanding how to deal with less common credit and income situations) and increasing access to self help housing (plans and financing). Several focus group participants, especially in the NGO focus group, cited the difficulty of getting tribes to attend trainings or getting the training to the specific people who need it.

## **Tribal Focus Group**

Answers to the first question—what participants would change about their own or community housing to make it green—demonstrated an understanding on the part of participants of the range of topics encompassing sustainability. Comments ranged from building envelope fixes, to location and landscaping elements, to development issues and education to ensure durability. From the question regarding support and training, participants expressed the need for specialized education in how to become more fluent in the language of sustainable building, and how to adapt it to tribal cultures in order to pass an understanding of sustainability, its costs and its benefits, both up to tribal leadership and throughout the community to encourage community buy-in. The language of sustainability can be different, but so is the time frame. The community and leaders might be familiar with basing their approval on upfront or construction costs. They may not have had the experience of evaluating a unit's cost based on long-term life cycle costs, where the savings in utilities or in material durability leads to lowers higher initial upfront costs. These are areas where education can lead to a change in perspective.

Tribal focus group participants described the types of support and training they need to develop a sustainable construction project. One major theme was a comprehensive education program: educating everyone from tribal leadership to tribal members to maintenance workers to the regional housing association, etc., about the value of green construction. Participants also emphasized the need for training, especially hands-on, on-site training, in a number of areas including:

- Training residents about green practices, green building technologies, and the benefits of green building
- Training in community planning
- Workforce training

Specific training and technical assistance needs range from very basic training in planning and development to more project-specific support, for example:

- How to develop a master plan.
- How to define a project and write a request for proposal.
- Assistance in developing own building standards.
- Checklist for procuring green construction materials.
- Energy training.
- Local workforce training.

Additional suggestions for support needed include rebates and incentives as well as funding; having access to appropriate housing designs and to charettes to ensure community input in these designs; and flexibility in Federal regulations and policies.

Participants identified a number of impediments to developing sustainable construction projects. These include:

- Lack of homeowner, decision-maker, and general community education about the benefits of green building.

- The cost of green building.
- Not enough available land for building.
- Multiple environmental review requirements.
- Lack of availability of energy efficient products in rural areas.
- Funding.
- Manpower including maintenance and construction workers.

The participants also described cultural and political issues impediments to green building:

- Conflicts between using traditional methods versus incorporating modern technology.
- Perception that pushing back to traditional ways is a step back to poverty.
- Barriers to using new housing designs.
- There is not always a need for housing where tribal council members want it.
- Lack of cooperation with adjacent communities.

Participants in this group noted the complications that can arise from the short building season in Alaska and other northern climates. This reinforces the urge to replicate the “tried and true” models rather than launch a more innovative project. Local builders and planners are more confident they can fit the approval, planning, construction, etc, of the standard planned house into this building cycle. Another environmental complication discussed in this group as well as the governmental group is the difficulty of locating or transporting specialized sustainable materials to remote communities. In some cases, however, the sustainable materials could help solve a problem because they may be lighter and more easily transported than some standard building materials.

## **ANALYSIS OF FINDINGS**

The group, which consisted primarily of governmental participants and several representatives from a regional Indian housing association, recognized that the results list was generated based on the questions asked during the focus groups and by the attendees of the focus groups. It therefore did not include the entire universe of possible responses. Operating from the available results, participants separately prioritized impediments that were general to the construction process within Indian Country and impediments that were specific to sustainable construction process.

The group identified the top five impediments to the general construction process in Indian Country as:

- Lack of money/flow of funds
- Tribal capacity – turnover, knowledge sharing and transfer. Change in leadership, short-staffed.
- Land issues
- Short-term versus long-term focus
- Fragmentation within the tribe

The major categories of impediments specifically related to the sustainable construction process are:

- Building codes
- Costs/funding
- Capacity building
- Planning
- Benefit analysis
- Infrastructure

## RECOMMENDATIONS

This section discusses recommendations that could be encouraged or implemented, in particular, by governmental entities. Given time constraints and the focus on sustainability, the group primarily limited recommendations to the first four (the highest ranking) impediments related to the sustainable construction process.

### **Building codes**

Green building codes or standards are a topic of interest for tribes in some parts of the country. A number of tribes are already impacted by green building standards in Minnesota when they incorporate certain types of State funding into affordable housing projects and the energy code in Washington State. These standards are another area where tribes have the freedom to develop their own standards that reflect their cultural priorities, and they have the option to be more stringent than State standards as well. At the same time, the process does require caution because too much strict regulation can inhibit construction. One possibility is to adapt the International Green Construction Code to each individual tribe's

### **Best Practices: Building Codes**

The Tribal Green Building Codes workgroup, begun March 2010, includes more than 50 representatives from Federal and tribal agencies, and non-profit organizations engaged in exploring how tribes can adopt or adapt sustainable building codes or standards to support housing that meets “the environmental, social and cultural priorities of Tribal people” (National Tribal Green Building Codes Summit Statement). Building codes shape federally funded housing standards in Indian Country, but not all tribes have building codes or standards that express their priorities.

The workgroup held its first summit June 23-24, 2011, where it developed a set of priorities, which include:

- “It is important to maintain clarity about the need to have tribally-driven and culturally-based process.”
- “Our emphasis needs to be on the development of a *process* rather than a product, from which tribally determined green building codes, and, or tribe-specific systems can develop.”
- “Codes need to support each Native Nation’s sovereignty, and be reflective of the community and culture.”

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needs. Federal agencies can provide incentives to tribes to implement green practices/ meet green standards. Another part of the process includes consideration of ways to build tribal capacity to enforce building codes. The level of interest in green building standards at the tribal level is evident in the work of the interagency Tribal Green Building Codes Workgroup.

### **Costs/Funding**

Cost and funding are constants, especially in an economic period focused on reduction rather than growth. The group suggested options for doing more with less which promote the use of sustainable construction practices from two directions:

- Education. This can show tribes how sustainable investments can save money and/or how they can get their money's worth
- Federal program use. A thorough understanding of Federal programs reveals built in supports to sustainable construction practices.

### **Best Practices: Federal Agency Funding Coordination**

An exciting example of Federal agencies joining forces to standardize requirements, combine funding sources, and enhance collaboration is the groundbreaking cooperation between the HUD Office of Sustainable Housing and Communities, the Department of Transportation (DOT), and the Environmental Protection Agency (EPA) on the Interagency Partnership on Sustainable Communities. This partnership promotes better access to affordable housing, more transportation options, and lower transportation costs.

It has also led to coordination planning, policy, and investment such as in the Transportation Investment Generating Economic Recovery (TIGER) II grants. There, for the first time, DOT and HUD jointly awarded grants for local planning activities which will eventually lead to integrated transportation, housing, and development.

The U.S. Department of Agriculture (USDA) and the EPA also assisted with the grant program.

*For more information, visit: <http://www.sustainablecommunities.gov/>*

Education related recommendations included letting tribes know how the health benefits of sustainable housing can spill over into savings in other arenas. For example, health care costs can decrease when people live in healthier buildings; maintenance costs can decrease when materials are more durable. Other suggestions included creating tools to help tribes make smart energy

improvement choices such as cost-benefit analysis tools or a matrix for tribal housing with information similar to a matrix for public housing agencies that shows the energy improvements with the greatest returns on investment:

[http://www.energystar.gov/index.cfm?fuseaction=affordable\\_housing.affordable\\_housing\\_phas](http://www.energystar.gov/index.cfm?fuseaction=affordable_housing.affordable_housing_phas). In addition, Federal agencies could develop a matrix that enumerates potential governmental funding sources for green improvements. In addition to the funding coordination listed in the box above, Federal agencies could incentivize sustainable building practices in their grant programs as they did American Recovery and Reinvestment Act grant programs.

Some education suggestions involved Federal agencies reaching out to other housing industry entities such as banks and lenders, insurance companies, and appraisers to educate them on the added value in energy efficient homes.

Federal programs have flexibility and credibility. HUD funds are still often seen simply as housing money, but they are also a tool that tribes can use to leverage other funds. This can be written into grants as a matching requirement, but HUD staff can also emphasize this in training, when reviewing IHPs and when working with tribes. Sustainable building components can be added into existing HUD training curricula. Federal agencies together can ensure that their training and TA efforts cross reference and consistently provide information on Federal efforts such as the EPA's green labeling programs, HUD's green construction programs, and DOE's weatherization and energy efficiency programs. In addition, while it might also be useful for total development costs to include life-cycle costs, right now tribes are eligible to apply for a variance to go above the total development cost (TDC) with Area Office approval based on the incorporation of sustainable building technologies (Notice PIH 2010-47).

### **Capacity Building**

To expand the capacity of the tribes seeking to develop sustainable housing and communities, participants suggested expanding the services provided by NGOs and supporting the increased capacity and an increased number of community development corporations. Some suggested that the number of Native CDCs with a specific mission of serving Native communities might be increased. One under utilized resource may be in tribal colleges. Tribal colleges are not only providing

critically important training certificates and degrees in sustainable building vocations, but are, in many cases, leading the way in educating their communities and regions about sustainability from a long-term Native perspective. See below for a brief overview of sustainability efforts of one tribal college, the College of Menominee Sustainable

#### **Best Practices: Capacity Building and Sustainability Education**

The College of Menominee Sustainable Development Institute (SDI) College is one example of a college creating a rounded approach to sustainability by increasing campus efficiency, educating and inspiring students and regional communities in sustainability efforts, and also to provide training in green collar careers. SDI:

- Provides financial assistance to student interns researching sustainability issues, such as campus-wide baseline conditions including energy benchmarking and greenhouse gas emissions, vermiculture, and indoor air quality.
- Has increased the environmental education units in all areas of study and is engaging campus community on campus sustainable development through nine visioning sessions with more than 90 participants.
- Has engaged Great Lakes areas tribes in climate change education and outreach.
- Supports car pooling and other efforts among staff and on campus.
- Conducts applied, participatory action research as identified by tribes including the sustainability indicators research project.

*For more information, contact Beau Mitchell, 715-799-5600, ext 3145*

Development Institute.

During this meeting, a few participants reacted to the need for education due to frequent leadership and other turnover, and also to help leadership embrace quality since this will decrease the need to rebuild as frequently. These recommendations, similar to suggestions mentioned earlier, include providing incentives and rebates for sustainable construction, developing baselines and collecting comparison information on efficiencies and savings, adapting analyses on sustainability in other communities for tribal communities, and also getting the word about model tribal projects out to other tribes. One suggestion was for a tribal college version of the solar decathlon, where college teams compete to build innovative, affordable houses—often rooted in their regional culture or meeting a regional need—powered with solar energy. To be successful, educating prospective homeowners is as important as educating

leadership, since they will live in and need to maintain the final product.

### **Best Practices: Capacity Building**

Smaller tribes do not always have the capacity or staffing to manage construction projects. In Oklahoma, because of a memorandum of understanding (MOU) between HUD and the U.S. Army Corps of Engineers (COE), (allowed by 10 U.S.C. 3036d, the Chief's Economy Act) they can partner with COE to help with their grant applications and project management.

The COE will work with tribes to provide supporting documentation for their project applications that add credibility to the package. These can include floor and site plans, a letter of support, and cost estimates. If the project is awarded, the tribe enters into a contract with COE. COE is paid approximately 6 percent of a grant.

Typically, COE will provide the tribe with request for qualifications and interview support, documentation for the audit process, analysis of prospective subcontractor cost proposals, and design review. The COE has structural, mechanical, and architectural engineers on staff.

During the project, COE provides tribes with multiple quality assurance inspections. These have led to an increase in the quality of materials used in projects and an increase in the square footage of projects. They review the pay application to ensure that anticipated work is completed before payment is made, insure that the punch list is completed, and conduct a warranty inspection just before a year after completion.

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Tribal capacity building also refers to the need for the development of specific technical skill sets that will allow tribal communities to control some costs of sustainable construction by doing the work in-house.

The partnership of COE and

tribes in Oklahoma offers a different model. Here, smaller tribes who lack the capacity and staffing to carry out aspects of a construction project can collaborate with COE. COE takes on some of the technical aspects and wins quality and cost gains for the tribes.

## **Planning**

Sustainable construction does not simply mean adding energy efficiency to individual housing units, but also planning for long-term community development. Participants suggested that the Federal government was well positioned to encourage and support long-term sustainable planning by informing tribes about available resources. These include Indian Community Development Block Grant (ICDBG) funds, Economic Development Administration (EDA) public works planning grants, and Administration for Native Americans grants that support long-range planning. In addition, Federal agencies can let tribes know about their own regional planning commissions that may have technical staff available to support communities with needs such as community comprehensive planning, grant preparation and assistance, mapping services, hazard mitigation planning, and environmental assessments. They can also alert tribes to planning assistance training opportunities available through organizations including the Native American Indian Housing Council (NAIHC) and the Native Learning Center.

The Mayor’s Institute on City Design is a National Endowment for the Arts initiative that helps transform communities through design by preparing mayors to be the chief urban designers of their cities. Participants suggested that Federal agencies could team up to create a tribal version to bring sustainable development concepts to a greater number of tribal leaders.

## **Federal Coordination**

Participants also offered some overarching recommendations to facilitate better information sharing and resource use among Federal agencies:

- Locate the right contact person in other agencies to provide TA or services. Federal agency staff do not always know their counterparts in other agencies or realize what who offers what services within a Federal agency. Regional contact lists could help.
- Coordinate/schedule trainings and meetings jointly rather than have multiple meetings with tribes.
- Similarly, coordinate among agencies to align agency visits to tribes.
- Support local regional training with multiple agency presence.
- Implement a joint project – agencies work together on, e.g., a master plan, a green building toolkit or a green building codes or standards toolkit.
- Develop a clearinghouse of meetings on topics relevant to tribes for sustainability.
- Conduct interagency meetings or establish an interagency workgroup.

## **SUMMARY**

Increasing use of sustainable construction technologies in Indian Country, as in the rest of the country, carries an appeal for additional financial incentives to support the incorporation of these technologies. However, what may be even more critical to encouraging acceptance of and desire for sustainable construction technologies is a change in perspective. This new perspective includes the following insights:

- Sustainable housing does not have to be in conflict with issues of overcrowding or the replacement of substandard housing. As one meeting participant framed it, “Housing

development that is not sustainable perpetuates the current problem. It impoverishes families with high energy costs, high maintenance costs and health issues.”

- Sustainable housing does not have to be more expensive over the lifetime of the housing unit. Inclusion of cost-effective sustainable technologies does require making informed choices based on availability of materials, suitability of materials to climate and housing unit, return on investment, as well as budget considerations.
- Sustainable housing offers health and financial benefits for residents. The savings from reduced energy costs or doctors' visits, in the case of decreased asthma attacks for example, can be redirected to other family needs.

The Sustainable Construction in Indian Country initiative is designed to provide types of assistance that can play a role in promoting understanding about the benefits of sustainable construction technologies:

- Providing supplemental technical assistance that can help tribes incorporate appropriate sustainable technologies into their residential construction projects.
- Educating demonstration projects about the range of sustainable construction technologies available.
- Promote use of available tools for helping tribes make informed decisions about which sustainable construction technologies to implement. Potential tools include free blower door testing through HUD ONAP, free modeling and benefit analysis software, and the Department of Energy's Tribal Energy Program TA.
- Highlight regional best practice case studies of successful tribal sustainable projects.
- Support tribes in collecting energy-related data for demonstrating energy and rehabilitation benchmarks and savings associated with sustainable technologies. This can show savings for TDHEs and residents.

Together with other Federal Agencies, and other committed partners, this initiative can implement strategies that will lead to a new perspective for some and a deeper understanding of green for others.

## **APPENDIX A: MEETING NOTES**

All of the focus groups used U.S. Green Building Council's definition of "green building": Sustainable construction has as its goal residential housing that is healthier, more comfortable, more durable, more energy efficient, and with a much smaller environmental footprint than conventional homes."

The focus groups used a brainstorming process.

Focus groups had similar agendas:

- Introductions
- Focus Group Process
- Purpose
- Discussion/comments
- Next Steps

Cielo Gibson facilitated the meetings with assistance from Lynda Lantz, both of FirstPic, Inc.

### **GOVERNMENTAL FOCUS GROUP**

**9 am-10:30 am**

#### **Participants:**

Randy Akers	HUD Northern Plains Office of Native American Programs (NPONAP)
Mike Blanford	HUD Policy Development and Research
Nova Blazej	Environmental Protection Agency (EPA)Region 9
Rodger Boyd	Deputy Assistant Secretary ONAP
Kate Brown	University of Illinois Urbana Champaign
Kevin Fitzgibbons	Eastern/Woodlands ONAP (EWONAP)
Brian Gillen	EWONAP, Region V Sustainability Officer
Rebecca Halloran	HUD ONAP Office of Loan Guarantee
Jed Harrison	EPA tribal advisor
Cynthia Kitchens	U.S. Army Corps of Engineers
Younes Masiky	U. S. Department of Energy (DOE) Tribal Energy Program
Carrie Nelson	Bonneville Power Administration DOE Energy Weatherization Program
Marty Nee	HUD Office of Healthy Homes and Lead Hazard Control (OHHLC)
Lizana Pierce	DOE Tribal Energy Program
Michelle Tinnen	Southwest ONAP (SWONAP) sustainable and green development

**Question 1: From your perspective as a Federal agency, what are the impediments to developing sustainable construction projects in native communities?**

Participants noted the following impediments:

- Resident Investment-ownership. Someone else is paying for it so not as invested in making changes. There is a cost to investing in housing and energy. Homeowner buy-in is needed.
- Need
- Money
- Green Building is perceived as a luxury.
- Quality vs. quantity (is it better to do more or to do it better?)
- The initial cost vs. the life cycle cost. There is a big initial investment which will pay off in the long run.
- Educating the public about the short-term cost vs. the long-term savings benefit
- Getting information to the tribes about industry financing vs. government financing
- Media. The perception of green home being a want vs. a need
- Limited number of native architects/culturally relevant/sensitive green design
- Leadership priorities - regulation and banking not going well together
- Appraisal value - impeding costs of remoteness. For example, getting an appraiser out to a location can be costly.
- Permitting and recording
- Tribal transition - staff turnover
- Council turnover
- Fragmentation within the tribe (ownership/responsibility)
- Availability and development of green building codes - what are the benefits or deterrents. How do you sell it to the tribes?
- Standardization of rules and regulations and processes across agencies
- Tribal empowerment - lack knowledge of exercising their sovereignty; they don't always know they have the ability to legislate in that area. Tribes don't realize they have the authority and ability to do things, that they have more freedom of decisions.
- As agencies, we could incentivize green building. There is a lack of encouragement.
- Remoteness, especially in Alaska. Sometime the infrastructure does not exist.
- The number of tribes and the diversity of tribes
- The large number of tribes and the limited number of Federal staff
- Coordination with tribal groups/ NGOs is not as good as it could be
- Cost - such as the impact of Total Development Cost, Dealing with small tribes is not cost efficient. The program with the Corp of Engineers has been able to provide economy of scale. Smaller tribes need the benefit of collaboration
- Education - "Presolarizing" educating the tribes and the homeowners that there is much that can be done in small steps and at little cost. You can do the little things before you do the big things. For example, you can change the light bulbs or do blower testing in your home before you think about putting solar panels on. There are inexpensive options. Also there are inexpensive options that can be incorporated into new construction. Also at both the tribal and Federal level, there needs to be an understanding of what all the agencies can do.

- Codes and permitting - sometimes there are codes that are not mandated and getting people to do things that are not mandated is hard.
- Weighing benefits to dollars. Part of the education piece is to see that green homes mean healthy homes. In the long run, there are financial, social and health benefits. You can save money on health care costs if you have healthy homes free of mold, mildew, and other health hazards. Educating the public that green equals healthy.
- Quality Assurance - the U.S. Army Corps of Engineers (COE) program is a good example of how there can be guidance which provides quality assurance and expediting processes. SWONAP has a memorandum of understanding (MOU) with the COE. The COE assists tribes preparing their RFP/RFQ, engineer experience, etc. They help the tribes with complicated processes.
- Laws and regulations governing each agency differ. Managing each agency/program requirement on a big, complex project is difficult. It would be better if there were common interagency requirements. For example, it would be nice to have one definition of income limits. The programmatic structure and funding streams have to be streamlined and consistent. The differences in statutory requirements require a lot of coordination.
- Tribal capacity – turn-over, staff changes, tribal changes, knowledge sharing and knowledge transfer. They have change in leadership, short-staffed. They need to have people on the ground.
- Dissemination of information - Looking at what publications the other Federal agencies are printing and distributing. There are good documents that should be disseminated, but the government is no longer printing many documents. Can this be done electronically as a spreadsheet? Do tribes all have access? There needs to be education at both the tribal and Federal agency level.
- Physical inventory - Sometimes agencies cannot provide TA because there was no physical inventory. There is a lack of information about the actual housing stock and its conditions.
- Construction time and the availability of contractors.
- It is okay to go “deeper green” - the cutting edge of what is happening in green building construction

**Question 2: What type of technical assistance (TA) and financial assistance does your agency currently provide or plan to provide in the future?**

Participants identified the follow current and future resources:

CURRENT	PLANNING FOR
NAHASDA (HUD)	Healthy Homes Production (HUD OHHLHC)
SECTION 184 (HUD)	SHHIP Certification (Safe Healthy Homes Investment Partnership) gets additional points in NOFA (HUD OHHLHC)
TITLE VI (HUD)	NAIHC - Green Building 2012
ICDBG (HUD)	NAIHC - emergency response program
Other HUD (Healthy Homes/RI/etc)	NAIHC - discussing poor performance - TDHE - could expand into green construction, develop training on emergency response, 2012 green building.
Connecting communities for regional planning (Office of Sustainable Housing and Communities)	
Proforma creation	
Radon grants (EPA)	

<p>GAP grants</p> <p>Smoke-free buildings</p> <p>Guidance on Smoke free buildings and ordinances (HUD)</p> <p>State resources for technical assistance</p> <p>Technical assistance through NAIHC to expand to green construction</p> <p>West - RHED Green Training - 6 sessions (USDA)</p> <p>Use of green materials: DOE, roof decking, light bulbs, solar water, green fair.</p> <p>IAQ - guidance training, scholarships, test shadowing, Web portal linking</p> <p>Networking among tribes share resources: Tribal Champions, Tribal Mentorships.</p> <p>Planning/Org for EE and renewable energy and capacity building, feasibility studies, retrofits, training. (DOE)</p> <p>Weatherization (3 tribal allocations); tribes must coordinate with States. (DOE)</p> <p>Weatherization training centers, i.e., Alaska. Also (ARRA) - 15 centers nationally, not specific to tribes (DOE)</p> <p>Retrofit training for auditors and inspectors and health/safety and weatherization (BPA)</p> <p>Funds equipment and weatherization materials; assist Washington tribes leverage funds with State grants (BPA)</p> <p>Supporting tribal green building codes working group (EPA)</p> <p>EPA standards and guidances are voluntary Utilities (e.g. PG&amp;E in CA) provide weatherization training and do some outreach to tribes</p> <p>Meet in person with tribes as part of TA</p> <p>Collaboration with the natural resources dept</p>	<p>Green Homes Fair - existing and new homeowners</p> <p>New Construction standards or labeling of Indoor Air Plus</p> <p>Tax credits and utility incentives</p> <p>Workshops, FOA's, TA, information, education (DOE)</p> <p>Try to adjust regulations to allow tribal access directly (DOE)</p> <p>EPA/HUD/Other? outreach to ICDBG and IHBG recipients re: green building/healthy homes/weatherization options (EPA)</p> <p>Interagency collaboration on Web sites and through trips to tribes and conferences and training, such as USDA, HUD, EPA, BPA, DOE. Field level coordination (e.g. Denver office)</p> <p>Policy: Incentive based coordination</p> <p>Intertribal Environmental council has a tire clean up - are there other such resources that can be tapped into</p> <p>TA to provide a list of resources in the State</p> <p>Healthy Home Fair</p> <p>Need a convener to facilitate pulling people together - issue of sustainability is a shared responsibility across the entire tribe</p>
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### Question 3: What kinds of assistance do communities need that are not being provided?

Federal agency participants identified the following needs:

- More education and information on sustained capacity building
- Information/technical assistance to tribes (limited because of travel to remote areas)
- Partnerships with TC&U, tribal colleges and universities

- Paper materials should be on-line (White House Administrative Executive Order flexibility for tribes) and tribes should know where these sources are.
- Limited infrastructure/Internet access
- More examples of best practices - tribal case studies and tribes learning from each other
- Assistance for leveraging colors of money.
- Multi Agency TA - TIGER TEAMS; strategic planning teams - work in advance on putting money together
- INTRA/INTER agency coordination vs. being siloed. Also coordinate with Indian Health Service (IHS) - healthy families=healthy homes
- Education and buy-in of agency staff and tribes on the importance of energy efficiency and green building
- Business code/legal infrastructure training
- Skilled workforce (green job skills) and job creation. More resources for workforce development, especially job skills
- Planning money
- Broader interagency collaboration - how to share information with tribes about technical assistance, conferences, via grass roots which can then inform higher level agency.
- Increased tribal capacity of how to conduct their own testing (weatherization, infrared, blower door, for example)
- Certified training of staff: purchasing equipment, utilizing equipment, (lead-based paint (LBP)/asbestos/radon, DOE, Native Workplace, etc)
- Curriculum development - weatherization plus health, indoor air quality, Healthy Homes, gas testing, backdrafting into house, moisture control
- Increased partnerships with Community Assistance Program (CAP) agencies
- Model codes
- Adjust regulation so that tribes can access directly
- More coordination with regional entities
- Partnership with tribal culture and agencies
- Assistance with developing infrastructure for Web development and access.
- Trainings provided through Webcast
- Leveraging – multi-agency strategic planning teams.
- Health and Human Services (HHS) coordination
- More education for our own agencies as to the importance and effects of green building. Overcome the “green is a fad” thinking.
- Development of building codes
- More resources for workforce development
- Centralized Web site that would include best practices, program resources, notices, publications (like an expand Codetalk)
- Coordinating the links so you can link back to the original resource site
- Expand the technical assistance that is currently being offered at SWONAP from the U.S. Army Corps of Engineers for other tribes, build capacity of grant applications and managing processes
- There needs to be a holistic approach to sustainable housing. That is, it needs to involve the entire tribal community and agencies in a collaborative effort
- Build the capacity of grant applications

- Relationship development (State, tribal, intertribal agencies) - how to develop a continuum to weather tribal changes. Continuum of programs and services.
- Green outreach - light bulb giveaway. It is easier to go where people are already gathered - e.g. pow wows
- Efforts needs to be comprehensive across agencies and tribal departments
- Certified training for tribal staff - e.g. radon mitigation
- Demographic and physical assessment tribe's housing inventory. E.g. BIA used to have a template, a checklist - spec sheet whereby you had a profile of the characteristics of a home.
- There are overlapping conferences that compete with each other - it is better for it to be a partnership and conducting trainings together. Exploring/Partnering with agencies on conferences and training- maybe expanding a day to prevent overlapping. For example, DOE energy conference last month and the HUD conference this month.
- Partnering with intermediaries (tribal colleges, CAP agencies, State initiatives, regional housing meeting)

**Question 4: What groups do you serve? Tribes, non-profits, housing authorities?**

- DOE and EPA said mostly to tribes.
- Whoever asks for the assistance.
- It varies among agencies.

**NONGOVERNMENTAL AGENCIES FOCUS GROUP**

**10:45 am – noon**

**Participants:**

Mike Blanford	HUD PD&R
Lacey Gaechter	Trees, Water and People
Judith Grunau	Cold Climate Housing Research Center (CCHRC)
Katie Hoyt	National Congress of American Indians (NCAI)
Russell Kaney	Enterprise Rural and Native Initiative
Jason La Fleur	AES
Beau Mitchell	College of Menominee Nation
Stewart Sarkozy-Banoczy	HUD Office for International and Philanthropic Innovation
Nick Tilsen	Thunder Valley CDC
Holly Youngbear Tibbets	College of Menominee Nation

**Question 1: What types of technical assistance and financial assistance does your organization currently provide or plan to provide in the future? Who do you serve?**

Nongovernmental organization participants identified the following services they offer currently or plan to offer in the future:

CURRENT	PLANNING FOR
<p>Renewable energy – straw bale construction – hands-on (Trees, Water and People)</p> <p>Constitution reform – in person, on-site, conference, webinars</p> <p>Tax – webinar - 40 people</p> <p>Annual/mid-year – variety of topics – target to resolution</p> <p>Planning – inclusion, survey, focus group</p> <p>Social media – only good at times – as many off reservation as on who follow it</p> <p>Community dialogue – they get input from community members to develop a plan. They work with the people, not with organizations.</p> <p>Reservation-wide opportunities for organizations to connect with each other</p> <p>Formal and community training/education in building trades – specializes in sustainable development (Menominee)</p> <p>Research on viable applications for the region (Menominee)</p> <p>Material construction and product testing, research, application in Circumpolar North (CCHRC)</p> <p>Community-based design of affordable, sustainable, culturally-appropriate housing (CCHRC)</p> <p>Instruction in building methods and building science – on-line, print and in-person (CCHRC)</p> <p>Partnership with tribes, housing authorities, village corporations and financial institutions (CCHRC)</p> <p>International education on sustainable forest management (SDI – part of Menominee)</p> <p>Financial assistance to student interns doing research for the college (SDI)</p> <p>Engage campus community on campus sustainable development (SDI)</p> <p>Engage Great Lakes tribes in climate change education, outreach (SDI)</p> <p>Applied, participatory action research as identified by tribes (SDI)</p> <p>Training and competency development on design side</p> <p>Technical assistance on green building,</p>	<p>Energy efficiency</p> <p>Livelihood development with renewable energy focus/green jobs – business development, environmental stewardship</p> <p>Planning for housing—holistic support/training</p> <p>Housing for 300-500 people (on the Pine Ridge Reservation)</p> <p>Training for trades people, existing builders, middle-level professionals – insurance, appraisers, mortgage lenders, etc., tribes in Great Lakes (Menominee)</p> <p>Facility for sustainable northern community development – an interagency /interorganizational collaboration space and opportunity (CCHRC)</p> <p>Training and competency development on supply side but expand to construction trades</p> <p>Green Group trainings (Enterprise)</p>

<p>financial (Enterprise)</p> <p>Technical assistance registry on-line (architects, engineers, etc. vetted by Enterprise on “green credentials) (Enterprise)</p> <p>Grants for green charettes (Enterprise)</p> <p>Grants for organizational capacity building (Enterprise)</p> <p>Architectural “green” workshops (Enterprise)</p>	
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### Who do you serve?

- Tribal leaders (elected) from member tribes – Federal/state
- Training center focused – from tribes – Great Plains
- Oglala Sioux tribe – people – Oyate
- Tribes in the Great Lakes region
- The Circumpolar North
- Tribal THDEs
- Tribal non-profits
- Tribal CDCs
- Tribal Human Services

### Question 2: What types of assistance do communities need that isn't being provided?

Participants identified the following assistance:

- More education on available housing loans and how to apply for them – assistance through the application process
- More education on home maintenance
- Innovative financing mechanisms – revisit double declining depreciation declining depreciation schedules used previously
- Actual on-site models that communities/builders can examine
- More information to communities on how to build own home – construction loans and house plans available
- Institutional resources to enable preparation of skilled builders
- Multi-income families/households need help showing combined income of multi-generational household
- Grant writing assistance
- TA in how to leverage Federal/non-Federal funding sources – focus on helping NGOs learn this:
  - How HUD plans to leverage funds – share with NGOs
  - Need an assessment tool/framework to determine what NGOs can handle – some kind of tool to help NGOS build their internal capacity
- Utilization of networks – systematic way for HUD to connect with/use the networks that already exist on reservations

- Need in-person, on-site training. This is really important. If tribal members go elsewhere for training, then they need to “translate it back” to the others in their tribe. If they get on-site training, they get immediate tribal buy-in.
- More NAHASDA training
- More financial assistance—and learning to leverage what’s there
- Flexible and targeted training and TA for projects/programs from HUD and also from specific “industry” groups. Bring housing authorities and NGOs together to work on specific projects. There is strong support for focusing training and TA on specific projects rather than general training.
- HUD’s environmental assessment requirements are very specific, and HUD doesn’t provide TA on how to get through their process. More generally, HUD needs to:
  - Provide more permanent TA for HUD grantees
  - If HUD doesn’t offer a specific kind of TA or training, tribes need to be allowed to use their grant money to pay other sources for the training and TA that they need.
- Long-term planning – master planning or strategy on development
- Pre-development funding for market analysis, demographics, technical reports, etc.
- One-on-one on-site specific/community specific consultants/TA to stay with project
- Focus on culturally-specific aspects unique to community
- Comprehending impacts and opportunities associated with climate change
- Peer-to-peer training

### **Question 3: What can we (NGOs) do better?**

- Engagement on appropriate nation-nation level to set agendas
- Needs assessments focused on community dialogue
- Relationship building
- Occupant education
- Green Home Fairs

### **Question 4: What can Federal agencies do to support you in helping tribes implement sustainable construction?**

Some responses overlapped with responses to questions 2 and 3. The participants identified the following Federal support needed:

- Have Veteran’s agencies, labor departments, etc., provide money to employ construction
- Provide business development assistance
- Provide TA person from HUD/DOE/etc. to help with getting specific program money to reservations and build local capacity to do so. Teach tribes best practices on how to access programs. Have “champion”/“community builder” – but don’t just add this job to someone’s existing workload because staff are spread too thin
- Set aside money for tribes rather than making tribes get funding through their State/municipality. Dedicate money to tribes so tribes don’t have to compete with States

for money. Agencies need to better understand the sovereign status of tribes and how to interact with them.

- Share data/grant programs – application process
- HUD set “standard” for sustainability. Difficult with sovereignty status but could force tribes to do green building.
- Pay serious attention to the institutional, physical, and structural infrastructure of rural America, e.g., Rural Development Institute – no education/training component
- Provide matching grants – community raises amount of money and Federal agencies match it
- Federal and private partnerships for creative funding
- More funding toward training within community of sustainable building practices and techniques
- Provide intellectual capital and labor for on the ground tribal-driven planning and projects
- Don’t take away funding, but direct it towards making people more self-sufficient (sweat equity self-help, training)
- Encourage, through resource allocation, performance-based development, which focuses on operations and maintenance
- Multiple funding opportunities throughout the year for planning, pre-development, visioning but allocated in climate areas across the county
- Federal support for fully qualified TA providers, materials, methods, i.e., standards and best practices
- Pilot/demonstration projects/homes, etc. with project evaluation/testing after to provide technical data on payback, savings, etc.
- Agencies listen, learn and apply traditional designs and values of tribal structures specific to “place.”
- Ask the community how they think it would be best for the future of the community to use funding to develop sustainability

#### **Question 5: What are the major impediments to working with tribes on sustainable construction?**

Participants identified the following impediments:

- Lack of money and flow of funds
- Lack of connection between private sector innovation to Federal efforts
- Building codes – capacity building – regulation
- Do training, then no jobs for tribal members afterwards
- Getting the right person/people to attend trainings and meetings
- Cultural barriers – tribes have adapted to the “HUD house mentality.”
- Existing units are unsustainable – need to commit to fixing old houses (disposition regulations).
- House design that is currently not focused geographically, culturally, climatically – commit to specific HUD support. Make a new, full commitment that replaces the 1960s, 1970s homes.

- Lack of local plan –difficult to do relocation for rehabilitating or redeveloping locations.
- Lack of master planning. Allocate more funding for tribes to do their Indian Housing Plans, so they can develop comprehensive housing plans rather than just meet requirements for using housing funds
- Transition from one “administration” to another – consistent voice; turnover of personnel at key tribal agencies/positions and Federal agencies
- Short-term versus long-term focus; need incentives to tribes to look long term at materials, etc; i.e., fewer restrictions on design, mandated materials, “low-bid” mentality undermines housing durability– want housing to have more durable life cycle
- Determining who owns land and what land is available for development and who has already done environmental assessments on the land. Also, often politics within communities among Village Corporations, tribes, and cities limit the land for sale, because they don’t work together to get more housing, or no one wants to sell land
- Letting existing water/sewer/roads/electric limit sustainable development and creativity
- Need to meet with the community many times to get dialogue going and planning developed, and travel to remote communities is very expensive. Relationship building – who do you trust?
- Lack of funding to consolidate fractional heirship interested on allotted reservations
- Institutional resources for research and development
- Flexible funding – quantity of restrictions, e.g., multi-generational units, etc.
- Consensus building is much needed – dialogue, ask/listen to community
- Use appreciative inquiry for engagement

## **TRIBAL FOCUS GROUP**

**2:45 pm – 4 pm**

There were about 16 participants (about 1/5 were Federal agency representatives like EPA and HUD). Tribes represented included the Pokagon Band of Potawatomi, Kalispell Band of Indians, Choctaw Housing Authority, Puyallup Tribe of Indians, as well as representatives of Alaska and southwest tribes.

### **Question 1: What would you change in your existing homes to make them green?**

Participants identified the following items that were intended to get them thinking about sustainability and give a sense of what how much they already know about sustainability:

- Weatherization: roofs, windows, doors (2)
- Durability; make sure the homes last -- that they don't fall apart in a short time
- Solar power (2)
- Landscaping- more native plants (2)
- Location - it is not sustainable if homes are remote from access to transportation and services/town (e.g. stores, schools, etc.) (3)
- Building new homes next to existing homes

- Conservation should exist. The kilowatt measuring device "Kill-a-watt" calculates the cost of usage. People don't realize that having appliances plugged in (like a toaster), when not in use, still uses power.
- Educate homeowners about what they can do with what they already have
- Motion sensor lights
- Energy audits, especially for larger and community buildings
- Community outreach: tap into community, schools, etc. For example, there was a recycling project at the school. It educated kids about the importance of recycling. The kids went home and told their parents. It was an example of the younger generation making changes at the family and community level. It also lowered landfill costs.
- Getting recycling and waste company partnerships with the community
- Preventive maintenance
- HUD regulation - want more flexibility - what you can and cannot include. e.g. put in an additional fireplace
- TDC - more flexibility to increase TDC for green building
- Energy efficient light bulbs, e.g. when tenants move in and out
- Beneficial use of gray water
- Rainwater collection systems but some concern about mosquitoes – expensive underwater rain catchment
- Community garden
- Walking trails
- Encourage biking; carpool with neighbors
- Engage community members to educate residents on how to use systems.
- Upgrades to windows, doors, floors, appliances, low-flow toilets, water efficiency, HVAC, roofs (7)
- Lighting, bulbs, fixtures, use of natural lighting, etc. (2)
- Attic space
- Ventilation
- Site location
- Get contractors on contracted out rehabilitation work to use energy efficient products
- Educating tribal members how to maintain new products

## **Question 2: What support and training do you need to develop a sustainable construction project?**

Participants identified the following types of needed support and training:

- How to define a project and write an RFP
- Top-down education. Getting political will and convincing the board
- Partner with tribal colleges, use of graduate students (engineers, architects), other local and community college partnerships and resources
- Educate maintenance and warehouse staff
- Have a green purchasing initiative
- Local workforce training - either on the job or at a training site

- Training residents on green practices, cost benefits, maintenance, etc.
- Pre-development and design funding – Big picture planning
- Engaging community partners. Need to work on the communication process and getting buy-in. Need to improve the mechanisms used for communication
- Need assistance how to have a community-building process
- There needs to be a link between language and culture on the issue of sustainability. Make sure we are all understanding the same concepts. Focus on "what is the message?"
- Staff training
- Technical support for code officials
- Assistance in developing own standards
- Charette with all stakeholders
- Money
- HUD: Develop a consortium of funding agencies that can partner with HUD dollars
- Training for NAHASDA on 1) green building technologies, 2) what LEED certification means and how that differs from other certification programs
- TA from HUD or HUD-approved agency on how to develop a master plan
- Webinar for TA is a potential BUT tribes may need assistance linking to a webinar
- Liaison at HUD that continues through a whole project - someone who can come out monthly
- On-line video training (YouTube) is a possibility, but there are concerns about tribal access
- Checklist for procuring green construction materials
- RFP template for contractors for green building; LEED provides a framework for ensuring all parties are committed to green building
- TDC is a limiting factor - need greater flexibility
- Energy training
- Decision makers need training
- Regional housing association training
- Force account training/certification
- Hands on training
- On-site training
- Train the trainers
- Financial support
- Community based education for our tribal members - for them to have buy-in
- Contact local housing associations to put out information to All tribal housing and building contractors
- HUD - allowing tribes to be empowered by allowing grant funds for develop and green builds (NOFA)
- More incentives for Green Builds/rebates

**Question 3: What are your major impediments to developing sustainable construction projects?**

Participants identified the following impediments to developing sustainable construction projects:

- Lack of homeowner education
- Perception of costs – green is too costly
- The conflicts that can be involved or perceived in using traditional methods vs. incorporating modern technology
- Perception that pushing back to traditional ways is a step back to poverty
- Board education and buy-in
- No more land – lack of space, needing to buy land
- Need for council buy-in and education
- Manpower – not enough maintenance workers; sometimes bring in workers from other areas, which increases cost
- Money/funding top to bottom – plan, build, maintain, and rehab
- Planning design is very important to avoid later problems
- Education of residents about benefits of energy efficient retrofits/behavior change
- Existing dispersed housing developments; developing consensus among community in developing Master Plan to reduce building footprint
- There is not always a need for housing where tribal council members want it; i.e., politics
- Lack of data on housing need; research
- Need to clearly demonstrate benefits of sustainable housing to decision-makers
- Multiple environmental review requirements
- Lack of cooperation with adjacent communities
- Land status; lack of documentation of real estate transfers
- Demolition of houses; regulations written for cities, not suitable for tribal communities
- Federal, State, local housing funding should have tribal set-aside based on formula
- Transportation
- Location
- Building cycle
- Political
- Funds/cost
- Education
- Myths
- The cost placed on the homeowner for replacement materials or products for energy efficient building
- Availability of energy efficient products in rural areas
- Cultural/traditional long-term cost
- Floor plans –barriers to using new designs – new generation homeowners not accepting anything less than grandpa’s house
- Budget restraints
- TDC limitations

#### **4. What can your tribe do to help your community understand the benefits of green construction?**

Participants listed the following ways to bring communities on-board:

- Board and Councils should attend workshops and summits
- Promote projects you do get done
- Grant administrators leave to attend workshops
- Workshops should be free and include food and incentives
- Follow the money – explain the cost savings
- Educate community about green building:
  - About conservation methods, e.g., better to insulate home than burn free wood
  - Explain relationship between green homes and health
  - Increase awareness of the younger generation
  - Identify targeted groups –e.g., elders, youth – and target them in appropriate ways
  - Get buy-in from opinion leaders/“squeaky wheels”
  - Use social media to educate the community/twitter about your event, e.g., “free light bulbs”
  - Tribal newspapers, radio, television commercials
  - Media blitz everywhere – health clinics, schools, etc.
  - Community events, e.g., booth at sporting events
  - Hand out materials at general Council meetings, election day campaign/polling places (2)
  - Fact sheet for community members on green building benefits
  - Community dinner to discuss benefits of green building
  - Community meetings for all tribal members
  - Monthly newsletter and/or Web sites with information about green building
- Educate/orientation at move-in for new residents on green building features; have staff do hands-on tenant training
- Partner with other agencies so you are not duplicating the number of visits from departments (e.g., Health Department brought energy efficient light bulbs when making health visits.)
- Partner with casinos, lodges, hotels, restaurants, and tribal enterprises
- National Indian Housing Survey – see if they are getting information about green issues/practices
- Tie green building into cultural heritage
- The RFP for any housing element should include training for operations and maintenance staff and require training manual from installer
- Need tribal champion at decision-making level
- Tribal councils adopt a policy or include language in the mission statement that supports/encourages green building in **all** projects
- Have tribal council establish an environment committee that can educate the council as a whole on green building; educate employees and tribal leadership
- EPA should encourage cooperation by the tribal housing and tribal environment departments
- Share information between tribes on green housing successes
- Tribal lack of or minimal access/use of computers/electronic media is potential barrier
- One-on-one training
- Demonstration

- Utility data collection
- Testimonies
- Partnerships/NGO
- Sensitive to community concerns
- Urban areas in the tribal areas that may be using home loan funds to purchase homes need to be educated for pre-existing structures
- Provide giveaways with information on the products

## **COORDINATION MEETING**

**September 28, 2011  
1:00 pm – 4:30 pm**

Participants:

Payton Batliner	Department of the Interior, Office of Indian Energy and Economic Development
Mike Blanford	HUD PD&R
Dana Bres	HUD Policy Development and Research (PD&R)
Tedd Buelow	US Department of Agriculture, Rural Development
Melissa Fettters	Choctaw Housing Authority
Brian Gillen	HUD, Eastern Woodlands ONAP
Daniel Glenn	Glenn & Glenn Architects
Rebecca Halloran	HUD ONAP Office of Loan Guarantee
Jed Harrison	Environmental Protection Agency, Office of Radiation and Indoor Air
Lizana Pierce	Department of Energy, Tribal Energy Program
Sabrina Stephens	Southern Plains Indian Housing Association Board member and Choctaw Nation Housing Authority
Roger Taylor	National Renewable Energy Laboratory, Tribal Energy Program
Trina Thompson	Choctaw Housing Authority
Michelle Tinnin	HUD SPONAP
David Vought	HUD, Alaska ONAP

This meeting began with a summary of the barriers that were identified in the three focus groups from the prior day. Most participants in this meeting were present at one of the focus group, but not all.

### **Discussion during Barrier Summary**

Participants expressed concern that a number of the barriers listed are not specific to green building. They think we need to focus on impediments to doing green building including the “low hanging fruit” such as weatherization, but omit those barriers that are endemic to doing any housing construction in Indian Country. Nonetheless, someone commented that some tribes are

less sophisticated than others and could benefit from training about the construction process. Tribes which are not familiar with the process may need this prior to any green training.

Another participant suggested that the questions asked in the focus group and the Green Building Council definition of sustainable development used in the focus groups favored certain responses and topics over others. He suggested both were designed to elicit strong discussion of environmental and energy factors, but not about the health side of sustainability or cultural issues. [Note that issues of the relationship of sustainability to culture and health were discussed as part of the focus groups. See pp 19, 21, 22, 23, 31, and 33.] The participant said that we need to broaden people's understanding of what "green" means to include these elements.

Participants were told that they could add barriers to the list. They added:

- Health factors
- Cultural relevance

#### **Barrier: IHP and Comprehensive Planning**

- Tribes submit the Indian Housing Plan (IHP) annually to HUD to describe their year's housing activities. HUD substantially updated the IHP this year. HUD reviews the IHP to ensure compliance and approves IHPs to release IHBG funding. Some tribes have fairly comprehensive IHPs and others give less detail. The level of detail is very tribe-specific. Some participants felt that tribes could use assistance to help them develop long-term/master plans.
- Some participants, however, felt that the planning issues faced by tribes were larger than the IHP. Tribes need to integrate their housing plan with the larger tribal planning process. Within their own governments, tribes need to plan roads, housing, etc. as a single entity. To have smart growth planning, need communication across different tribal entities. The goal is to integrate housing, roads, health services, zoning, etc. in one planning process. Housing should stem from the master plan.
- Several participants stressed that not all tribes are "reservation tribes," in particular tribes in Oklahoma and Alaska but also in other places. Thus, challenges may be different and familiarity with long-term planning may be different. Choctaw Nation, for example, has 5-, 10-, and 100-year plans so they can be sustainable in all areas for future generations. They also work with their counties, cities, and State to do comprehensive planning.
- Perhaps it would be productive to ask each region to identify barriers to tribes conducting comprehensive planning.

A participant said that some tribes keep doing the same things because that's what they are familiar with. It is easier to do what you've always done than to do something new. In contrast, another participant stated that there were tribes that were leading the way in commitment to sustainability: "The Pokagon Band of Potawatomi showed us what could be done to make a tribal community really green, from the planning of the site through the whole process. We have example after example in our communities of sustainable building. We just want to promote this and share this with other tribes."

After the barriers were summarized and discussed, participants were asked to use dot ballot voting to prioritize the barriers, which were also posted on the wall. They each were given 10 dots in each of two colors:

- Red dot: absolute priority even if not specific to green building
- Green dot: priorities among the barriers to green building

Most participants did not use all of their dots!

The combined impediment list for the coordination meeting was composed of the following:

- Lack of money and flow of funds
- Flexible funding – quantity of restrictions, e.g., multi-generational units, etc.
- Connect private sector innovation to Federal efforts
- Building codes – capacity building – regulation – permitting- recording
- Do training, then no jobs for tribal members afterwards
- Getting the right person/people to attend trainings and meetings
- Cultural barriers – tribes have adapted to the “HUD house mentality.”
- Existing units are unsustainable – need to commit to fixing old houses (disposition regulations, written for cities not tribes).
- House design focused geographically, culturally, climatically – commit to specific HUD support. Make a new, full commitment that replaces the 1960s, 1970s homes.
- Lack of local plan –difficult to do relocation.
- Need master planning. Allocate more funding for tribes to do their IHPs, so they can develop comprehensive housing plans rather than just meet requirements for using housing funds
- Transition from one “administration” to another – consistent voice; turnover of personnel at key tribal agencies/positions and Federal agencies
- Short-term versus long-term focus; incentives to tribes to look long term at materials, etc; i.e., fewer restrictions on design, mandated materials, “low bid” mentality – want housing to have more durable life cycle, educating the public about the short term cost vs. the long term savings and health benefit
- Land issues: ownership and land is available for development (including environmental). Politics within communities among Village Corporations, tribes and cities limit the land for sale, because they don’t work together to get more housing, no one wants to sell land. Funding to consolidate fractional heirship interested on allotted reservations. Also lack of space, needing to buy land
- Letting existing water/sewer/roads/electric limit sustainable development and creativity
- Need to meet with the community many times to get dialogue going and planning developed, and travel to remote communities is very expensive.
- Institutional resources for research and development, need for data
- Lack of consensus building
- Using traditional methods and incorporating modern technology or vice versa
- Perception that going back to traditional ways is a step back to poverty
- Council and Board education and buy-in

- Manpower – not enough maintenance workers; sometimes bring in workers from other areas, which increases cost
- Planning design is very important to avoid later problems
- Residents not knowing benefits of energy efficient retrofits/behavior change
- Existing dispersed housing developments
- There is not always a need for housing where Tribal Council members want it; i.e., politics
- Green building: need to clearly demonstrate benefits of sustainable housing to decision-makers
- Multiple environmental review requirements
- Lack of cooperation with adjacent communities
- Federal, state, local housing funding should have tribal set-aside based on formula
- Transportation
- Location
- Building cycle
- Myths
- The cost placed on the homeowner for replacement materials or products for energy efficient building
- Availability of energy efficient products in rural areas
- Cultural/traditional long-term cost
- Floor plans –barriers to using new designs – new generation homeowners not accepting anything less than grandpa's house
- Budget restraints
- Resident Investment-ownership: someone else is paying for it so not as invested in making changes. There is a cost to investing in housing and energy. Homeowner buy in is needed.
- Green Building is perceived as a luxury or a fad
- Quality vs. Quantity (better to do more or to do it better?)
- The initial cost vs. the Life Cycle cost. Big initial investments which will pay off in the long run.
- Getting information to the tribes about industry financing vs. government financing
- Limited number of native architects/culturally relevant/sensitive green design
- Leadership priorities - regulation and banking not going well together
- Appraisal Value - For example, getting an appraiser out to a location can be costly
- Fragmentation within the tribe (ownership/responsibility)
- Availability and development of green building codes
- Standardization of rules and regulations and processes across agencies
- Tribal empowerment - lack knowledge of exercising their sovereignty; they don't know they have the ability to legislate in that area.
- Agencies don't always incentivize green building.
- Remoteness, especially in Alaska. Sometime the infrastructure does not exist
- The number of tribes and the diversity of tribes
- The large number of tribes and the limited number of Federal staff
- Coordination with tribal groups/NGO's is not as good as it could be

- Cost - such as the impact of Total Development Cost, Dealing with small tribes is not cost efficient. COSTS AND FUNDING
- Quality Assurance
- Tribal capacity - turn over, knowledge sharing and transfer. Change in leadership, short staffed.
- Dissemination of information during digital age
- Lack of physical housing inventory
- Construction time and the availability of contractors.
- Okay to go “deeper green” - the cutting edge in green building construction

## **Results of Dot Ballot Voting**

### **General construction issues (red dots)**

The five impediments that received the most votes included:

- Lack of money/flow of funds (9 votes)
- Tribal capacity – turnover, knowledge sharing and transfer. Change in leadership, short-staffed. (7 votes)
- Land issues (9 votes)
- Short-term versus long-term focus (6 votes)
- Fragmentation within the tribe (ownership/responsibility)(5 votes)

### **Green issues (green dots)**

The major categories that emerged from voting on specific barriers included:

- Building codes (21 votes)
- Costs/funding (16 votes)
- Capacity building (15 votes)
- Planning (15 votes)
- Benefit analysis (8 votes)
- Infrastructure (6 votes)

One participant noted that there are some issues the group can impact and others that are harder to impact, e.g., staff turnover. She suggested a focus on issues that the group can address.

## **Bridging the Gap (Solutions)**

### **Capacity building**

- Expand the services provided by NGOS that give interim support.
- Develop the capacity of CDCs because there are not enough groups that have this capacity.
- Develop the number of Native CDCs with capacity to serve Native communities.

## **Building codes**

- Develop matrix of funding sources to tribes.
- Develop new green building standards. Participants think we should talk about standards rather than a code. Tribes can develop their own standards/policies that are more stringent than state codes.
- Have one, consistent income limit for all programs (several think this is true for all construction).
- Tribal policy.
- Adopt incentives that encourage tribes to implement green practices/ meet green standards.
- Adopt International Building Code (IBC) customized by individual tribes.
- Pick standards that you particularly want to emphasize, e.g., stand up to a particular wind speed. But need to be cautious because don't want to discourage building because of too stringent standards.

## **Planning**

- Provide initial planning for tribes
- Education – identify funding for planning:
  - Let tribes know that they can use planning under ICDBG
  - Let tribes know that there are regional planning commissions that can help them do comprehensive planning
  - Can access EDA public works planning grants
  - Can get other grants to do planning, e.g., new Native American Business Development Initiative grant
  - ANA
  - Green PDR – can provide assistance to tribes to identify funding sources
  - NAIHC – training on development/financing
- Cross-agency training and training at the tribal level to educate groups about the types of assistance that are available
  - Native Learning Center
  - NAIHC provides classes and also provides direct TA to tribes
  - Mayor's Institute on Urban Design – do tribal version

## **Benefit Analysis – Resident and Community Education**

- Because of turnover, need to do this “over and over and over again.” Have to repeat education/training regularly because energy is not at the top of their radar screen. The training is more effective when you get a group of people in a given tribe together for a several day training because there is critical mass and the knowledge is sustainable. This is much more effective than having only one person from a tribe attend a regional training. You need a champion to lead the charge, and the champion can be a housing authority director.

## **Costs/Funding**

- Focus on smaller items as a step toward going green.
- Education on the life-cycle costs; Daniel Glenn – HUD needs to reevaluate TDC to incorporate lifecycle costs; educate tribes on ability to get a waiver and go above TDC

- Education about the benefit to other programs – for example, healthier buildings will reduce health care costs
- Use creative financing – use other sources in addition to HUD funds – do better job of leveraging funding
- Cost-benefit analysis tools – see payoff of putting in different energy efficiency options – see return on investment (ROI) of different options
- Tax benefits, e.g., of solar
- Health benefits/impact on health
- Cultural relevance
- Insurance reduction -- Convince insurance companies that building green homes will save them a great amount of money. Fireman's Fund (offers discount for LEED home), Farmer's Insurance of Los Angeles and Fireman's Fund (provides eco-rebuild options)
- Train appraisers -- Get appraisers to recognize additional value to a home that has green features
- Educate local lenders about value of green building
- Cost-benefit analysis ("What if matrix")

### **Demonstrate benefits of sustainable housing to decision makers**

- Assessment of existing stock that identifies shortcomings
- Comparison of green project to other homes – do as baseline (not ongoing)
- Look at best practices in tribal housing
- Lots of these analyses have been done for non-tribal developments – perhaps adapt these
- Have a tribal version of the DOE's Solar Decathlon featuring solar (or other renewable energy heated) homes built at tribal colleges.

### **Quality versus Quantity**

- Perception change – show them tribes who have done it well/models
- Offer incentive/rebates

Paramount to this effort – need to change how homeowners perceive housing. How can housing providers change homeowners' attitudes and behaviors?

### **Coordination/Collaboration/Improvement: How do different agencies improve how they work together to accomplish goals?**

- Find right person to provide TA
- Coordinate/schedule meetings better rather than have multiple meetings with tribes
- Coordinate among agencies about outreach schedules – align agency visits
- More local training – get more tribal areas together
- Do a joint project – agencies work together on, e.g., master plan
- Clearinghouse of meetings
- Interagency meetings

## APPENDIX B: ORIGINAL INVITEES

Govern-mental Invitees	Name and title	Organization and address
1	Winter Jojola-Talburt, Electrical Engineer	DOI, Office of Indian Energy and Economic Development
2	Rebecca Halloran, Presidential Management Fellow	HUD, Office of Native American Programs
3	Lizana Pierce, Administrator	DOE Tribal Energy Program
4	Tedd Buelow, Native American Specialist	US Department of Agriculture
5	Brian Gillen, Region V Sustainability Officer	Eastern/Woodlands ONAP
6	Randy Akers, Administrator	Northern Plains ONAP
7	Lisa Stewart, Grants Management Specialist, or Tom Carney, GM Director	Northwest ONAP
8	Michelle Tinnin, Native American Program Specialist	Southern Plains ONAP
9	Carolyn J O'Neil, Administrator	Southwest ONAP
10	Jed Harrison, Tribal Program Advisor	EPA
11	Carrie Nelson, Low-Income Weatherization for Tribes	Bonneville Power Administration
12	Cynthia Kitchens, SWT	U.S. Army Corps of Engineers
13	Martin Nee, Division Director	HUD Healthy Homes
14	Dana Baer, Assistant Program Director, or Gordon Delchamps, General Engineer	Indian Health Service
15	Evangeline Campbell, Program Manager	Department of Labor Indian and Native American Program
16	David Vought, Native American Programs Specialist	HUD Alaska ONAP

NGO Invitees	Name and title	Organization and address
1	Stewart Sarkozy-Banoczy, Director	HUD PD&R IPI (formerly of Oweesta)
2	Russell D Kaney, Sr. Program Director	Enterprise Community Partners
3	Charles Anderson, Training & TA Specialist	National American Indian Housing Council
4	Katherine (Katie) Hoyt, Legislative Fellow	National Congress of American Indians
5	Judith Grunau, Architectural Designer/Program Manager	Cold Climate Housing Research Center
6	Tony Monroe, Board Member	Green Native Council
7	Jon Panamaroff, Executive Director	Oweesta
8	Dr. Holly YoungBear-Tibbetts, Dean, External Relations	College of Menominee Nation
9	Lacey Gaechter, Assistant National Director	trees, water & people
10	Holly Tiger Bowers, Executive Director	Native Learning Center
11	Colleen Steele, Executive Director	Mazaska Owecaso Otipi Financial Inc.
12	Zoe LeBeau, Sr. Program Manager	Corporation for Supportive Housing, American Indian Supportive Housing Initiative (AISHI)
13	Cindy Owings, Executive Director	Red Feather Development Group
14	Tanya Fiddler, Executive Director, also on Native CDFI board	Four Bands Community Fund

15	Greg Bland, Director	Travois Environmental Services
16	Hazel James, Executive Director (works with Navajo Nation)	Indigenous Communities Enterprises
17	Billie Spurlin, Executive Director	Salt River Financial Services Institution
18	Dorothy Stoneman, President, and Kim Phinney, Director Rural and Tribal Development	Youthbuild

Coordination Meeting	Name and title	Organization and address
1	Rick M. Garcia Regional Administrator	Denver Regional Office HUD
2	Rebecca Halloran, Presidential Management Fellow	HUD OLG, on rotation with the DOE's Tribal Energy Program
3	Lizana Pierce Director	Tribal Energy Program Department of Energy
4	Tedd Buelow Native American Specialist	US Department of Agriculture
5	Charles Anderson, Training & TA Specialist	National American Indian Housing Council
6	Phil Bush, Director	Nevada-California Indian Housing Association
7	Russell Kaney, Sr. Program Director	Enterprise Community Partners
8	Judy Romann, Construction Projects Coordinator, and/or Annette Bryan, Executive Director	Northwest Indian Housing Association (NWIHA)
9	Evangeline Campbell, Program Manager	Department of Labor Indian and Native American Program (INAP) TEAM
10	Jon Panamaroff, Executive Director	Oweesta
9	Sabrina Stephens and another SPIHA director	Southern Plains Indian Housing Association
10	Dan Duame, Board President	Association of Alaska Housing Authorities and Aleutian Housing Authority
11	Kitcki Carroll, Director	United South and Eastern Tribes

12	Jed Harrison, Tribal Program Advisor [or Alfreda Mitre, EPA Region 8, Tribal Assistance Programs]	Environmental Protection Agency (EPA)
13	Winter Jojola-Talburt, Engineer, or Payton Batliner, Program Specialist	DOI/BIA
14	Michael Chavez, President	Southwest Indian Housing Assn
15	Dana Baer, Assistant Program Director, or Gordon Delchamps, General Engineer	Indian Health Service
16	Steven Golubic, National Tribal Liaison	FEMA
17	Rodger Boyd, Deputy Assistant Secretary	HUD ONAP
18	Roger Taylor, Tribal Energy Program	DOE NREL
19	Martin Nee, Division Director	HUD Healthy Homes
20	David Vought, Native American Programs Specialist	Alaska ONAP
21	Brian Gillen  Native Programs Specialist, Region V Sustainability Officer	Eastern/Woodlands ONAP
22	Randy Akers Administrator	Northern Plains ONAP
23	Lisa Stewart, Grants Management Specialist, or Tom Carney, GM Director	Northwest ONAP
24	Michelle Tinnin Native American Program Specialist	Southern Plains ONAP
25	Carolyn J O'Neil Administrator	Southwest ONAP