

**U.S. DEPARTMENT OF ENERGY
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY**

DOE's Tribal Energy Program



Greener Homes National Summit 2011

Tribal Weatherization Programs and Opportunities

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Department of Energy

Advancing Energy and National Security through Science, Technology and Environmental Stewardship

Contributes to the future of the Nation by ensuring energy security, maintaining the safety, security and reliability of the nuclear weapons stockpile, cleaning up the environment from the legacy of the Cold War, and developing innovations in science and technology

Managed by Program Offices:

- **Civilian Radioactive Waste Management**
- **Electricity Delivery and Energy Reliability**
- **Energy Efficiency & Renewable Energy**
- **Environmental Management**
- **Fossil Energy**
- **Legacy Management**
- **Nuclear Energy**
- **Science**

Principally, a National Security Agency



Energy Efficiency and Renewable Energy

Clean Energy for America's Future

Invests in clean energy technologies that:

- Strengthen the economy,
- Protect the environment, and
- Reduce dependence on foreign oil

Leverages partnerships to speed the adoption of new technologies in renewable energy, advanced vehicles and fuels, and energy efficiency.



* Operates an annual budget of \$2.2 billion and responsible for investing more than \$16 billion in Recovery Act funds.

DOE's Tribal Energy Program

Promote tribal energy sufficiency, economic development and employment on tribal lands through the use of renewable energy and energy efficiency technologies



Mission

Offering financial and technical assistance to Tribes through government-to-government partnerships that:

- 1) Empower Tribal leaders to make informed decisions about energy choices;***
- 2) Bring renewable energy and energy efficiency options to Indian Country;***
- 3) Enhance human capacity through education and training;***
- 4) Improve local Tribal economies and the environment; and***
- 5) Make a difference in the quality of life of Native***



DOE's Tribal Energy Program

Why Invest in Good Construction?

“Whole building” design is a way of designing buildings by considering how the building structure, systems and surroundings work best together, to save energy and reduce environmental impact.



Generally considered are:

- Heating, cooling and ventilation
- Insulation, windows and lighting
- Climate
- Heat gain (unwanted heat)
- Building orientation, siting, and landscaping
- Innovative building materials.

Over a 30 year life span, only 2% (on average) of the overall investment in a building goes towards construction

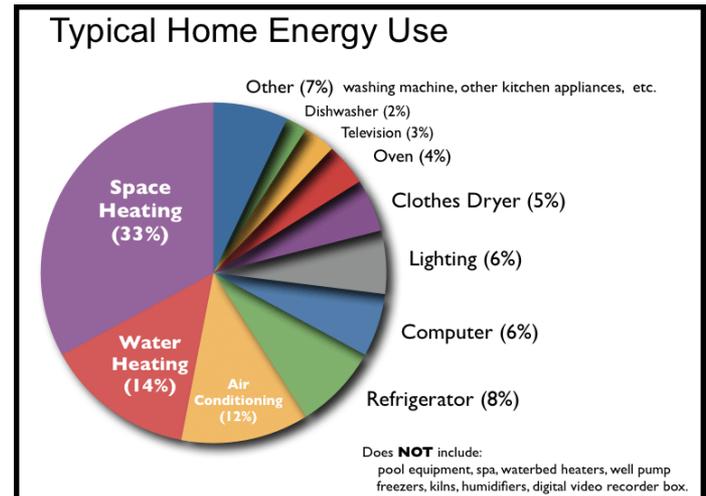


DOE's Tribal Energy Program

Why Invest in Energy Efficiency First?

Existing buildings represent one of the best opportunities for immediate and cost-effective reductions in energy use and greenhouse gas emissions.

- It's easier and cheaper to save energy than produce energy – “The low hanging fruit”
- Energy efficiency can return ~\$2.51 in benefits for every \$1 invested (Based on DOE Wx Program)
- Average of 30 percent of the energy used in commercial buildings goes to waste
- Every \$1 spent on efficiency saves at least as much as \$2 spent on renewables



Weatherization reduces the export of local energy dollars and keeps more money in the community



DOE's Tribal Energy Program **Three Pronged Approach**

**Financial
Assistance**

*Success through
Government-to-
Government
Partnerships*

**Technical
Assistance**

*Leveraged through
Intergovernmental
Coordination*

Information & Education

*Leveraged with Intra-
governmental
Coordination*



Providing Financial Assistance

Providing financial and technical assistance to Tribes for the evaluation and development of renewable energy resources on Tribal Lands

Eligibility:

Federally-recognized Tribe, Tribal Energy Resource Development Organization, or Tribal Consortium (two or more entities, at least one of which is an Indian Tribe).



Tribal Lands include Indian reservations; Public domain Indian allotments; Former Indian reservations in Oklahoma; Land held by under the provisions of the Alaska Native Claims Settlement Act (43 U.S.C. 1601 et seq.); and Lands held in fee simple or under a Federal land lease.

Funds Awarded through a Competitive Process



FY2011 Financial Assistance

Financial Assistance to Spur Deployment in Indian Country

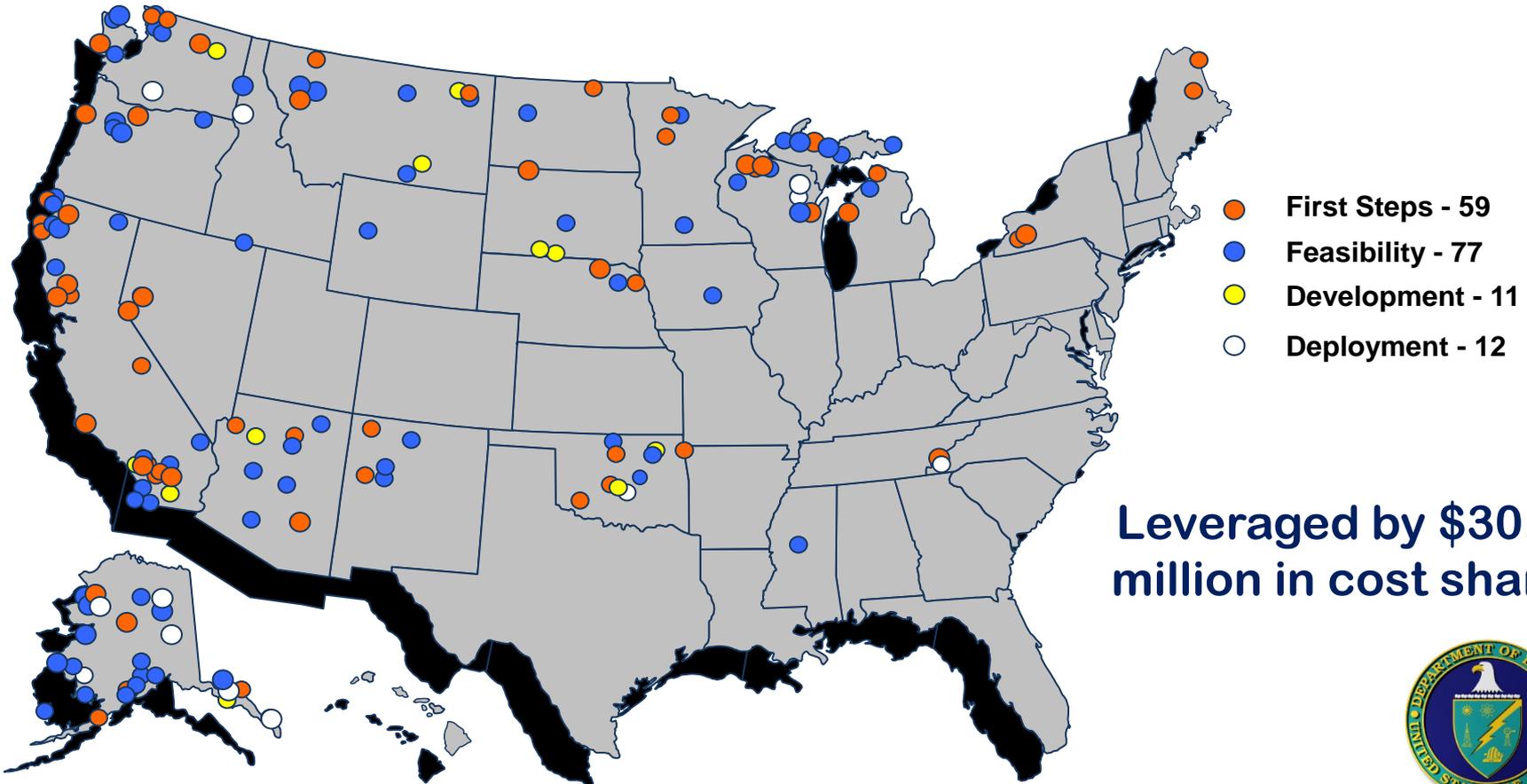
- **First Steps Toward Developing Energy Efficiency and Renewable Energy on Tribal Lands**
 - Strategic energy planning
 - Energy options analysis
 - Energy organization development
 - Human capacity development
- **Energy Efficiency Development and Deployment in Indian Country**
 - Feasibility Studies
 - Installation of energy efficiency improvements
- **Renewable Energy Development and Deployment in Indian Country**
 - Feasibility Studies
 - Development (pre-construction) activities
 - Deployment (construction) activities



Solar arrays on Navajo home



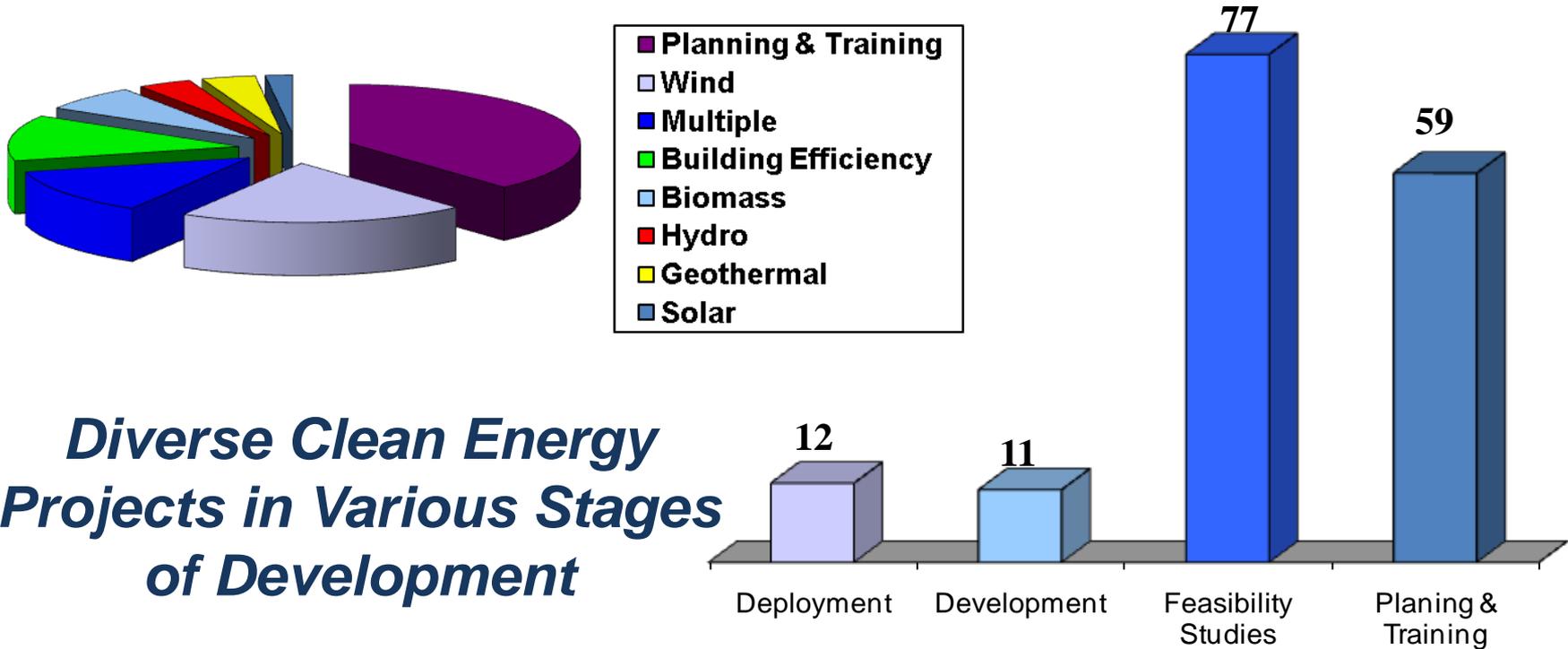
DOE has Funded 159 Tribal Energy Projects Investing \$36 Million (2002-2011)



Leveraged by \$30.9
million in cost share



Tribal Energy Project Pipeline

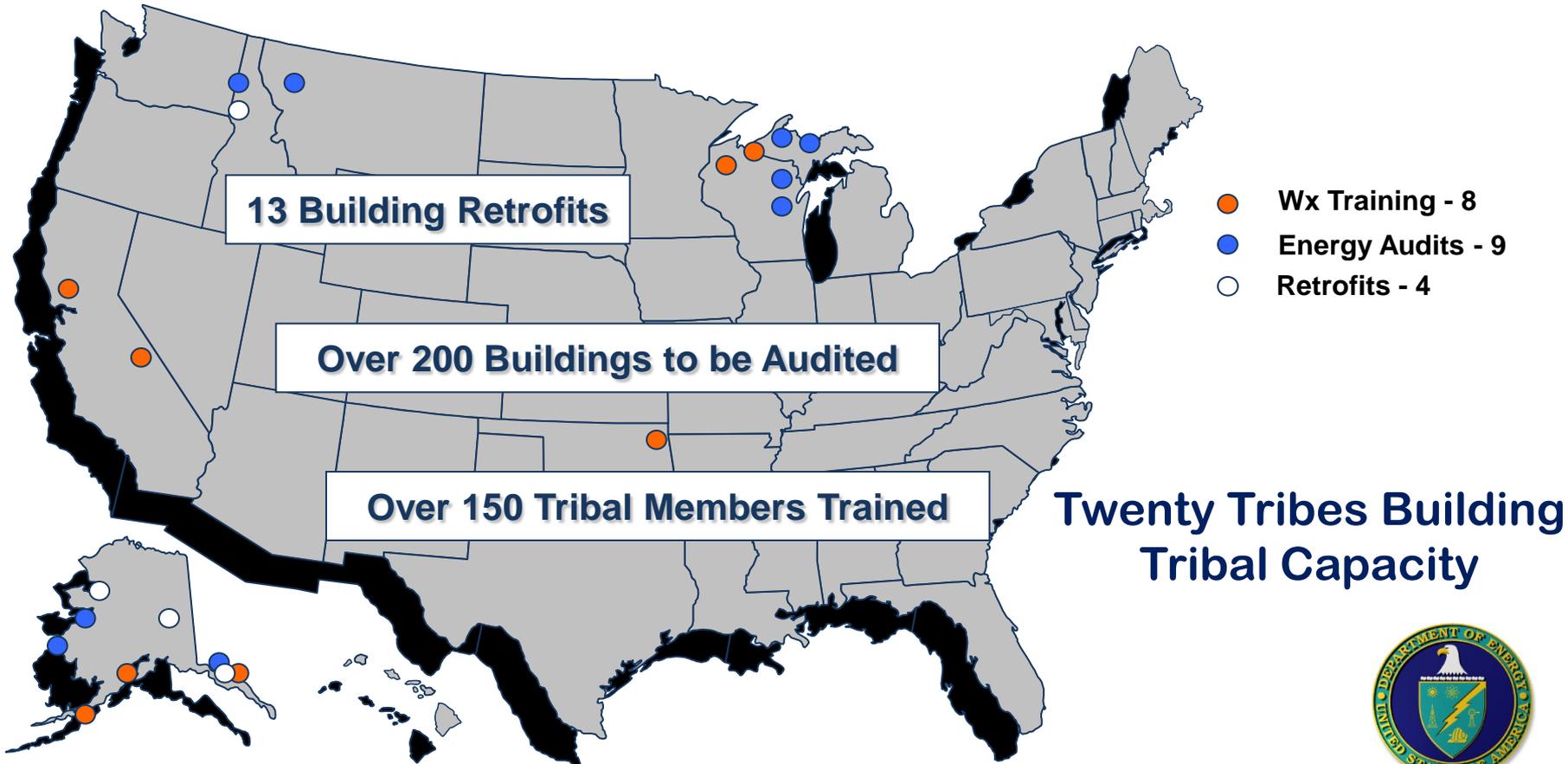


Assisting Tribes Fulfill Their Energy Vision



Energy Efficiency & Wx Training Projects

Goal of Reducing Building Energy Use by 30%



Saving Energy for the Future



Sault Ste Marie's Tribal Health Clinic and Community Center, one of 20 buildings for which the Tribe conducted energy audits



Forest County Potawatomi Community (MI) installed 1,664 new LED lights for a 54% reduction in energy use



Lighting upgrades could save the Chickasaw Nation \$180,000 per year



Building Local Skills and Knowledge



Keweenaw Indian Community trained members in weatherization: 9 energy auditors; 8 envelop professionals; and 38 air sealing insulation installers. Logo contest winner shown above.

Cook Inlet Tribal Council training two apprentices in weatherization (4,000 hour program). Apprentices to graduate February 2012 and be hired to serve local communities



Scotts Valley Band partnered with 12 Tribes in Lake and Mendocino Counties to build local capacity through education and training. Twenty-three members trained and 3 hired by the Tribes



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Coordination*

**Information &
Education**



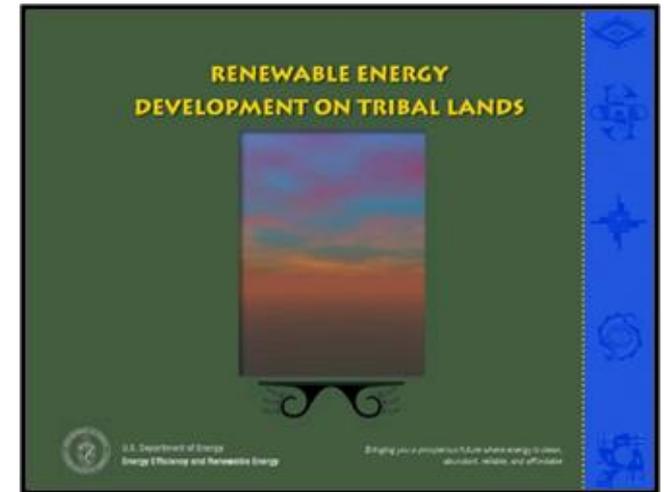
Technical Assistance & Information and Education

▪ Technical Assistance

- Expert assistance through DOE's National Laboratories (NREL & SNL)
- Pre-feasibility transmission studies through DOE's Power Administrations (WAPA & BPA)

▪ Information & Education

- Annual Program Review
- National training workshops
- Webinars
- Informational Resources
- Student Internships



Annual Program Review

Unique Tribal Forum for Sharing and Learning

- Forum for Tribes to meet and learn from other Tribes pursuing energy sufficiency through renewable energy and energy efficiency, and share in their successes
- Networking & learning opportunity
- Tribal project presentations – lessons learned.
- Forty to fifty (40-50) tribal energy projects represented
- Typically 200-250 participants



Denver, CO (Nov 14-18, 2011)



Funding Sources & Information Resources



Information Resources

Join the DOE Tribal Energy Email List

Distributes information on funding opportunities through the DOE Tribal Energy Program and those from other agencies, training opportunities, and upcoming events.

Subscribe today at http://apps1.eere.energy.gov/tribalenergy/join_email_list.cfm?subject=Join E-Mail List

Funding Opportunities

- Tribal Energy Program Funding Opportunities
- Federal, State & Utility Funding Opportunities (Grants.gov)
- Federal Funding Available for State, Local, and Tribal Governments

Training Opportunities (Also see the TEP website)

- Workshops
- Webinars
- Internships
- Classroom

Upcoming Events (Also see the TEP website)

- Program Events
- Conferences
- Summits



First 750 kW Turbine on
Tribal Lands in the
Contiguous U.S.

Resources & Tools

DOE EERE Energy Savers (www.energysavers.gov)

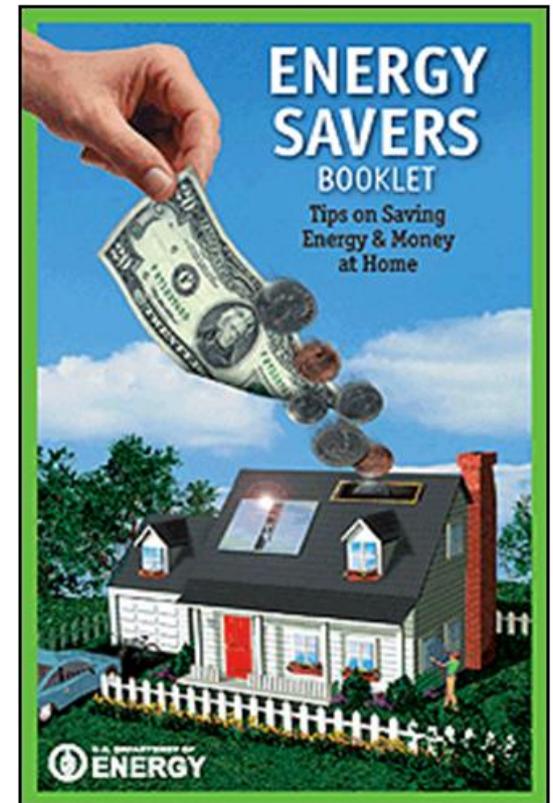
- Energy Efficient Appliance Rebate Programs
- Estimating Energy Use
- Reducing Energy Use
- Designing & Remodeling a Home

EPA's Energy Star (www.energystar.gov)

- Energy Savings Calculators
- Savings Calculator
- Product Information

EPA's Portfolio Manager (www.energystar.gov/benchmark)

- Free online tool that helps you the benchmark, track, report, and disclose public building energy use.
- Portfolio Manager is an interactive energy management tool that allows you to track and assess energy and water consumption across your entire portfolio of buildings in a secure online environment.



Consumer's Guide <http://www.energysavers.gov>
Energy Savers Tips on Saving Energy & Money at Home <https://www1.eere.energy.gov/consumer/tips>

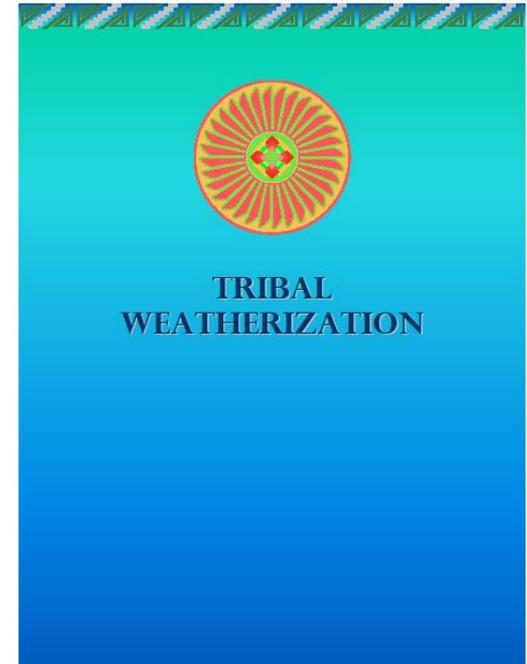
Resources & Tools

Weatherization Assistance Program Technical Assistance Center (WAPTAC) www.waptac.org

- Virtual' library of all rules, regulations, policies and procedures required by DOE's weatherization program
- Technical Tools & Aids
- Best Practices
- Training Tools
- Network of Training Centers
- Weatherization Day Tools & Resources

Tribal Wx Handbook

- Concept initially developed by Energy Out West (EOW), a consortium of state and local weatherization providers in the western United States.
- The purpose of the Handbook is not only to provide examples of successful Tribal weatherization projects, but to provide the resources, skills, and encouragement to build bridges and form partnerships between Tribes, state and local WAP providers, and other housing resources to increase energy efficient housing services to low-income Native Americans.



Resources & Tools

Energy-10™ Software Tool (<http://www.nrel.gov/buildings/energy10.html>)

- ENERGY-10™ is a software tool that helps architects, builders, and engineers quickly identify the most cost-effective, energy-saving measures to take in designing a low-energy building.
- ENERGY-10™ can conduct a whole-building analysis, evaluating the energy and cost savings that can be achieved by applying energy-efficient strategies such as daylighting, passive solar heating, and high-performance windows and lighting systems.
- Using the software at the early phases of design can result in energy savings of 40% to 70%, with little or no increase in construction cost.
- Licensed to: Sustainable Buildings Industry Council, Innovative Design

RETScreen Clean Energy Project Analysis Software (<http://www.etscreen.net/ang/home.php>)

- Unique decision support tool developed with the contribution of numerous experts from government, industry, and academia.
- The software, provided free-of-charge, can be used worldwide to evaluate the energy production and savings, costs, emission reductions, financial viability and risk for various types of Renewable-energy and Energy-efficient Technologies (RETs).
- The software also includes product, project, hydrology and climate databases, a detailed user manual, and a case study based college/university-level training course, including an engineering e-textbook.



Funding Sources

U.S. Housing and Urban Development Grant Opportunities

For U.S. Department of Housing and Urban Development (HUD) grants for Indian housing and community development, see [Public and Indian Housing Grants](#).

Low-Income Energy Assistance

The U.S. Department of Health and Human Services (HHS) offers assistance to low-income households to meet their home heating and cooling needs through the [Low-Income Home Energy Assistance Program](#) (LIHEAP). If your Tribe is not a LIHEAP [tribal grantee](#), you may need to contact [state grantees](#) for assistance. The DOE [Weatherization Assistance Program](#) reduces energy costs for low-income households by increasing the energy efficiency of their homes while ensuring their health and safety.

Weatherization Assistance for Low-Income Families

- Weatherization Assistance Program <http://apps1.eere.energy.gov/weatherization>
- Low Income Home Energy Assistance Program (LIHEAP)
<http://www.acf.hhs.gov/programs/ocs/liheap/grantees/states.html>



Funding Sources

Government Grants

- Government Grants <http://grants.gov>
- Federal Grants <https://www.fedconnect.net/>
- Rural Development Grants and Loans <http://www.rurdev.usda.gov/>
- Financial Opportunities for Consumers <http://www1.eere.energy.gov/financing/consumers.html>

Database of Incentives

- Database of State Incentives for Renewables and Efficiency <http://www.dsireusa.org/>

Government Loans and Loan Guarantees

- Rural Development Grants and Loans <http://www.rurdev.usda.gov/>
- Bureau of Indian Affairs (BIA) Loan Guarantees
<http://www.lrboi.com/commerce/docs/BIAloanprogrambrochure.pdf>
- Department of Energy (DOE) Loan Guarantees <http://www.lgprogram.energy.gov/>



Contact Information

Tribal Energy Program
Department of Energy
Golden Field Office
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Email: tribal@go.doe.gov

To receive periodic email information on funding opportunities, upcoming workshops and training, and other tribal energy information

“Join Our Email” List on-line at
www.eere.energy.gov/tribalenergy

