

NATIONAL WILDLIFE FEDERATION 2010

- On average, Tribal households pay significantly more in home energy expenses than other Americans. Most utilities are solely owned and operated by non-Tribal entities, *so the money paid to energy providers immediately leaves tribal communities.*

THE NEW ENERGY FUTURE IN INDIAN COUNTRY

- The infrastructure and revenue streams created by tribal renewable energy and energy efficiency projects could help tribes achieve economic growth and energy independence, and strengthen tribal sovereignty. *These projects would help keep utility revenue within tribal communities* and create worker training opportunities in clean energy jobs, such as installation, maintenance, weatherization, and construction. While such projects must carefully consider the potential impacts on the land, wildlife and habitat, they could help tribes meet their energy demands and sustain their natural resources for future generations.



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Weatherization

- The *simplest and most cost-effective way of reducing energy costs* and emissions is *by increasing the energy efficiency* of buildings. Weatherization includes strengthening insulation barriers, sealing gaps, replacing inefficient materials, and installing energy-efficient heating and cooling systems. *These should be the first stages of any energy efficiency plan.*



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TRIBAL OPPORTUNITY

Because Indian tribes endure the highest energy costs in the nation, great strides can be made in economic savings by weatherizing tribal homes and buildings. While no method currently exists to project total economic savings via weatherization on all Indian reservations, a few examples illustrate the significant potential to lower energy costs and conserve energy. *Depending on the condition of the building, weatherization can save 15 to 40 percent in energy consumption and costs.*



Retro Fit Loading Order

Fundamentals

- *Insulation*
- *Air Sealing*
- *Duct Sealing*
- *Lighting*
- *Appliances*
- *Water Conservation*
- *Plug Loads*
- *Behavior*

Major Systems

- *Heating*
- *Air Conditioning*
- *Ventilation*
- *Water Heating*

Renewables

- *Solar PV*
- *Solar Thermal*
- *Wind*
- *Water Catchment*



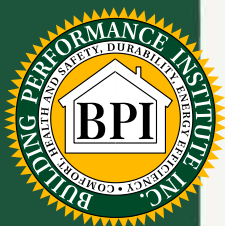
Training for Weatherization: What it Really Takes

Building Science Academy



Successful Energy reduction Programs are Driven by well trained Tribal Members!

- The foundation of every successful program is the people delivering the services. (Energy Wise)
- Well trained individuals with the right resources, tools and training can deliver consistent energy savings to the Tribal communities.
- Beyond rebates and incentives well trained people can drive long term sustainable programs if they are provided quality training and mentoring programs.



Successful Training Programs *Must* be taught by Experienced Trainers.

Trainers Experience must include the following:

- Energy Assessments
- Blower Door testing experience
- Infrared Thermal Imaging
- Combustion Safety testing
- Gas leakage testing
- Contractor Installation of Energy Efficient Measures
- Heating and Cooling Systems
- Sales and Marketing
- Building Code Knowledge
- Construction Business Management

Training is only as good as the trainer and the curriculum!





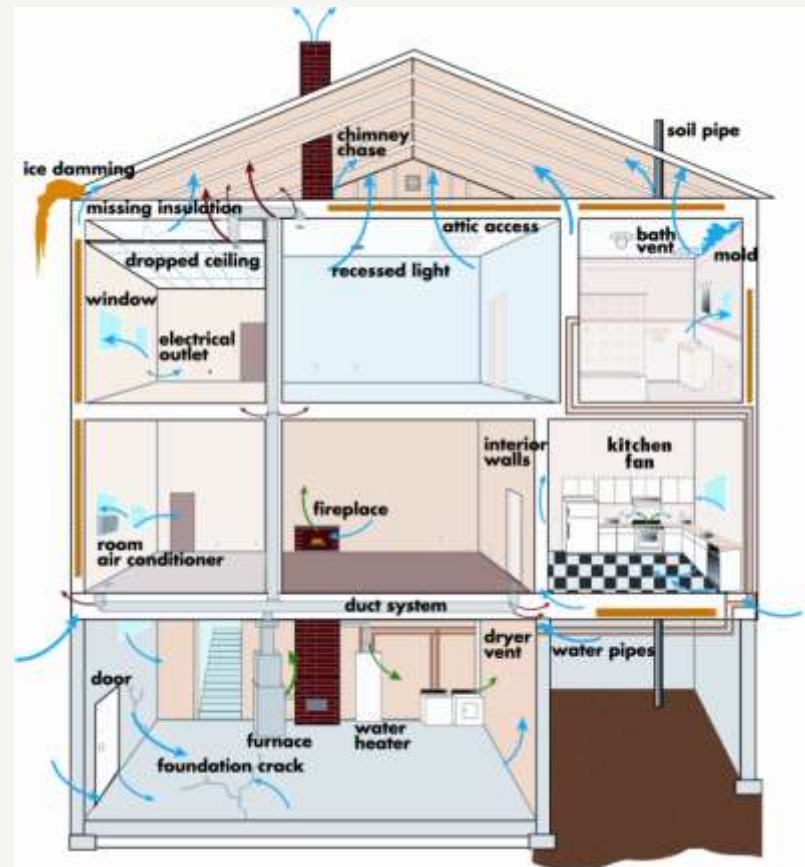
Nationally recognized Certifications Must be the first Step!

1. Building Performance Institute (BPI) certifications are required in over 100 energy efficient programs in 35 states.
2. Everything starts with a good Energy Assessment
BPI Building Analyst certification
3. Effectively Communicating the results of the Energy Assessment.
4. House as a System training is not optional!
5. Certifications alone are not sufficient to prepare a worker to be effective and successful.



Typical home...full of systems...

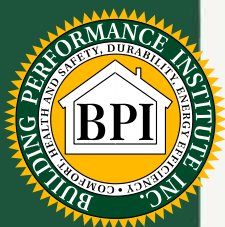
- Drainage system
- Foundation system
- Flooring system
- Wall system
- Ceiling system
- Roof system
- Heating system
- Air conditioning system
- Ventilation & IAQ systems
- Moisture control systems
- Distribution system
- Exhaust systems
- Plumbing systems in/out
- Electric, Appliance
& Lighting systems
- Energy management system



Hands on Training a Must!



**Keweenaw Bay Indian Community Training
Baraga, Michigan**



- BPI Building Analyst Certification
- BPI Envelope Professional Certification
- BPI Weatherization Installer Certification
- BPI Multi Family Certification
- BPI Certified HVAC Certification
- Advanced Equipment Training
- Hands on Field Training
- Mentoring Programs



The BSA Difference

- We provide training at your location.
- Assistance and partnerships for grants and other initiatives.

Our Trainers are all certified and experienced
Contractors.





BSA Tribal Training Director

Eric Hunting

Member of Little Traverse Bay of
Odawa Indians

Michigan Licensed Contractor for 26 years.

Holds Multiple BPI Certifications

BSA Certified Trainer







Weatherization Installer Training

BPI & DOE Approved





Ceiling attic Prop



Chimney Flashing Props



Pre-Insulation stack barrier



Duct Sealing Props



Attic Knee wall Prop



Attic Ventilation Prop



Dense Pack Wall Insulation Prop



Tools provided for training



Energy Efficient Chandelier



Low Flow Shower Head



How safe is this???



seeifixedit.com

Multi Family Project



New Work Truck



seeifixedit.com



Why I do what I Do!

- Poor housing conditions are among many hardships confronting residents of American Indian reservations. According to a recent study by the U.S. Department of Housing and Urban Development (HUD), housing problems of American Indians are considerably more severe than those of non-Indians in all parts of America.





Contact Information

- **Building Science Academy**

www.buildingscienceacademy.com

Eric Hunting or Sam Flanery

info@buildingscienceacademy.com

616-887-2311

