



Tribal Weatherization Workforce Development

- **Identify the tribal entity that will implement the Weatherization program.**
- **Identify Funding Sources to support a complete Program**
- **Develop Weatherization Manual, Training program guidelines, Quality Assurance Program**
- **Assess building stock needs and trends**
- **Implementation Plan based on Building stock report**
- **Identify Training needs based on Assessment and IP Plan**
- **Worker Recruitment**
- **Development of ongoing mentoring and training program.**



Challenges we have seen!

1. Resources have been directed to the training of workforce without a program in place.
2. Focus has been on certifications vs delivery of true workforce development. (ie, mentoring programs, weatherization training that aligns with individual building stock assessments, quality assurance programs that focus on the delivery of improved solutions and processes.)
3. Lack of identification of personnel that have been trained and mentored to lead the weatherization program.
4. No long term plan to continue a program and take into the private market outside of the tribe to produce profitability that will provide sustainability for the Energy Efficiency program



Solutions

Identify the tribal entity that will implement the Energy Efficiency program.

1. Housing department-New homes, retro fit homes, rental housing.
2. Public works department-Tribal Public buildings, Water conservation programs.
3. Environmental department. Health and Safety directives.
4. Current workforce development program
5. Renewable Energy department

Suggestion is to have a combined effort to identify who takes the lead and how they work in concert.



Solutions

Identify Funding Sources to support a Complete Program

1. Maximize current directives from federal government to combine funding sources from all agencies.
2. Pooling funding sources allows a tribe to align with the proper loading order of energy efficiency, health and safety and renewable energy to offer complete solutions.

Suggestion is to have a combined effort to identify who takes the lead and how they work in concert.

Proper 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***
- ***Geothermal***
- ***Biomass***





Hands on Training a must!





Health and Safety

Weatherization is not just about energy efficiency.

Most people spend 90% of their time in indoors.

The number of children with asthma has doubled in the last 10 years.

1 in 40 Children have too much lead in their body's

Thousands of Children die each year from chemicals stored or improperly stored in their home.

Each year accidents in the home injure over 6.5 million people a year.

U.S. Department of Housing and Urban development.



Energy Efficiency + Renewable Projects = Successful Programs

- Even the solar industry recommends starting with energy-efficiency steps. “It’s silly to invest in solar energy if the extra power is blowing out the window,” says Monique Hanis, a spokeswoman for the Solar Energy Industries Association in Washington, D.C. **“We believe they work together.”**
- A study done by a Lawrence Berkeley National Laboratory scientist claimed that commissioning all of the nation’s commercial buildings would yield the greatest energy savings per dollar spent of any option, including wind and solar energy production. Commissioning involves fine tuning a building’s existing energy systems to improve performance and eliminate wasteful energy use.
- **Making American homes and buildings more energy efficient presents an unprecedented opportunity for communities throughout the country.**

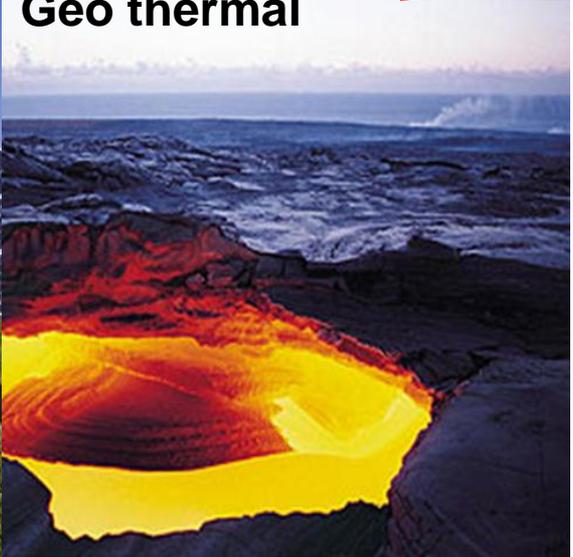
LOADING ORDER



Solar projects



Geo thermal



Wind





How are we going to solve this?

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.

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Complete Programs

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 clean energy jobs. 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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Contact info!

For more information on developing a complete program Contact

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Thank you!