Tanana Chiefs Conference Energy Projects

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“Stronger Together for the Next 100 Years”
Tanana Chiefs Conference is a Tribal Consortium representing 42 federally recognized tribes, and 37 villages.

MISSION: “Tanana Chiefs Conference provides a unified voice in advancing sovereign tribal governments through the promotion of physical and mental wellness, education, socioeconomic development, and culture of the Interior Alaska Native people.”
The Region

- 235,000 Square Miles
- 37% of the State
- Extreme Subarctic
- Majority off road system
- Avg. Village load is about 100-150 people, 75kW load
- Roughly the size of Texas, fewer miles of road than Rhode Island
TCC Energy Program Goals

1. Reduce the cost of Energy in Rural Alaska
2. Build Capacity in Rural Communities
3. DO NOT get overwhelmed by the enormity of the challenge
All our Eggs are in the “Oil Basket”
TCC Energy is Currently Managing $4mill in Projects

- $1 mill, 5yr DOE Tribal Energy Grant to TCC
- $623k Solar PV/Battery Project Hughes Tribe
- $200k CDBG 3-phase upgrade City of Hughes
- $1.3 mill, RACEE grants Galena, Ruby, Holy Cross
- $215k EPA Generator Replacement Project CIK
- $100k Backup Generator/Solar Project Kaltag
- $373k Biomass/Lodge Rehab Project Minto
- $380k Biomass Project Anvik

$4.1 Million
Largest Solar PV array North of the Arctic Circle, in Alaska
Minto Biomass Project
2016-2021 DOE Inter-Tribal Award

Interior Athabascan Energy Network (IAEN)

1. Assist our villages with the creation of a Tribal Utility
2. Set new construction standards for public buildings by working with local partners
3. Funding to Support more projects/planning
4. Support to complete case studies and broadcast projects
IAECBN 1st Year Punch List

- Implement Interior Athabascan Energy Network (IAEN), hold quarterly meetings.
- Develop a high energy efficiency building performance standard.
- Create a capacity building “Power Pool” network.
- Complete line loss study in one stand alone village.
- Craft case studies of past energy projects.
- “Other duties as assigned”.

Energy Efficient Buildings

• Formed an Agreement with our housing authorities to build to a 6 star minimum.
• Why 6 star?
• Using the AKwarm energy rating software to predict or verify the performance of residential and commercial construction.

TCC HOUSING
The Agreement

- Working together to produce results.
- Almost went to hell in a hand basket!
- Concluded it’s a win for all.
Forming A Power Pool

• Conglomerate of 11 independent Electric utilities.
• Currently known as the Villages Power Collaborative
• Spread across the entire region.

Beaver                   Chalkyitsik          Hughes
Birch Creek              Ruby               Venetie
Rampart                  Stevens Village     Koyukuk
Nikolai                  Arctic Village       

What Could Go Wrong??

- 100% diesel power generation / 75kw average load.
- Some plant operators have limited mechanical experience.
- No maintenance program.
- No scheduled repair & replacement program.
Game Plan

• Assist with sending power plant operators or new recruits to a PPO training and certification program.
• Initiate a Computerized Maintenance Management System.
• Address power distribution inefficiencies. (Line loss)
• Building capacity through a supportive network.
Maintenance Program

• Partnered with 60Hertz to develop and deploy a CMMS designed for rural Alaskan electric utilities.
• Pilot program will include 4 participants from the “Power Pool”.
• Launch date: January, 2018.
Case Studies

- Condensed information
- Quick reading
- Easy to digest
- Accessible on the TCC website
Shared Information

- Broadcast project info across the region and beyond.
- More to come...
Other Projects

• Never a dull moment at TCC Energy!
• “Other duties as assigned”

14kw grid tie pv system at the Kaltag clinic.
More Projects

Minto biomass storage

Before

- Exposed to the rain.
- Buried under snow.
More Projects

After

• Dry biomass storage.
The Big Picture

- It’s all about forming a strong network.
- Creating partnerships.
- Banding together to succeed!
Athabascans
Not
Athabascant’s
Baasee’
Thank you