Tribal Facilities Retrofits

"Freeing up resources through reduced demand"

2011 PROGRAM REVIEW

Central Council Tlingit & Haida Indian Tribes of Alaska

Elias Duran – Project Manger

Welcome!

Elias Duran – Facilities Manager

- Day to day operations of facilities
- Budget control over facilities
- Project needs for future space requirements
- Maintenance
- Capital improvements

Presentation Overview

- Brief history of the Tlingit & Haida Tribes
- Tour of our existing facilities
- Historical utility cost data
- Summary of Project Objectives
- Expected cost and emission reductions
- Strategic planning for future implementation

Our Proud Heritage

Two separate Tribes

United by common challenges

Surrounded by vast natural resources

Our Proud Heritage

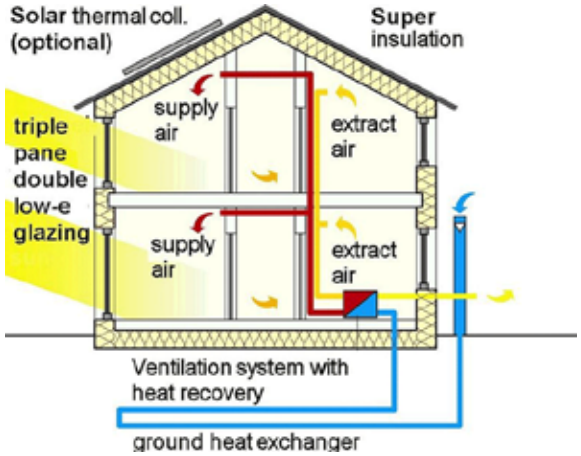
"Our people have made a transition to a written, formal process to engage in foreign government relationships in order to address issues impacting us. Foreigners continue to attack our rights to self-government as sovereign nations, while continuing the decimation of the Tlingit and Haida population, our traditional homeland and our access to natural resources. The Tlingit nation and the Haida nation united with foresight, courage, and determination to fight for our rights and preserve our relationship with the land, water, and resources. As a result of those who fought the battle, the Central Council of Tlingit and Haida Indian Tribes of Alaska was formed to serve the interests of the Tlingit and Haida people for generations to come" CENTRAL COUNCIL

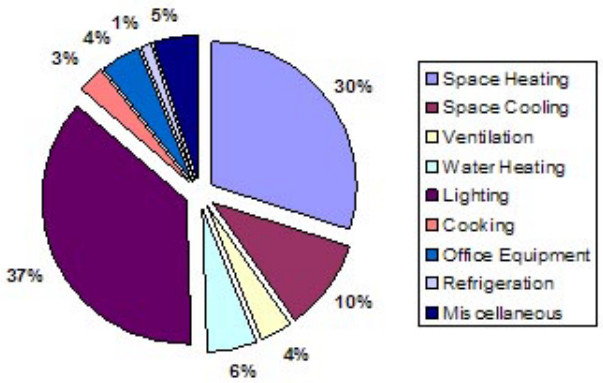
Our Challenges

- **Services**

  Central Council offers a variety of family-centered services focused on promoting and supporting safe and stable families. These services assist individuals in attaining the education and skills necessary to support healthy lifestyles, develop meaningful careers and engage in the traditional activities of their communities.

Striving to do more with less





Money Isn't All You're Saving

Andrew Hope Building

- Central Council Headquarters
- Approx. 41,000 square feet over three levels
- Constructed in 1985
- Wood Frame Construction

Andrew Hope Building

Biennial Celebration Event 2010

Edward K. Thomas Building

- Constructed in 1982
- Approx. 11500 sf over 2 floors
- Admin Offices

Douglas Headstart

- Built in 1962
- Approx. 3700 s.f. over 2 floors
- Wood Frame
- Mostly original construction
- Headstart program

VTRC

- Vocational Training & Resource Center
- Approx. 9800 sf
- Built in 1998
- Open to public
- Employee and Client training services

Energy Audit

PARTNERENERGY

- On site inspection of our tribal facilities
- Evaluated each building's energy consumption
- Prepared Level II Audit
- Delivered list of Energy Efficiency Measures to address in retrofits

Energy Audit Findings
Hope Building

Recommended Energy Efficiency Measure	Estimated Installed Cost	Annual Cost Savings	Available Rebates	Simple Payback (Yrs)
Occupancy Sensors	$4,270	$3,871	N	1.1
CO/2 Demand Ventilation Control	$8,400	$11,013	N	.8
Variable Frequency Drives & High Efficiency Motors on AHU Supply Fans	$14,000	$1,704	N	8.2
Lighting Upgrade w/delamping	$57,411	$11,439	N	5
New High Efficiency Boilers w/night setback and Electric Hot Water Heater	$77,300	$4,318	N	17.9

Energy Audit Findings
Edward K. Thomas Building

Recommended Energy Efficiency Measure	Estimated Installed Cost	Annual Cost Savings	Available Rebates	Simple Payback (Yrs)
Occupancy Sensors	$2,030	$835	N	2.4
High Efficiency Boilers w/night setback and Electric Hot Water Heater	$37,300	$6,621	N	5.6
Lighting Upgrade w/delamping	$17,309	$2,577	N	6.7

Energy Audit Findings VTRC

Recommended Energy Efficiency Measure	Estimated Installed Cost	Annual Cost Savings	Available Rebates	Simple Payback (Yrs)
Occupancy Sensors	$1,980	$981	N	2.0
High Efficiency Boilers w/night setback	$77,300	$3,817	N	20.3
Lighting Upgrade w/delamping	$11,555	$1,397	N	8.3
Programmable T-stats w/night setback	$21,000	$1,981	N	10.6

Energy Audit Findings
Douglas Headstart

Recommended Energy Efficiency Measure	Estimated Installed Cost	Annual Cost Savings	Available Rebates	Simple Payback (Yrs)
Occupancy Sensors	$1,170	$115	N	10.1
High Efficiency Boilers w/night setback	$37,700	$1,359	N	27.7
Lighting Upgrade w/delamping	$3,263	$243	N	13.4

Energy Audit Cumulative Totals

Recommended Energy Efficiency Measure	Estimated Installed Cost	Annual Cost Savings	Available Rebates	Simple Payback (Yrs)
Andrew Hope				
Total retrofits	$161,381	$32,345	N	5
Thomas Building				
Total retrofits	$56,639	$10,033	N	5.1
VTRC				
Total retrofits	$111,835	$8,176	N	10.2
Douglas Headstart				
Total retrofits	$42,133	$1,717	N	24.5
TOTALS	$371,988	$52,271	N	7.1

Proposed Project Objectives

- Perform recommended retrofits
- 3 year plan to implement
- 1st year Andrew Hope retrofits
- 2nd year VTRC
- 3rd year Thomas and Douglas Headstart

Thank you!

Approved Energy Efficiency Measure Note Demand (kW)
Saved
Annual (KWh)
Saved
Fuel Oil
(Gallons) Saved
Annual Source
MBtu Saved
Annual GHG Emissions
Saved (lbs CO2e)
Andrew Hope
1. Occupancy Sensors 0.0 39,667 0 135,383 9,009
2. CO2 demand ventilation control 0.1 513 4,766 478,390 35,182
3. VFDs & Premium Efficiency Motors on AHU Supply fans 0.2 17,456 0 59,577 3,964
4. Lighting upgrade w/ delamping 39.9 117,208 0 400,030 26,619
5. New HE Boilers w/ night setback & Electric Water Heater 0.0 0 1,877 187,727 13,811
Edward K Thomas
6. Occupancy Sensors 0.0 8,559 0 29,212 1,944
7. Lighting upgrade w/ delamping 8.9 26,405 0 90,121 5,997
8. New HE Boilers w/ night setback & Electric Water Heater 0.0 0 2,938 293,752 21,295
Vocational Training and Resource Center
9. Occupancy Sensors 0.0 10,051 0 34,304 2,283
10. Lighting upgrade 4.4 14,316 0 48,862 3,251
11. Programmable T-stats w/ night setback 0.0 0 861 86,147 6,336
12. New High Efficiency modulating Boilers 0.0 0 1,671 167,079 12,231
Douglass Headstart
13. Occupancy Sensors 0.0 888 0 3,031 293
14. Lighting upgrade 0.9 1,866 0 6,370 616
15. New HE Boilers w/ night setback 0.0 0 546 54,567 2,903
Tribal Courthouse
16. Occupancy Sensors 0.0 768 0 2,621 253
Records Archive Building and Storage
17. Temperature Heating Setpoint Night setback 0.0 0 78 7,840 417
54.3 237,698 12,737 2,085,014 146,403