Reducing the High Energy Costs of Alaska’s Rural Water Systems

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The Alaska Native Tribal Health Consortium’s (ANTHC) Rural Energy Initiative works with communities to implement innovative energy efficiency and renewable energy solutions to make public sanitation affordable for the people we serve across Alaska.

We believe basic sanitation should be efficient, sustainable and affordable.
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Breakdown of average operating costs for a water/sewer system in rural Alaska

- **Energy, 39%**
- **Labor, 44%**
- **Parts, 13%**
- **Regulatory, 4%**

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Our Path: A Comprehensive and Holistic Approach

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The Process: A Holistic Approach

• Evaluate the Entire Sanitation System for energy efficiency along with sanitation service performance
• Address energy issues along with non energy issues at the same time to save money and improve service
• Identify larger needs
The Process: Solve more than One problem at once

- Reduce Energy Cost
- Increase life span of equipment and infrastructure; no more “repair by replacement”
- Improve sanitation service
The Process: Training

• Provide local appropriate training
• Encourage stronger ties between maintenance and operations and administration
• Improve job satisfaction and reduce turnover
• Improve Earning Potential through energy savings and improved job skills
Our Path: A Comprehensive and Collaborative Approach

- Opportunities to Reduce Rural Sanitation Energy Costs
  - Behavior Changes
    - Proper O&M
    - Training & Education
    - Ongoing Monitoring
  - Hardware Changes
    - ANTHC Rural Utility Support
    - Efficiency Retrofits
    - New and Ongoing Projects
    - Renewable Energy Systems

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Case Study: Energy Efficiency Retrofits – Pilot Station, Alaska

Training and small scale improvements.

• Saves sanitation system over 1,000 gallons of fuel oil and 25,000 kWh annually

• Equates to 66% reduction in Fuel and 33% drop in electricity

• Combined annual savings of $11,090

BEFORE:
Brushing & cleaning soot from boiler

AFTER:
Clean flue passage

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Example Efficiency Measures

Sealed Stacks and Stack Caps

Boiler Cleaning Annually

Before   After  Before   After
LED Lighting

Before

After
Important Things YOU Can Do

• Annual Boiler Maintenance
• Keep Detailed Fuel Usage Records by week or month
• Seal air leaks in facilities
• Notify your RMW of significant changes in system operations
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Thank You

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For more information, please visit:
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