Energy Efficiency Upgrades for Sanitation Facilities in Selawik, Alaska

DOE Program Review
November 2011

Alaska Native Tribal Health Consortium
Division of Environmental Health & Engineering
Selawik Overview

Selawik

Anchorage
Selawik Overview
Selawik Overview
Selawik Overview:
Energy Use & Costs

**Electricity**
- FY 2010 $91,559
- Total = 337,829 kWh
- Average = $0.271/kWh

**Fuel**
- FY 2010 $38,902
- Total = 10,514 gal
- Average = $3.70/gal

**Heat Recovery**
- FY 2010 $7,688
- Total = 5,125 equiv. gal
- Average = $1.50/gal
Project Objectives

- Part of a larger effort to upgrade utility
- Improve Overall Energy Efficiency
- Reduce Dependence on Fuel
- Promote Affordable & Sustainable Utility
Project Objectives
Current Project
# Project Objectives

## Utility Recommended Retrofit Measures

<table>
<thead>
<tr>
<th>Utility</th>
<th>Recommended Retrofit Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Water Treatment/Vacuum Sewer Plant</strong></td>
<td>1. Maximize use of recovered heat</td>
</tr>
<tr>
<td></td>
<td>2. Upgrade all heat-add system components</td>
</tr>
<tr>
<td></td>
<td>3. Replace interior lighting</td>
</tr>
<tr>
<td></td>
<td>4. Eliminate heat trace on water loops</td>
</tr>
<tr>
<td><strong>Vacuum Sewer Collection System</strong></td>
<td>1. Leak detection testing and repairs for the glycol heat trace and vacuum sewer collection lines</td>
</tr>
<tr>
<td></td>
<td>2. Re-commission vacuum pumps</td>
</tr>
</tbody>
</table>
Maximize Heat Recovery
Upgrade Heat-Add System Components
Electric Heat Tape on Water Loops
Replace Interior Lighting
Vacuum Sewer Lines
Re-commission Vacuum Pumps
Progress to Date

- Gathered additional information on site
- Surveyed utilidors
- Finalized Project Work Plan
A Healthy & Sustainable Future for Rural Alaska