



Deep Energy Makeover for POSS Camp



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St. Paul, AK

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St. Paul Island

Population ~500

Located about 750 air miles from Anchorage and 200 miles north of the Aleutian chain in the Bering Sea





Tanadgusix Corporation (TDX) is an Alaska Native Village Corporation whose mission is to provide economic well being for the Tanadgusix indigenous peoples and the current residents of St. Paul Island, Alaska

600+ employees across the US and internationally

Provides services to commercial, industrial, and public sectors:

- Hotels and Tourism
- Alternative Energy
- Electric Utilities
- Power Plant O&M
- Wireless & Fiber Optic Technologies
- Construction and Environmental Remediation
- Marine Support Services
- Satellite Technologies





Our Vision

80% of ALL energy consumed on St. Paul Island comes from renewable energy sources by 2025

The Problem

Currently, 98% of all energy – fuel for electrical generation, heating, and transportation – comes from off-island





POSS Camp

“Petroleum Offshore Supply Support” Camp

Initially built to support oil exploration programs in the 1980s

First Native-owned and operated independent wind-diesel hybrid plant in the US

- Built in 2000
- Can run “diesels off”
- Provides 34% of facility electrical and heating
- Excess energy stored and used for heat



Project Goals

Increase percentage of renewable energy on St. Paul

Utilize excess wind capacity to generate heat

Increase usable space in POSS Camp while significantly decreasing fossil fuel consumption

Training, employment, and educational opportunities for community members and outside investment on St. Paul



POSS Camp Improvements

Based on findings from 2015 energy
audit

- Building envelope
- Electrical upgrades
- Wind to heat system
- Energy efficiency improvements

Scheduled for summer 2018



Wind Turbine Install

Vestas V27 wind turbine

To be located near current turbines next to airport

Scheduled for summer 2019





Overall energy improvement

Reduce electricity use by approximately 54%

Reduce the thermal load of the existing heated space by 23%

Almost double the contribution of wind power (from 34% to 67%)

Reduce diesel fuel purchases by an estimated \$239,000 per year - a net annual savings of nearly \$200,000

Increased revenue from leasing the additional 28,000 square feet of climate-controlled space

Environmental benefits accrued from reducing the facility's carbon emissions by 560 tons per year

