



Alaska Department of Transportation & Public Facilities

DOT&PF – NORTHERN REGION ENERGY UPGRADES: A CASE STUDY

ENERGY EFFICIENCY NOW:

AN ENERGY PERFORMANCE CONFERENCE FOR COMMERCIAL AND PUBLIC BUILDINGS

STATEWIDE PUBLIC FACILITIES

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PRESENTER

Rebecca Smith, P.E., CEM

- *State of Alaska Department of Transportation & Public Facilities*
- *Lead Project Manager, Energy Office*



TOPIC OVERVIEW

- Project Introduction
- Why Focus on St. Mary's and Tazlina?
- St. Mary's
- Tazlina
- Successes
- Challenges
- Lessons Learned



DOT & PF NORTHERN REGION ENERGY UPGRADES

\$3.5 Million
9 Communities
16 Buildings





Location	Facility Name
Chitina	Chitina Maintenance Shop Chitina SREB
Ernestine	Ernestine Maintenance Shop
Fairbanks	Grader Ward Storage Building (Cat House) Large Vehicle Warm Storage SEF Light Duty Shop and Office Warm Storage Building
Gulkana	Gulkana Airport Maintenance Building (Old Shop) Gulkana Airport Maintenance Shop (New Shop)
Nelchina	Nelchina Maintenance Building
Paxson	Paxson Maintenance Building
Slana	Slana Maintenance Building
St. Mary's	St. Mary's 3-Bay Shop St. Mary's SEF Shop St. Mary's SREB
Tazlina	Tazlina Maintenance Building

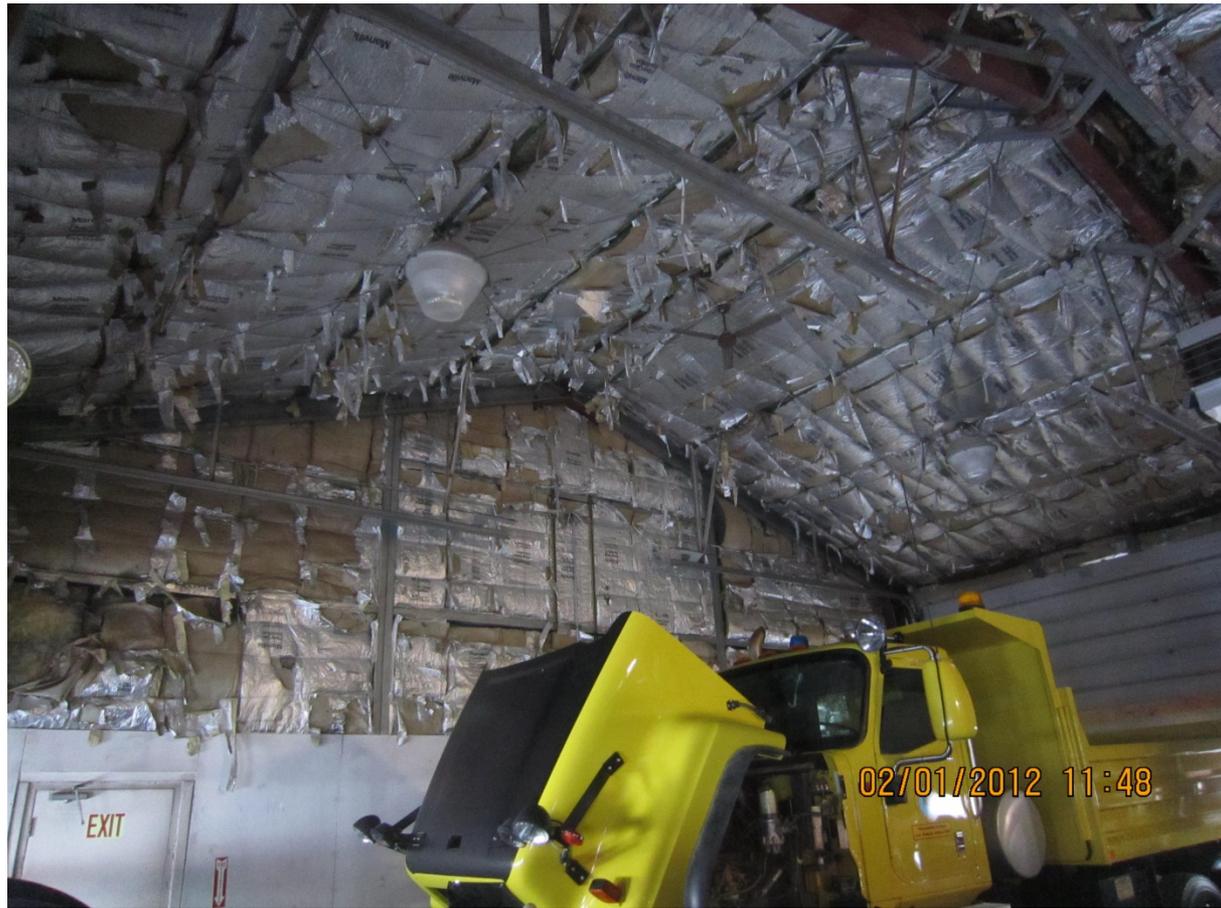


ENERGY EFFICIENCY MEASURES

- Interior and Exterior Lighting Upgrades
- Direct Digital Control Upgrades
- Programmable Thermostats Installation
- Heating System Redesign and Replacement
- Replace Electric Baseboard Heat with Alternative Heating Source
- Weatherization
- Man Door Replacements
- Window Removal and Infill
- Overhead Door Removal and Infill
- Increase Building Insulation
- Pipe Insulation
- Exhaust Fan Timers/Motion Sensor
- Engine Block Heater Timers
- New Fuel Oil Day Tank
- Combined Heat & Power Generation
- Retro-commissioning



Why Focus on St. Mary's and Tazlina





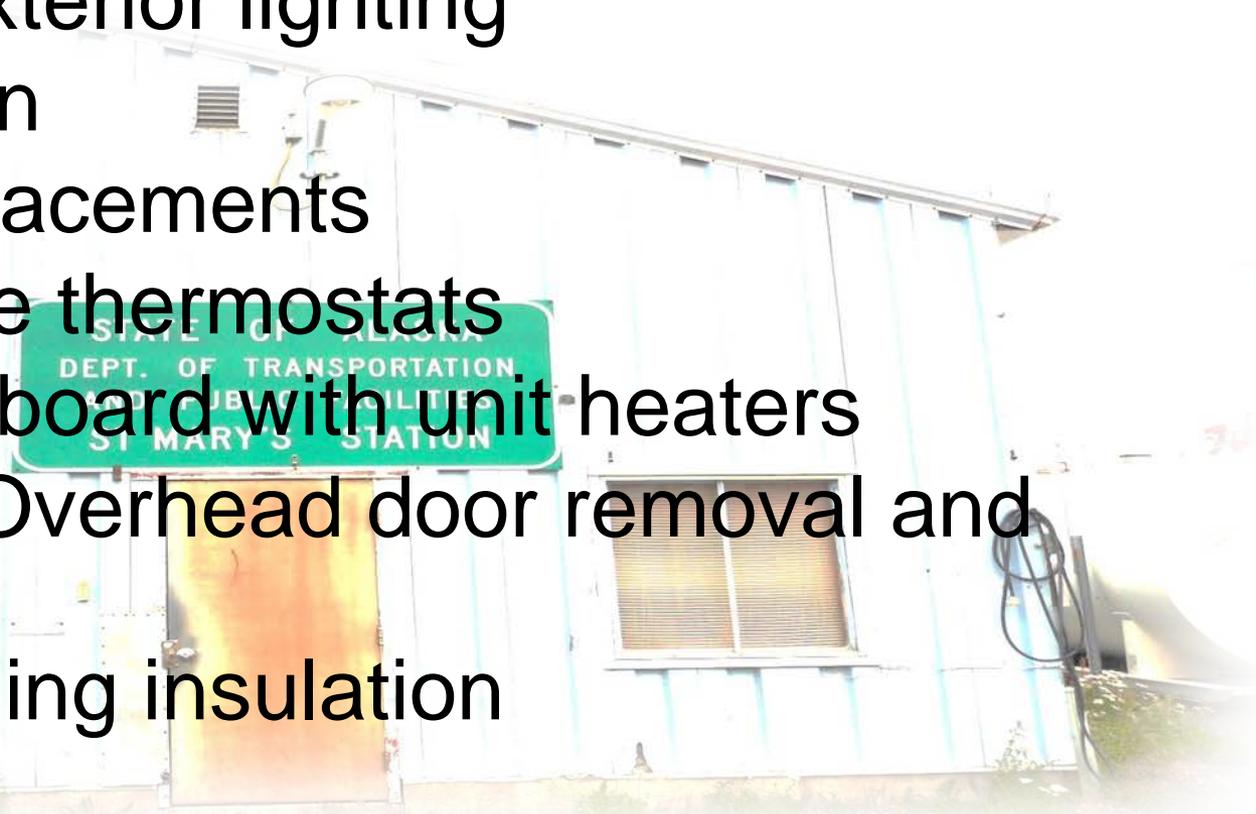
Why Focus on St. Mary's and Tazlina





St. Mary's EEMs

- Interior and exterior lighting
- Weatherization
- Man door replacements
- Programmable thermostats
- Replace baseboard with unit heaters
- Window and Overhead door removal and infill
- Increase building insulation
- Oil day tank





TAZLINA EEMS

- Interior and exterior lighting upgrade
- Weatherization
- Man door replacement
- Direct digital control upgrade
- Heating system redesign and replacement
- Engine block heater timers



SUCCESSSES

Working with the onsite personnel – CRITICAL
Technology Selection
Understanding of the Building
Know what hasn't worked in the past



CHALLENGES

Rural Alaska Logistics

Timing

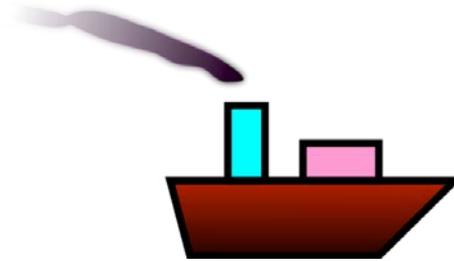
Technology Selection



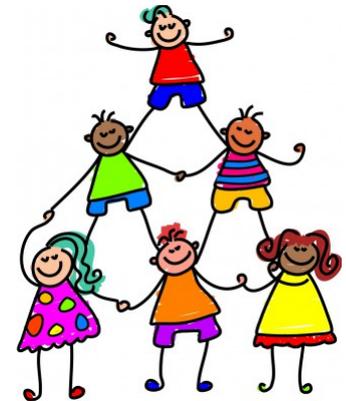


THE LESSONS LEARNED

- Lessons Learned
 - Keep logistics in mind



- Work with the onsite personnel – FROM THE BEGINNING!!!!





FOR FURTHER INFORMATION

Rebecca Smith, P.E., C.E.M

Dept. of Transportation & Public Facilities

Lead Project Manager, Energy Office

Rebecca.Smith2@alaska.gov

(907) 269-0802

Christopher Hodgin, P.E., C.E.M.

Dept. of Transportation & Public Facilities

Program Manager, Energy Office

Christopher.Hodgin@alaska.gov

(907) 269-7484

***Thank you
for your
attention
and this
opportunity.***