

# MAKING NORTHWAY ALASKA RESILIENT AND SUSTAINABLE THROUGH ENERGY EFFICIENCY AND SOLAR PV POWER



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Northway is located on the east bank of Nabesna River, 50 miles southeast of Tok. It lies off the Alaska Highway on a 9-mile spur road, adjacent to the Northway airport. It is 42 miles from the Canadian border in the Tetlin National Wildlife Refuge. Northway presently consists of three dispersed settlements: Northway Junction, Northway (the airport), and the Native village of Northway

The area around Northway was first utilized by semi-nomadic **Athabascans** who pursued seasonal subsistence activities in the vicinity of Scottie and Gardiner Creeks and Chisana, Nabesna, and Tanana Rivers. The Native settlement of Northway Village is located 2 miles south of Northway Airport.

Tribal Enrollment – 523  
Population - 250



# CLIMATE AND ENERGY COSTS

□ The warmest month in Northway, Alaska is July with an average high temperature of 70.4°F. The hottest day on record was July 11 2011 when the temperature hit 97.0°F.


□ During January the overnight temperature drops to an average of -24.0°. Our Coldest Recorded days were;

- 20 January 1952 -71.5 F
- 9 February 1979 -70.8 F
- 3 February 1947 -69.5 F
- 18 January 1971 -66.5 F
- 27 January 1962 -65.0 F

*Jim River, AK closed in on the all time record coldest temperature of -80°F set in 1971, which is not only the Alaska all-time record, but the record for the entire United States.*

□ Electricity is \$0.56/kWh and heating oil is \$3.00 per gallon in Northway

# GOALS AND OBJECTIVES OF THE PROJECT


- ❑ Install the community's first clean energy system and reduce exclusive reliance on fossil fuels and the corresponding environmental, social, and health costs.
  - ❑ Train two local staff to install and maintain a variety of EEMs and the PV system.
  - ❑ Save at least \$20,000 in annual utility expenses to reinvest in energy efficiency projects.
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# PROJECT SITES AND EXPECTED OUTCOMES


- ❑ Reduce energy usage in tribally owned buildings by 25%
- ❑ Offset electricity use by 65%
- ❑ Displace 345,568 kBTU's (British Thermal Units) annually.



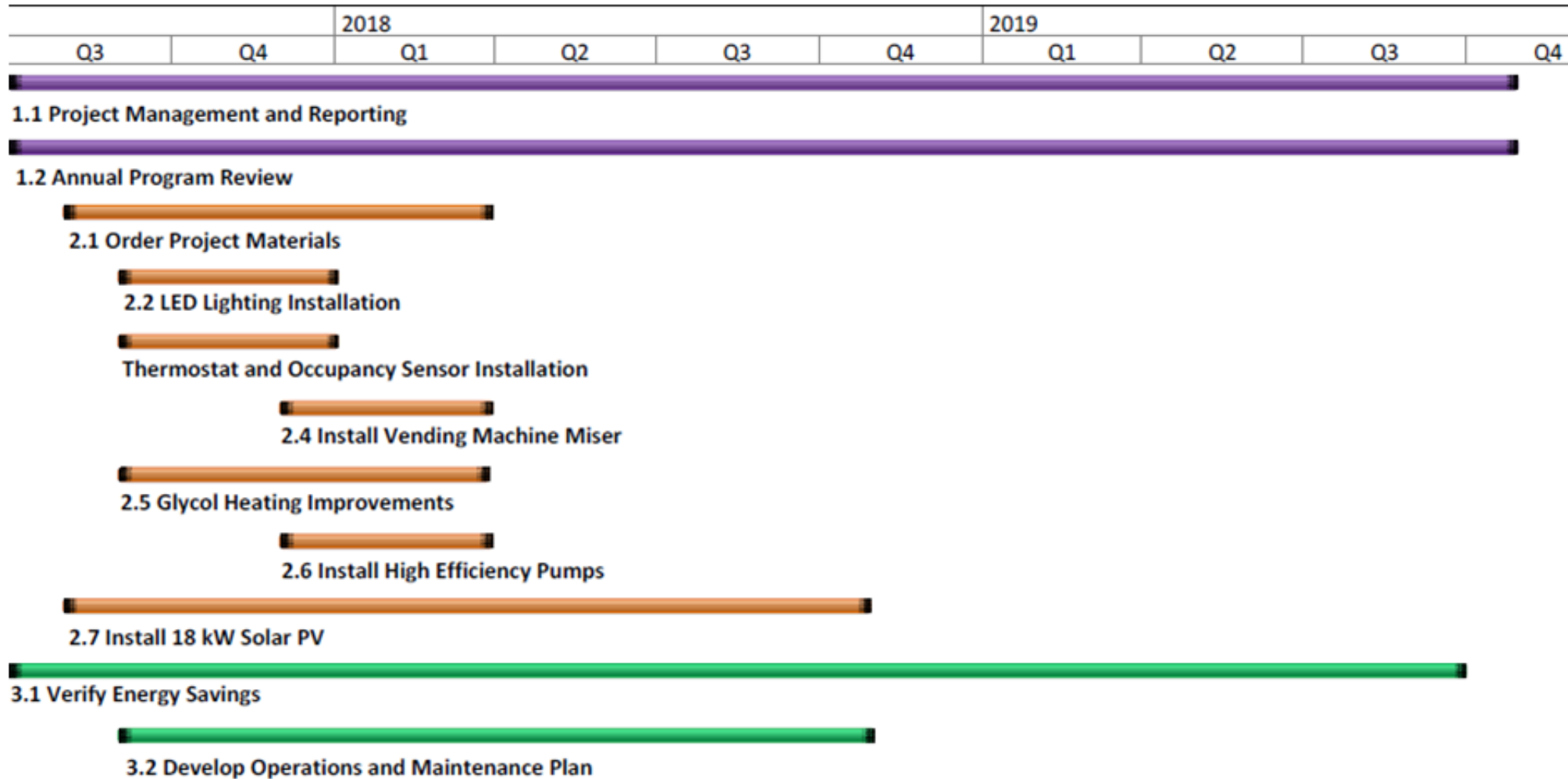
# PRE-FEASIBILITY WORK AND INITIAL PROJECT IMPLEMENTATION

- ❑ Technical Assistance from Office of Indian Energy and NREL
    - ❑ Energy Audits
    - ❑ Renewable Energy Site Assessments
  - ❑ ANTHC helped reduce energy usage by:
    - ❑ Upgrading to LED lights
    - ❑ Programmable Thermostats
    - ❑ Motion Detectors on Lights
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# NEXT STEPS AND PROJECT DEVELOPMENT

- ❑ *Glycol Heating Improvements*
  - ❑ *Install Electronically Commutated (brushless DC) Motors with Built-in Variable Speed Controls at the Water Treatment Plant*
  - ❑ *Install Solar Photovoltaic Arrays*
  - ❑ *Energy Verification and Sustainability*
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# PROJECT TIMELINE





# T'SNEE - THANK YOU

