DOE OFFICE OF INDIAN ENERGY

Wind-Diesel Workshop
Active IE Alaska Projects – 11/9/2018

Michael Kuca, Engineer, Alaska
Deep Energy Makeover for the POSS Camp at St. Paul Island Alaska (1660)—Tanadgusix Corporation’s (TDX’s) project will reduce the energy consumption on the island of St. Paul, Alaska, by approximately 54% through deep energy retrofits, and will increase the contribution of wind power from 35% to 65% by installing an additional 900-kilowatt (kW) wind turbine.
Stebbins and St. Michael Renewable Energy Construction Project (Pending)
EWT DW52-900 kW Turbine.

AVEC and Stebbins Native Corporation, through a joint venture, will install a 900-kilowatt (kW) turbine to provide wind energy to two remote communities in rural Alaska. This project will serve 328 buildings in Stebbins and St. Michael, AK, and reduce diesel fuel use by approximately 167,500 gallons each year, resulting in savings of approximately $10,117,000 over 20 years.
Calista

Pitka’s Point/Saint Mary’s Wind Energy Construction Project

EWT 900 wind turbine - 2,525 MWh/year (net), evenly split between Saint Mary’s/Pitka’s Point and Mountain Village, (with the planned intertie). St. Mary’s and Pitka’s Point will be upgraded to three phase and the St. Mary’s power plant will be upgraded to integrate wind power.

Bethel Wind Energy Construction Project

EWT 900 kW wind turbine- 2,370 MWh of energy annually resulting in the replacement of 170,280 gallons of diesel fuel per year or over $18 million over the life of the system.
Other wind activities

Past Grants:
- Kongiganak (2014)
  
  **Project Amounts**
  DOE: $250,000
  Awardee: $13,160
  Total: $263,160

- Chaninik (2010)
  
  **Project Amounts**
  DOE: $750,000
  Awardee: $1,250,000
  Total: $2,000,000

- Eyak (2010)
  
  **Project Amounts**
  DOE: $248,107
  Awardee: $29,440
  Total: $277,547

Technical Assistance examples
- Buckland (wind/solar- rates)
- Kipnuk (rates/PCE)
- Nanwalek (data review)
- Annette (wind 101)
Power Project Loan - AEA

AIDA – SETS, Loan Participation

DOI Loan Guaranty, Insurance, and Interest Subsidy Program

DOE Tribal Energy Loan Guarantee

Indian Energy Grants (current) – roughly at mature design, through construction and one year of operational data

RECON FEASIBILITY DESIGN CONSTRUCTION OPERATION

PROJECT DEVELOPMENT STAGE

Tech Assist Grants PPF

TA Grants PPF Angel Capital

Venture Capital Private Equity

Construction loan

LONG-TERM DEBT/BONDS

REF/RPSU - AEA

HIGH

LOW