

Alaska Village Electric Cooperative, Inc./ Bethel Native Corporation Renewable Energy Joint Venture Bethel Wind Energy Construction Project

Tribal Energy Conference

Denver, Colorado

November 2017

Forest Button
Manager, Project Development &
Key Accounts



Alaska Village Electric Cooperative

Member owned, not-for-profit

Energizing Rural Alaska since 1968

- ▶ 58 Member Communities
- ▶ 11,500 Services
- ▶ Population Served: 30,194
- ▶ 94% Alaska Native
- ▶ Smallest: Shageluk 71 ▶ Largest: Bethel 6,205
- ▶ 8.2 million gallons of diesel
- ▶ 185 FT / PT Employees
- ▶ 49 Power Plants
- ▶ 34 Wind turbines serving 15 communities
- ▶ 2 Solar arrays serving 2 communities



Who is AVEC?



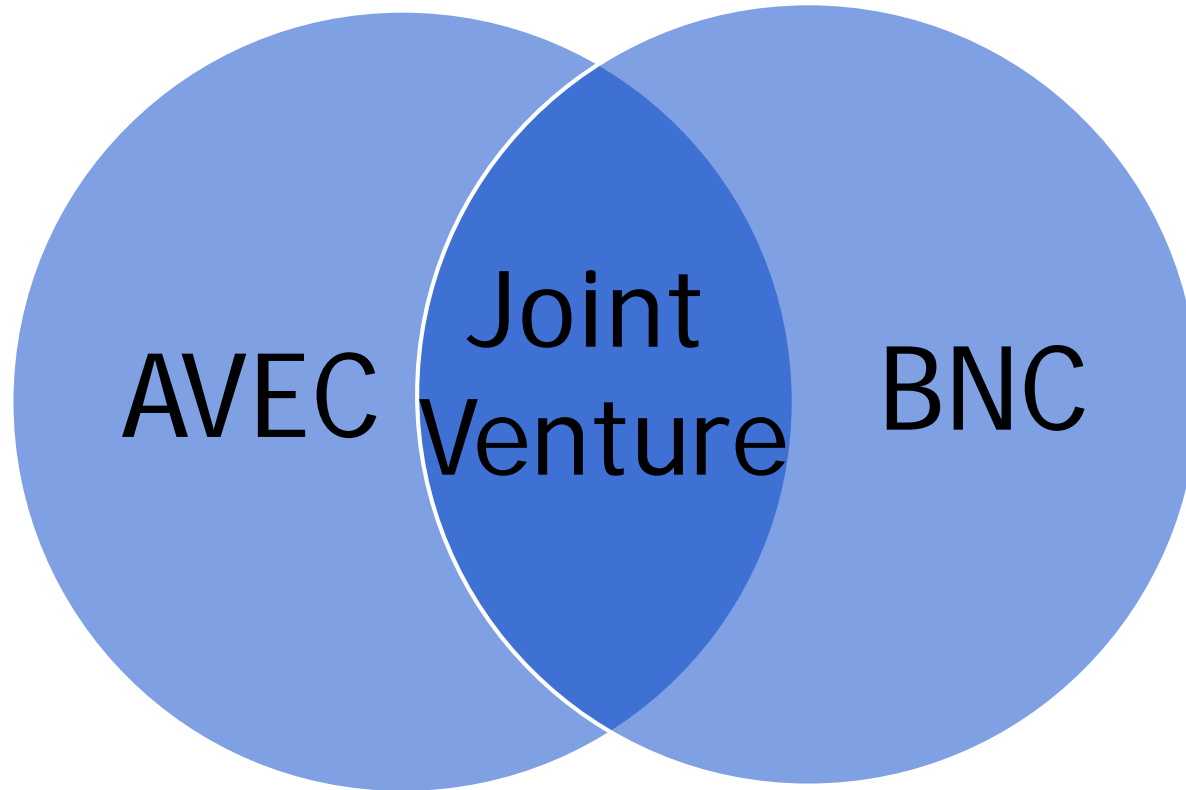
Who is BNC?

- ▶ ANCSA village corporation
- ▶ Serves 1,800 shareholders
- ▶ Mostly Yup'ik Eskimo



What is the Joint Venture?

- ▶ Partnership between AVEC and BNC - ABRE
 - ▶ To benefit the communities of Bethel and Oscarville

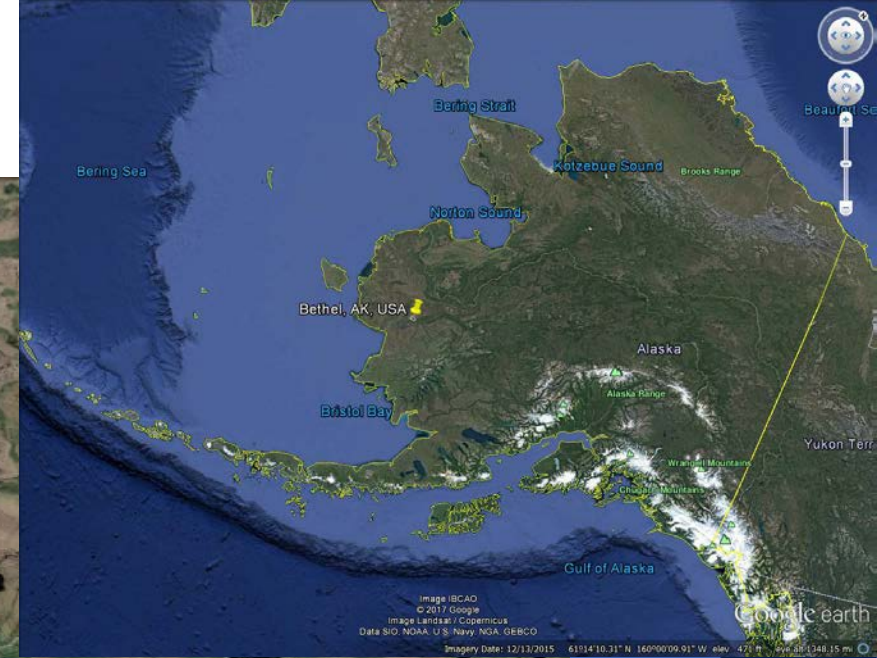


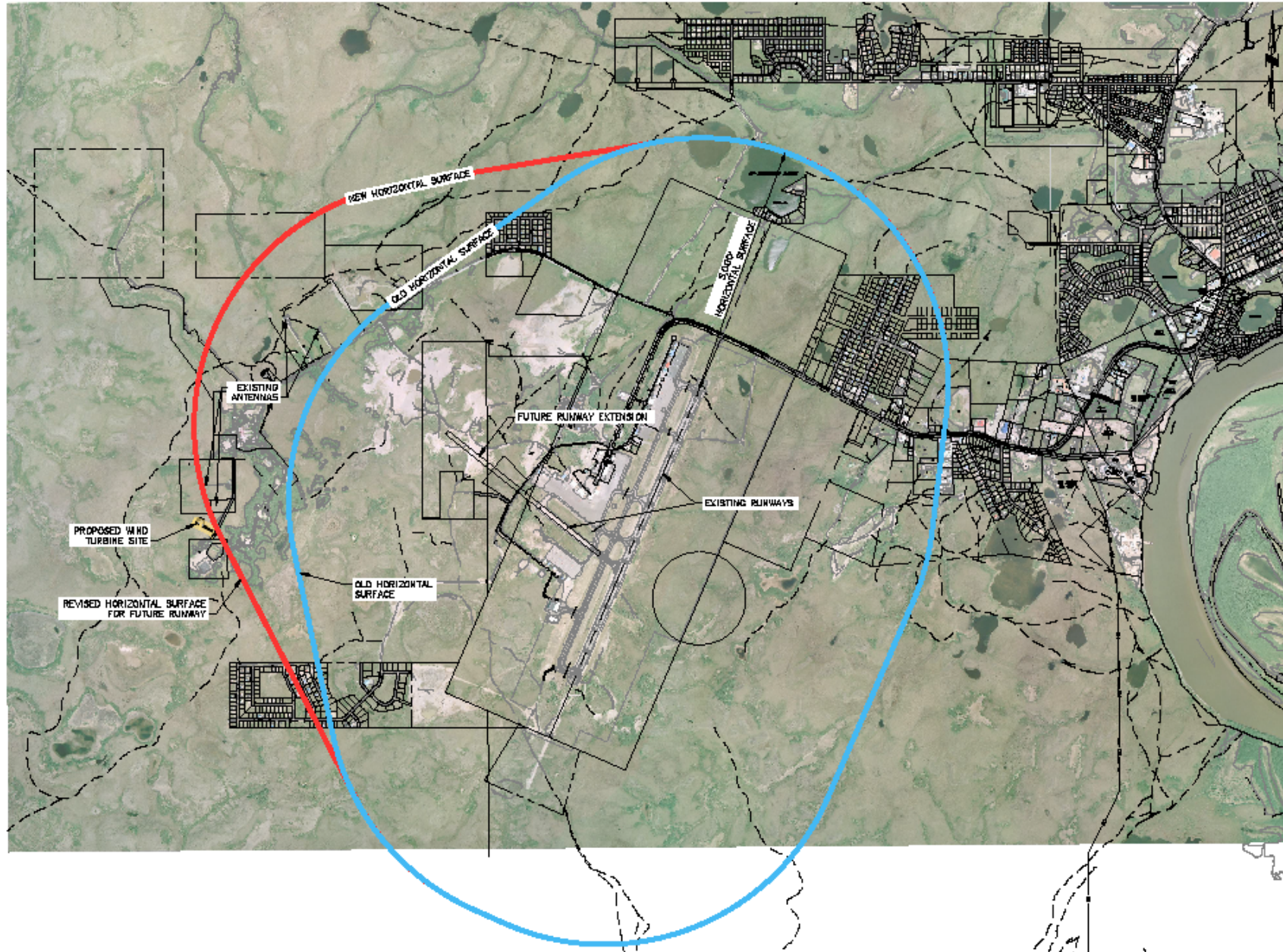
Project Overview

- ▶ Installation of one Emergya Wind Technologies (EWT) 900 direct drive wind turbine.
 - ▶ 52 meter diameter rotor
 - ▶ 50 meter high tower
- ▶ Upgrade power plant to accept wind energy
 - ▶ Automated governors -actuators
 - ▶ Voltage Regulators



Project Location





1 VFR AIRSPACE
SCALE 3/4"=1'

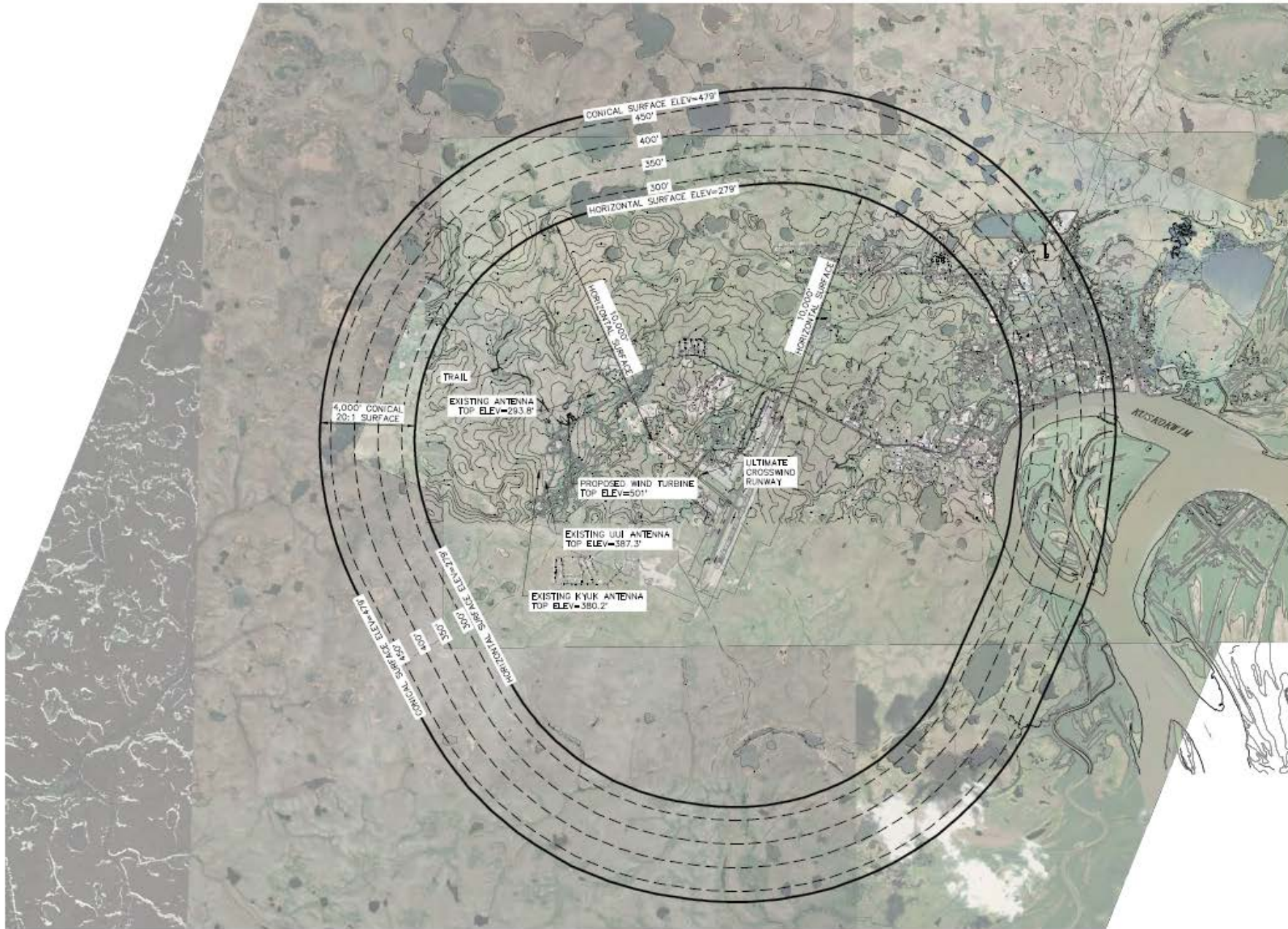


BETHEL, ALASKA
WIND TURBINE PROJECT
VFR AIRSPACE

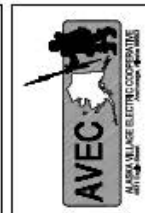
NO.	REVISION	BY	DATE

Date: 11/13/12
 Drawn: JVB
 Checked: JVB
 Approved: JVB

FIG 1



1 PART 77 AIRSPACE
SCALE: GRAPHIC



BETHEL, ALASKA
WIND TURBINE PROJECT
PART 77 AIRSPACE

NO.	REVISION	BY	DATE

Plot: 4/21/17
 Design: KSH
 Draw: GB
 Approval: JVS



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Project Objectives

- ❖ Generate 2,604 MWh / Year
- ❖ Offset 200,000 gallons fuel consumption per year
- ❖ Save approx. \$700,000 per year on fuel
- ❖ Eliminate 2,238 tons of CO₂ / year
- ❖ Simple pay back...8.5 years

Progress:

Turbine – Ready for Shipment Certificate Received

Road, pad, and pile foundation winter 2017/2018

Turbine ship to Alaska May 2018

Concrete foundation June 2018

Next steps...

Thank you!

Questions?

Onya Stein

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