



ALASKA VILLAGE ELECTRIC COOPERATIVE CHEVAK BATTERY ENERGY STORAGE SYSTEM APPLICATION TO THE RENEWABLE ENERGY FUND

Presentation to

HOUSE ENERGY COMMITTEE

State of Alaska 34th Legislature
March 13, 2025

Kivalina, AK

Bill Stamm, President & CEO
bstamm@avec.org
www.avec.org

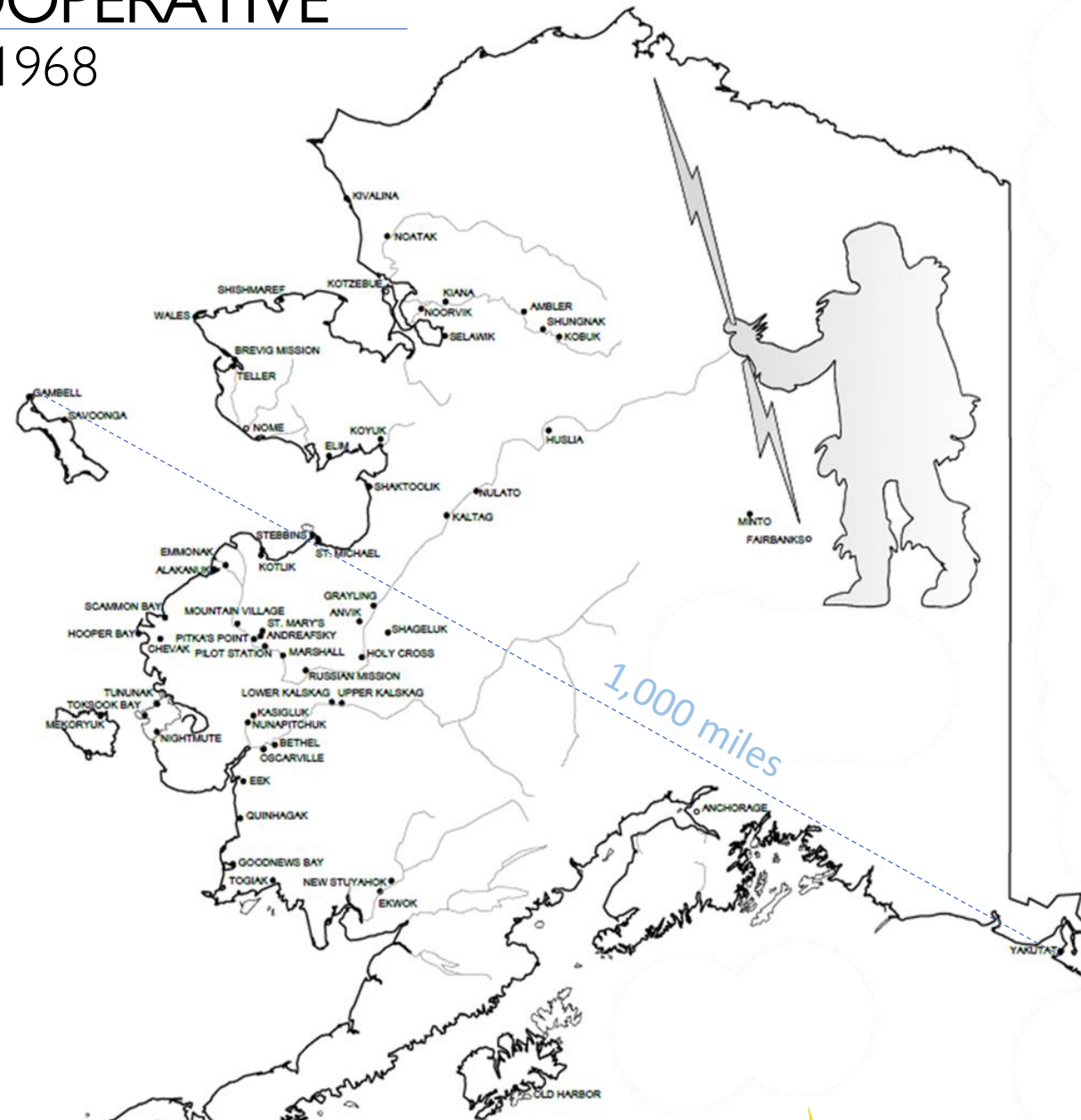
Alaska Energy Authority - Renewable Energy Fund - Round 16 - Recommended Projects to Legislature

Community	Project Name	Applicant Name	Election District	REF 16		REF 17
				Recommended Funding	Funded FY25	Proposed FY26
Ruby	Ruby Community Solar PV and Battery Storage	Tanana Chiefs Conference	36-R	\$2,008,113	\$2,008,113	
HEA service area	Kenai Peninsula Solar Farm	Solstice Energy LLC	various	\$2,000,000	\$4,008,113	
Kotzebue	Kotzebue Community Scale Energy Storage and Inertia	Kotzebue Electric Association, Inc.	40-T	\$3,675,000	\$7,683,113	
Homer	AEEC / KPB CPL Landfill Gas CHP Project	Alaska Electric & Energy Cooperative, Inc.	6-C	\$1,115,014	\$8,798,127	
Igiugig	Igiugig Tribal Utility Solar PV	Igiugig Village Council	37-S	\$1,723,709	\$10,521,836	
Pelican	Pelican Hydro Relicensing Project, Restoration, Repair	City of Pelican, Pelican Utilities	2-A	\$650,474		\$650,474
Naknek	Naknek Solar PV on Cape Suwarof	Naknek Electric Association, Inc.	37-S	\$3,137,848		\$3,788,322
Skagway	Goat Lake Hydro Storage Expansion Study	Goat Lake Hydro, Inc.	3-B	\$121,250		\$3,909,572
Kwethluk	Nuvista Kwethluk Wind and Battery Project Completion	Nuvista Light and Electric Cooperative Incorporated	38-S	\$738,979		\$4,648,551
Quinhagak	Quinhagak Battery Energy Storage System Project	Alaska Village Electric Cooperative, Inc.	38-S	\$443,956		\$5,092,507
Nenana	Nenana Biomass District Heat System, Final Phase	City of Nenana	36-R	\$1,223,000		\$6,315,507
Kongiganak	Kongiganak 100 kW Solar Energy Project	Puvurnaq Power Company	38-S	\$720,453		\$7,035,960
Railbelt	Railbelt Wind Diversification Alaska Renewables	Alaska Renewables LLC	various	\$2,000,000		\$9,035,960
Homer	Homer Energy Recovery Project	City of Homer	various	\$280,000		\$9,315,960
Atmautluak	Atmautluak ETS Installation, Integration and Commissioning	Atmautluak Tribal Utilities	38-S	\$286,227		\$9,602,187
Ketchikan, Petersburg, Wrang	Southeast Alaska Grid Resiliency (SEAGR)	Southeast Alaska Power Agency (SEAPA)	1-A, 2-A	\$4,000,000		\$13,602,187
Chevak	Chevak Battery Energy Storage System Project	Alaska Village Electric Cooperative, Inc.	38-S	\$968,644		\$14,570,831
Pedro Bay	Knutson Creek Hydro Project Construction	Pedro Bay Village Council	37-S	\$400,000		\$14,970,831
Akiachak	Akiachak Native Community 200 kW Solar Energy Project	Akiachak, Ltd	38-S	\$67,833		\$15,038,664
Nome	NJUS Solar Nome Banner Ridge Solar Farm	Nome Joint Utility System	39-T	\$4,000,000		\$19,038,664
MEA service area	Hunter Creek Hydroelectric Feasibility Study Project	Matanuska Electric Association	various	\$1,280,500		\$20,319,164
Chignik	Chignik Hydroelectric Power System	City of Chignik	37-S	\$883,012		\$21,202,176
GVEA service area	Healy Unit 2 Coal to Biomass Fuel Conversion	Golden Valley Electric Association	various	\$269,500		\$21,471,676
Sterling	Sterling Solar Project	Utopian Power LLC	8-D	\$12,500		\$21,484,176
TOTAL				\$32,006,012	\$32,006,012	\$10,521,836
Proposed Governor's Budget for FY25 from December 15, 2024- \$6,315,507						

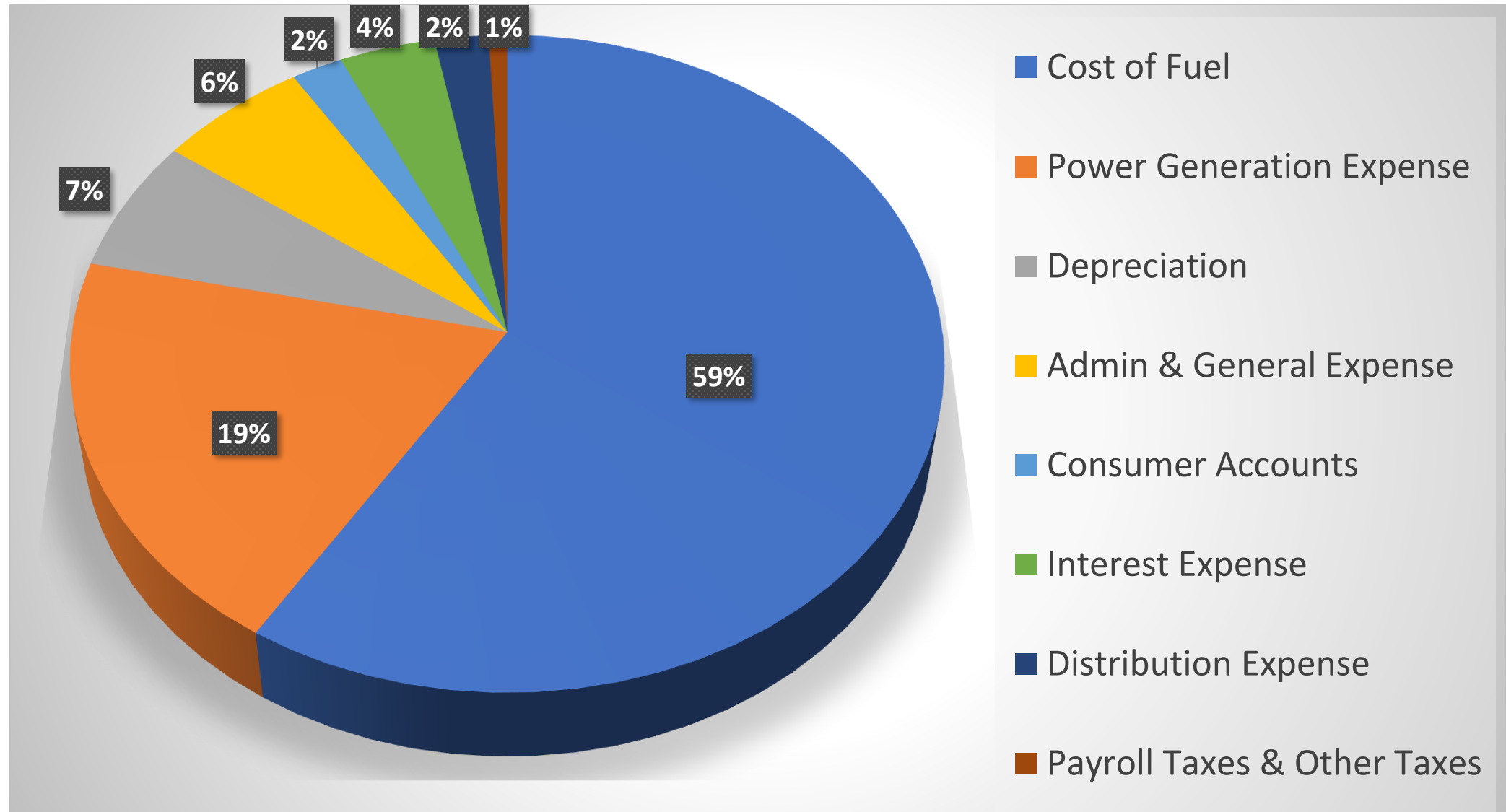
ALASKA VILLAGE ELECTRIC COOPERATIVE

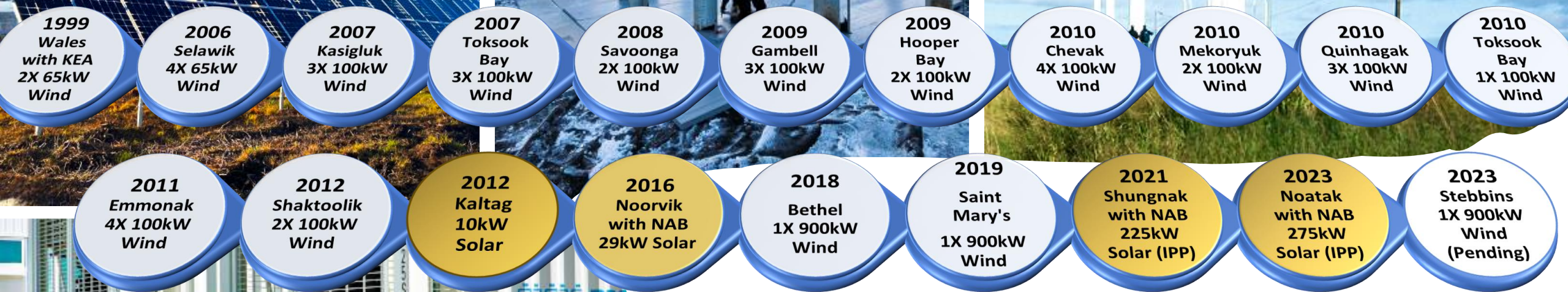
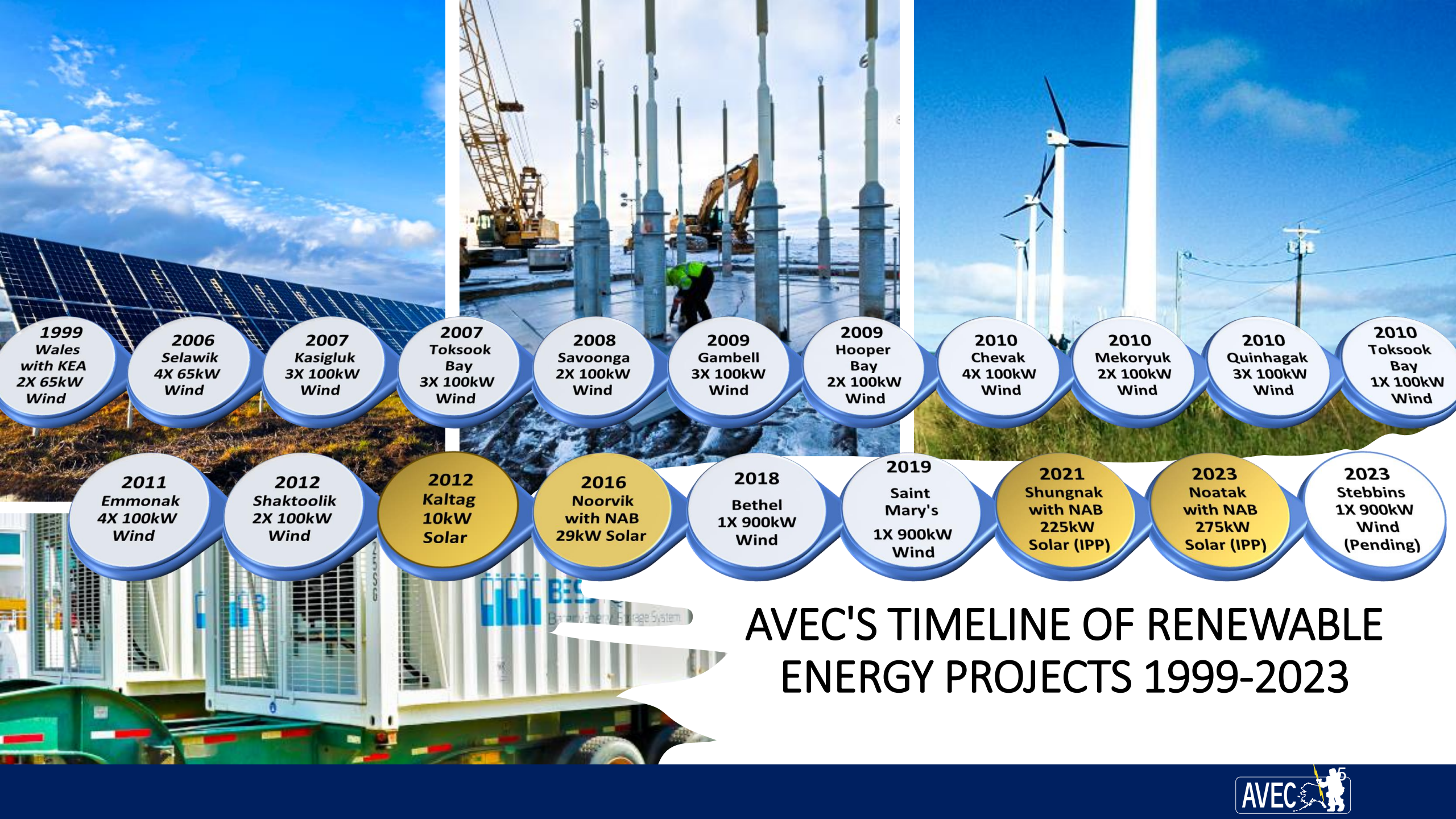
Energizing Rural Alaska since 1968

- Nonprofit 501(c)12 -Electric Cooperative
- 58 Rural Communities, 31,000+ Residents
- 46 Power Plants, 160 Diesel Generators
- 9.5M Gallons of Diesel in 2024 (\$42.3M)
- 525 miles of Distribution Lines
- 13 Wind Sites, 33 Wind Turbines, Serving 22 Communities
- \$77.9M Annual Revenue
- 2024 Total Electricity Sold 125.6 MWh



Costs per Kilowatt-hour Sold (2023)





AVEC'S TIMELINE OF RENEWABLE ENERGY PROJECTS 1999-2023



What is a B.E.S.S. ?

Battery Energy Storage System installed in Shaktolik, 2024. (200 kW/274 kWh)

BESS Module Includes:

- Batteries
- Battery Monitoring System
- Inverter
- Controls/Communications
- HVAC

Shaktolik Funding:

Denali Commission	\$ 84,407
DOE Office of Indian Energy	\$759,656
AVEC	\$265,282

Chevak BESS

Proposed BESS: **720 kW/ 864 kWh**

Chevak Average Load: **311 kW**

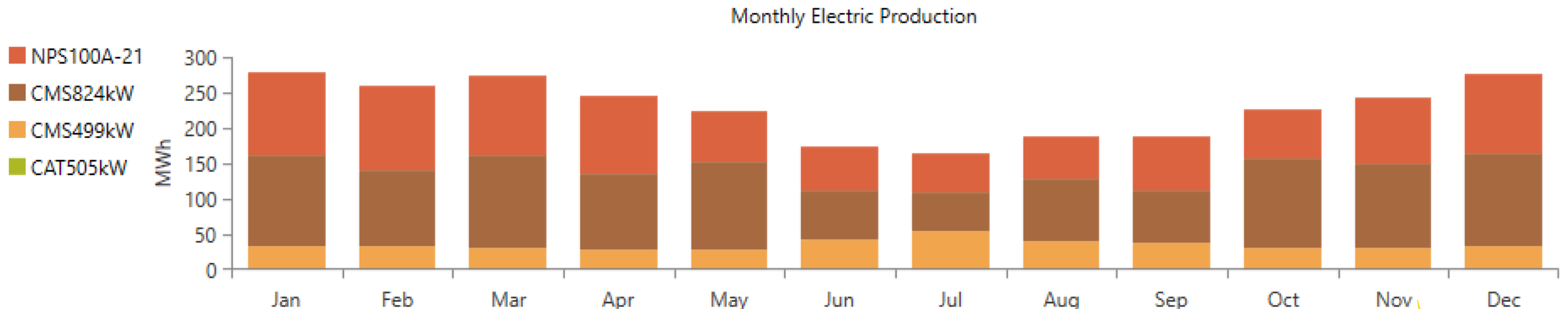
Chevak Peak Load: **600 kW**

Wind Capacity: **400 kW** (4x100kW
NPS100-A turbines)



Chevak BESS & PP Improvements

- Nearly double wind production – from 573 MWh to 1,050 MWh per year
- Offsets an additional 29,785 gallons fuel, a savings of about \$138,202/year
- Shift 2,000+ engine runtime hours to smaller engine, improving PP efficiency
- Diesels-off approximately 169 hours per year.
- Modernizes the plant for renewable expansion
- Provides operating reserve and grid stability



Chevak BESS

Project Status: Preliminary design and cost estimates completed with potential supplier and contractor input

Permitting: Limited permitting required, all improvements would be installed on AVEC Power Plant Site. Fire Marshall approval required. Similar installations already approved.

Financing: Latest estimated cost for project completion in 2027 is expected to increase 25% over the estimate provided in the 2023 application. AVEC will be seeking additional funding for completion. Fuel savings anticipated to provide a 10-year payback of project expense.

Timeline: Funding Approval, August 2025

Design and Procurement, Q4 2025- Q1 2026

Fabrication and Delivery, Q2 2026- Q4 2026

Installation and Commissioning, Q4 2026-Q2 2027



Thank you,



Bill Stamm, President & CEO
Alaska Village Electric Cooperative