

KAWERAK ENERGY PROGRAM

# **BERING STRAIT REGIONAL ENERGY NETWORK**

November 22, 2019

Kawerak DOE-OIE Inter-Tribal  
Technical Assistance Program





**KAWERAK, INC.**

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**Advancing the capacity of our people  
and tribes for the benefit of the region.**

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OUR MISSION



# THE STATE OF ALASKA

*Bering Strait Region*



KAWERAK, INC.



OWN UTILITY



AVEC



GEO THERMAL



WIND



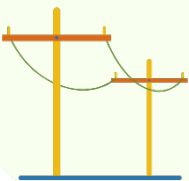
SOLAR



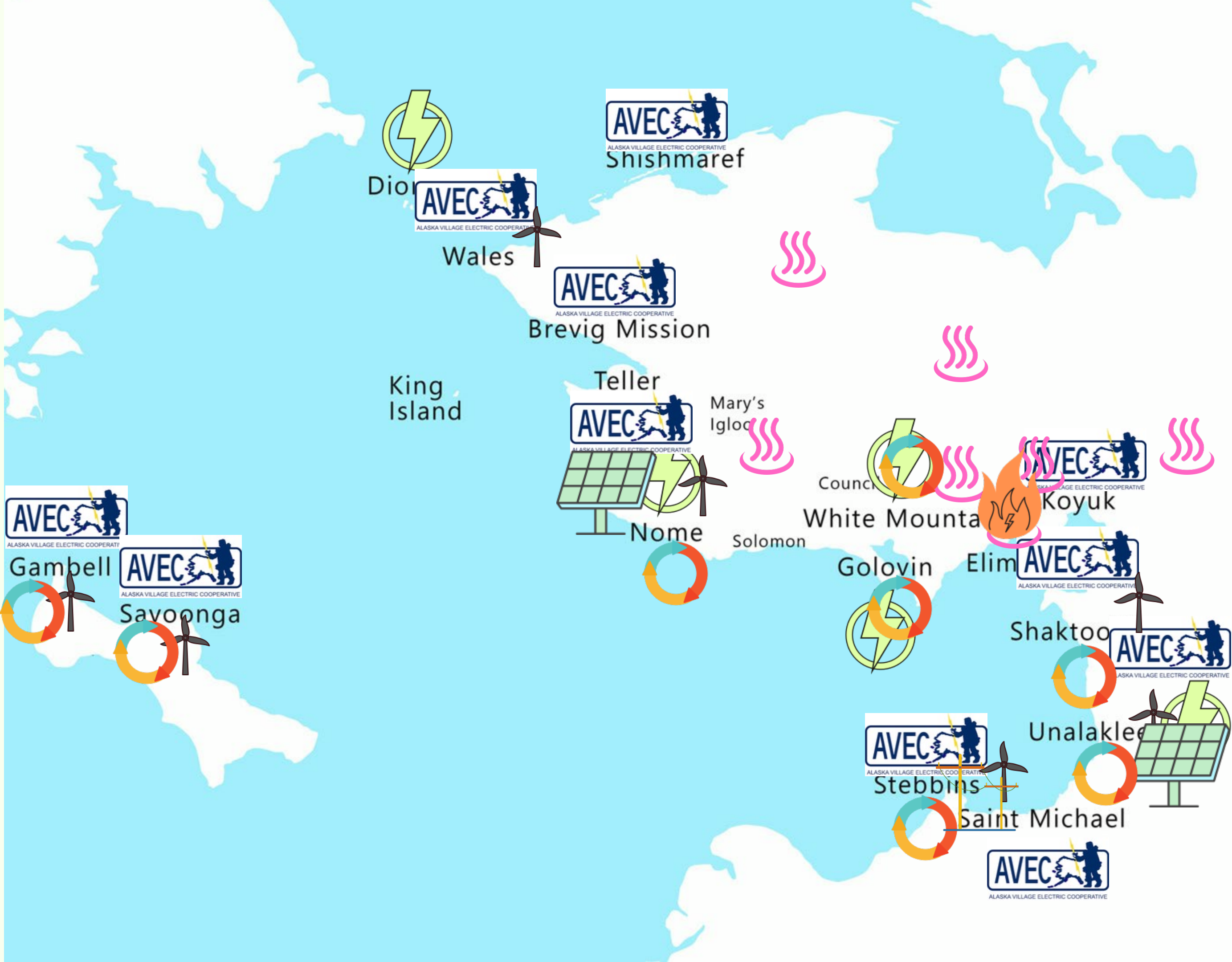
HEAT RECOVERY



BIOMASS



INTER-TIE







OWN UTILITY



AVEC



GEO THERMAL



WIND



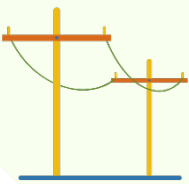
SOLAR



HEAT RECOVERY



BIOMASS



INTER-TIE



KAWERAK, INC.







FUEL COSTS\* - at Power Plant

Brevig Mission	\$2.67
Diomedede	\$2.29
Elim	\$2.75
Gambell	\$2.88
Golovin	\$2.26
Koyuk	\$2.66
Nome	\$2.01
Savoonga	\$2.63
Shaktoolik	\$2.67
Shishmaref	\$2.82
St. Michael	\$NA
Stebbins	\$2.63
Teller	\$2.76
Unalakleet	\$2.49
Wales	\$2.79
White Mountain	\$2.42



Photo: Golovin, AK \*Costs from FY2018 Report by AEA





Photo: Unalakleet, AK \*Costs from FY2018 Report by AEA

## ELECTRICAL RATES\*

Brevig Mission	\$0.50	\$0.24
Diomedede	\$0.65	\$0.43
Elim	\$0.52	\$0.24
Gambell	\$0.51	\$0.27
Golovin	\$0.38	\$0.25
Koyuk	\$0.51	\$0.24
Nome	\$0.33	\$0.25
Savoonga	\$0.50	\$0.25
Shaktoolik	\$0.50	\$0.27
Shishmaref	\$0.53	\$0.24
St. Michael	\$0.50	\$0.24
Stebbins	\$0.50	\$0.24
Teller	\$0.54	\$0.24
Unalakleet	\$0.44	\$0.28
Wales	\$0.56	\$0.24
White Mountain	\$0.55	\$0.29





Photo: Teller, AK \*Costs from last week, Call to communities

## HEATING FUEL\* - Residential

Brevig Mission	\$4.22
Diomedede	\$5.20
Elim	\$3.99
Gambell	\$4.45
Golovin	\$4.75
Koyuk	\$4.71
Nome	\$5.40
Savoonga	\$5.60
Shaktoolik	\$4.99
Shishmaref	\$4.29
St. Michael	\$4.35
Stebbins	\$4.42
Teller	\$6.11
Unalakleet	\$5.00
Wales	\$6.25
White Mountain	\$4.23



# ENERGY PROGRAM GOALS

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**Provide Technical Assistance & Capacity Building for:**

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Energy Planning (Community Energy Action Plans)

Bering Strait Regional Energy Leadership Committee

Seeking Energy Project Funding

Energy Project Research, Development, Implementation

Project Management, Grant Management, Reporting

Training & Workforce Development

STEM Education & Energy Education

OUTREACH! Networking, Collaboration, Transparency







# ENERGY PLANNING

August 12-13 | Community Energy  
Action Plan Workshop

Participants:

St. Michael

Shishmaref

Brevig Mission

Elim

White Mountain

Nome

Small group workshop focused on  
creating an actionable plan for  
addressing energy challenges &  
solutions, specific to each community.

Teller energy planning, starting in  
December 2019

Upcoming planning in Diomedes, set  
for January 2020





# ENERGY LEADERSHIP COMMITTEE (ELC) ADVISORY GROUP

Five members selected for the “Executive Team”  
and four “Executive Alternates” Quarterly  
Teleconferences  
Annual Energy Summit Meeting

Group goal: Advising the energy program on the  
best course of action for energy development in  
the region & assisting with regional energy  
solutions & planning.

Internal capacity building: attended 2019  
National Tribal Energy Summit with ELC member





# PROJECTS

13 technical assistance requests since May 2019

Bering Strait Regional Regional Energy Database

Wind-to-heat feasibility – Bering Straits Native Corporation, Sitnasuak Native Corporation

VW Settlement - Koyuk, White Mountain, Savoonga, Brevig Mission

LED Lighting retrofits - Village Energy Efficiency Program, through Wells Fargo & Alaska Energy Authority. Brevig Mission & Shishmaref.

NSEDC Community Energy Fund - currently assisting Koyuk on their application & conducting outreach to other communities.

Honor the Earth - received a grant for "Kawerak Mazaq" - to purchase a portable solar setup for off-grid workshop. TA requested by Mary's Igloo.



Kawerak funds the purchase of solar data logger and measurement tools to capture solar data around the region.

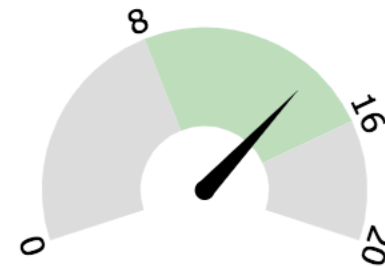




# Nome - Talialuk Dashboard

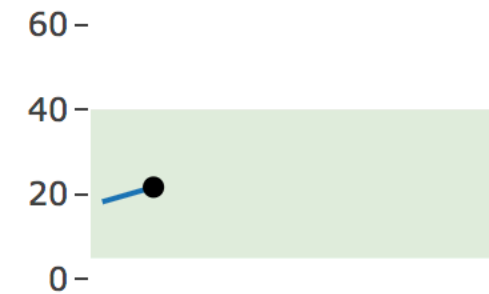
Energy Use

**Electric**



**13.98 kW**

**Fuel Oil**



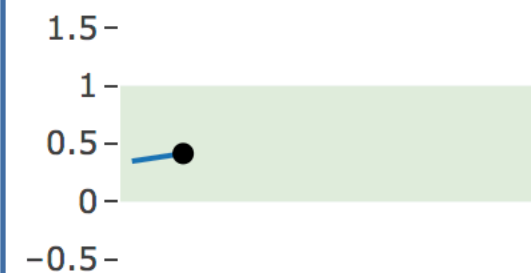
**21.71 Gallons/day**

**Nome Temperature**



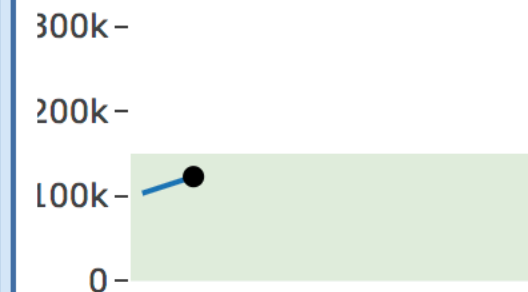
**21.02 deg F**

**Total Boiler Runtime**



**0.415 Runtime Fraction**

**Boiler Fuel Consumption**



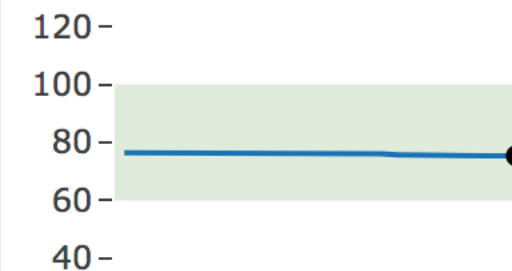
**123,000 BTU/hour**

**Boardroom Occupancy**



**0 1=Occupied 0=Vacant**

**Boardroom Temp**



**75.38 deg F**



## **PARTNERSHIPS & FUNDING SOURCES**

Norton Sound Economic Development Corporation is a regional, private non-profit corporation that represents 15 member communities & more than 8,700 people in the Bering Strait Region.

15 out of 20 tribes served

Yearly funding opportunities for various community projects

Community Energy Fund for Energy-Specific Projects – we are providing TA on these applications





# RESEARCH, DEVELOPMENT, IMPLEMENTATION & PROJECT MANAGEMENT

Funding from DOE & Research/Project Development assistance from our contractors



U.S. DEPARTMENT OF  
**ENERGY**

Office of  
Indian Energy

Bering Straits  
DEVELOPMENT CO.

**ACEP**  
Alaska Center for Energy and Power



**CCHRC**

COLD CLIMATE HOUSING  
RESEARCH CENTER



Deerstone  
Consulting





# TRAINING & WORKFORCE DEVELOPMENT

## VISION: A REGIONAL NETWORK

Tribes, Native Corporations and Municipalities working together for a common goal: affordable, sustainable, clean energy. **Also – Keeping up with maintenance!**

- Lighting retrofits and installation
- Home weatherization, retrofits, energy efficiency
- Biomass, Heat Recovery Systems, O&M
- Grant writing and project management
- Off-grid power for subsistence camps
- Solar & Wind: Feasibility, implementation, O&M
- Utility Management, Reporting, O&M, SAFETY







## REAP PARTNERSHIP

Bringing more K-12 energy education to the region  
Power Pledge Challenge (AVEC, NJUS, WMU)  
Classroom visits, Teacher in-service Training  
Continuing Education for teachers and young adults  
Workforce Development

## STEM EDUCATION

Focusing on in-classroom activities about energy technology, getting kids excited about energy & interested in pursuing careers in the energy world...



# REAP

Renewable Energy  
Alaska Project



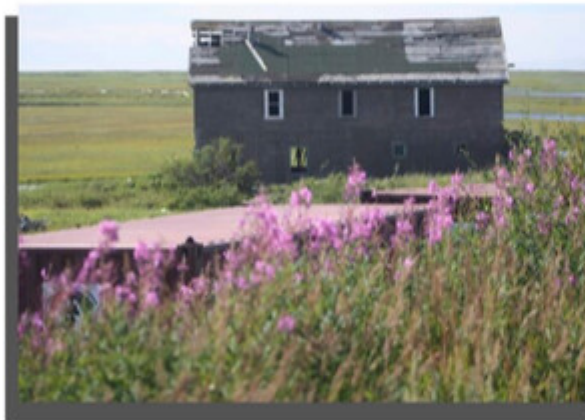


# BERING STRAIT REGIONAL ENERGY NETWORK

THE QUARTERLY NEWSLETTER ON ENERGY

THE BERING STRAIT REGIONAL ENERGY NETWORK IS MAINTAINED BY KAWERAK INC.'S ENERGY PROGRAM, PART OF THE ENVIRONMENTAL PROGRAM, NATURAL RESOURCES DIVISION

MARCH 15, 2019, ISSUE 1



VILLAGE OF SOLOMON: Fireweed blooms looking over the Solomon Roadhouse out toward the Bering Sea, Summer 2017. Photo courtesy of Village of Solomon, from their 2017 Regional Energy Plan.

## FEATURED COMMUNITY: VILLAGE OF SOLOMON

### Going back home

BY THE KAWERAK ENERGY PROGRAM

The Village of Solomon is located approximately 34 miles east of Nome, on the Nome-Council Highway. Originally settled by Inupiat of the Fish River Tribe, the original village site was on the beach near the sea at the mouth of the Solomon River Delta. After a flood in the early 1900's, the village relocated to Jerusalem Hill, its present location. The Gold Rush brought thousands of folks to the region, and Solomon grew into a large town. After storms and flu epidemics of the 1910's, little remained of the community. In 1940, a school was built by the Bureau of Indian Affairs, although it was closed by 1956, followed by the post office closing in 1958. After that, families began to relocate to Nome, Anchorage, and other places so their children could continue to school. Now, members of the Village of Solomon are ready for their next move: going back home. Continued on Page 3.



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JUNE 15, 2019, ISSUE 2



OUR FUTURE - Young leaders Kendra Lee, Allison Topkok, and Audrey Topkok pose for a photo at the 2019 Bering Strait Regional Energy Summit on May 7-10 in Nome, AK.

## 2019 ENERGY SUMMIT

### An opportunity to network, connect and learn.

The 2019 Bering Strait Regional Energy Summit was held May 7-9, 2019 in Nome, Alaska. Additional workshops took place on May 10.

79 attendees joined us for this event (37 community representatives and 42 agency/organization representatives/guests). 25 sessions were held covering various topics such as energy efficiency, project planning, community projects in the region, energy leadership committee formation, and more. See the whole story inside!



# BERING STRAIT REGIONAL ENERGY NETWORK



THE QUARTERLY NEWSLETTER ON ENERGY IN OUR REGION

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SEPTEMBER 15, 2019, ISSUE 3



CLEANING UP DIRTY DIESELS - This 1994 Mack dump truck in White Mountain, Alaska is one of the eligible vehicles in the region planned to be replaced by the Volkswagen Environmental Mitigation Settlement. Photo by Amanda Toerdal, Kawerak Energy Program.

## ENVIRONMENTAL MITIGATION

### Money from Volkswagen Settlement brings new equipment to communities

What do Volkswagen cars have to do with old dump trucks? Well... in 2015, the car maker Volkswagen was charged with cheating on diesel emissions tests, and had to pay up. That money was set aside to clean up dirty diesels around the nation, including large trucks and heavy equipment in Alaska Native villages.

The Native Villages of White Mountain, Brevig Mission, Savoonga and Koyuk have all submitted paperwork and project plans to get four brand new dump trucks delivered to their communities. How can your community get on the list to receive funds? Read more inside.

## WHAT'S INSIDE:

**FEATURED STORY:**  
Dump trucks to be replaced with VW Settlement Funds.

**COMMUNITY SPOTLIGHTS:**  
St. Michael, Brevig Mission, Shishmaref, White Mountain, Elim, Nome participate in energy planning workshop.

**QUARTERLY CONTEST:**  
Enter to win a holiday gift package with LED lights and a programmable timer!



KAWERAK, INC.

# OUTREACH

Quarterly  
Newsletter

Email List

Mailing List

Presentations  
NWAB ESC &  
ATCEM PCE

kawerak.org/  
energy



# 2019 BERING STRAIT REGIONAL ENERGY SUMMIT

ENERGY WORKSHOPS & PRESENTATIONS, NETWORKING  
GRANT WRITING, STRATEGIC ENERGY MANAGEMENT



Office of  
Indian Energy





**SAVE THE DATE**



# 2020 BERING STRAIT REGIONAL ENERGY SUMMIT MAY 5-7 | UNALAKLEET

MAZAĠLU, ANUĠILU, QUAQSAINALU, UUNAURATUAĠLU  
SUN, WIND, POWER, WARMTH



U.S. DEPARTMENT OF  
**ENERGY**

Office of  
Indian Energy

**WELLS  
FARGO**



# Questions?

*“Quyaana”*

*“Quyaana Caknek”*

*“Igamsiqanaghalek”*

*“Iliganamiik”*

**THANK YOU**

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