

# Alaska Village Electric Cooperative

## 2011 Annual Report



*Celebrating Commitment*

# LETTER TO THE MEMBERSHIP

March 27, 2011

To our AVEC membership:

Operating expenses in 2011 showed a sharp increase of almost 10% over 2010 due to the higher cost of fuel. Total revenue in 2011 was \$37,578,128, while expenses were \$37,825,682, resulting in a net operating loss of \$247,554. Because of the delay between when fuel is purchased and when we are able to start collecting the higher fuel cost, we ended 2011 with undercollected fuel costs of about \$1,050,000. Had we been able to implement the new fuel charge earlier in the year, we would have realized positive margins instead of a loss.

The new tug and barge sets were brought to Alaska in August and October of 2011. One set was used during the end of the season to deliver fuel in Bristol Bay and is now wintering in Aleknagik. The other set is wintering in Seward. Both sets are being operated by Vitus Marine, who orchestrated the historic delivery of fuel to Nome in January of this year with the use of a Russian ice-class tanker escorted by the USCG Icebreaker Healy.

A major remodel and expansion of our 35-year-old headquarters building was accomplished in 2011, giving cramped employees much needed room to operate.

We welcomed the village of Ekwok to the AVEC family in 2011 and borrowed \$1,000,000 from the Alaska Energy Authority to pay for much needed system improvements there. Despite the addition of Ekwok, the combined population served by AVEC fell from 22,736 in 2010 to 22,489 at the end of last year.

We sold 71.6 million kWh in 2011 – up 2.2% over 2010. Much of that was due to Ekwok coming on line, as well as new schools statewide. The cost of fuel purchased in 2011 is close to the historic highs we paid in 2008 at \$4.24 per gallon. This is \$0.88 more than in 2010 and accounts for the operating loss experienced. Our wind turbines helped to offset part of the cost of fuel with five percent of overall generation being provided by wind.

PCE has been fully funded for the current fiscal year and is included in the Governor's budget for full funding in the next fiscal year. There is a bill being considered by the legislature to expand PCE to 7,200 kWh per year per residential consumer and to provide it to small commercial customers as well, but that bill's fate is yet to be determined.

Approximately \$4,000,000 was added to total utility plant, while half of that amount was retired from service. We received \$9.3 million from the Denali Commission and State of Alaska for energy projects, and brought a substantial amount of AVEC match money to the table as well. About \$220 million in completed and ongoing energy projects have been developed in the last ten years. Going hand-in-hand with plant investments is the necessity to borrow money to pay for the cash match. AVEC's long-term loans increased by about \$12,000,000 in 2011 to pay for the many infrastructure improvements completed.

Information on major projects underway is provided on Page 6 of this report. We have submitted funding requests to the legislature for more than \$138 million in top priority projects, including continuation of the tank demolition that has been a top priority for the AVEC membership for many years.

2011 has been a busy year for all of us. Thank you for letting us serve you.



Charlie Curtis, Chairman of the Board



Meera Kohler, President and CEO

*Front cover photo: The board and staff visited one of the tug-and-barge sets in Seward. Back row (L to R): Katie Millen, Mark Teitzel, Andy Lehman (legal counsel), Fred Sagoonick. Middle row: Debbie Bullock, Robert Beans, Helena Jones, Phyllis Clough. Kneeling: Dan Kessler (CFC - financing), Amy Murphy and Meera Kohler. Photo by Mark Smith with Vitus Marine.*

# REPORT TO THE MEMBERSHIP

## SCHOLARSHIPS

AVEC's Board of Directors awarded scholarships totaling \$15,000 to students from nine communities. The following students received financial assistance to pursue their dreams of a higher education: Willie Augustine of Emmonak; James Joseph and Mari-Ann Nukusuk of Hooper Bay; Jerilyn Andrew and Nichole Twichell of Kasigluk; Agnes Beans of Mt. Village; Andrea Adams, Brett Kirk, Mitchell Thurston and Samantha Mills of Noatak; Kayla Christiansen of Old Harbor; Brian Stephanoff of Russian Mission; Margaret Smith of Selawik; and Jennifer Joe, Rachael Journey and Stefan Weingarth of St. Mary's.

## CAPITAL CREDITS

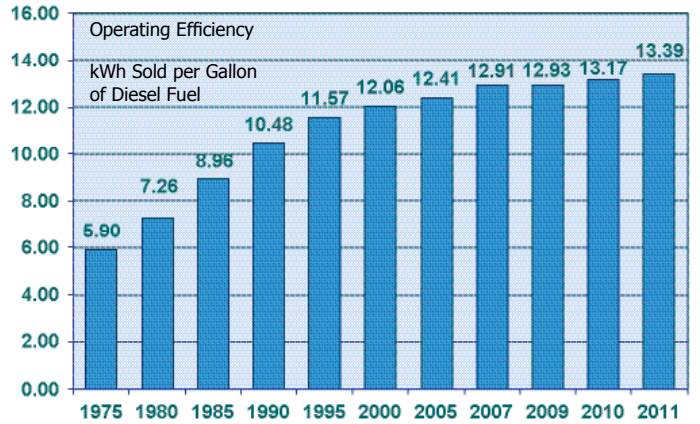
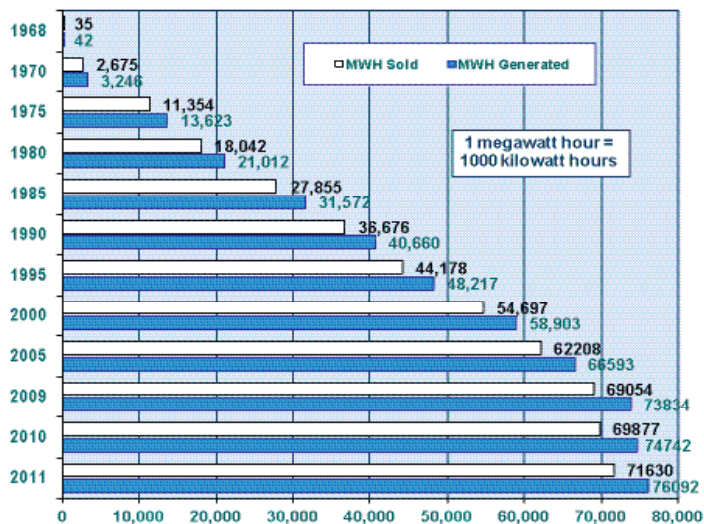
Total operating margins generated since the incorporation of AVEC is \$33,923,048. This includes 2011's \$247,554 loss. 55% of these margins – about \$18,700,000 – have been returned to the membership in the form of Capital Credit refunds in the last fifteen years. No retirement was made in 2011 as we took on additional debt and reduced our equity position. When financial circumstances are more favorable, the Board of Directors will determine when and how to return additional Capital Credits.

## ELECTRONIC METERS

The electronic meters with automated reading capabilities installed in all our communities are working well, saving more than \$200,000 in meter reading, data entry and field collections. The meters streamline the billing process and also make remote disconnects and reconnects easier and more cost effective to take care of.

## TOTAL MEGAWATT HOURS GENERATED AND SOLD

In 2011 AVEC generated a total of 76,092 MWH. AVEC wind projects showed a large increase in generation of 31% over 2010. AVEC sold 71,630 MWH, a slight increase over 2010.



## SAVINGS FROM INCREASED FUEL EFFICIENCY

AVEC has shown a steady increase in fuel efficiency over the years, resulting in substantial savings in fuel costs. Our fuel efficiency has more than doubled since 1975, which means we consume less than half the fuel to generate power today than we did in 1975. At today's extremely high cost of fuel, this saves our communities thousands of dollars annually. This is achieved by upgrading our engines and power plants and using the latest technology available. Using less fuel also reduces the amount of bulk fuel storage required to generate power.

## SAVINGS FROM RENEWABLE ENERGY

Thanks to funding received from the Denali Commission, Rural Utilities Service and the State of Alaska, AVEC has installed wind turbines in eleven communities with interties to three other communities. In 2011, wind turbines generated 3,680,158 kWh (net) and displaced an estimated 277,169 gallons of diesel fuel, saving more than \$991,000 dollars in diesel generating costs. Combined with fuel savings realized in 2009 and 2010, AVEC's consumers saved over \$1,991,000 in fuel costs over the past three years.

## TOP 10 PLANT OPERATORS OF THE YEAR

Each year AVEC selects the Top 10 Plant Operators of the Year in order to reward the operators with the best performance for the past year based on a set list of criteria. The winners receive a 3-in-1 winter jacket along with a cash bonus. The 2011 Top 10 Plant Operators of the Year are: **Carl Rock** of Brevig Mission; **Harold Gregory** of Emmonak; **Darin Douglas** of Koyuk; **David Peterson** of Mt. Village; **Mickey Ashby** of Noatak; **Brian Ekada** of Nulato; **Rudy Hamilton** of Shageluk; **Edward Bekoatok** of Shaktoolik; **Winfred Obruk** of Shishmaref; and **Greg Myas** of Togiak. Special recognition goes to **Anvik** and its operators, which had zero power outages. Other communities with few outages are: Kaltag and Shageluk with just one; Elim with two; and Russian Mission with three.

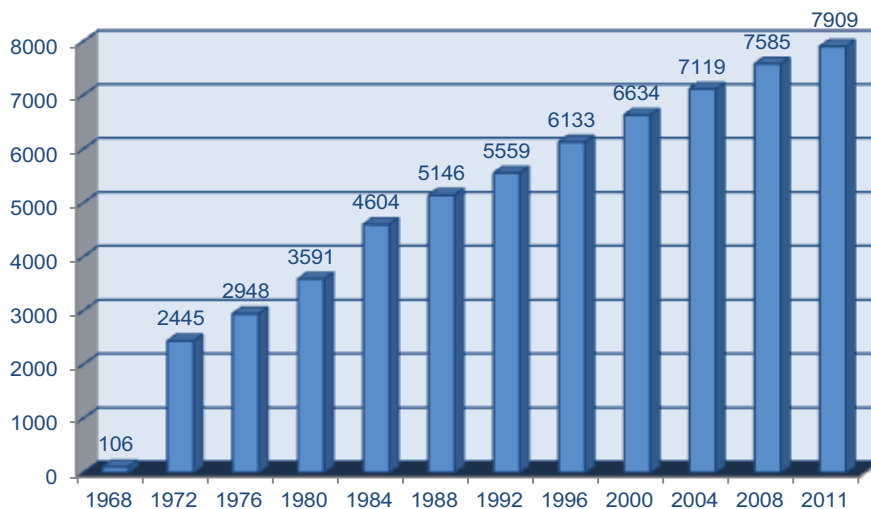
# CONSUMERS

## As of December 31, 2011

The system overall showed an increase of 149 new consumers for the year, nearly half that amount comes from Ekwok, our newest member. Thirty-three villages showed an increase in consumers, 18 villages had slight decreases in consumers and 3 villages remained the same. The total number of meters connected is a record high at 7,909.

Alakanuk	197	Holy Cross	109	Minto	96
Ambler	116	Hooper Bay	326	Mountain Village	242
Anvik	70	Huslia	136	New Stuyahok	154
Brevig Mission	126	Kaltag	105	Nightmute	82
Chevak	252	Kasigluk	155	Noatak	147
Eek	133	Kiana	148	Noorvik	184
Ekwok	71	Kivalina	110	Nulato	150
Elim	137	Kotlik	172	Nunapitchuk	173
Emmonak	287	Koyuk	124	Old Harbor	130
Gambell	202	Lower Kalskag	96	Pilot Station	172
Goodnews Bay	107	Marshall	149	Pitkas Point	43
Grayling	81	Mekoryuk	128	Quinhagak	209
				Russian Mission	96
				St. Mary's/Andreafsky	252
				St. Michael	135
				Savoonga	207
				Scammon Bay	158
				Selawik	247
				Shageluk	54
				Shaktoolik	91
				Shishmaref	192
				Shungnak	90
				Stebbins	171
				Teller	113
				Togiak	316
				Toksook Bay	175
				Tununak	118
				Upper Kalskag	101
				Wales	74

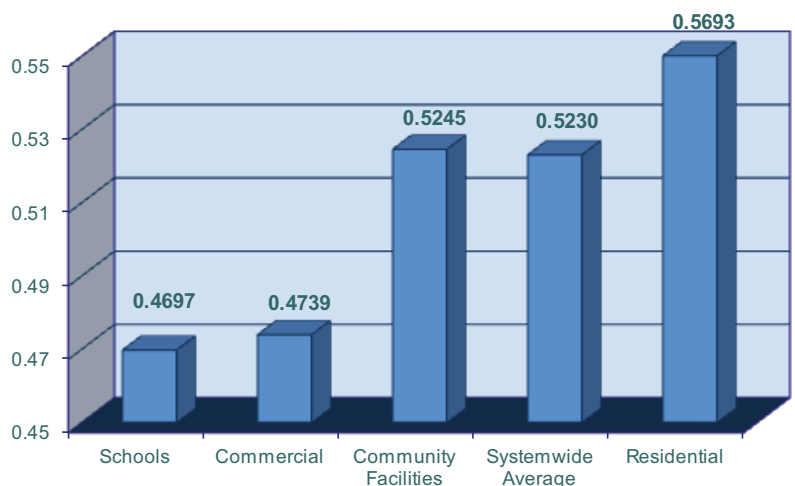
## CONSUMERS SERVED AT YEAR'S END



This local crew worked on the Emmonak-Alakanuk intertie (L to R): Henry Johnson, Charlie Redfox, Cyprian Edwards, Dominic Hunt, Ben Alexie and Phillip Kameroff.

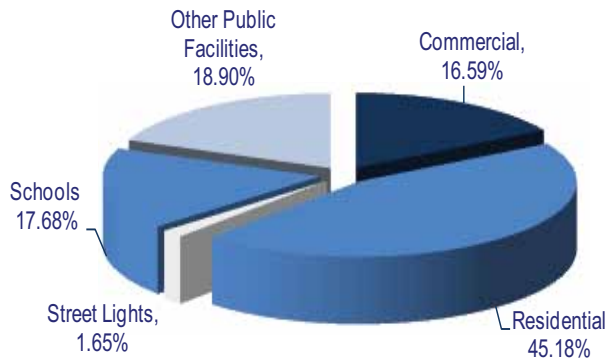


## AVERAGE REVENUE PER KWH BY CONSUMER CLASS



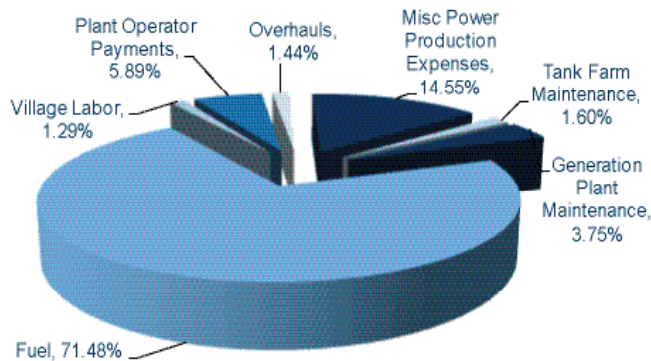
# BALANCE SHEET

## SOURCE OF ELECTRIC REVENUE

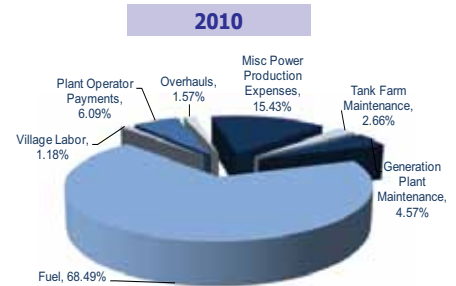
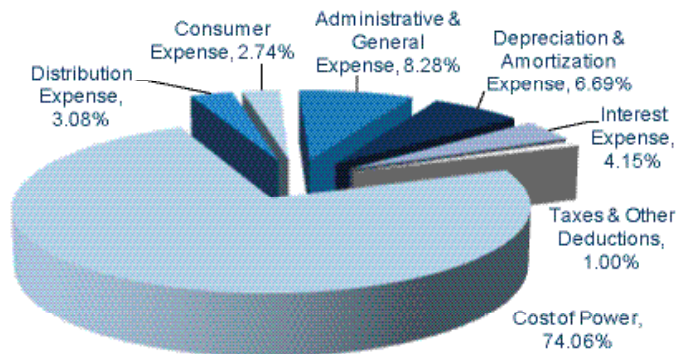


## POWER PRODUCTION EXPENSES

2011  
vs 2010



## TOTAL COST OF SERVICE BY ITEM



ASSETS	12/31/11	12/31/10
Total Utility Plant	\$127,798,814	\$125,587,796
Accumulated Provision for Depreciation	<u>71,954,209</u>	<u>69,681,251</u>
Net Utility Plant	\$55,844,605	\$55,906,545
Other Property & Investments	5,909,809	5,500,309
Current & Accrued Assets	47,146,406	29,016,051
Deferred Debits	<u>5,382</u>	<u>2,595</u>
<b>TOTAL ASSETS</b>	<b>\$108,906,201</b>	<b>\$90,425,500</b>

LIABILITIES	12/31/11	12/31/10
Equities	\$39,608,395	\$38,730,334
Long Term Debt	49,569,716	37,788,423
Current & Accrued Liabilities	19,309,995	13,508,844
Deferred Credits	<u>418,095</u>	<u>397,899</u>
<b>TOTAL LIABILITIES</b>	<b>\$108,906,201</b>	<b>\$90,425,500</b>

Equities As Percent Of Assets	2011	2010
	36.37%	42.83%

STATEMENT OF OPERATIONS	12/31/11	12/31/10
<b>Operating Revenue</b>	<b>\$37,578,128</b>	<b>\$35,303,709</b>
Cost of Power	28,015,105	25,562,974
Distribution Expense	1,163,626	1,147,880
Consumer Expense	1,036,299	1,175,231
Administrative & General Expense	3,130,562	2,696,518
Depreciation & Amortization Expense	2,532,305	2,325,422
Interest Expense	1,570,900	1,521,954
Taxes & Other Deductions	<u>376,886</u>	<u>375,600</u>

TOTAL COST OF ELECTRIC SERVICE	2011	2010
<b>TOTAL COST OF ELECTRIC SERVICE</b>	<b>\$37,825,682</b>	<b>\$34,805,579</b>
Operating Margin	(\$247,554)	\$498,131
Interest Income	11,862	434,636
Other Non-Operating Income	<u>1,115,320</u>	<u>293,565</u>

TOTAL MARGIN	2011	2010
<b>TOTAL MARGIN</b>	<b>\$879,628</b>	<b>\$1,226,332</b>

# PROJECTS/FACILITY UPGRADES



Crews working on the Emmonak - Alakanuk intertie.

Three of the four wind turbines in Emmonak.



## Generation Projects

- **Interties:** A 10-mile intertie connecting Emmonak and Alakanuk was built. This intertie involves the widest and tallest overhead crossing of the Yukon River. After six years of permitting and planning, construction of the seven-mile Brevig Mission-Teller intertie began in September 2011. It was scheduled to be energized in late November 2011 but an epic storm hit western Alaska before ice could form and protect the shoreline. A submerged cable was damaged in the storm and cannot be repaired until the ice goes out.
- **New Diesel Power Plants Completed:** New Stuyahok - plant relocated; Emmonak - new switchgear; Shaktoolik - new switchgear module (underway).
- **New Engine Startups:** New Stuyahok - Cat 3456 being installed; Teller - Detroit Diesel Series 60.
- **Tank Farm Upgrades:** New Stuyahok and Stebbins
- **Heat Recovery:** AVEC assisted ANTHC with heat recovery projects in Minto and Goodnews Bay.
- **New Wind Turbines:** four 100-kW turbines in Emmonak and two 100-kW turbines in Shaktoolik.
- **Wind Monitoring Stations:** Ongoing: Teller. Planning for: Stebbins, Scammon Bay, Marshall, New Stuyahok, and Eek. Completed: Emmonak, Minto.

## Distribution Projects



Sam Lindquist powerwashed Savoonga's storm-damaged facilities.

Although there were no new airports or new schools connected this year there was still plenty of new construction. Housing: Elim, Russian Mission, Marshall, Toksook Bay, Huslia, Noatak, Shungnak, Goodnews Bay and Mt. Village. School facilities or Headstart: Scammon Bay, Toksook Bay and Shaktoolik.

School housing: Scammon Bay, Marshall, Huslia, and Grayling. Health Clinic: Nunapitchuk. Water and Sewer Projects: Mekoryuk, Ambler, Kasigluk, Andreafsky, Pitkas Point, Nulato, Old Harbor and Shaktoolik. Telecom: Goodnews Bay, Elim, Kotlik, New Stuyahok and Shishmaref. Store: Kotlik. Relocate facilities for road projects: Quinhagak, Kaltag and Marshall. New ferry dock in Old Harbor.

## AVEC Issues and Maintenance:

- In response to extended outages in Savoonga from freezing salt spray year we began installing additional insulation or "creepage extenders" on the primary bushings of transformers in certain coastal villages. Savoonga and Shaktoolik are complete; Kivalina, Shishmaref and Wales are scheduled for next summer.
- We improved capacity and added additional circuits to improve the ability to sectionalize parts of town in St. Michael, Togiak, Noorvik, Koyuk, Shishmaref and Marshall.
- Extensive modifications were done to the distribution system in New Stuyahok to accommodate the relocation of the power plant to a new site behind the school. A three-phase line extension and modifications around the power plant were completed in Shaktoolik to accommodate the installation of new wind turbines. Crews also built two miles of overhead line as part of the Brevig/Teller intertie.
- Crews in Ekwok tensioned lines and services, straightened poles and cleared rights of way under the power lines.
- We began a concentrated effort to inspect our aging distribution systems to identify maintenance items before they become a problem. After inspections are complete, line crews addressed items of concern: re-tensioning or replacing conductors, replacing rusty transformers and straightening poles and clearing rights-of-way. This included replacing deteriorated poles in Shishmaref, Mekoryuk and Toksook Bay.



New Stuyahok's power plant was re-located.



The ends of the Brevig Mission-Teller submarine cables are covered by protective armor.



Shaktoolik's two wind turbines.

# AVEC MEMBERS AND EVENTS

## Plant Operators and Local Hire



Tommy Heckman Sr. of Pilot Station has been a plant operator for more than 30 years. Thanks, Tommy, for your long-term commitment!



Anthony Evan, one of the plant operators in Pilot Station, performs maintenance duties.



Brent Paukan of St. Mary's is the nephew of Moses Paukan Sr., another long-time plant operator.



Alan "Booboo" Andrew of St. Mary's learned how to perform fuel inventories.



Arvin Demientieff and John Deck of Holy Cross received operator training.



Brevig Mission residents worked on the Brevig-Teller intertie..



Eric Moses of Alakanuk worked on the Emmonak-Alakanuk intertie project.



John Evan and Jeremy Evan shoveled deep snow at the Pilot Station power plant.

## Community Events

AVEC held a formal dedication of the new power generation facilities in Chevak that included lunch and tours.



Speakers (L to R): Dora Hill, Meera Kohler, Mayor Ulric Ulroan and elders David Boyscout and Leo Moses Sr.



Ribbon cutting (L to R): Sandra Moller with Alaska Energy Authority, Jim Nordlund with Rural Utilities Service, Meera Kohler with AVEC, and Joel Niemeyer with the Denali Commission.



Elias Stone of Hooper Bay, holding his daughter Mayu, designed AVEC's logo many years ago.



Quinhagak Salmon Run 5K race participants (L to R): Alissa Mark, Mikayla White, Kion Roberts and Anthony Sharp.

## Numerous communities hold annual spring cleanups.



St. Mary's cleanup crew.



Noatak cleanup.



Pitkas Point cleanup.



Russian Mission's cleanup crew.

# AVEC Board of Directors



**Charlie Curtis**  
Chairman  
Kotzebue



**Walter Sampson**  
Vice-Chairman  
Noorvik



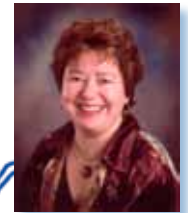
**Helena Jones**  
Treasurer  
Ambler



**Fred Sagoonick**  
Member  
Shaktoolik



**Robert Beans**  
Member,  
Mt. Village



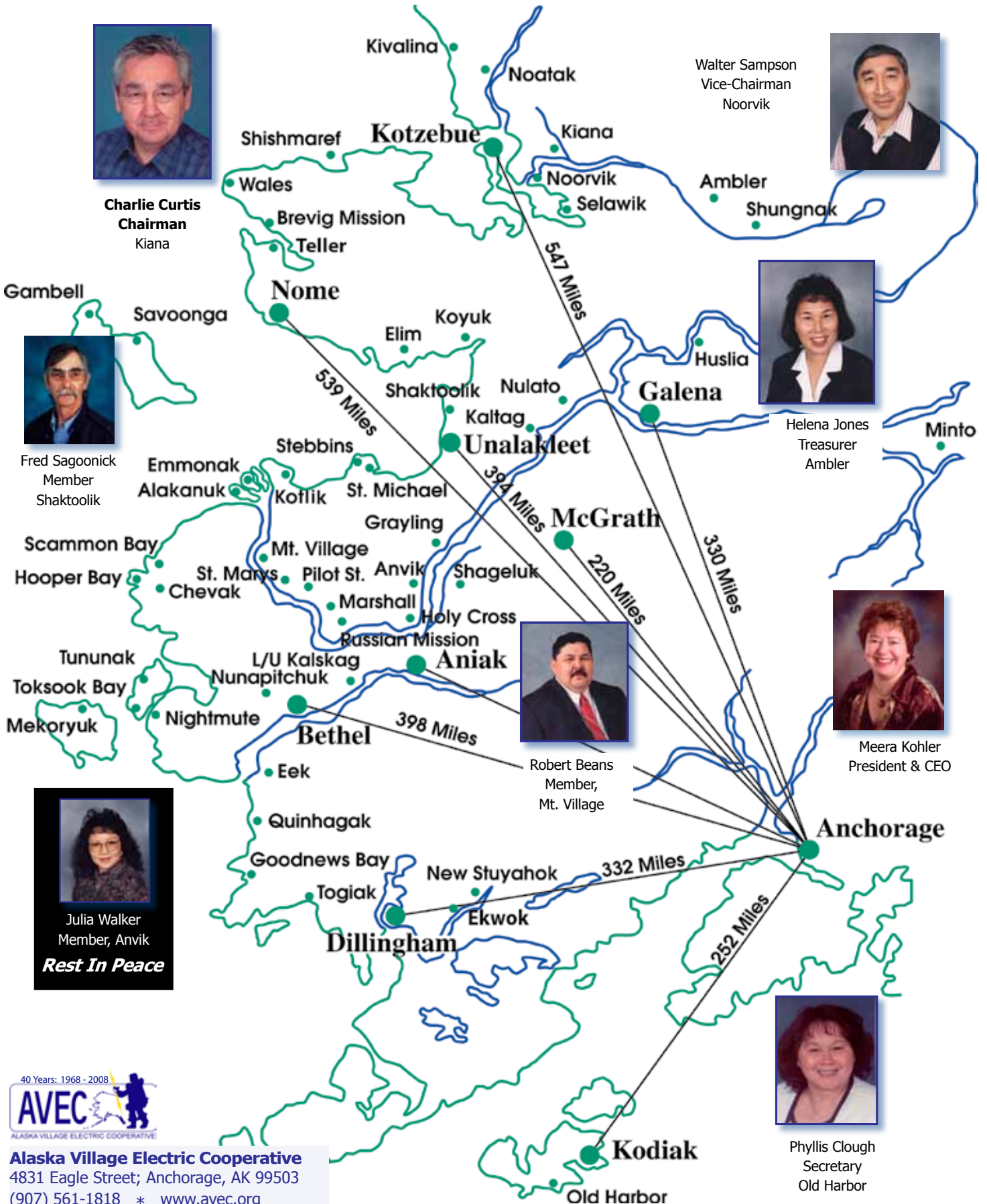
**Meera Kohler**  
President & CEO



**Julia Walker**  
Member, Anvik  
*Rest In Peace*



**Phyllis Clough**  
Secretary  
Old Harbor



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