

Alaska Energy Authority

Curtis W. Thayer
Executive Director
Alaska Energy Authority

House Finance
Subcommittee
January 30, 2020



Who We Are



Created in 1976 by the Alaska Legislature, the [Alaska Energy Authority \(AEA\)](#) is a public corporation of the State of Alaska governed by a board of directors with the mission to “reduce the cost of energy in Alaska.” AEA is the state's energy office and lead agency for statewide energy policy and program development.

What We Do



Energy Planning – In collaboration with local and regional partners, AEA provides critical economic and engineering analysis to plan the development of cost effective energy infrastructure.



Grants and Loans – AEA provides loans to local utilities, local governments, and independent power producers for the construction or upgrade of power generation and other energy facilities.



Railbelt Energy – AEA owns the Bradley Lake Hydroelectric Project and the Alaska Intertie. These assets benefit Railbelt consumers by reducing the cost of power.



Renewable Energy – AEA provides renewable energy and energy efficiency grants, analysis, and expertise to benefit Alaskans. These include hydro, biomass, wind, solar, and others.

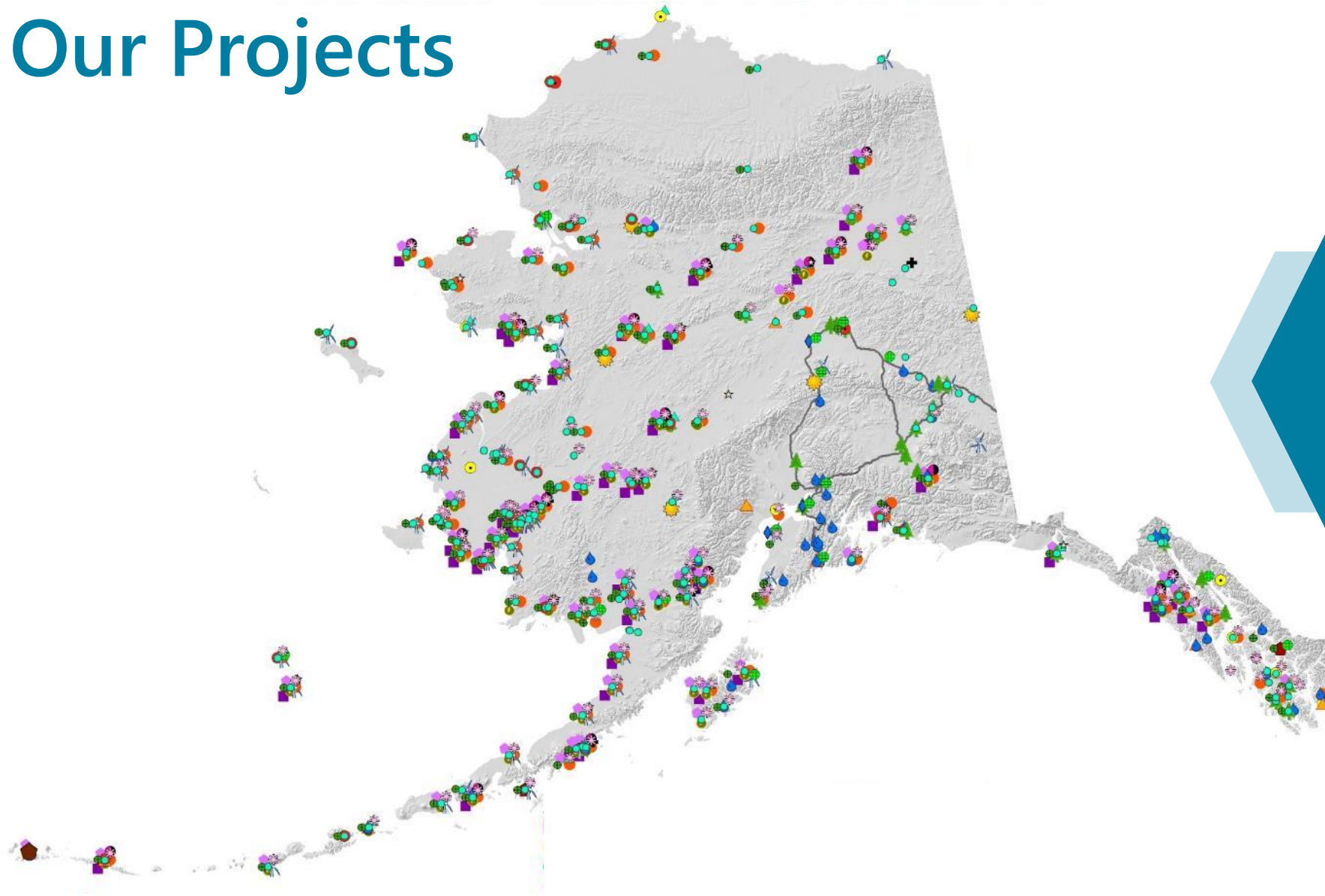


Power Cost Equalization – The Power Cost Equalization Program reduces the cost of electricity in rural Alaska for residential customers and community facilities.



Rural Energy – AEA constructs bulk fuel tank farms, diesel powerhouses, and electrical distribution grids in rural villages. AEA supports the operation of these facilities through circuit rider and emergency response programs.

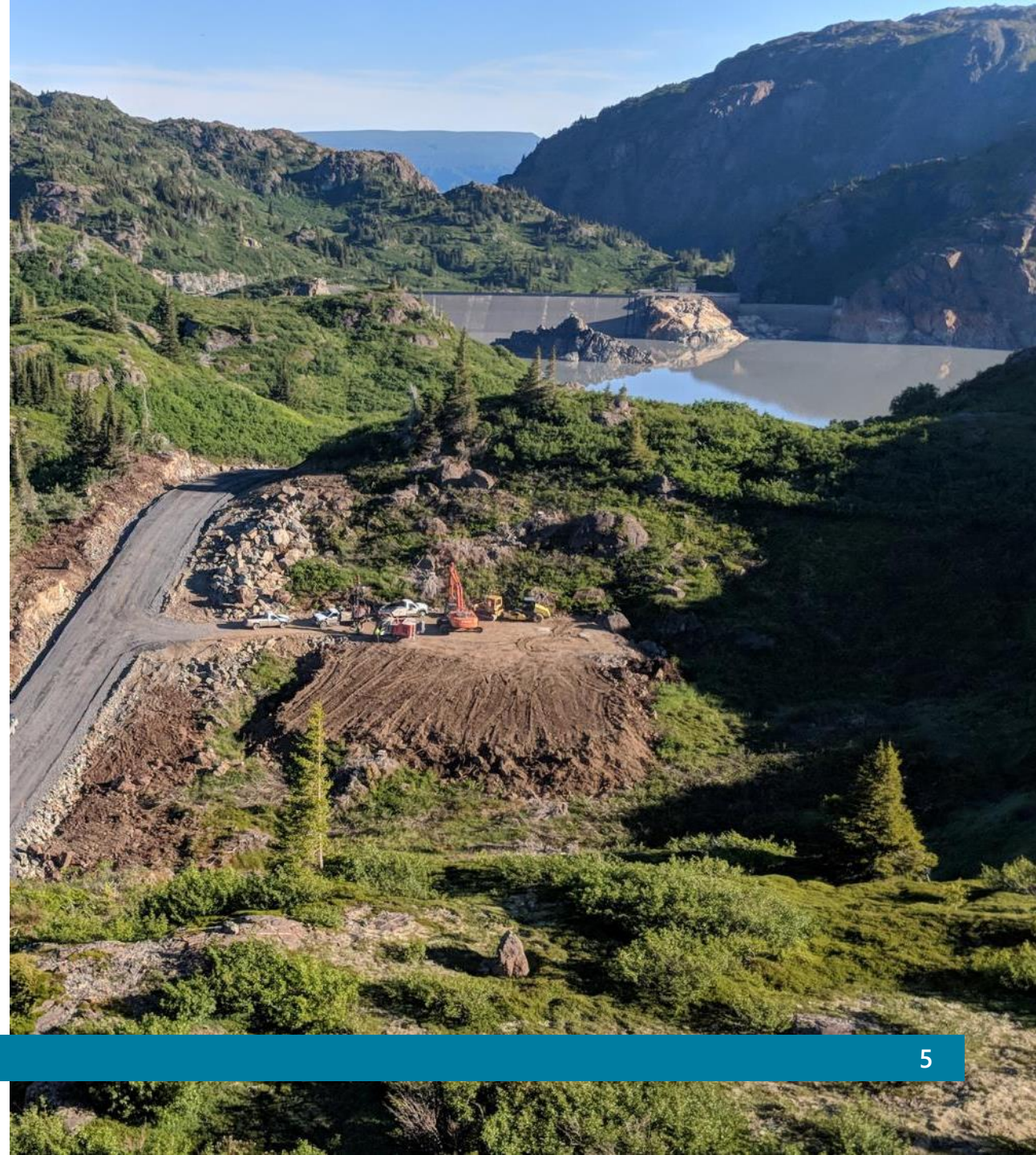
Our Projects



AEA works with its Alaska partners and stakeholders to provide reliable and affordable energy solutions.

Programs and Projects

- ▶ Bradley Lake Hydroelectric Project
- ▶ Alaska Intertie
- ▶ Bulk Fuel Upgrades
- ▶ Rural Power System Upgrades
- ▶ Rural Utility Assistance
- ▶ Power Cost Equalization
- ▶ Renewable Energy Fund Grants
- ▶ Power Project Fund Loans
- ▶ Alaska C-PACE
- ▶ Alternative Energy
- ▶ Energy Efficiency
- ▶ Energy Project Development



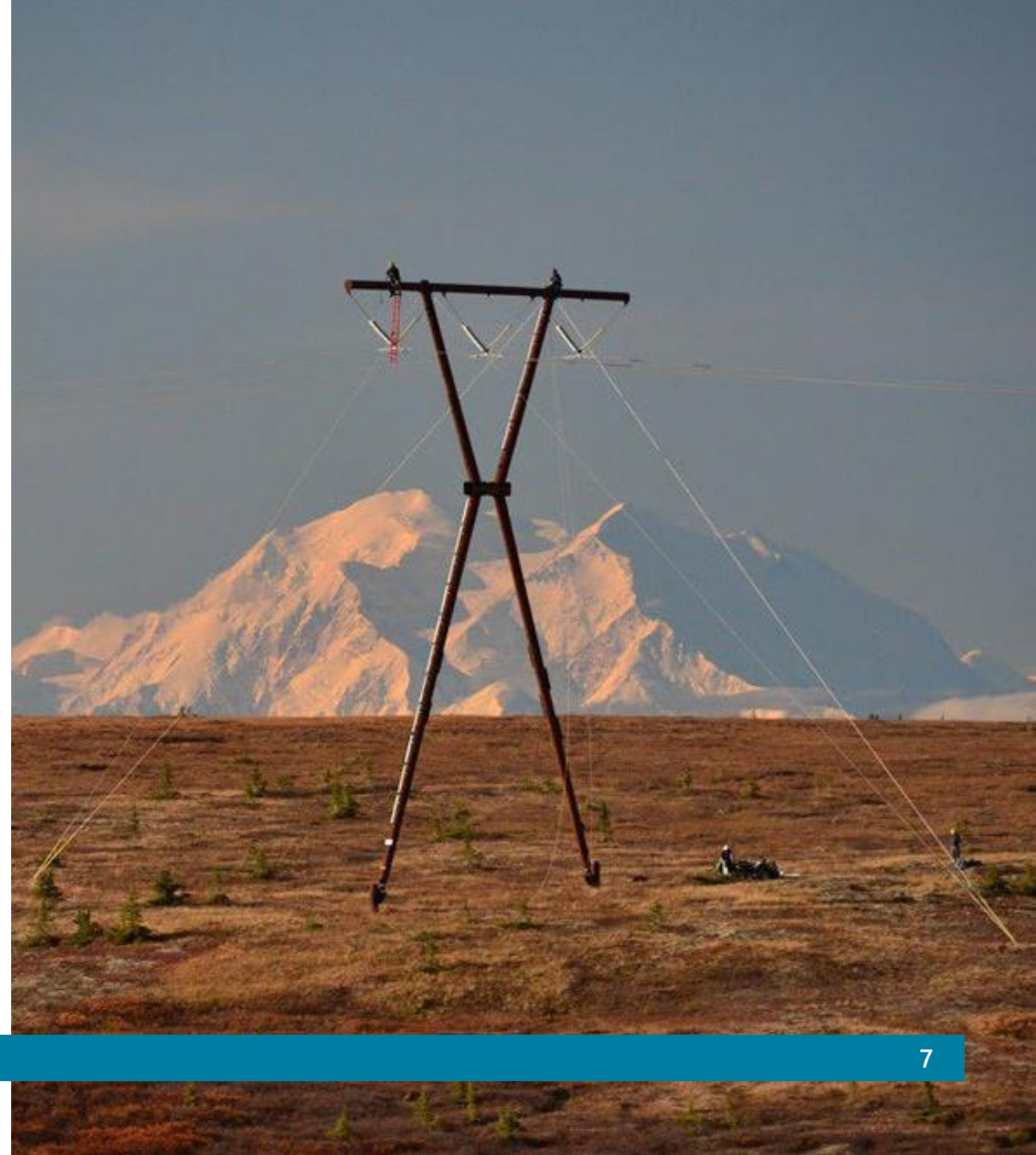
An aerial photograph of the Bradley Lake Hydroelectric Project. The image shows a large concrete dam structure across a river. To the left of the dam is a powerhouse with a white roof. The river flows from the top left, through the dam, and then turns to the right, creating a series of rapids and a waterfall. The surrounding landscape is rugged and forested with green trees and rocky terrain. A road or path is visible on the right side of the dam.

Bradley Lake Hydroelectric Project

- ▶ Produces ~10% of Railbelt electricity, 4.5 cents/kWh
- ▶ Benefits members of:
 - ▷ Chugach Electric Association
 - ▷ City of Seward
 - ▷ Golden Valley Electric Association
 - ▷ Homer Electric Association
 - ▷ Matanuska Electric Association
 - ▷ Municipal Light & Power
- ▶ Battle Creek Diversion Project: \$47 million, will add ~10% energy

Alaska Intertie

- ▶ 170 miles from Willow to Healy
- ▶ Allows Golden Valley Electric Association (GVEA) to connect to and benefit from lower cost power
- ▶ Improves reliability within Railbelt system
- ▶ Operated by AEA and Railbelt utilities
- ▶ \$40 million savings for GVEA in Fiscal Year 2019



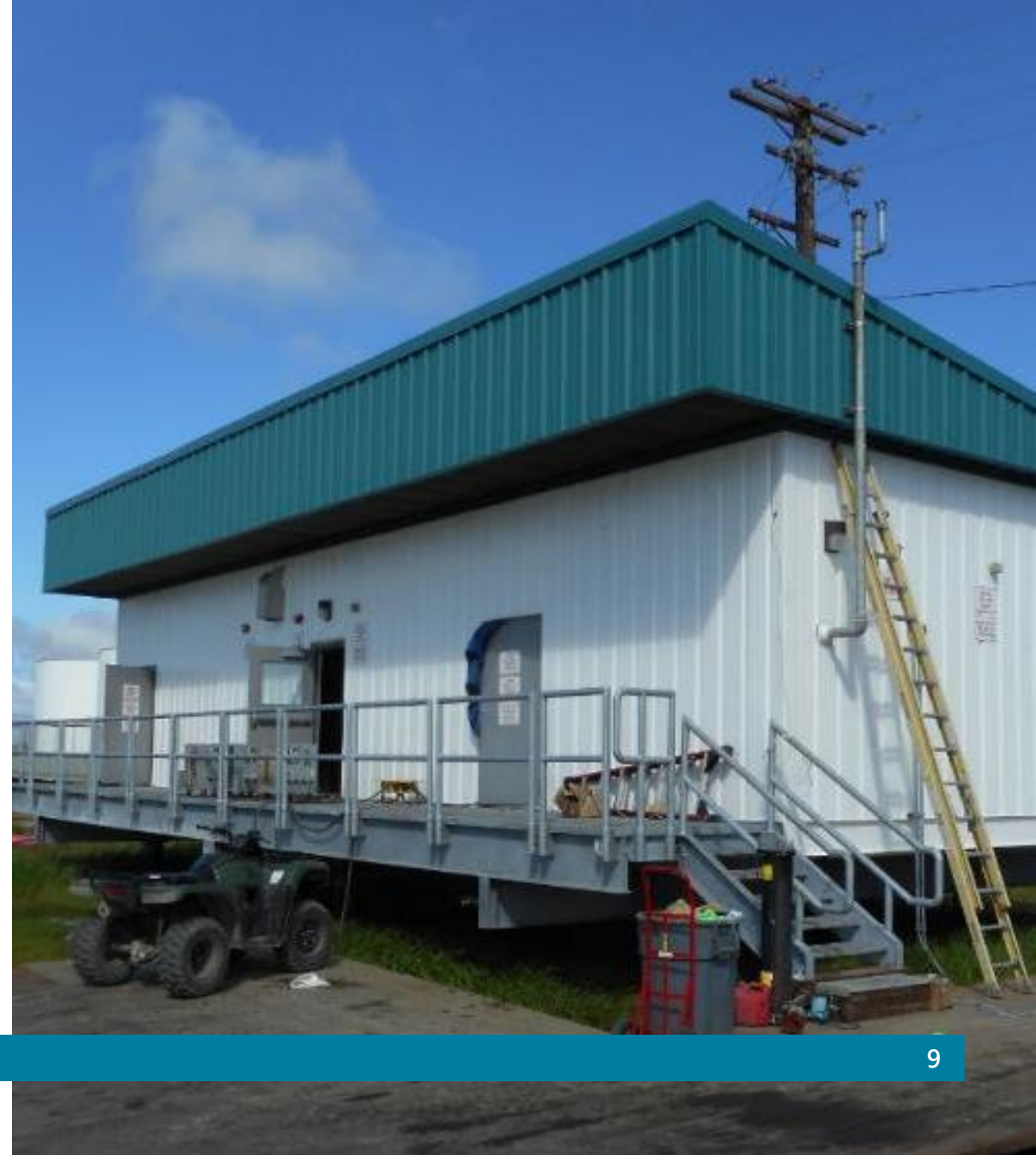
Bulk Fuel Tank Farm Upgrades

- ▶ Code compliant fuel storage facilities
- ▶ Prevention of spills and contamination
- ▶ Reduction of fuel cost by allowing the community to purchase bulk quantities
- ▶ 118 projects completed since 2000



Rural Power System Upgrades

- ▶ Improving power system efficiency, safety, and reliability
- ▶ Building code compliant facilities to provide stable and reliable power
- ▶ ~10% to 20% efficiency improvement in diesel generation
- ▶ 86 projects completed since 2000



Rural Utility Assistance



103

Communities received circuit rider and rural utility worker assistance in Fiscal Year 2018



38

Communities received training in Fiscal Year 2018



6

Communities assisted with electrical emergencies in Fiscal Year 2018

Power Cost Equalization Program

- ▶ **History** – Established in 1985, the Power Cost Equalization (PCE) Program provides electric power to rural residential customers and community facilities at costs similar those in Anchorage, Fairbanks, and Juneau
- ▶ **PCE Endowment Fund** – Created and capitalized in Fiscal Year 2001, the \$1.1 billion PCE Endowment Fund is managed by the Department of Revenue
- ▶ **Calculation of PCE Rate** – The Regulatory Commission of Alaska determines the effective rate based on rural utility expenses and power sales

PCE Impact



194
Communities
Served



\$27 Million
Disbursed in
Fiscal Year 2018



Supported by
AEA Rural Utility
Assistance



Web Portal
to Increase
Accuracy



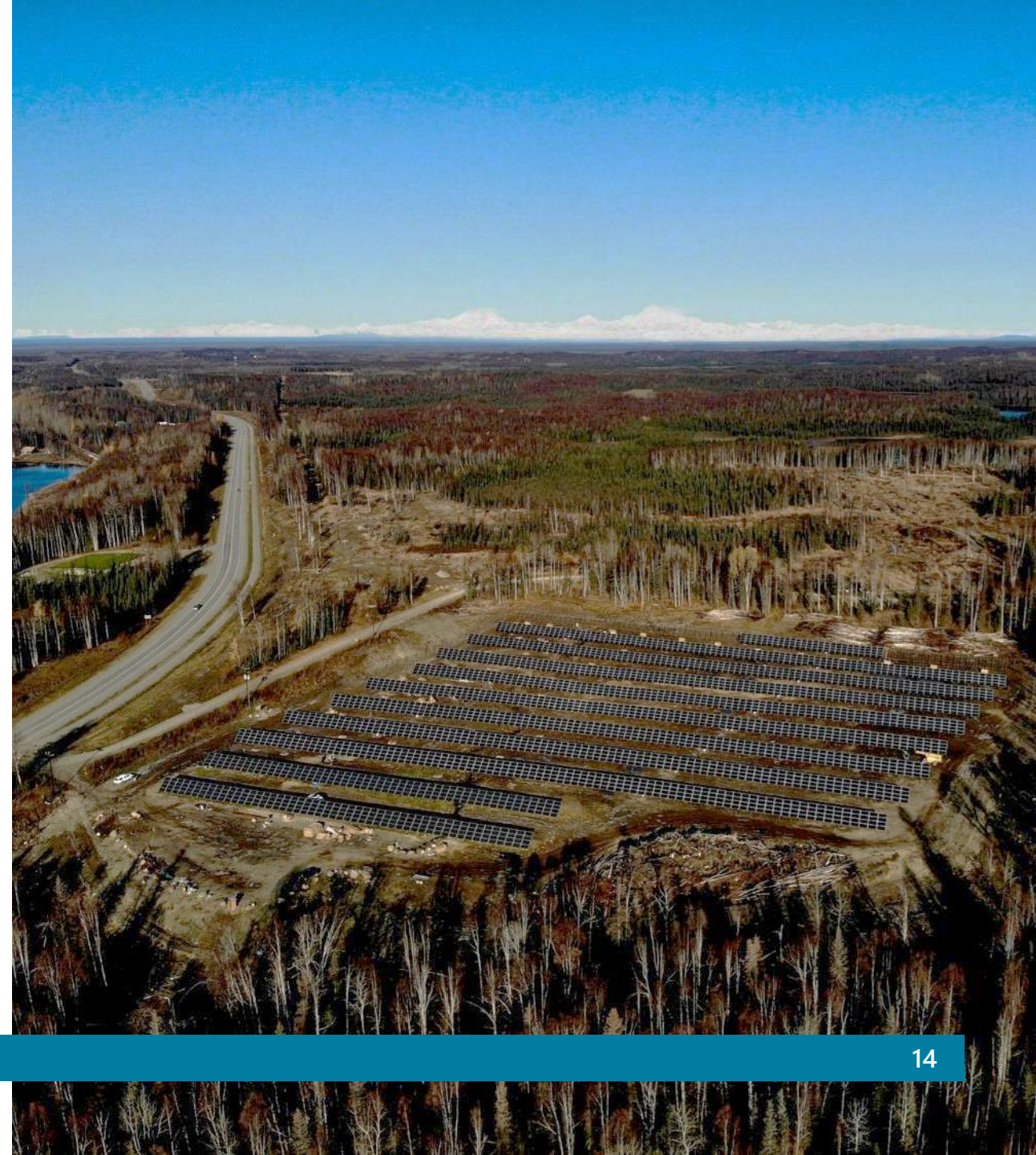
Renewable Energy Fund

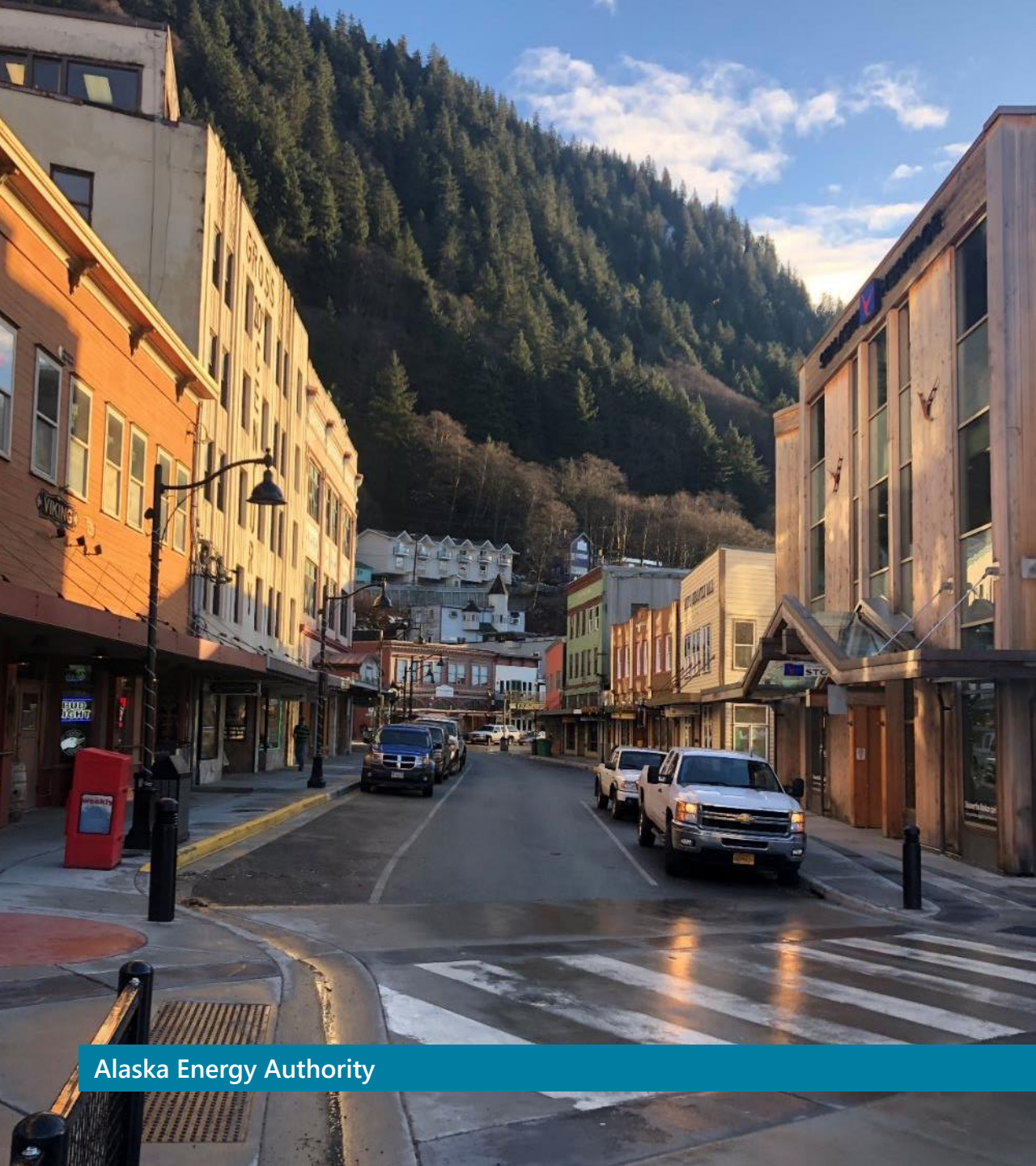
- ▶ \$268 million invested in the Renewable Energy Fund (REF) by the State
- ▶ Boosted renewable energy market in Alaska
- ▶ Leveraged hundreds of millions of federal and private dollars
- ▶ 90 operational projects, 30 in development
- ▶ Displacing ~30 million diesel equivalent gallons annually
- ▶ ~\$74 million in fuel savings in 2017



Power Project Fund Loan Program

- ▶ \$27.5 million committed or disbursed for 20 loans
- ▶ \$10.7 million uncommitted
- ▶ Flexible loan program
- ▶ Covers all aspects of supply side system
- ▶ Relies on unique, in-house technical expertise for evaluation of loan viability and regulatory compliance
- ▶ Loan applications are vetted for economic and finance viability
- ▶ Critical resource in shift from grant funded to debt financed energy projects





Alaska C-PACE

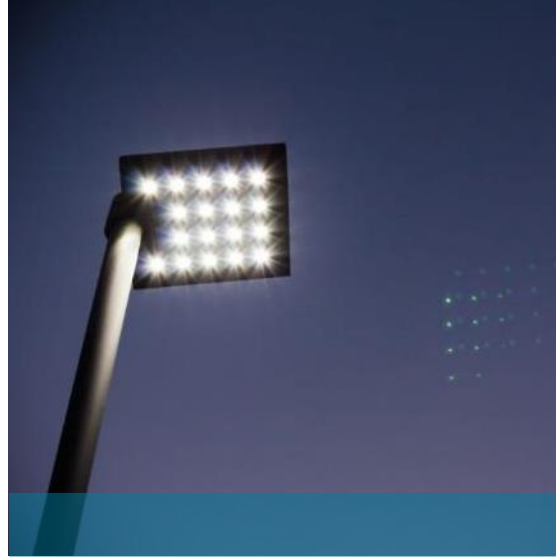
- ▶ Adopted by over 20 states, Commercial Property Assessed Clean Energy (C-PACE) is an effective financing program tool to attract private capital for energy upgrades
- ▶ In 2017, legislation was passed to develop a C-PACE program in Alaska
- ▶ AEA is leading an ad hoc group of stakeholders to initiate programs in municipalities and boroughs statewide
- ▶ Under the C-PACE model, debt associated with doing the improvements is repaid via a line item on local tax assessments

Alternative Energy and Energy Efficiency



Biomass

AEA's biomass program supports the construction of wood-fired boilers using local fuels that provide heat for public facilities.



Energy Efficiency

AEA focuses its energy efficiency programs on commercial buildings, public buildings, industrial facilities, and electrical efficiency.



Hydroelectric

In addition to Bradley Lake, AEA continues to analyze, develop, construct, and fund hydroelectric projects throughout Alaska.

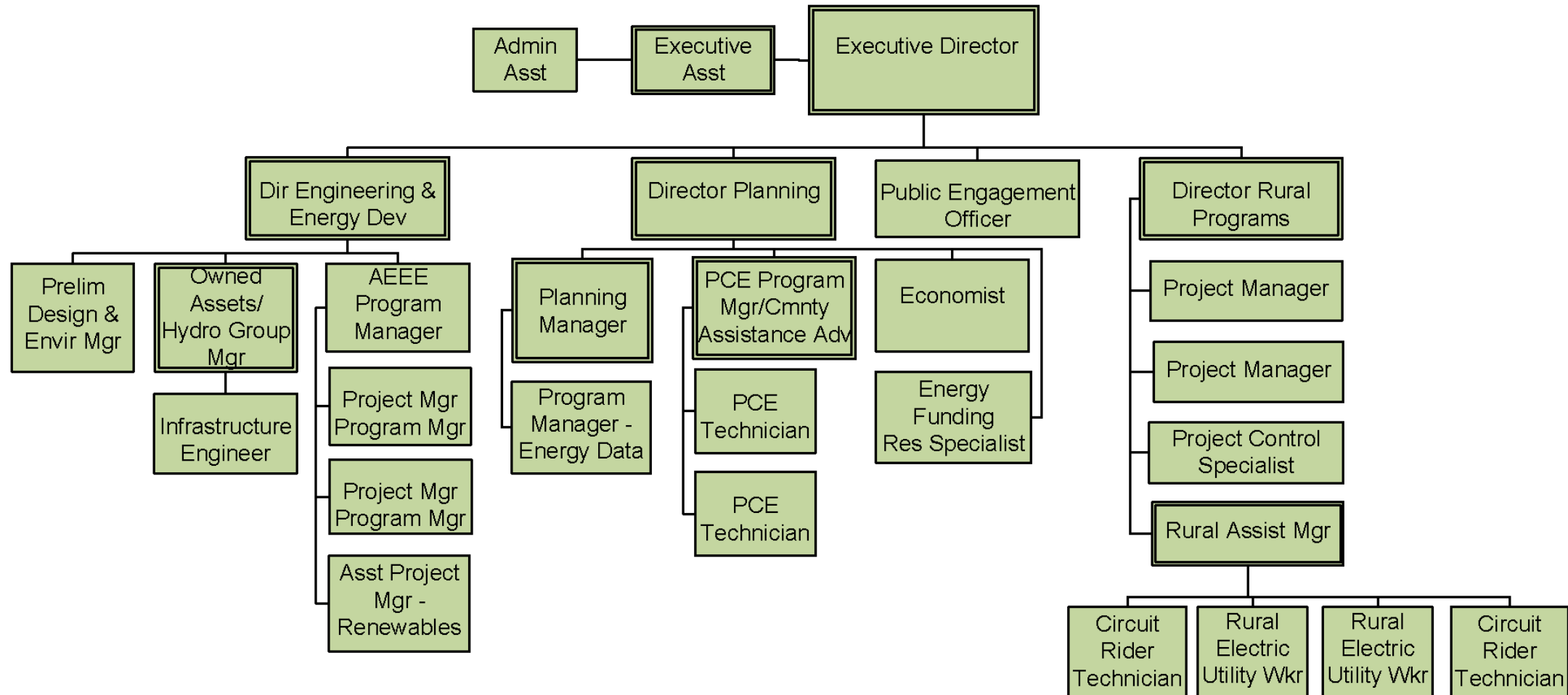


Wind

AEA supports the development and construction of wind projects across Alaska – from the Railbelt Grid to rural villages.

AEA Org Chart

Alaska Energy Authority



AEA FY2021 Budget (thousands)

AEA FY2021 OPERATING BUDGET (ALL COMPONENTS)	FY2020 Authorized	FY2021 Governor	Variance
Expenditure Categories:			
Travel	134.8	134.8	-
Services (includes personal services paid to AIDEA)	9,698.2	8,548.2	(1,150.0)
Commodities	56.0	56.0	-
Capital Outlay/Equipment	15.0	15.0	-
Grants	32,100.0	29,600.0	(2,500.0)
Totals	42,004.0	38,354.0	(3,650.0)
Funding Sources:			
Unrestricted GF (undesignated)	847.3	847.3	-
Power Project Fund (designated)	995.5	995.5	-
Renewable Energy (designated)	2,000.0	1,400.0	(600.0)
PCE Endowment (designated)	32,736.8	30,236.8	(2,500.0)
GF Program Receipts (designated)	100.0	50.0	(50.0)
Subtotal (Designated & Undesignated GF)	36,679.6	33,529.6	(3,150.0)
CIP Receipts	2,567.8	2,567.8	-
Federal Receipts	1,502.0	1,202.0	(300.0)
AEA Receipts	980.7	780.7	(200.0)
I/A Receipts	123.9	123.9	-
Statutory Designated Program Receipts	150.0	150.0	-
Totals	42,004.0	38,354.0	(3,650.0)

AEA FY2021 Capital Budget (thousands)

Project Name	State Funding Request	Federal Receipt Authority	Total	Fund Code	Brief Summary
Electrical Emergency Response	200.0	-	200.0	1004 - General Fund	Critical to rural communities - provides technical support when an electrical utility has lost, or will lose the ability to generate or transmit power. AS42.45.900
Rural Power Systems Upgrades (State dollars are matching funds)	5,000.0	12,500.0	17,500.0	1002 - Fed Receipts / 1169 PCE Endowment	Electric utility systems are part of the basic infrastructure of rural communities. New power systems are designed to meet accepted utility standards for safety, reliability, and environmental protections.
Bulk Fuel Upgrades (State dollars are matching funds)	5,500.0	7,500.0	13,000.0	1002 - Fed Receipts / 1169 PCE Endowment	Bulk fuel tank farm upgrades. Replaces aging tanks that may be leaking. Adds capacity to meet community needs. Meets code compliance standards improving life, health, and safety of community.
Railbelt Energy Plan	3,000.0	-	3,000.0	1012 - Railbelt Energy Fund	The Bulk Electrical System in the Railbelt region of the state has gone through tremendous change since the completion of the last Railbelt Integrated Resource Plan (RIRP) in 2010. Multiple dockets have been opened at the Regulatory Commission of Alaska (RCA) and over \$56 million in state funds have been appropriated for improvements consistent with the RIRP. Institutional reform is necessary to address increases to Railbelt taxpayers' energy costs.
TOTALS	13,700.0	20,000.0	33,700.0		

Unaudited Financial Highlights (thousands)

BALANCE SHEETS

Assets:

	<u>June 30, 2019</u>	<u>June 30, 2018</u>
Restricted Investments securities and cash	1,204,632	1,212,214
Loans, net	24,742	17,968
Capital assets, net	375,972	369,188
Receivables and other assets	4,244	5,766
Total Assets	<u>1,609,590</u>	<u>1,605,136</u>

Liabilities and net position:

Liabilities

Bonds payable	74,709	85,179
Other bond liabilities	1,269	1,256
Payables and other liabilities	1,090,582	29,774
Total liabilities	<u>1,166,560</u>	<u>116,209</u>
Net Position	<u>443,030</u>	<u>1,488,927</u>
Total liabilities and net position	<u>1,609,590</u>	<u>1,605,136</u>

Unaudited Financial Highlights (thousands)

REVENUES, EXPENSES AND CHANGES IN NET POSITION	<u>June 30, 2019</u>	<u>June 30, 2018</u>
Operating revenues:		
Federal grants	3,552	3,505
Revenue from operating plants	21,035	21,482
State operating and capital revenues	20,444	16,063
Interest on loans	347	296
Other operating revenues	792	144
Total operating revenues	<u>46,170</u>	<u>41,490</u>
Operating Expenses:		
Grants and projects	20,213	30,496
Power cost equalization grants	28,369	26,196
Interest expense	1,746	2,371
Plant operating	5,350	6,772
General and administrative	5,672	4,454
Provision for loan loss	169	15
Loss on disposal of asset	-	(51)
Depreciation	10,862	15,594
State of Alaska appropriations and transfers	1,097,628	-
Total operating expense	<u>1,170,009</u>	<u>85,847</u>
Operating loss	<u>(1,123,839)</u>	<u>(44,357)</u>
Investment Income, net	78,008	79,345
State of Alaska reappropriations and transfers	(67)	(10,067)
Capital contributions	1	2,796
Increase (decrease) in net position	<u>(1,045,897)</u>	<u>27,717</u>

PCE Endowment History (thousands)

	<u>FY2015</u>	<u>FY2016</u>	<u>FY2017</u>	<u>FY2018</u>	<u>FY2019</u>
BEGINNING INVESTMENT FUND BALANCE	\$ 977,867	969,389	946,939	1,023,566	1,073,378
Inflows:					
Annual investment earnings	33,192	8,912	112,331	76,602	74,142
Capital fund transfers in	—	—	—	—	—
Total inflows	33,192	8,912	112,331	76,602	74,142
Outflows:					
Transfers to AEA for PCE payments (1)	(41,002)	(30,622)	(34,956)	(25,595)	(29,719)
Transfers to Other Funds	—	—	—	—	(44,000)
Program administration - AEA	(248)	(255)	(243)	(624)	(444)
Administrative fee - Regulatory Commission	(107)	(100)	(112)	(113)	(102)
Management fee - Department of Revenue	(313)	(385)	(393)	(458)	(430)
Total outflows	(41,670)	(31,362)	(35,704)	(26,790)	(74,695)
Ending investment fund balance	\$ 969,389	946,939	1,023,566	1,073,378	1,072,825

The background of the slide is an aerial photograph of a coastal region. In the foreground, there is a green, hilly coastline with a small sandy beach curving into a blue body of water. In the distance, two prominent snow-capped mountain peaks rise above a layer of clouds. The water is a deep blue, and the sky is a pale, hazy blue.

AEA provides **energy solutions** to meet the unique needs and opportunities of Alaska's rural and urban communities.



ALASKA ENERGY AUTHORITY

813 West Northern Lights Blvd.
Anchorage, Alaska 99503
Phone: (907) 771-3000
Fax: (907) 771-3044
Toll Free (888) 300-8534

akenergyauthority.org

For more information, please contact AEA Executive Director Curtis W. Thayer