

Alaska Energy Authority

Sara Fisher-Goad, executive director
Senate Finance Committee
March 16, 2016



Alaska Energy Authority

- AEA is an independent and public corporation of the State of Alaska, est. 1976
- 44.83.070: “ The purpose of the Authority is to promote, develop, and advance the general prosperity and economic welfare of the people of the state by providing a means of financing and operating power projects and facilities that recover and use waste energy and by carrying out the powers and duties assigned to it under AS 42.45.”

AEA Programs

Programs

- Circuit Rider Assistance
- Community Assistance
- Emergency Response
- Emerging Energy Technology Fund
- Energy Efficiency and Conservation
- Power Cost Equalization
- Power Project Loan Fund
- Regional Energy Planning
- Renewable Energy Grant Fund
- Utility Training (Power Plant and Bulk Fuel Operator, Hydro Operator)

Projects

- Alaska Affordable Energy Strategy
- Biomass
- Bulk Fuel Tank Farms
- Combined Heat and Power
- Energy Efficiency
- Geothermal
- Hydroelectric
- Ocean and River
- Rural Power Systems Upgrades
- Electrical Distribution
- Solar
- Wind

AEA-Owned Infrastructure

- Bradley Lake Hydro
- Alaska Intertie
- Susitna-Watana Hydro *(authorized)*



AEA's Strategy, Purpose and Core Values

- Purpose: To develop and deliver optimal energy solutions for Alaska's communities
- Mission: To reduce the cost of energy for Alaskans
- Core Values:
 - **Respectful:** Demonstrating high regard for communities, integrating local perspectives
 - **Responsible:** Being prudent and ethical stewards of Alaskans' resources
 - **Innovative:** Seeking new ideas and methods and adapting to changing conditions
 - **Passionate:** Enthusiasm for and commitment to our work team and improvement



Rural Energy Systems

- AEA is the state entity that serves rural Alaska from planning to construction of energy systems and from utility, bulk fuel and power house training to emergency response.



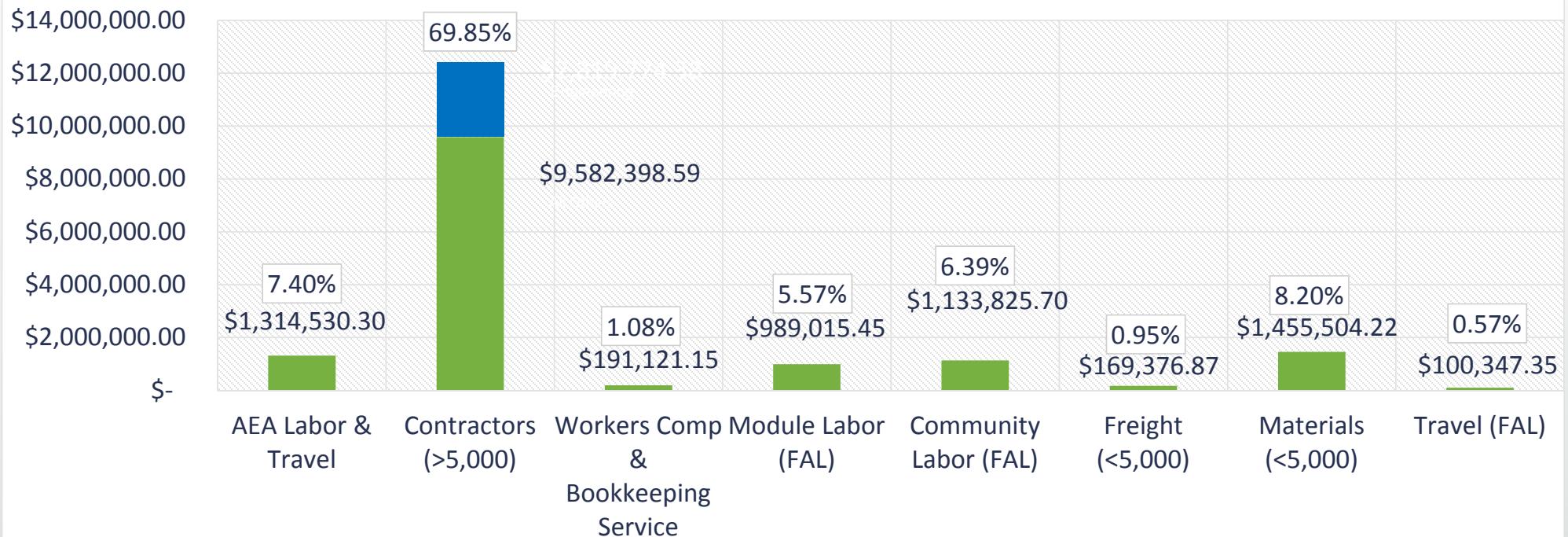
Communities Benefit from Rural Infrastructure Investments

- Weighted rate savings to the community from an AEA Rural Power System Upgrade project is 19 cents per kilowatt hour (as opposed to debt financing the project)
 - Assumptions: 5% interest, 20-year life for Capex, Utility costs are 50/50 fuel and non-fuel
- Not uncommon to see 30%-40% increased fuel efficiency
- Code-compliant bulk fuel upgrades allow fuel purchase in larger quantities at a lower cost/gallon
- AEA's has community focus
 - Can integrate larger picture, fuel storage, heat loops, potential renewable integration, clean diesel standards, etc.
 - Projects constructed with goal of stabilizing or reducing rates



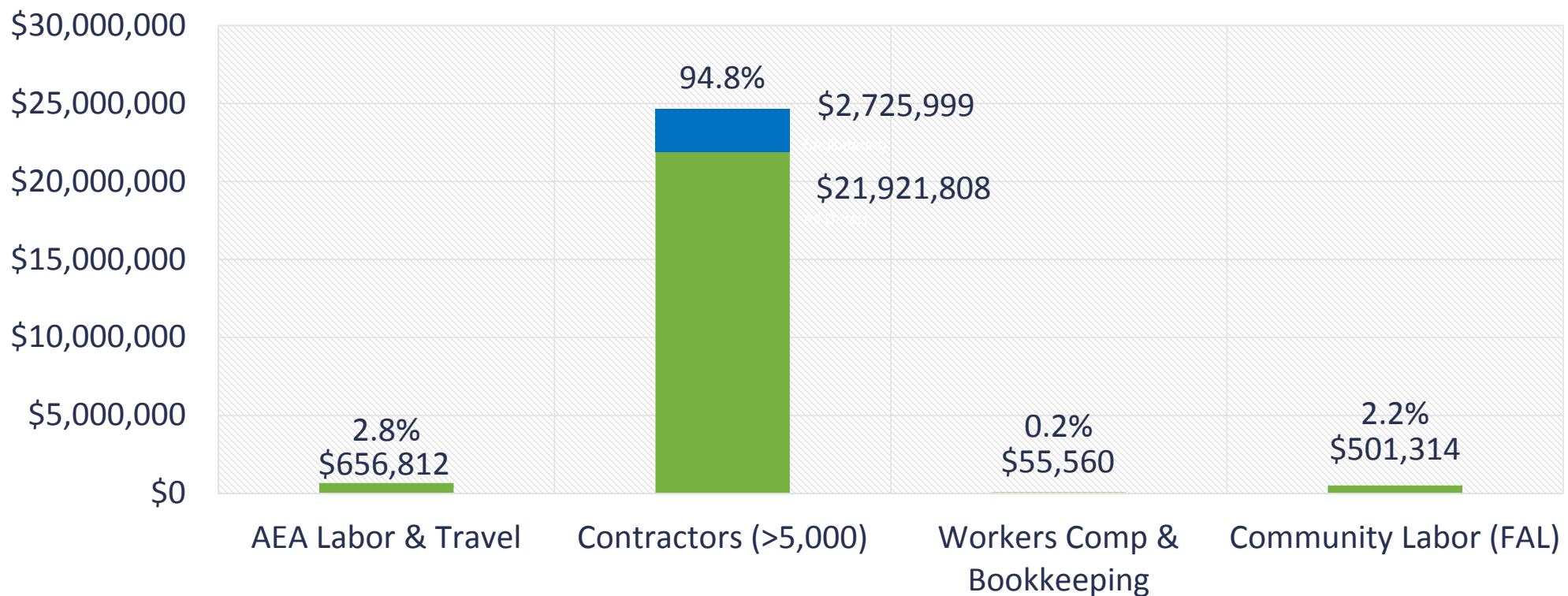
Contractors Benefit from Rural Infrastructure Investments

AEA Rural Powerhouse System Upgrade Combined Projects Summary

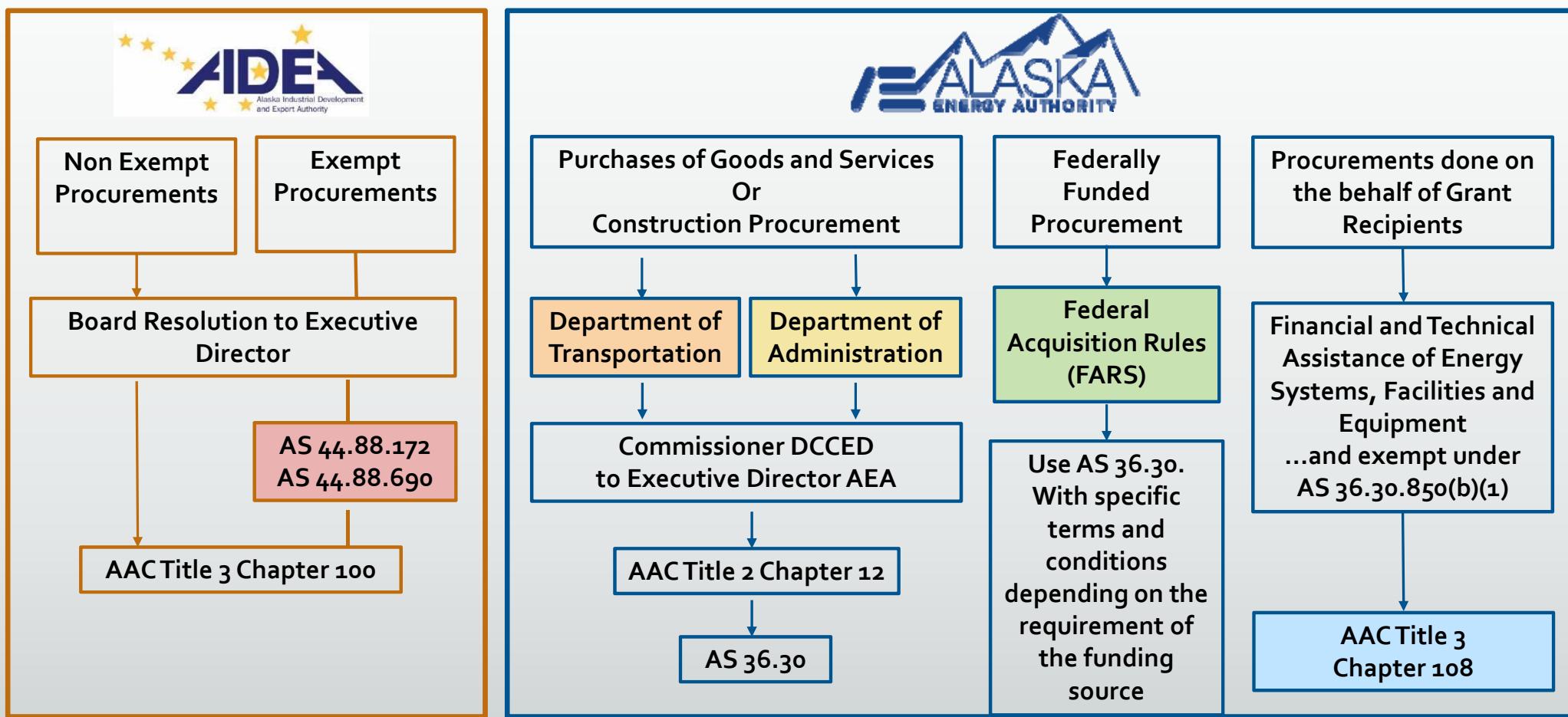


Contractors Benefit from Rural Infrastructure Investments

AEA Bulk Fuel Upgrade Combined Project Summary

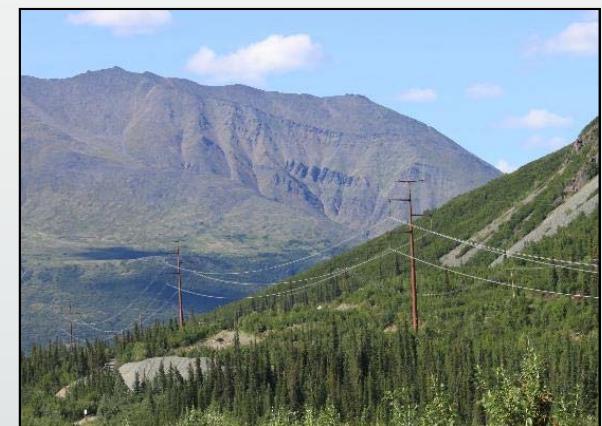


Procurement Delegations



Owning and Financing Energy Infrastructure

- AEA has bonding authority and administers the Power Project Loan Fund, as well as owns the Bradley Lake Hydroelectric Project and the Alaska Intertie.



State-owned Railbelt Assets Benefit Ratepayers

- AEA owns Railbelt energy infrastructure to the benefit of ratepayers
 - Bradley Lake Hydroelectric Project provides 10 percent of the Railbelt's power at some of the lowest-costs (\$0.045 cents per kilowatt hour)
 - Alaska Intertie is a debt-free asset that connects Northern and Southcentral utilities, resulting in \$60,000 in annual savings to Fairbanks customers

AEA Power Project Loan Fund

Outstanding Loans & Loan Commitments

as of December 31, 2015

Borrower	Project Description	Outstanding Balance
Alaska Environmental Power, LLC	Wind Turbine purchase	1,818,565
Aleutian Wind Energy, LLC	Wind Turbine purchase	753,702
Arctic Village Council	Purchase/Overhaul/Evaluate gensets	100,000
City of Atka	Hydroelectric power system	648,493
City of Chefornak: Naterkaq Light Plant	Generator repair	23,063
City of Larsen Bay	Hydroelectric	213,000
City of Pilot Point	Powerhouse & Distribution Line Repair/Maintenance	247,969
Kwig Power Company	New Genset	300,640
Southfork Hydro, LLC	Hydroelectric construction project	2,047,136
Tuntutuliak Community Services Association	Replace 2 Powerhouse engines	168,000
		<u>6,320,568</u>
Pending Loan Commitments:		
Kwig Power Company	New Genset	99,360
Haida Energy, Inc.	Hydroelectric Project Construction	20,000,000
City of Pelican	Hydro - lower penstock stabilization	61,000
City of King Cove	Waterfall Creek Hydro	1,975,000
Ungusraq Power Company (Newtok)	Install New Diesel Genset/Repairs To Distribution System	232,000
		<u>22,367,360</u>



AEA Bonding Authority

- AEA has bonding authority to issue revenue bonds for capital projects
 - Prior to 1993, bonds were issued for AEA-owned projects as part of the energy program for Alaska
 - No fixed-bonding limit
- 44.83.100-160 outlines bonding authorities
 - AEA must have a revenue source to issue bonds, likely a power sales agreement for a power project
 - 44.83.110: AEA can issue an moral obligation
 - 44.83.110(h) moral obligations must be secured by a capital reserve fund with notice and annual reporting to the state bond committee and the Legislative Budget and Audit Committee
 - 44.83.100: AEA can enter into an agreement with a private developer to contract to repay the debt, including a provision to secure the bonds (similar to AIDEA)
 - Municipal bond bank sets private activity bonding capacity



AEA Debt Issued and Outstanding

\$(thousands) as of 6/30/15

		date	amount issued	outstanding at 6/30/15	final maturity
Variable Rate Demand Note					
	(Bradley Lake Hydroelectric Project)	9/7/1989	111,755	100	7/1/2021
Power Revenue Bonds, Third Series					
	(Bradley Lake Hydroelectric Project)	4/6/1999	59,485	16,235	7/1/2017
Power Revenue Bonds, Fourth Series					
	(Bradley Lake Hydroelectric Project)	4/4/2000	47,710	26,020	7/1/2021
Power Revenue Bonds, Sixth Series					
	(Bradley Lake Hydroelectric Project)	7/1/2011	28,800	28,800	7/1/2021
Total			<u>\$ 247,750</u>	<u>\$ 71,155</u>	

Source: Alaska Energy Authority financial statements.



Integration of Renewables

- Through the Renewable Energy Fund and Emerging Energy Technology Fund, Alaska is leading the way on integrating alternative energy into small diesel microgrids.



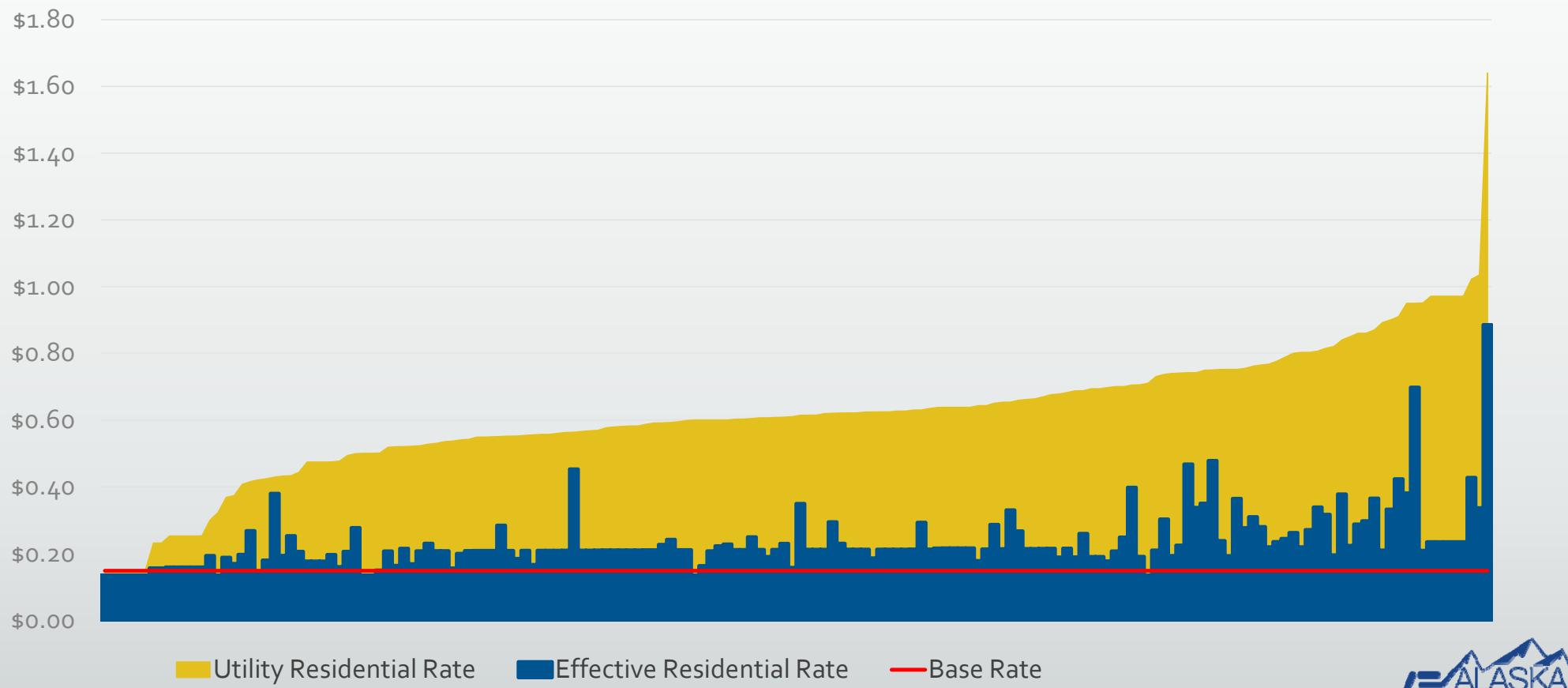
Renewable Energy Fund Benefits and State Savings

- \$257 million issued since 2008, resulting in
 - 287 grants, 225 unique projects (projects can include reconnaissance, energy resource monitoring, feasibility, final design and construction)
 - 133 active Renewable Energy Fund grants
- 54 projects are currently in operation
 - Displacing more than 20 million gallons of diesel equivalent annually (project to be 30 million in 2017)
 - Overall 2.8 cost/benefit ratio
- Renewable Energy Grant Fund has leveraged \$200 million in other investments
- 30-40% of a community's kWh sold are eligible for PCE, the remaining 40-70% benefits from Renewable Energy Fund projects
 - Resulting in \$24.5 million in savings to non-PCE community customers
- \$1.7 million in state PCE savings from Renewable Energy Fund projects (2014)



Stabilizing Power Rates

Power Cost Equalization Communities



Leveraging Federal Partnerships

- U.S. Department of Energy-
 - AEA is designated State Energy Office
 - State Energy Program (SEP) Funding
 - Rural Alaska Communities Energy Efficiency (RACEE) program technical provider
 - \$600,000 available for technical assistance for up to 20 communities
 - \$3.3 million in competitive grants to up to five communities for implementation
 - Strategic Technical Assistance Response Team (START) program
 - Emerging Energy Technology Fund- \$250,000 receipt authority budget amendment
- U.S. Department of Energy Office of Indian Energy
 - Working to establish programmatic MOU
 - Partner on energy planning, technical assistance to rural communities
- American Recovery and Reinvestment Act (ARRA) Funds
- U.S Forest Service- Biomass Program Grants
- Denali Commission \$250 million since FY 01
- U.S Department of Agriculture
 - Rural Utility Service
- EPA through DEC - Clean Diesel Grant Program



Operating Budget Overview (03/15/16)

ALASKA ENERGY AUTHORITY						
OPERATING BUDGET OVERVIEW (in thousands)						
Updated March 15, 2016						
AEA Operating Components		FY2016 Authorized	Percent Change from FY2015	FY2017 Revised Governor	Percent Change from FY2016	Pending Amendments
Owned Facilities		981.7	-8%	981.7	0%	
Rural Energy Operations/Rural Energy Assistance		5,902.7	-6%	5,638.5	-4%	
Technical Assistance (combined with Rural Energy Ops Component in FY2016)		-	n/a	-	0%	
Statewide Project Development, AEE (excludes multi-year authorizations)		6,725.0	0%	-	-100%	2,000.00
		13,609.4	-7%	6,620.2	-51%	2,000.0
Funding Sources:						
Unrestricted GF		2,711.4	4%	1,256.3	-54%	
GF Program Receipts		100.0	0%	100.0	0%	
Power Project Fund		1,050.9	0%	995.5	-5%	
Renewable Energy		2,152.3	0%	-	-100%	2,000.00
CIP Receipts		5,956.7	-14%	2,567.8	-57%	
Federal Receipts		271.9	0%	445.0	64%	
Other Receipts (AEA Receipts, I/A Receipts, Stat Designated)		1,366.2	-9%	1,255.6	-8%	
		13,609.4	-7%	6,620.2	-51%	2,000.0
*Multi-year authorization for EETF Data Collection (FED) and AKAES (GF)		2,506.7	n/a	FY2016 Balance Forward		
Power Cost Equalization		41,355.0	0%	40,355.0	-2%	



Capital Budget Overview (03/15/16)

ALASKA ENERGY AUTHORITY

CAPITAL BUDGET OVERVIEW

Prepared March 15, 2016

Project Description	FY2016	FY2017 (including pending amendment)	GF Only
Electrical Emergencies	330,000	330,000	330,000
Renewable Energy Grant Fund	11,512,700	-	
<u>Rural Power System Upgrade Projects:</u> Match federal funding for next priority project(s) in Port Heiden, Clark's Point and Port Alsworth (\$2.5 M GF; \$3.15 M fed)	-	5,650,000	2,500,000
<u>Bulk Fuel Tank Farm Upgrades:</u> Match federal funding for next priority project(s) in Tuluksak, Beaver, Chalkyitsik, and Venetie (\$1.3 M GF; \$5.35 fed)	-	6,650,000	1,300,000
Emerging Energy Technology Fund (\$250.0 fed)		250,000	
TOTAL	\$11,842,700	\$ 12,880,000	\$ 4,130,000

Note: Funding source is state general funds, unless otherwise noted.



AEA Capital Assets and Liabilities

AEA Capital Assets, net of accumulated depreciation, at June 30, 2015 (stated in thousands):

Bradley Lake Hydroelectric Project	\$167,235
Alaska Intertie Project	35,254
Susitna-Watana Hydroelectric Project	165,671
Total	\$368,160

AEA Liabilities (current and non-current) at June 30, 2015 (stated in thousands):

Due to the State of Alaska (advances)	\$29,199
Accounts Payable	26,603
Bonds Payable (Bradley Lake Hydroelectric Project)	71,155
Other bond liabilities	1,849
Accrued interest payable	1,953
Other liabilities	628
	\$131,387



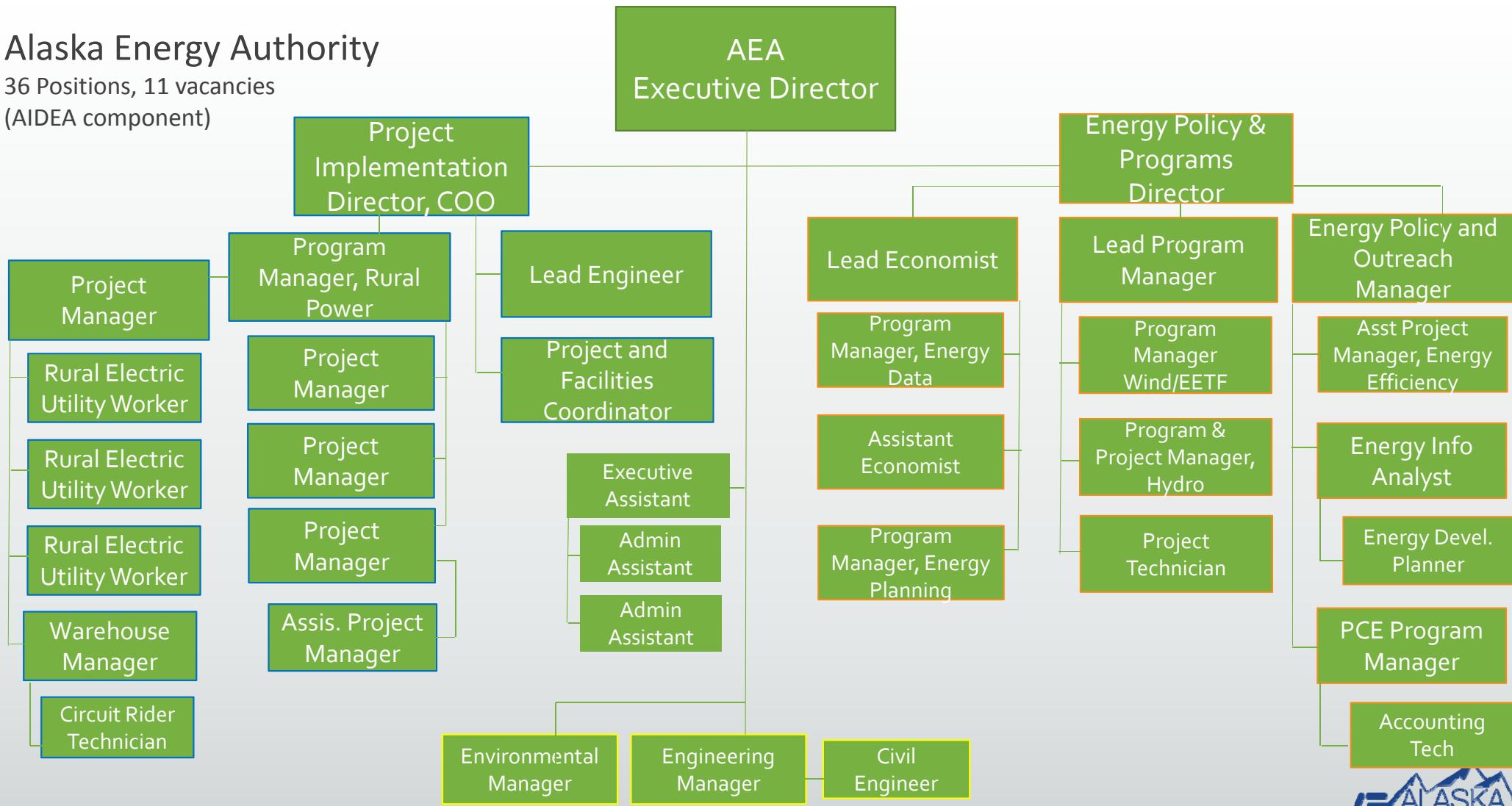
AEA and AIDEA: an Efficient Partnership

- AIDEA and AEA are two distinct State corporate agencies with separate missions and executive directors. There are significant shared services, including members of the management team.
- Technically all are AIDEA employees and AEA reimburses AIDEA for any personnel services.
- AIDEA and AEA share procurement, finance, grant management, human resources and IT staff and are located in the same building.
- Both are governed by a shared board of directors, with the chair of AIDEA serving as the vice-chair of AEA and vice versa.
- There's no commingling of assets, liabilities, or programmatic operational activities



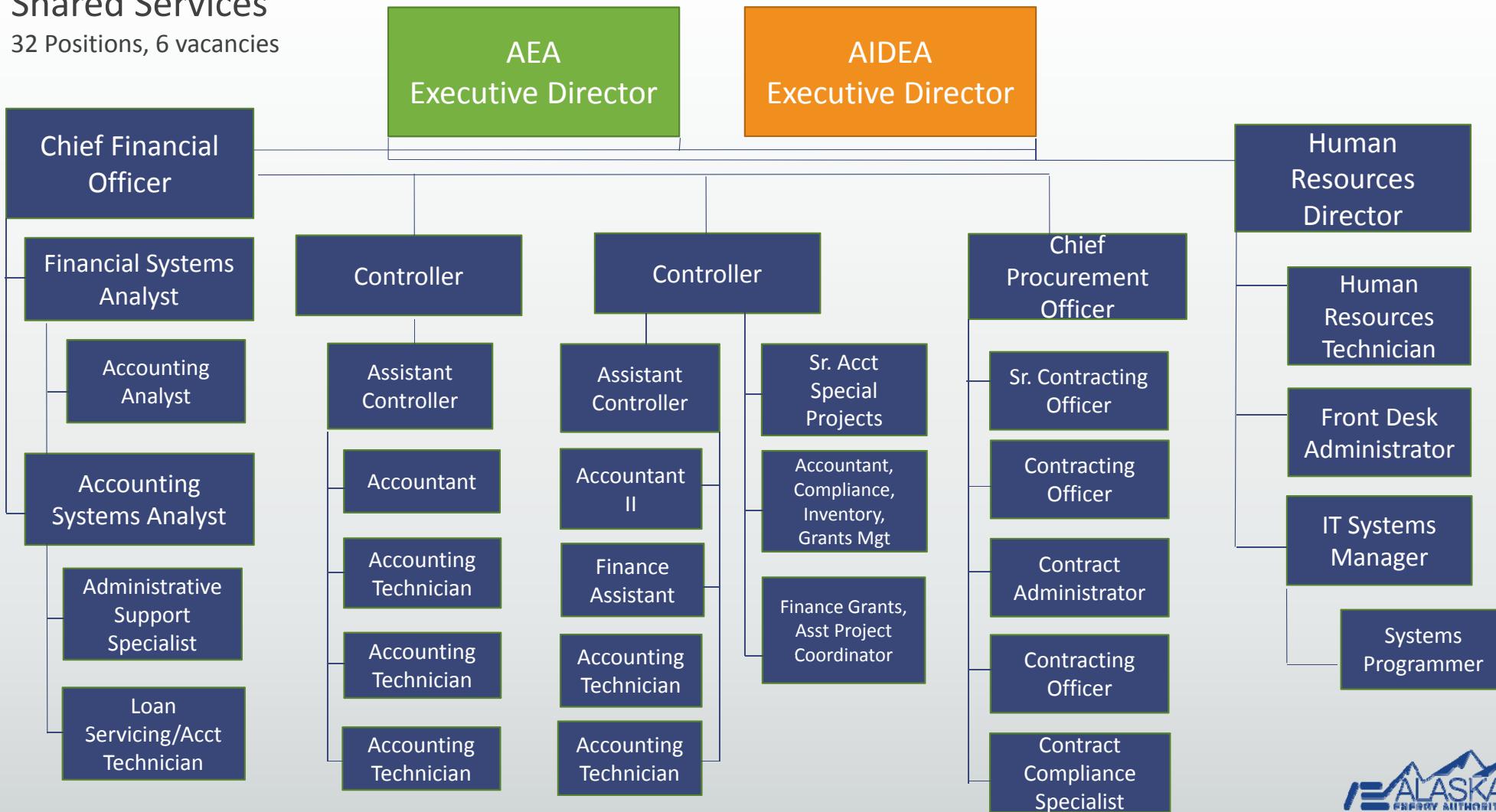
Alaska Energy Authority

36 Positions, 11 vacancies
(AIDEA component)



Shared Services

32 Positions, 6 vacancies



AKEnergyAuthority.org

