

# AEA Overview

Curtis W. Thayer  
Executive Director  
Alaska Energy Authority

House Energy Committee  
March 19, 2019



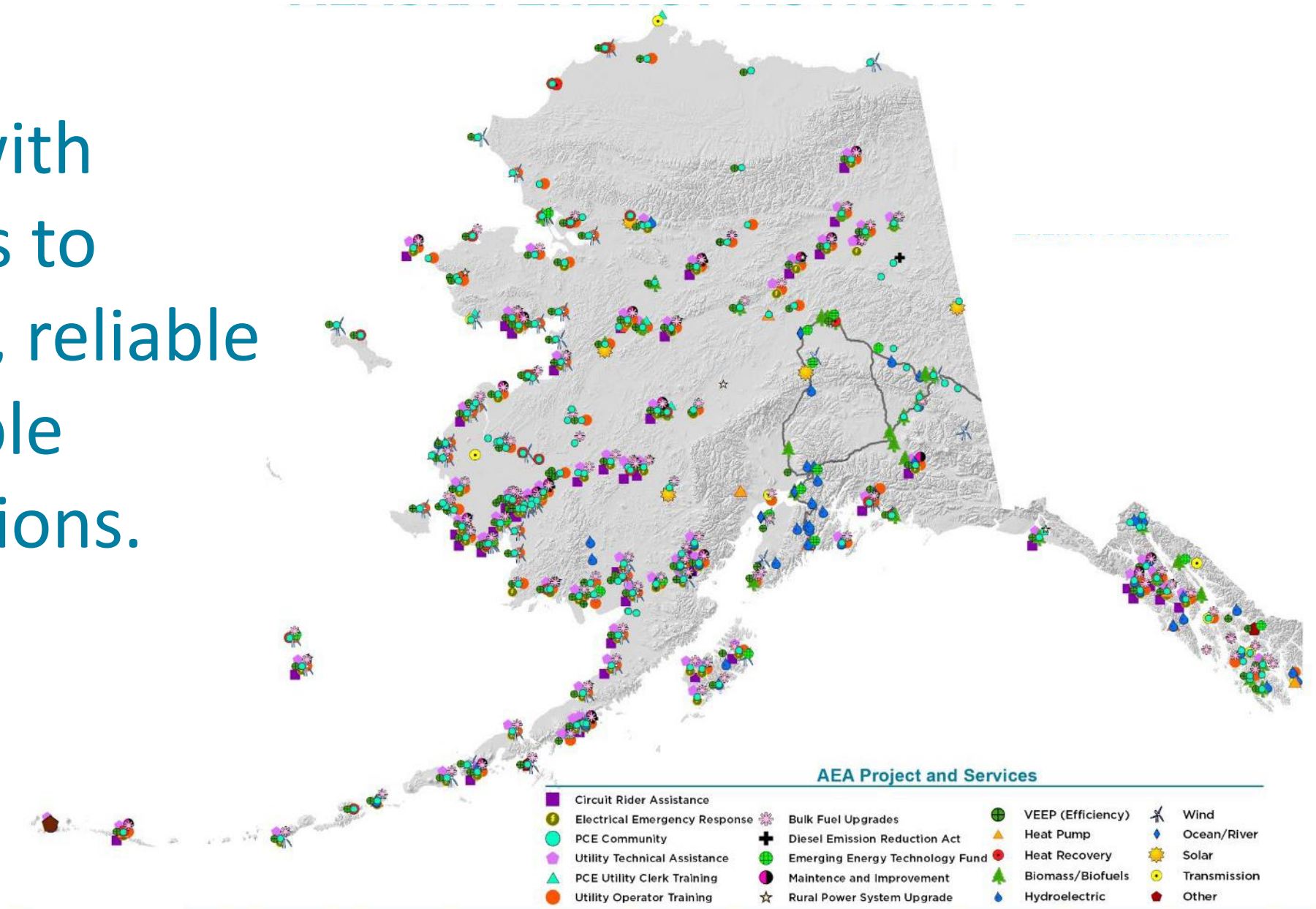
ALASKA ENERGY AUTHORITY





AEA's mission is to reduce the cost of energy in Alaska

AEA works with communities to provide safe, reliable and affordable energy solutions.





# AEA Programs and Projects

- Bradley Lake Hydro
- Alaska Intertie
- Bulk Fuel Upgrades
- Rural Power System Upgrades
- Rural Utility Assistance
- Power Cost Equalization
- Renewable Energy Fund grants
- Power Project Fund Loans
- Alternative Energy & Energy Efficiency
- Energy Project Development & Finance



Battle Creek lower access road (foreground), Bradley Lake Dam (background); picture taken summer 2018

# Bradley Lake Hydroelectric Project

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



Bradley Lake Dam



# Alaska Intertie

- 170 miles from Willow to Healy
- Allows Golden Valley Electric Assoc. (GVEA) to connect to and benefit from lower cost power
- Improves reliability within Railbelt system
- Operated by AEA and Railbelt utilities
- \$27.4M savings for GVEA in FY2018



# Bulk Fuel Tank Farm Upgrades (BFU)

- Builds code compliant fuel storage facilities
- Preventing spills and contamination
- Decreasing the per unit cost of fuel by allowing the community to purchase bulk quantities
- 118 projects completed since 2000



Kipnuk Bulk Fuel Tanks being loaded onto the barge in WA

# Rural Power System Upgrades (RPSU)

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



Kipnuk powerhouse



# Rural Utility Assistance



CR Assistance

103

Communities received **circuit rider** and **rural utility worker** assistance in FY2018



AVTEC training

38

Communities received **Training** in FY2018



Hughes electrical emergency assistance

6

Communities assisted with **electrical emergencies** in FY2018

# Power Cost Equalization (PCE) Program

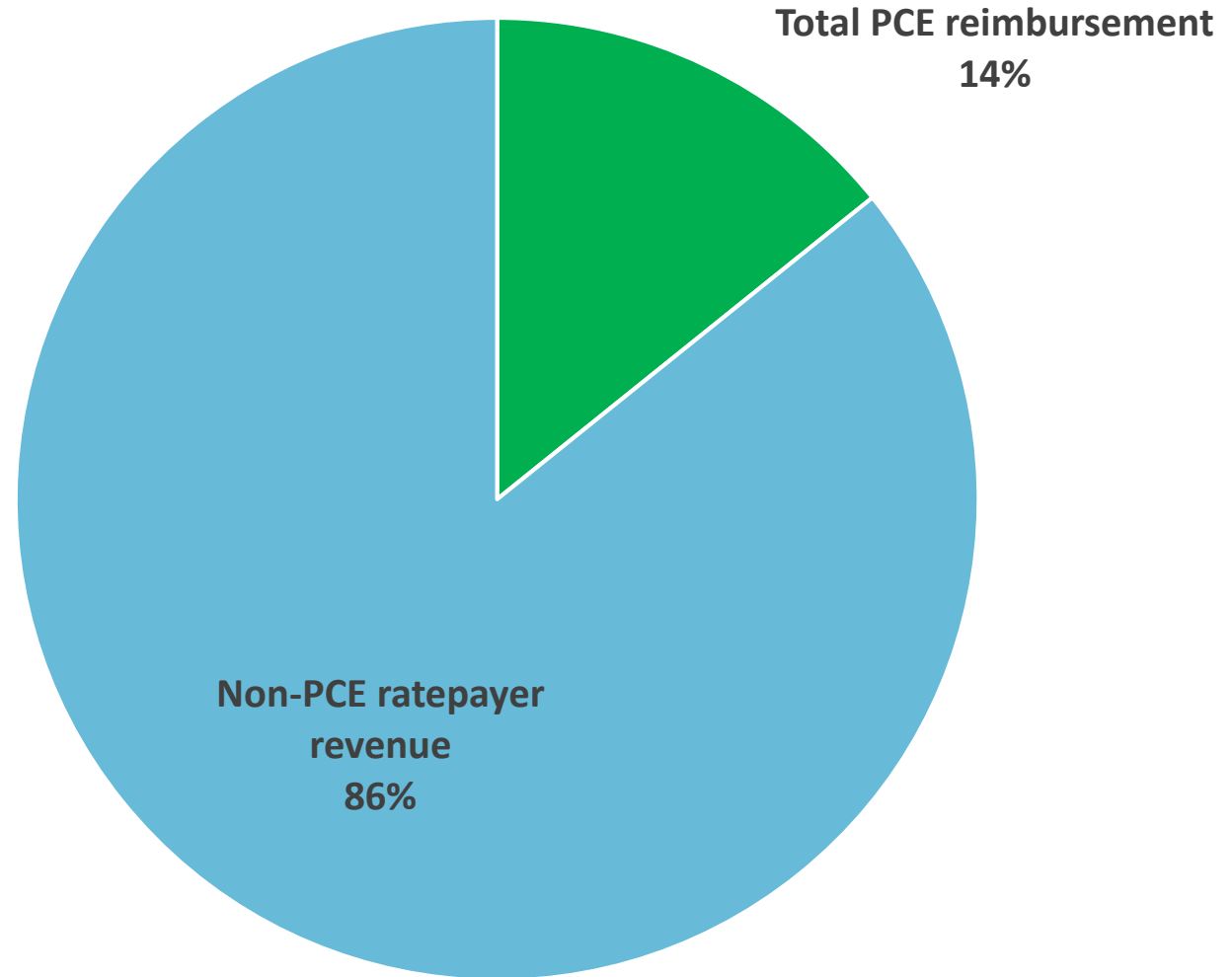
- 195 communities served
- Disbursed \$27M in FY2018
- Regular communication with rural utilities helps identify problems early
- Supported by AEA rural utility assistance
- Online portal will increase efficiency and accuracy of reporting



Akiachak

# PCE is only one small piece of the community energy cost pie

Source of  
Revenue for  
PCE-eligible  
Utilities





# PCE Endowment FY2019 Appropriations

SLA2018

## *Calculation of Excess Power Cost Equalization Earnings Available for Appropriation*

FY2017 Earnings (AS 42.45.050(c)(2))		\$112,330,514
FY2019 Planned Appropriations – Based on Prior Year		
AEA – Power Cost Equalization	\$32,355,000	
AEA – Rural Energy Assistance	\$381,800	
Revenue – Treasury	\$359,000	
Less: Total FY2019 Appropriations		<u>\$33,095,800</u>
Unobligated FY2017 Earnings		\$79,234,714
70% of Unobligated FY2017 Earnings per AS 42.45.085(d) (max \$55 million per AS 42.45.085(d)(2))		\$55,000,000
FY2019 Additional Appropriations per AS 42.45.085 (d)(2)		
Community Assistance Program (AS 42.45.085(d)(2)(A))	\$30,000,000	
Renewable Energy Grant Fund (AS 42.45.085(d)(2)(B))	\$14,000,000	
Rural Power Systems Upgrades (AS 42.45.085(d)(2)(B))	\$11,000,000	
Less: FY2019 Additional Appropriations		<u>\$55,000,000</u>
Remaining Balance		\$0

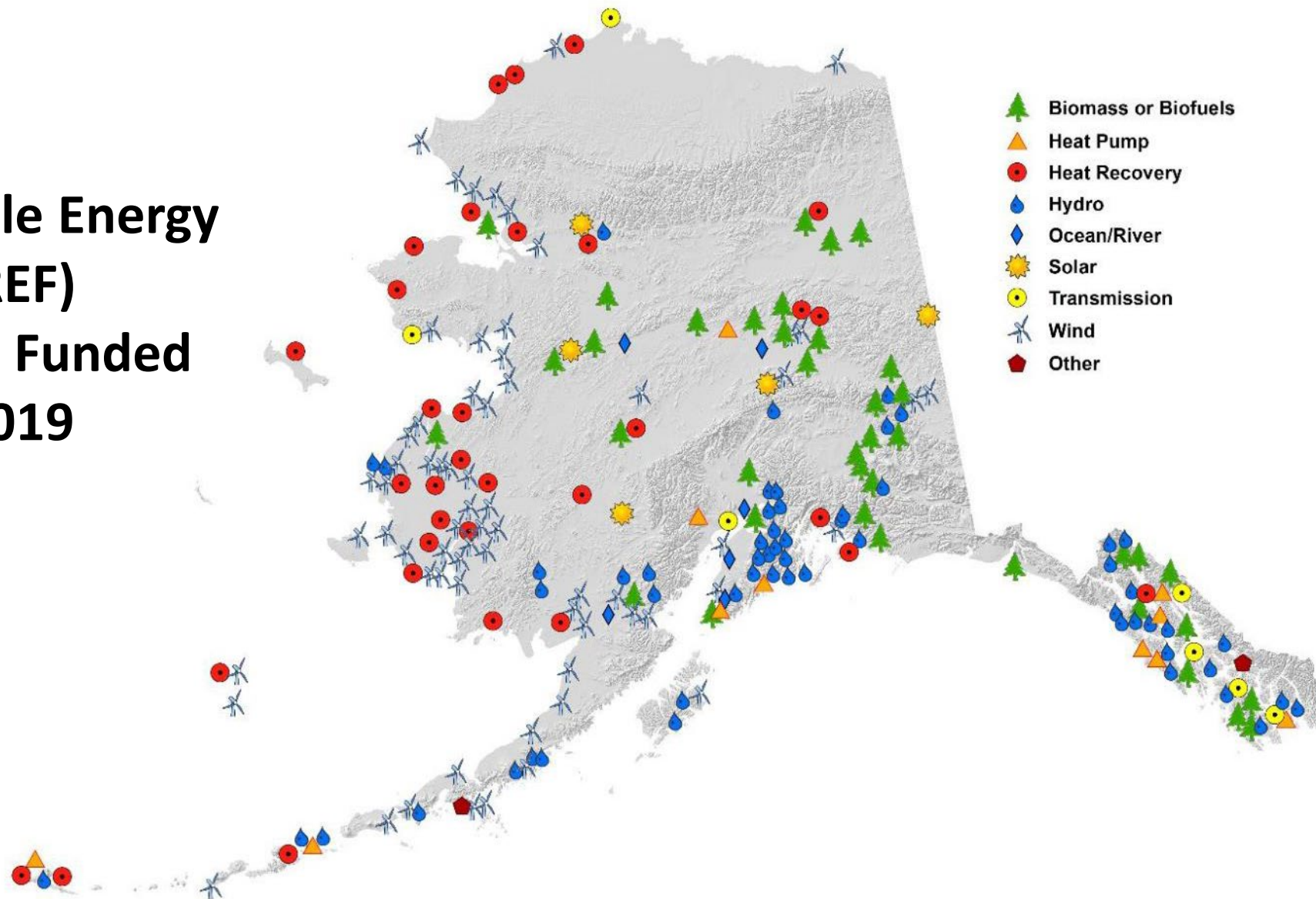
# Renewable Energy Fund (REF)

- \$268M invested in REF by the State
- Boosted renewable energy market in Alaska
- Leveraged hundreds of millions of federal and private dollars
- 73 operational projects, 56 in development
- Displacing ~30 million diesel equivalent gallons annually
- ~\$74M in fuel savings in 2018



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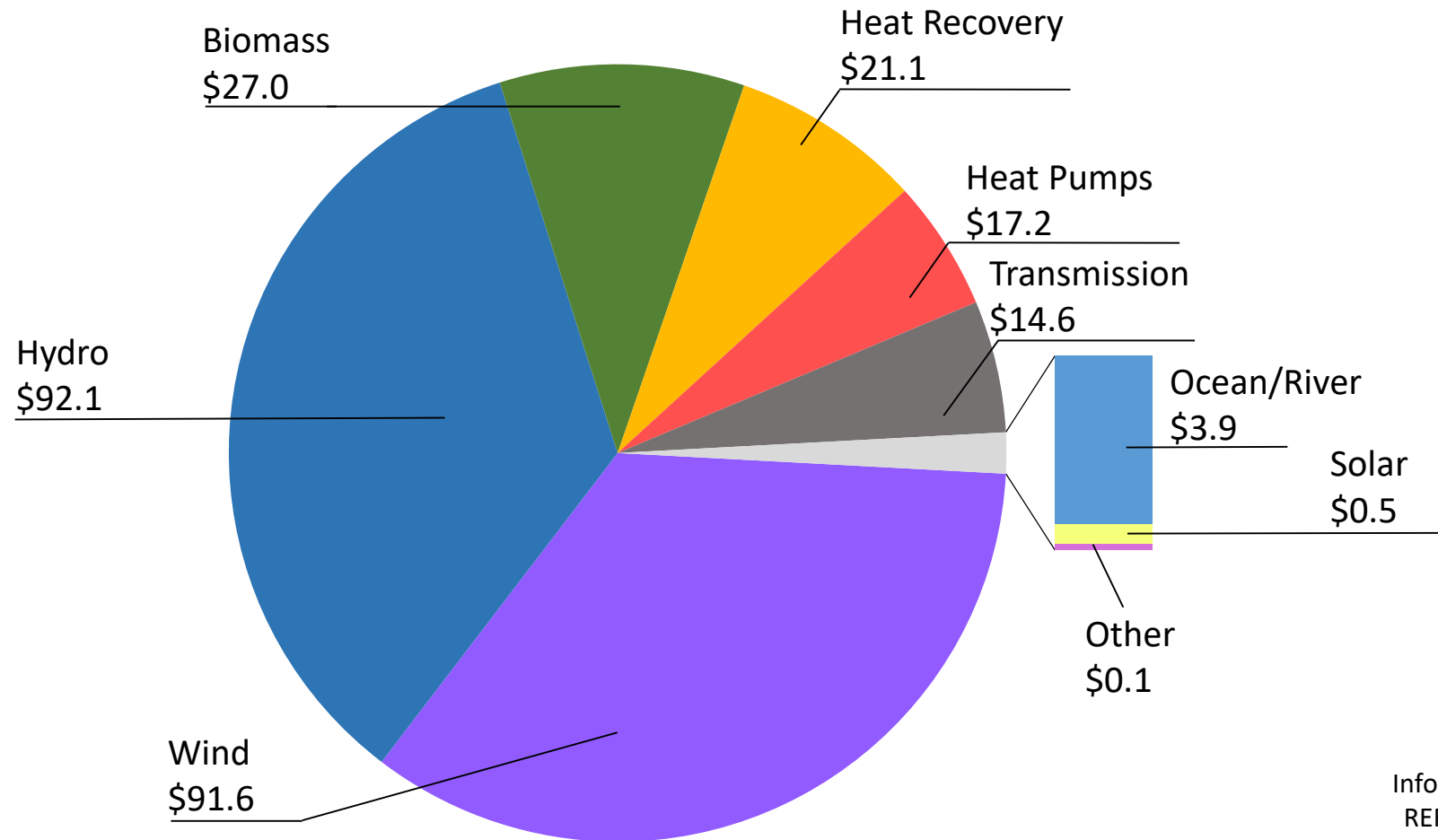
# 295 Renewable Energy Fund (REF) Applications Funded 2008-2019





# REF Funding by Energy Resource (\$ millions)

## Rounds I-IX (2008-2019)



Information taken from the 2018  
REF Status Report, available on  
AEA's [website](#).

# Power Project Fund Loan Program

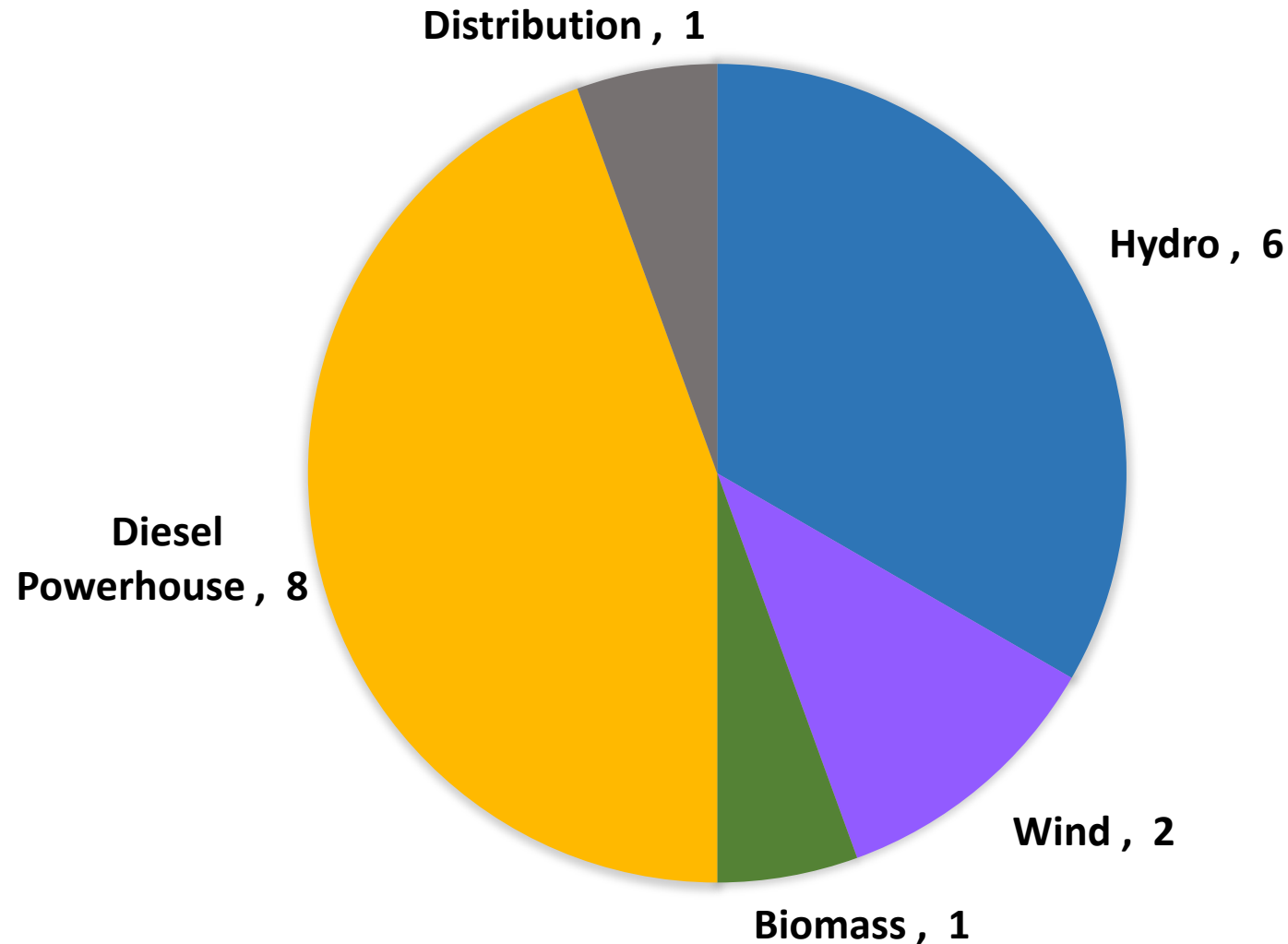
- \$27.5 committed or disbursed for 18 loans
- \$10.7 million uncommitted
- Flexible loan program
- Covers all aspects of supply side system
- Relies on unique, in-house technical expertise for evaluation of loan viability and regulatory compliance
- Loan applications are also vetted for economic and finance viability
- Critical resource in shift from grant funded to debt financed energy projects
- Participation continues to increase



Waterfall Creek, King Cove

# \$29.5 million approved for 18 active projects

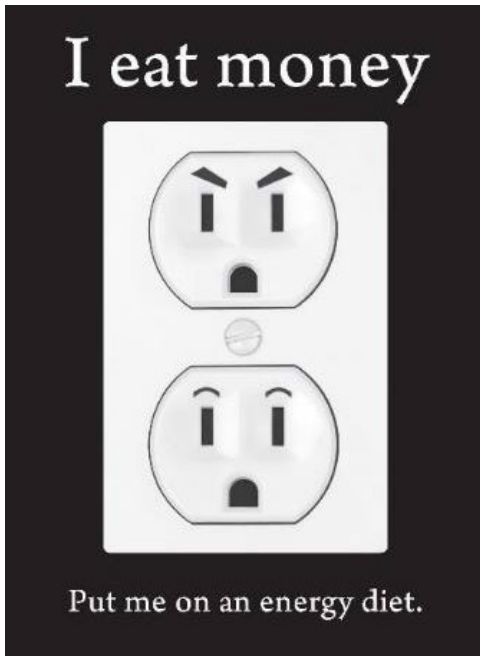
Active PPF  
Loans by  
Project Type





# Alternative Energy & Energy Efficiency

## Energy Efficiency



## Hydro



## Biomass



## Wind



# Energy Project Development & Financing

## AEA's “Energy Solutions Center” Front Door

- Planning, evaluation and project development assistance
- Data collection & reporting
- Utility business assistance
- Financing (e.g. Power Project Fund loans)
- Critical federal partnerships (e.g. Denali Commission)

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





## ALASKA ENERGY AUTHORITY

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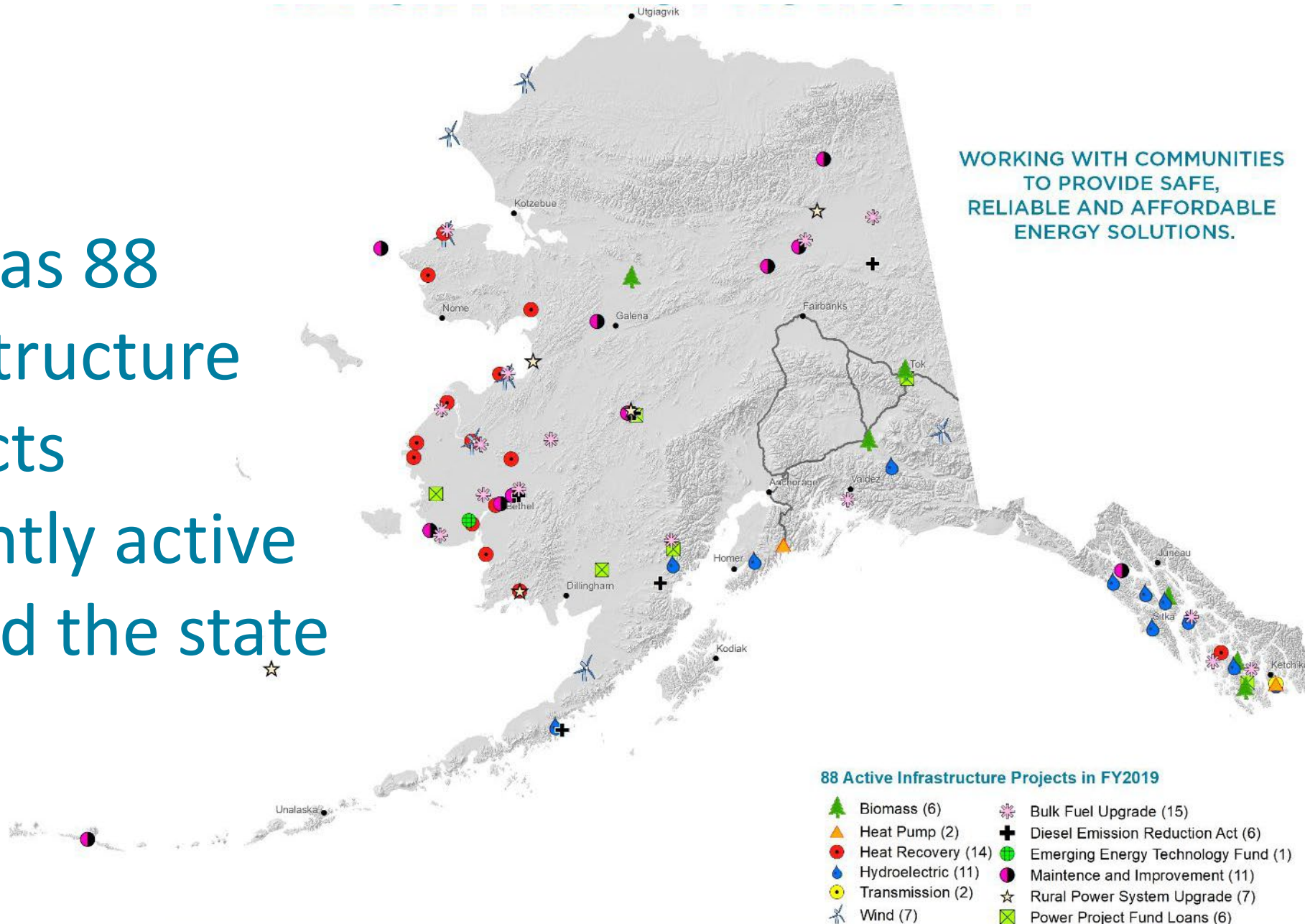
Toll Free 888-300-8534

For more information, please contact

Curtis W. Thayer

AEA Executive Director

AEA has 88  
infrastructure  
projects  
currently active  
around the state



# Volkswagen violated the Clean Air Act and they were caught. A lawsuit followed, resulting in the VW Settlement.

- Alaska is a beneficiary, allocated \$8.125 million
- AEA is the designated Lead Agency for Alaska
- The State's Beneficiary Mitigation Plan outlines which of the 10 eligible Environmental Mitigation Actions (EMAs) Alaska will fund
  - 50% on school buses
  - 10% on public transit
  - 10% on commercial marine vessels
  - 15% on rural prime power
  - 15% on Electric Vehicle charging infrastructure

Funding will be  
initiated this  
winter/spring



# C-PACE Implementation

