

# AEA Overview

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ALASKA ENERGY AUTHORITY

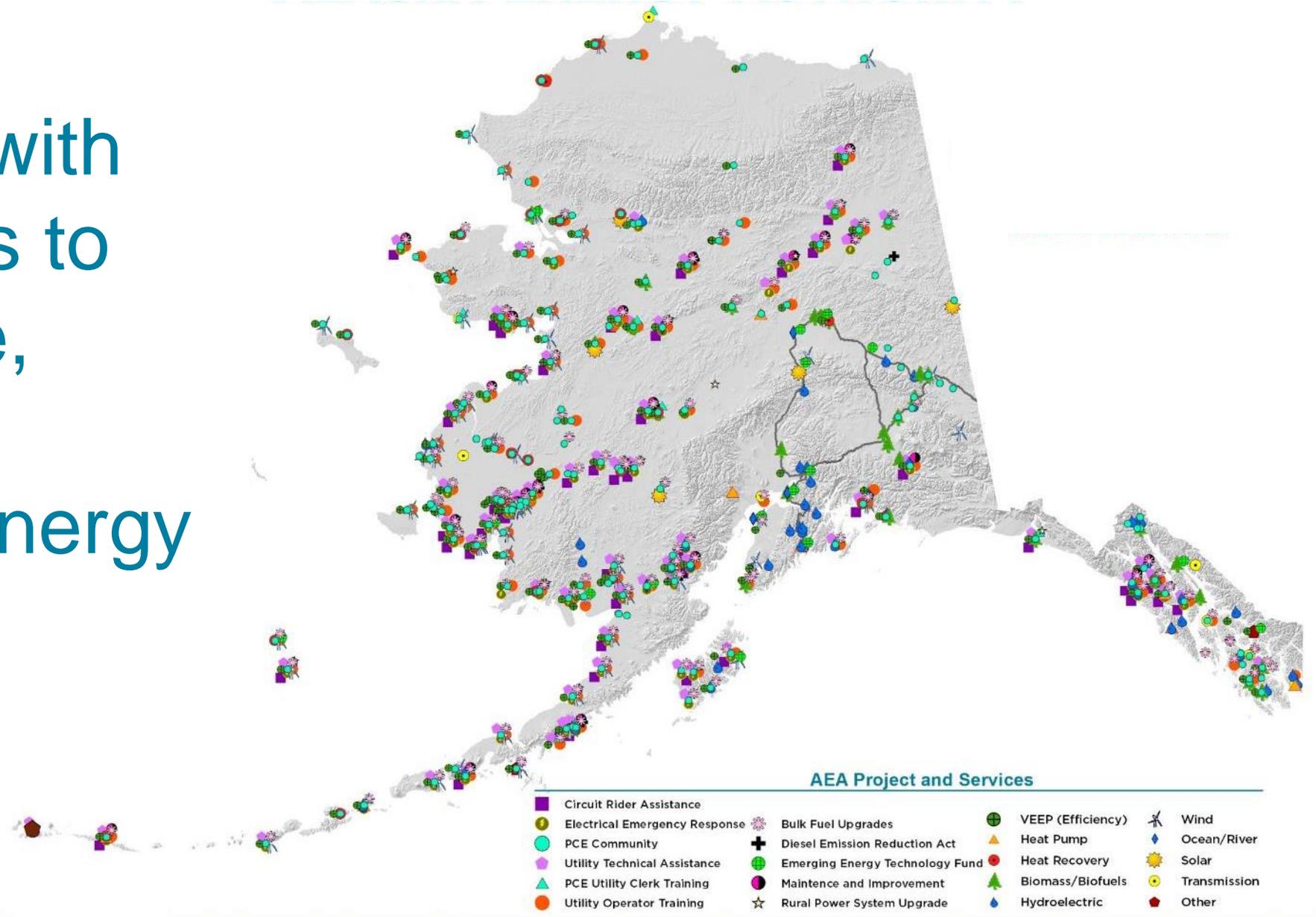


REDUCING THE COST OF ENERGY IN ALASKA



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

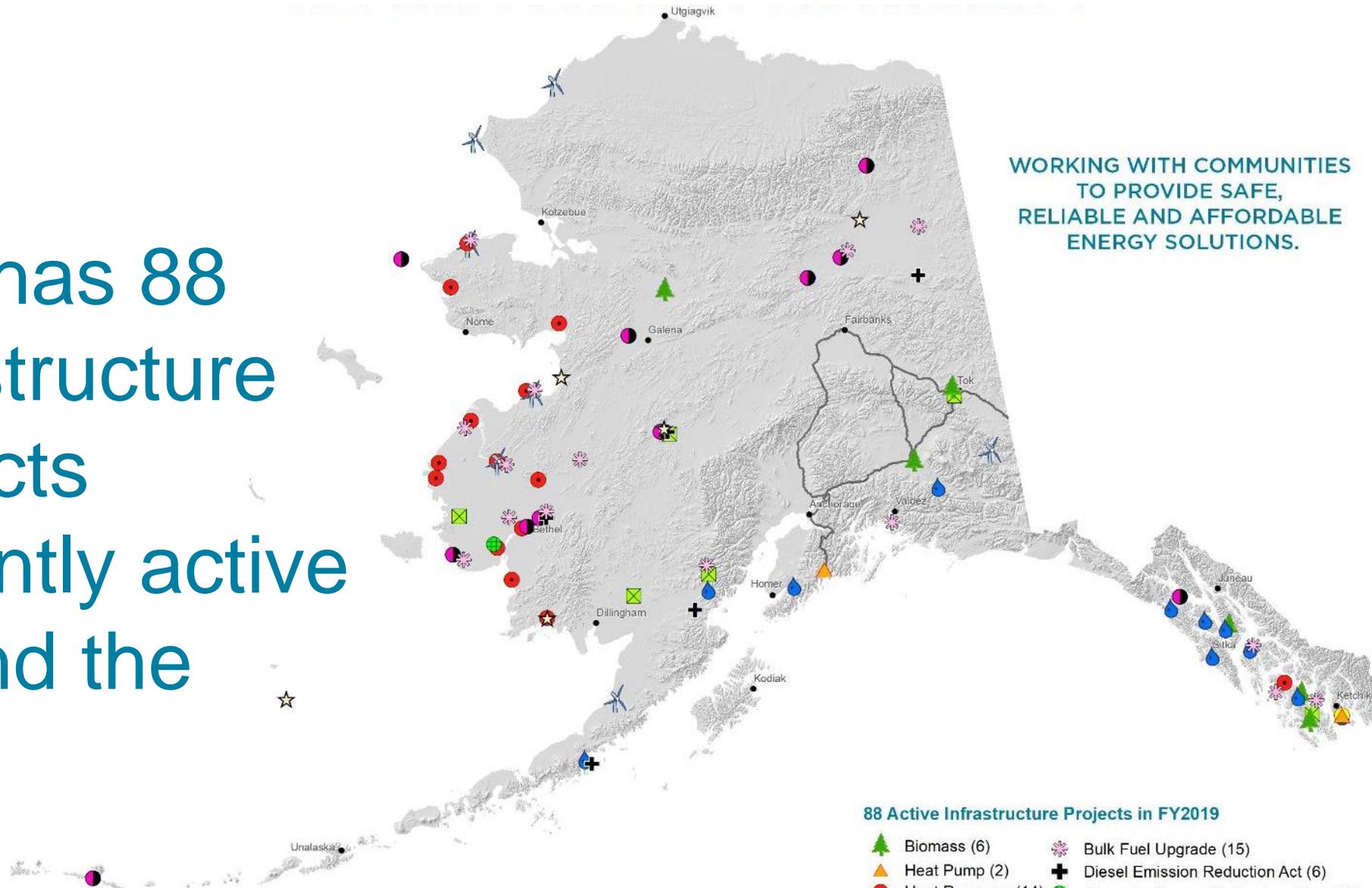
- Bradley Lake Hydro
- Alaska Intertie
- Bulk Fuel Upgrades
- Rural Power System Upgrades
- Rural Utility Assistance
- Power Cost Equalization
- Renewable Energy Fund Grants
- Power Project Fund Loans
- Alternative Energy
- Energy Efficiency
- Energy Project Development



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

AEA has 88 infrastructure projects currently active around the state

WORKING WITH COMMUNITIES TO PROVIDE SAFE, RELIABLE AND AFFORDABLE ENERGY SOLUTIONS.



**88 Active Infrastructure Projects in FY2019**

-  Biomass (6)
-  Heat Pump (2)
-  Heat Recovery (14)
-  Hydroelectric (11)
-  Transmission (2)
-  Wind (7)
-  Bulk Fuel Upgrade (15)
-  Diesel Emission Reduction Act (6)
-  Emerging Energy Technology Fund (1)
-  Maintenance and Improvement (11)
-  Rural Power System Upgrade (7)
-  Power Project Fund Loans (6)

# 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
- Supported by AEA rural utility assistance
- Online portal to create increased efficiency and accuracy of reporting



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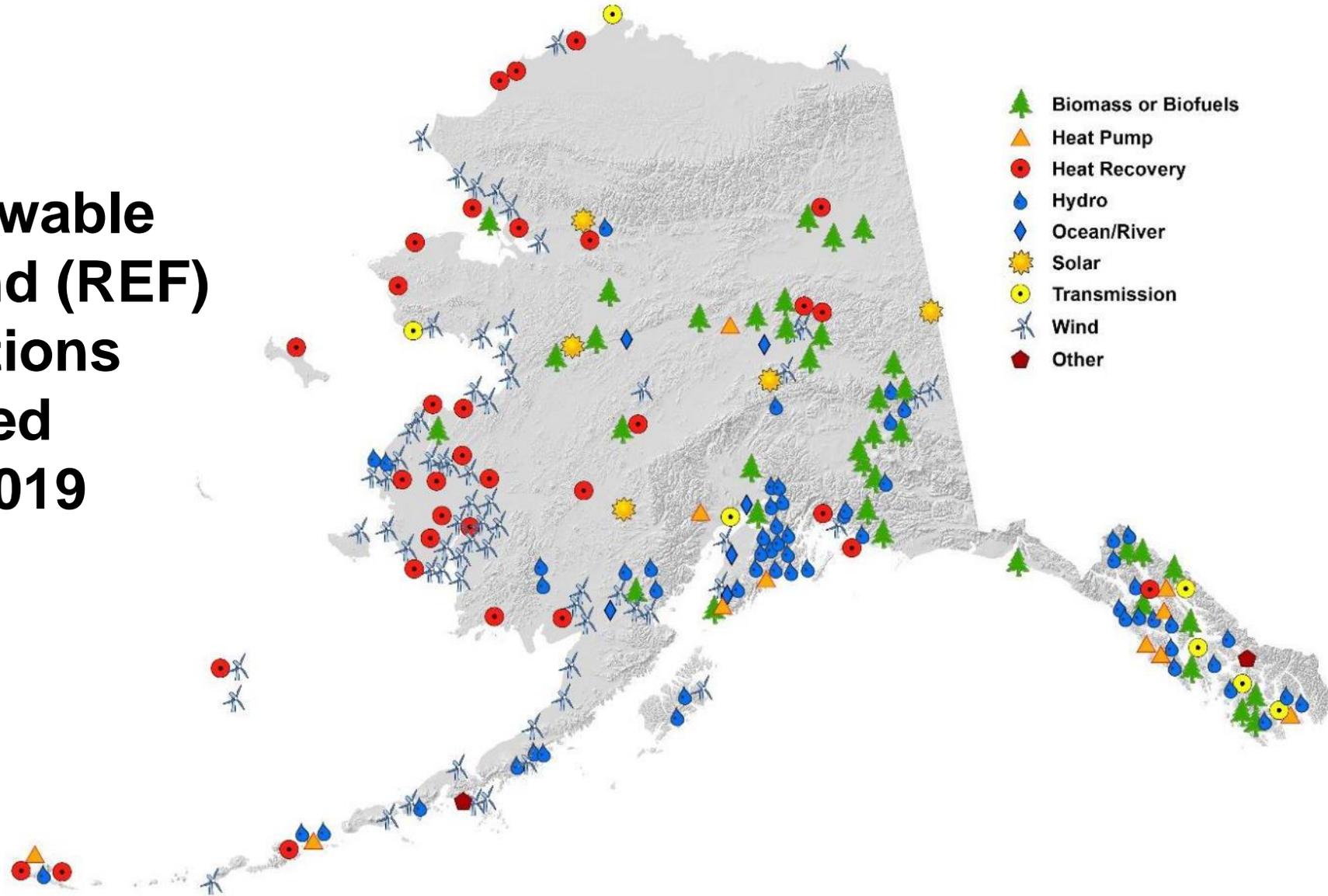
# Renewable Energy Fund (REF)

- \$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

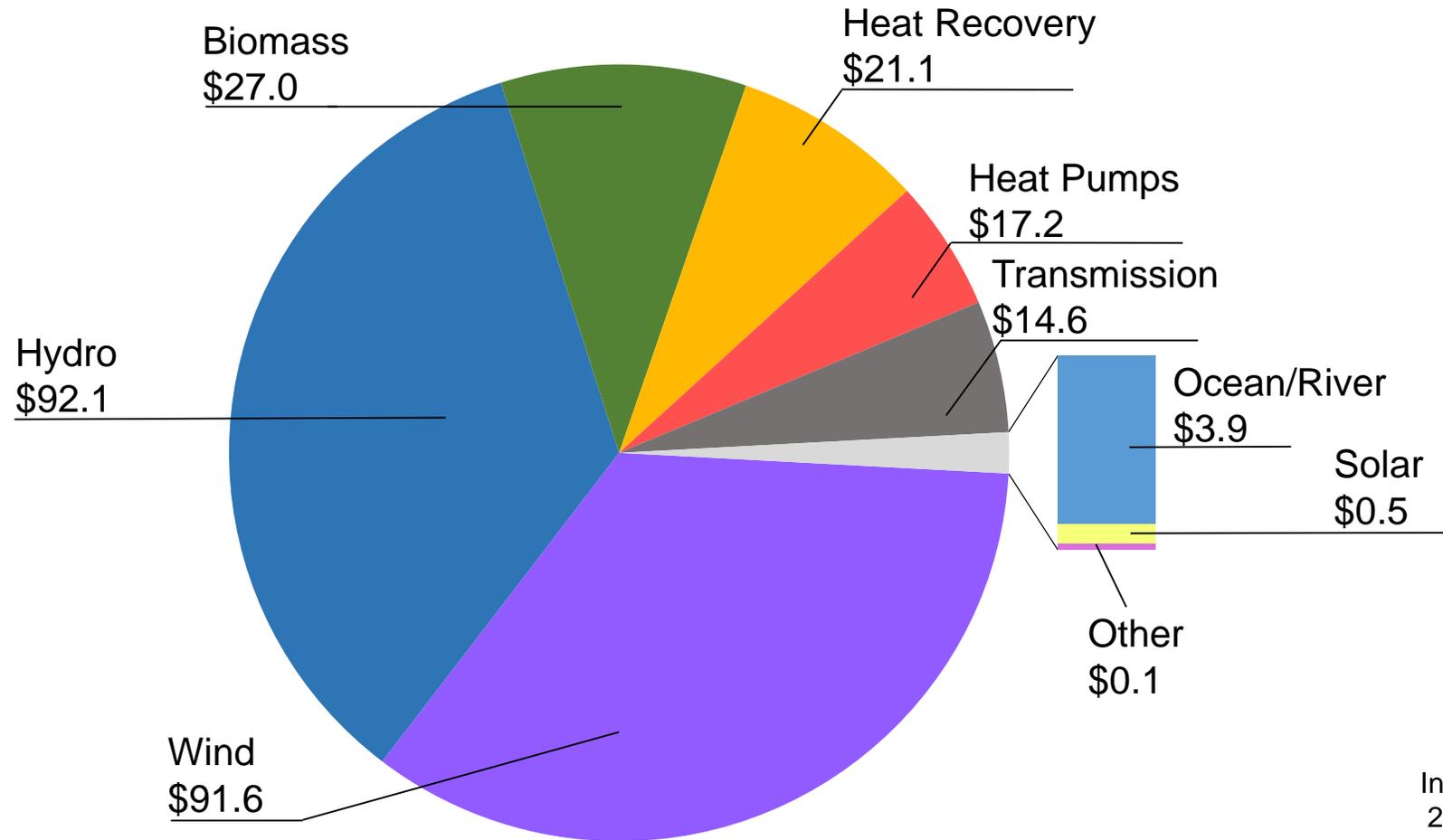


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# 295 Renewable Energy Fund (REF) Applications Funded 2008-2019



# 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

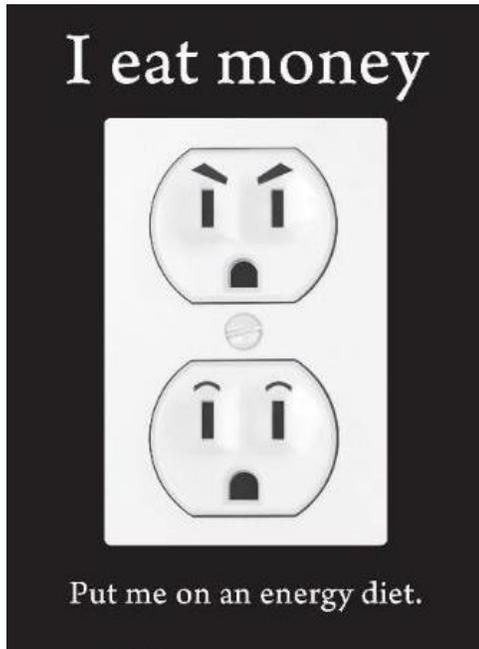
- \$27.5 committed or disbursed for 18 loans
- \$10.7 million uncommitted
- Flexible loan program
- Covers all aspects of supply side system
- Relies on unique, in-house technical expertise for evaluation of loan viability and regulatory compliance
- Loan applications are also vetted for economic and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



Waterfall Creek, King Cove

# 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
- Critical federal partnerships (Denali Commission, Department of Energy, USDA Rural Development)



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



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