

# Financing Energy Projects in Rural Alaska

Cady Lister  
Chief Economist  
Alaska Energy Authority

NASEO, New Orleans

September, 2017

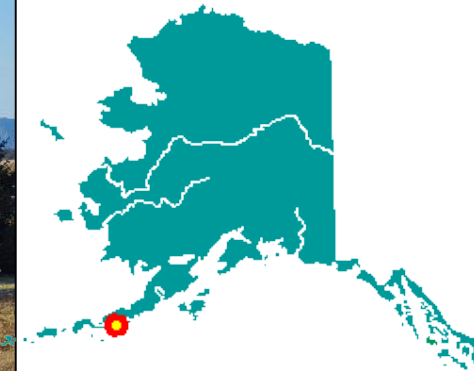




AEA's mission is to reduce the cost of energy in Alaska

# AEA takes a community-centered approach with:

- Technical assistance
- Energy planning
- Resource assessment
- Project identification
- Funding
- Training
- O&M



Perryville, AK

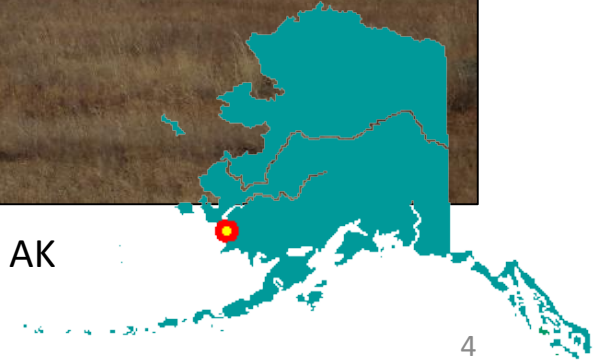


# Assistance with project development, financing, and long-term management of energy infrastructure

- Diesel powerhouses
- Heat Recovery
- Bulk Fuel
- Power Cost Equalization
- RE (wind, bio, hydro, solar)
- End-use efficiency



Quinhagak, AK



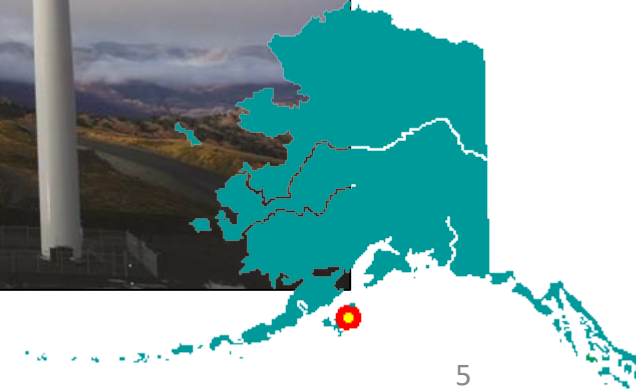
# Alaska Energy Authority invests in rural Alaska

**\$257 million** in  
Renewable Energy Fund  
since 2008

**\$11 million** in  
Emerging Energy  
Technology Fund since  
2010



Kodiak, AK



# Alaska Energy Authority invests in rural Alaska

**\$350 million** in Bulk Fuel  
Upgrades  
since 2000

**\$250 million** in Rural  
Powerhouse Upgrades  
since 2000



Akutan, AK



# Alaska: by the numbers

**740,000** People

**660,000** Sq. Miles

**200** Remote  
Microgrids



## Railbelt

72% of Pop

76% of Energy  
(Natural Gas)

## Southeast

10% of Pop

13% of Energy

## Rest of AK

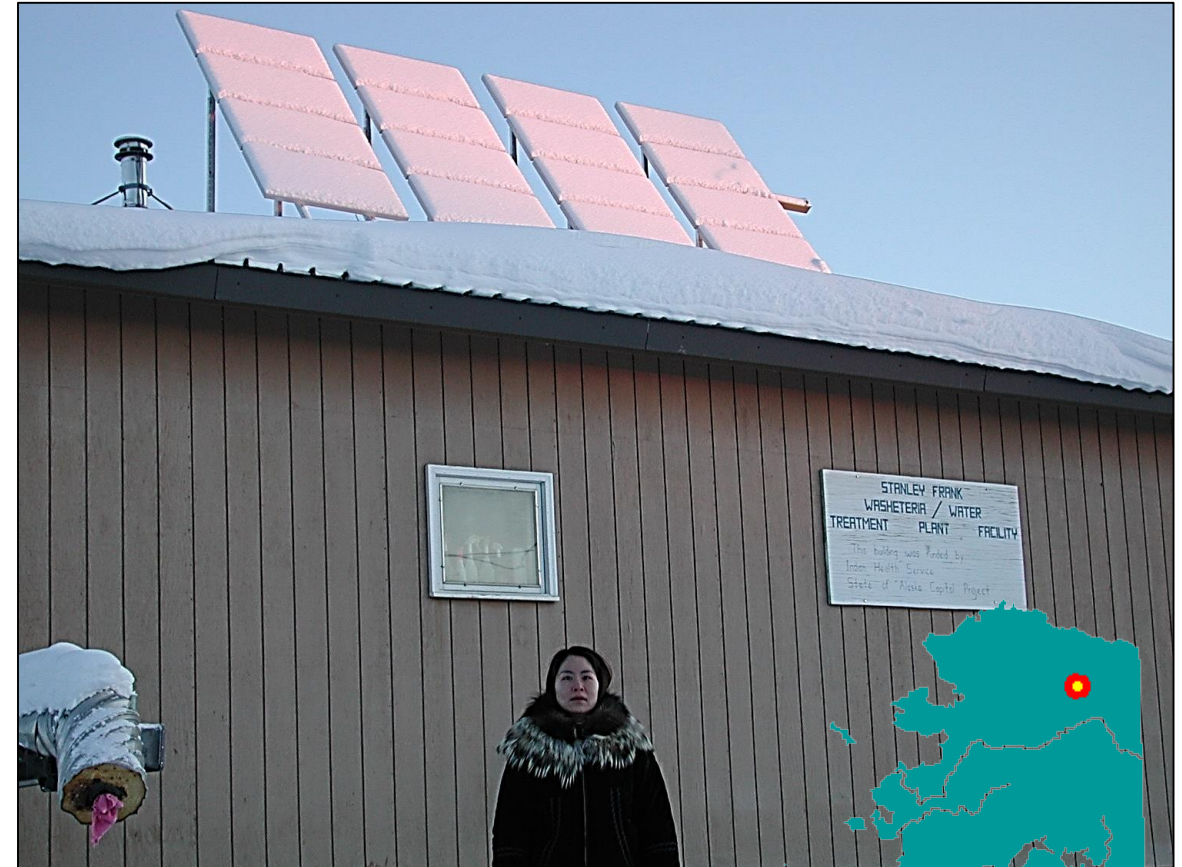
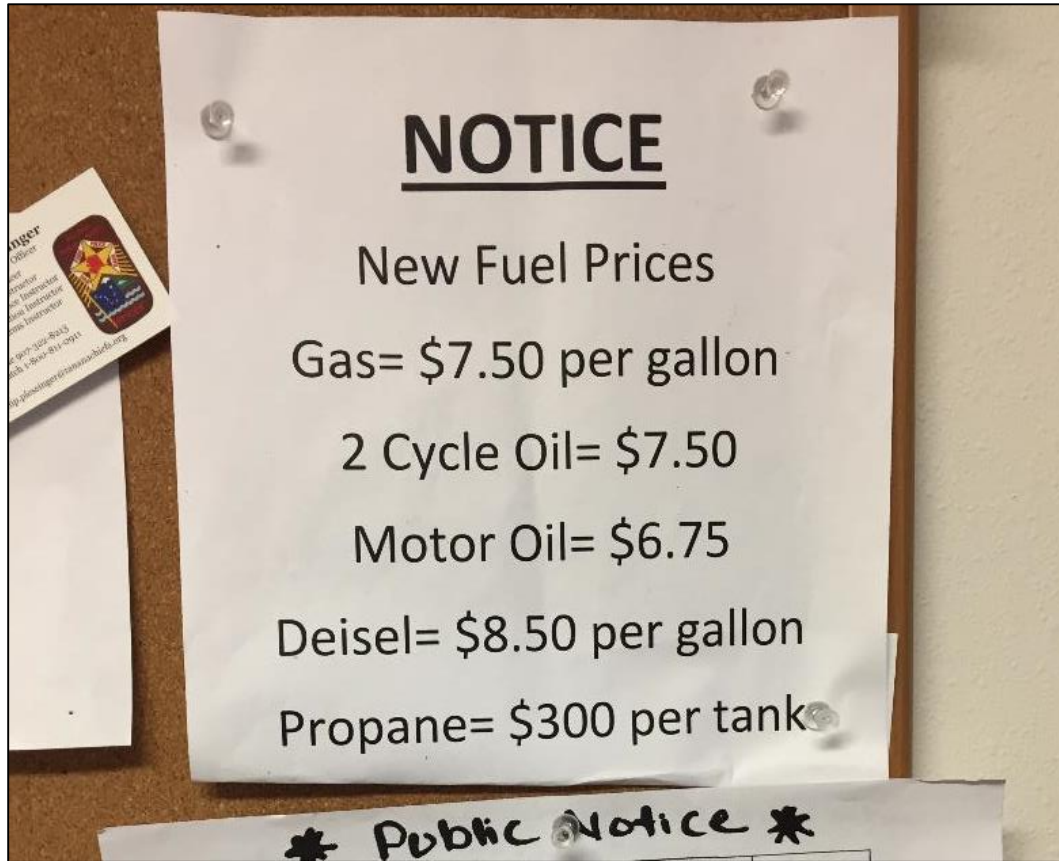
18% of Pop

11% of Energy





# Rural AK pays a high cost of energy



Venetie, AK (energy prices from 1/5/17)

# Rural infrastructure





# Rural infrastructure





# Diesel is primary power in 90% of rural Alaska



Shaktoolik, AK





# Integrating renewables

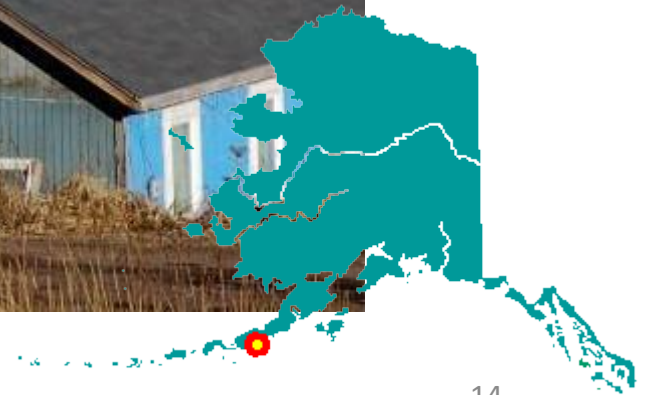




# What works elsewhere doesn't necessarily work here



Sand Point, AK





# The future points to dynamic project funding

**2017**

**the future**

**Need remains constant**

**Yet availability of public funding to help  
meet that need is decreasing**

# AEA's Project Development & Finance Team

- First point of contact for accessing the full breadth of AEA's technology, project management and financing expertise
- Identifying good projects, building on planning and technical assistance
- Assisting communities in navigating complex systems, e.g. federal funding requirements, regulatory, permitting, etc.
- Identifying and accessing funding options for utilities and communities

# Technical Assistance – Identifying Good Projects

## Critical Technology Areas

- End-use Efficiency
- Hydro
- Biomass
- Wind
- Heat Recovery
- Diesel generation/integration

## Evaluating Options

- Resource assessment
- Comparing technologies
- Energy planning and coordination
- Utility/customers/community impacts
- Project implementation management



# Technical Assistance – Accessing Funding

## External to Utility Funds

- Research grant opportunities
- Assist with grant application development
- Research loan opportunities
- Assist with loan application development
- Administer PPF program

## Internal to Utility Funds

- Reporting to optimize PCE
- Rate setting to cover all costs
- Evaluation of project financial impacts
- Utility business practice to improve financial health

# The Power Project Fund Loan Program

- Flexible loan program
- Covers all aspects of supply side system
- Available for all project dev. phases
- Technical, economic and finance viability
- Increased interest and activity recently
- Anticipate activity will continue to grow



Healy, AK



# What we know about rural community financing needs:

1. Alaska's small, isolated communities bring many challenges to project development
2. Access to financing is not the primary barrier for projects, though it is a significant one
3. Communities need more than just “green” energy projects
4. Alaska's regulatory environment offers few requirements or incentives to spur private investments
5. There is no effective financing model to capitalize on the significant opportunity for cost reduction through efficiency improvements

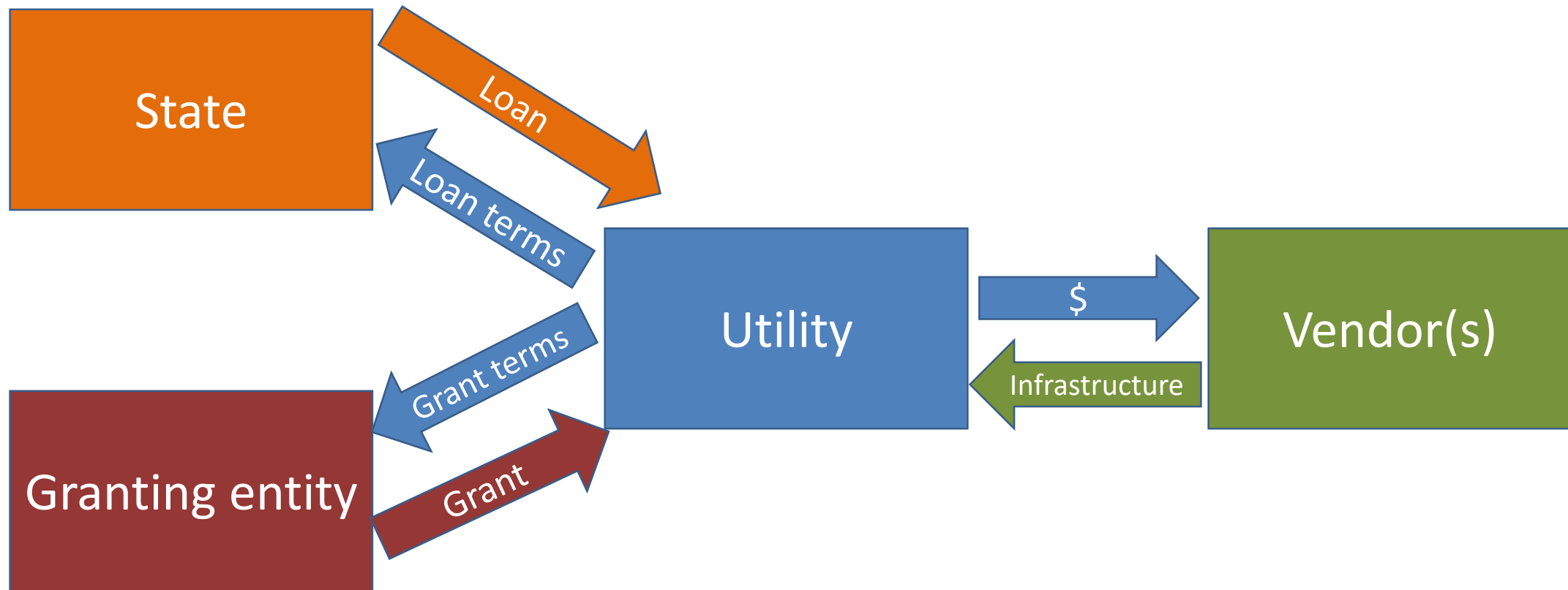
# Alaska Affordable Energy Strategy Recommendation:

## **Community Energy Fund for Alaska (CEFA)**

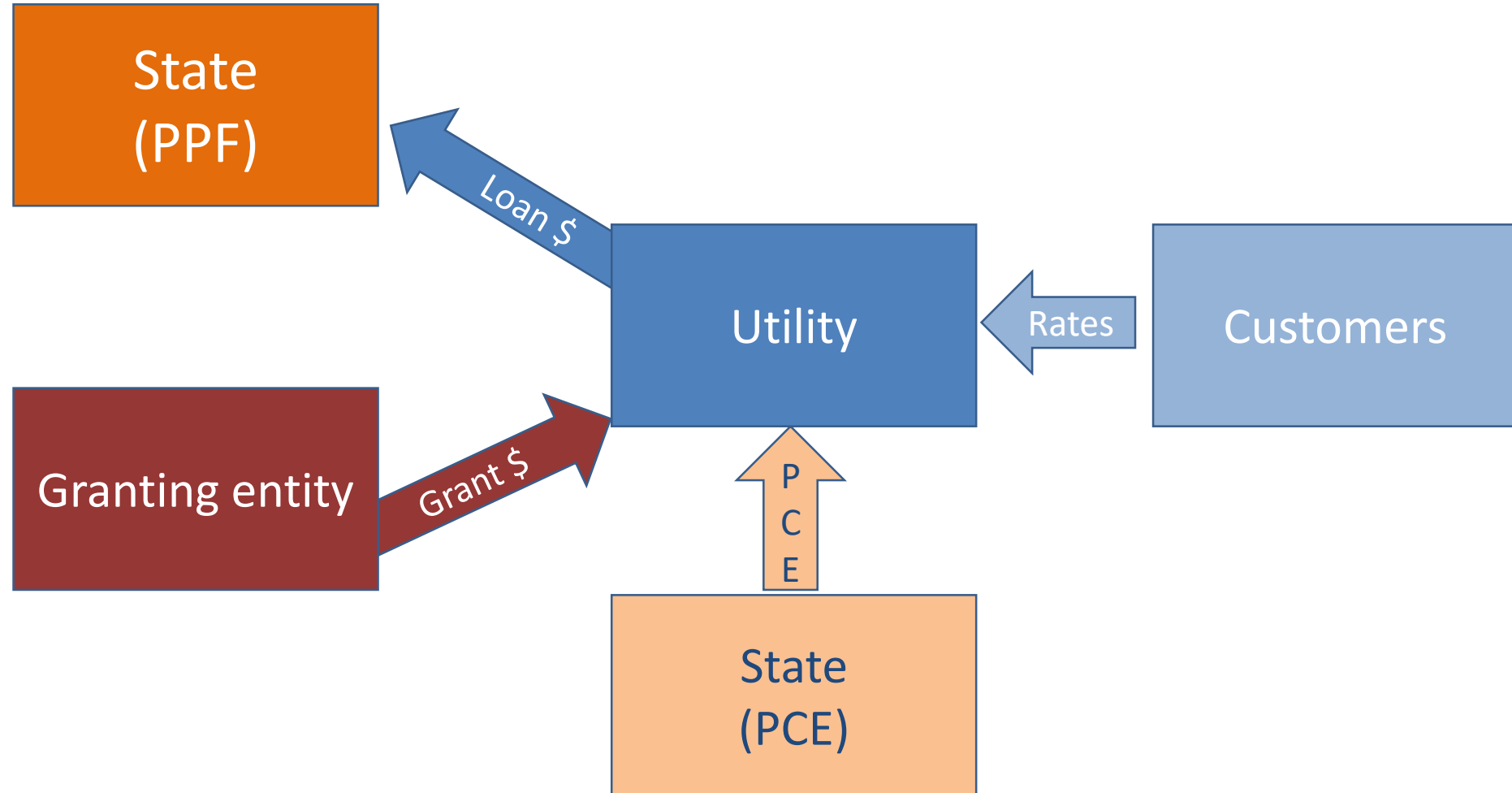
- Focus initially on community-scale financing needs
- Use existing resources to create “Energy Investment Partnerships”
  - ✓ State: Power Project Loan Fund, Alaska Housing Finance Corporation, PCE, other loans/grants
  - ✓ Denali Commission and other granting entities
  - ✓ Other financial institutions: CDFIs, banks, credit unions, USDA
- One-stop-shop: The state would take on administrative responsibility, some credit risk, and provide incentives, e.g. loan guarantees and loan-loss reserves from state or non-state sources
- Use grants as incentives and to mitigate rate shock
- Reduces, but does not eliminate, long-term subsidy and capital grants



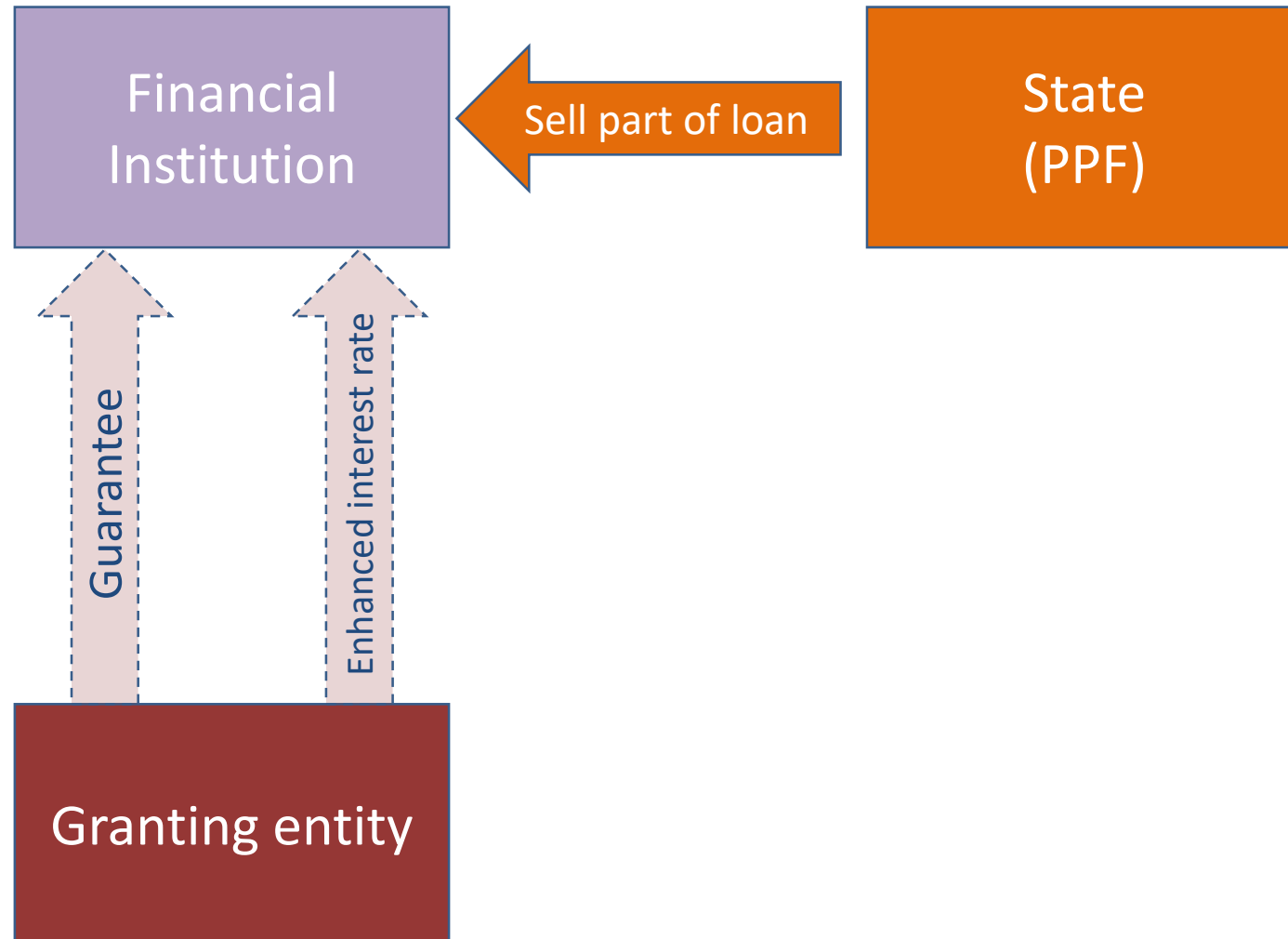
# CEFA Phase 1: Set up loan & agreements



# CEFA Phase 2: Initial payback of loan

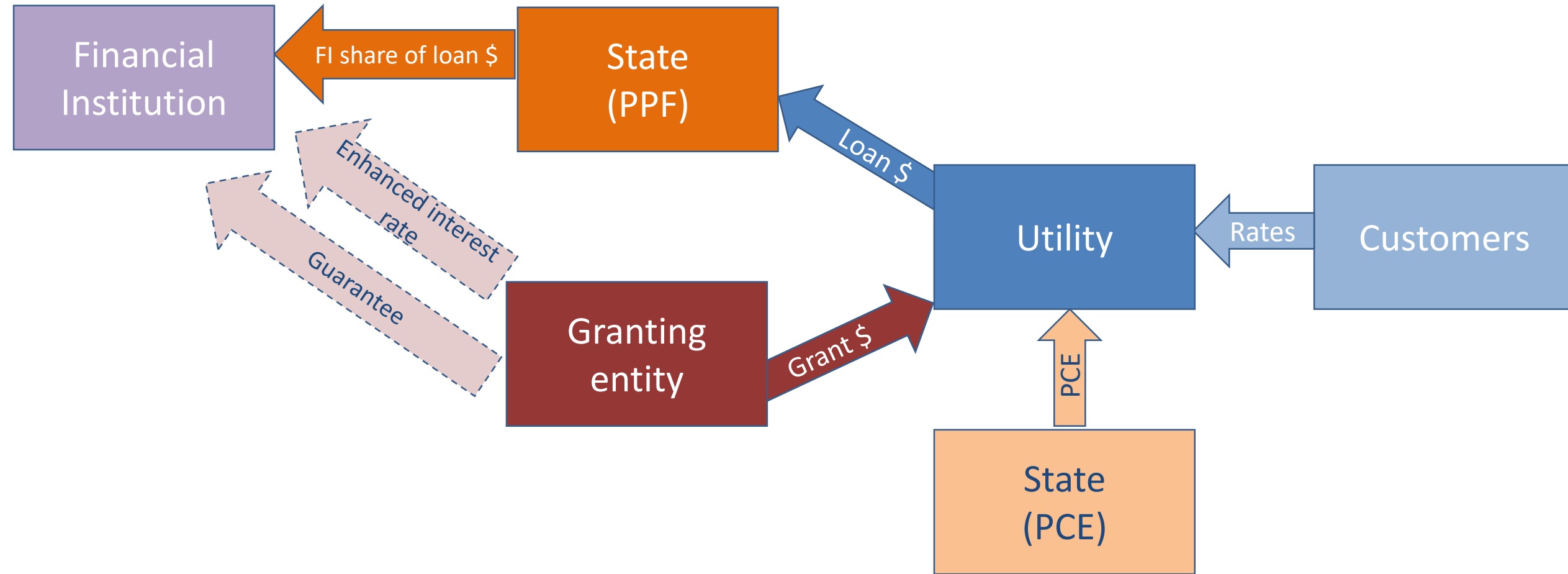


# CEFA Phase 3: Recapitalize loan fund





# Proposed Loan Product Example



# Benefits of central mixed financing

- Reduce need for state grants
- Leverage non-state funds more effectively
- Create direct and indirect incentives for improving infrastructure maintenance
- Ensure minimal impact on rates
- Potential to expand into other markets







## ALASKA ENERGY AUTHORITY

813 West Northern Lights Blvd.

Anchorage, Alaska 99503

Phone: (907) 771-3000

Fax: (907) 771-3044

Toll Free (Alaska Only) 888-300-8534

*AEA's mission: Reduce the cost of energy in Alaska.*