

# Alaska Energy Authority Agency Budget Overview

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Alaska Energy Authority

Presentation to House Finance DCCED  
Budget Subcommittee

February 9, 2017





# Statutory and Regulatory Duty/Authority is AEA's Guidance

# Alaska Energy Authority History

- Independent public corporation of the State of Alaska, created by the Legislature in **1976**
- In **1999** the Legislature initiated the re-establishment of AEA as the State Energy Office by **reuniting State energy programs** with the **AEA owned assets**, and, **renewed focus and funding for rural energy infrastructure**
- When oil prices increased starting in **2007** (Alaska families and communities saw their energy costs sky rocket) **there was a push for further focused state leadership for renewable energy development and energy planning**
- AIDEA and AEA were asked to help develop a plan and manage new energy programs
- The Board of Directors responded through **by-law changes**, establishing a management structure within AIDEA and AEA that allowed for the **AEA “cost of energy” focus** to be independent of **AIDEA’s “jobs and economic development” focus**
- The legislature’s **1993** consolidating action created the **Shared Services Department within AIDEA and AEA** which now brings almost **25 years of combined expertise and structural flexibility** to address state energy issues.

# Alaska Energy Authority Mission & Purpose

- AEA's mission: **to reduce the cost of energy in AK**
- 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.**”

# Alaska Energy Authority Mission & Purpose

## AS 42.45.900. Assistance to rural utilities.

(a) The authority **shall provide** technical assistance to rural utilities including catastrophe prevention programs and other training programs for utility projects. The authority **shall provide** rural utilities with the technical assistance and training that the utilities need to improve the **efficiency, safety, and reliability** of their power systems and to **prevent emergency situations** from developing. **At a minimum, the assistance and training** must include information on

- (1) reducing **distribution line** losses;
- (2) **installation of generators** that are more fuel efficient;
- (3) **preventative maintenance** programs;
- (4) **safety inspections**;
- (5) installing and maintaining **waste heat systems**;
- (6) improved **metering systems**;
- (7) improved **management and administration**; and
- (8) **coordinating regional activities**, including **circuit rider maintenance programs**.

(b) In providing rural utilities with technical assistance and training, the authority shall give **priority to contracting with the private sector** for these services.





## Four Primary Funding & Service Quadrants

# Categorizing Alaska Energy Authority Activities



Rural

Urban

# Categorizing Alaska Energy Authority Activities

Operating  
Budget:  
Programs/  
Services

Capital  
Budget:  
Projects/  
Infrastructure



# Alaska Energy Authority Activities Quadrants

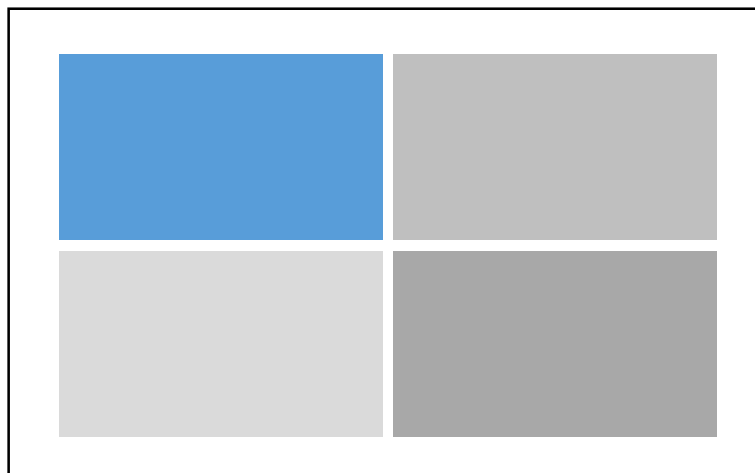
Rural Operating  
Budget  
Programs/Services

Rural Capital  
Budget Projects/  
Infrastructure

Urban Operating  
Budget  
Programs/Services

Urban Capital  
Budget Projects/  
Infrastructure

# Rural Operating Budget Programs/Services



- PCE utility clerk training
- Utility operator training
- Technical assistance - utility operators
- Circuit rider
- Electrical emergency response\*
- Power Cost Equalization (PCE)
- Power Project Fund loans (PPF)
- Energy policy lead

*\*Though a recurring service this is funded by capital budget authorization*

# Urban Operating Budget Programs/Services



- Technical Assistance
- Energy Policy Lead
- Bradley Project Management Committee (BPMC)
- Intertie Management Committee (IMC)

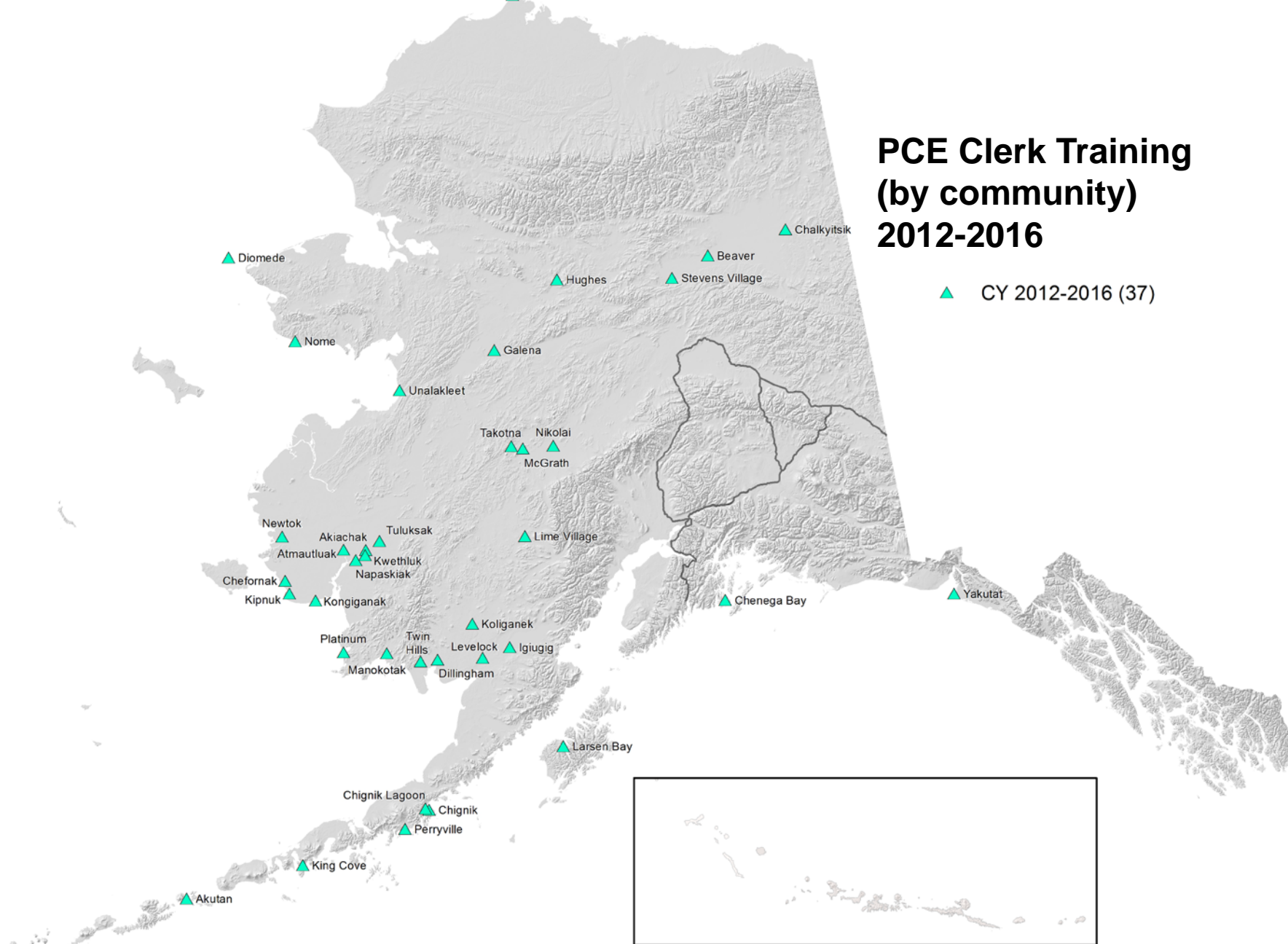


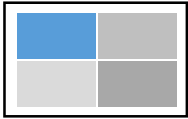
# Operating Budget Programs/Services



## PCE Clerk Training (by community) 2012-2016

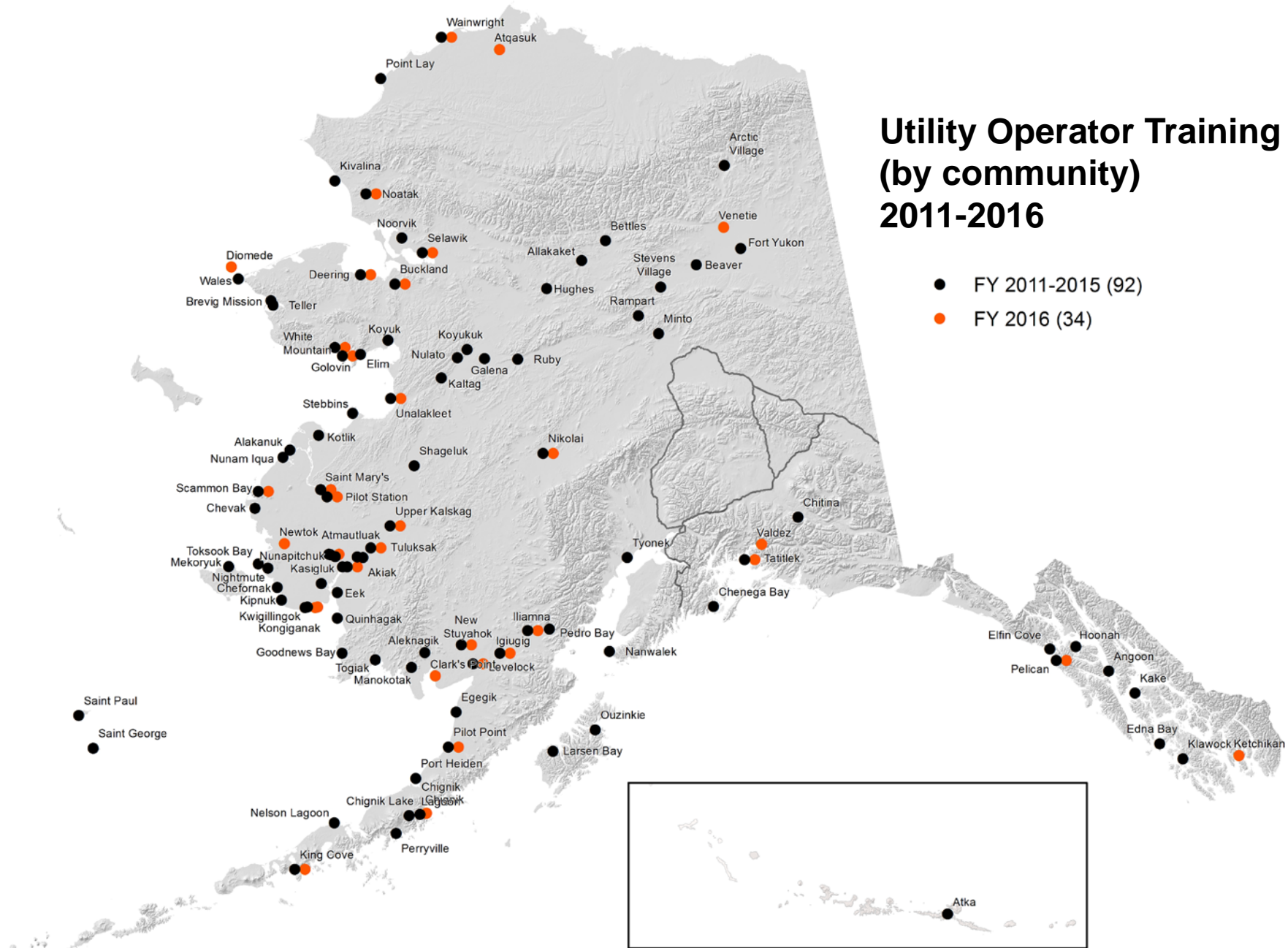
▲ CY 2012-2016 (37)



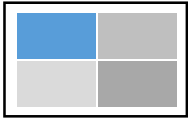


## Utility Operator Training (by community) 2011-2016

- FY 2011-2015 (92)
- FY 2016 (34)

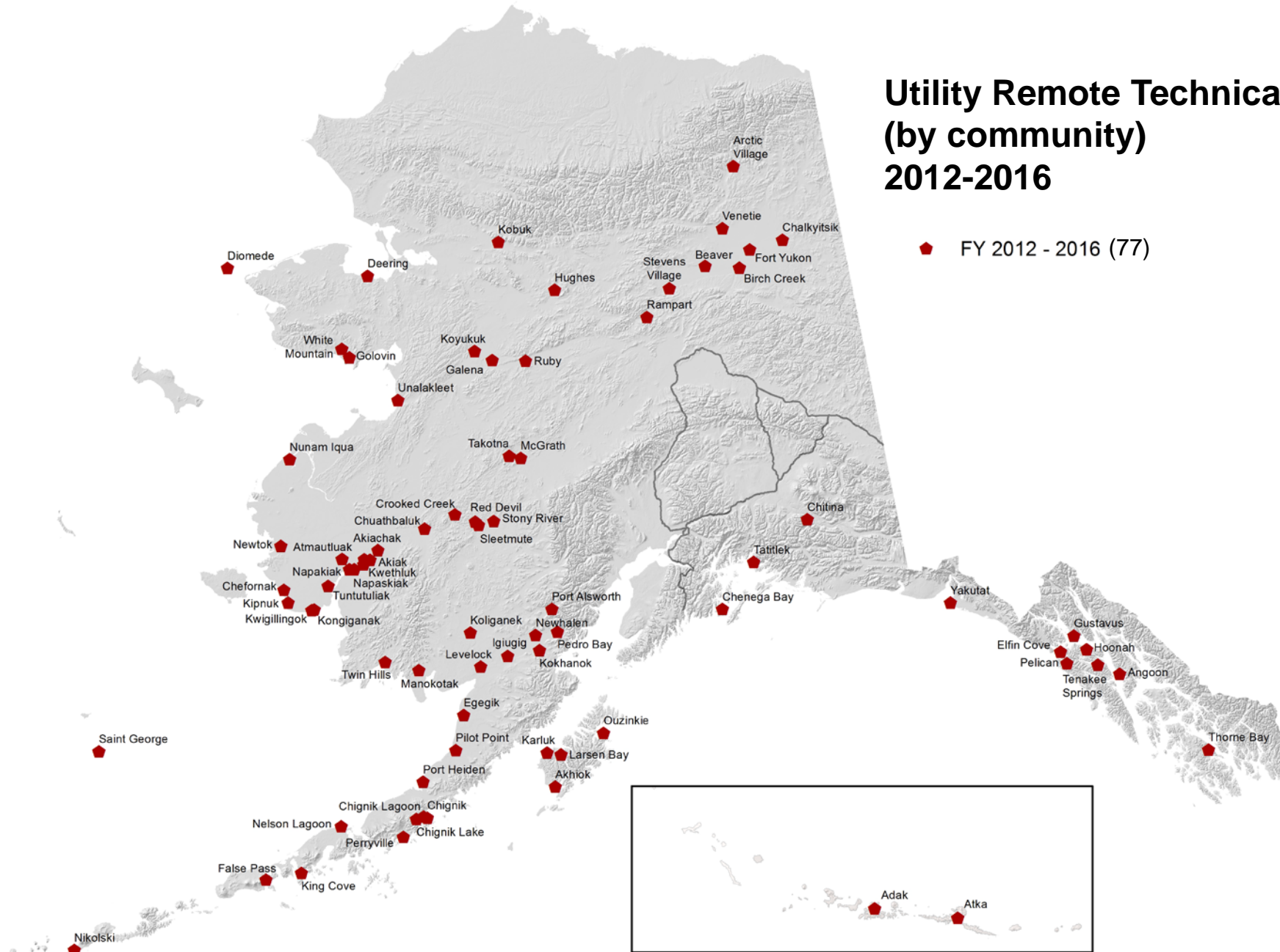






## Utility Remote Technical Assistance (by community) 2012-2016

◆ FY 2012 - 2016 (77)

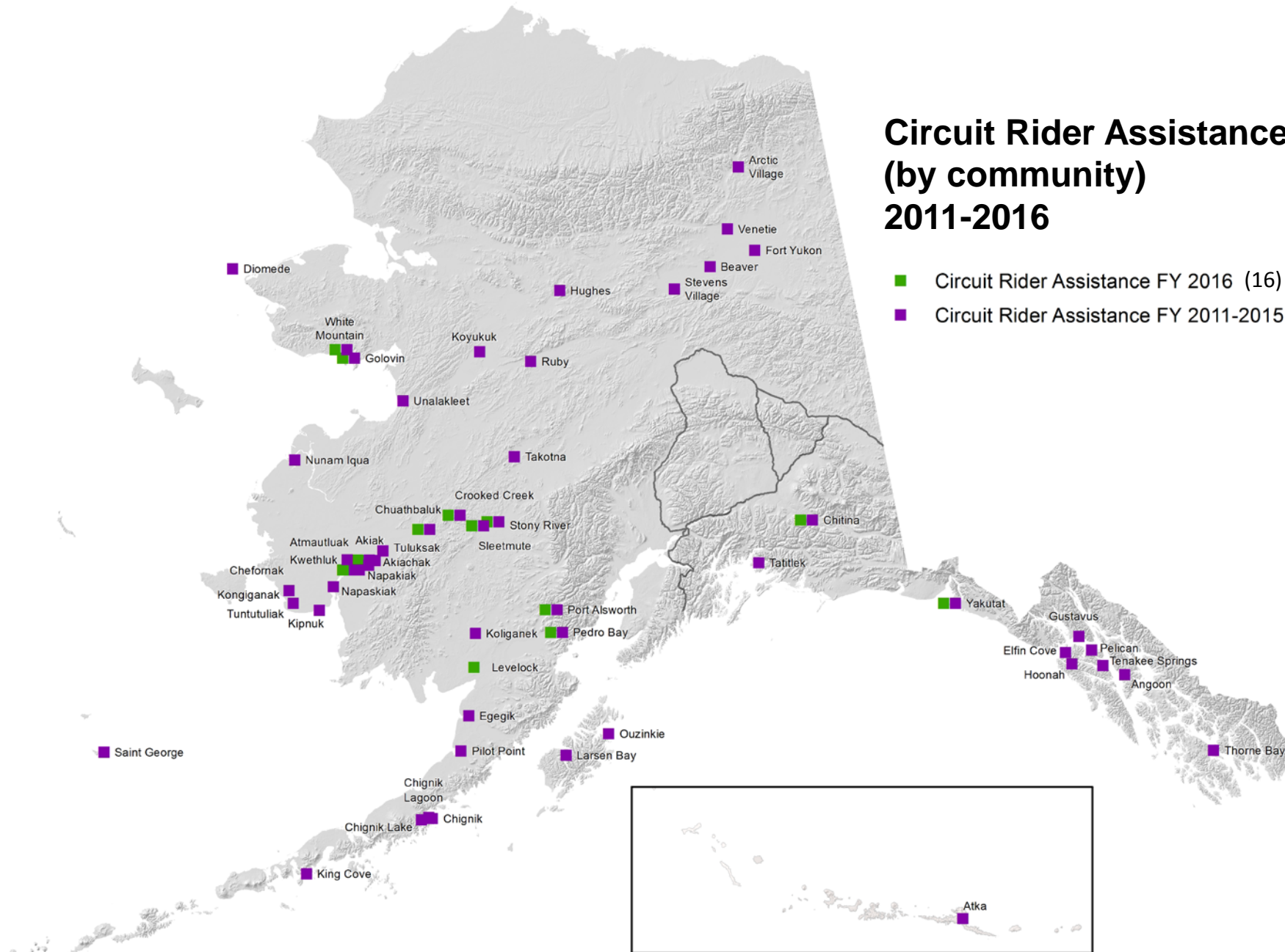






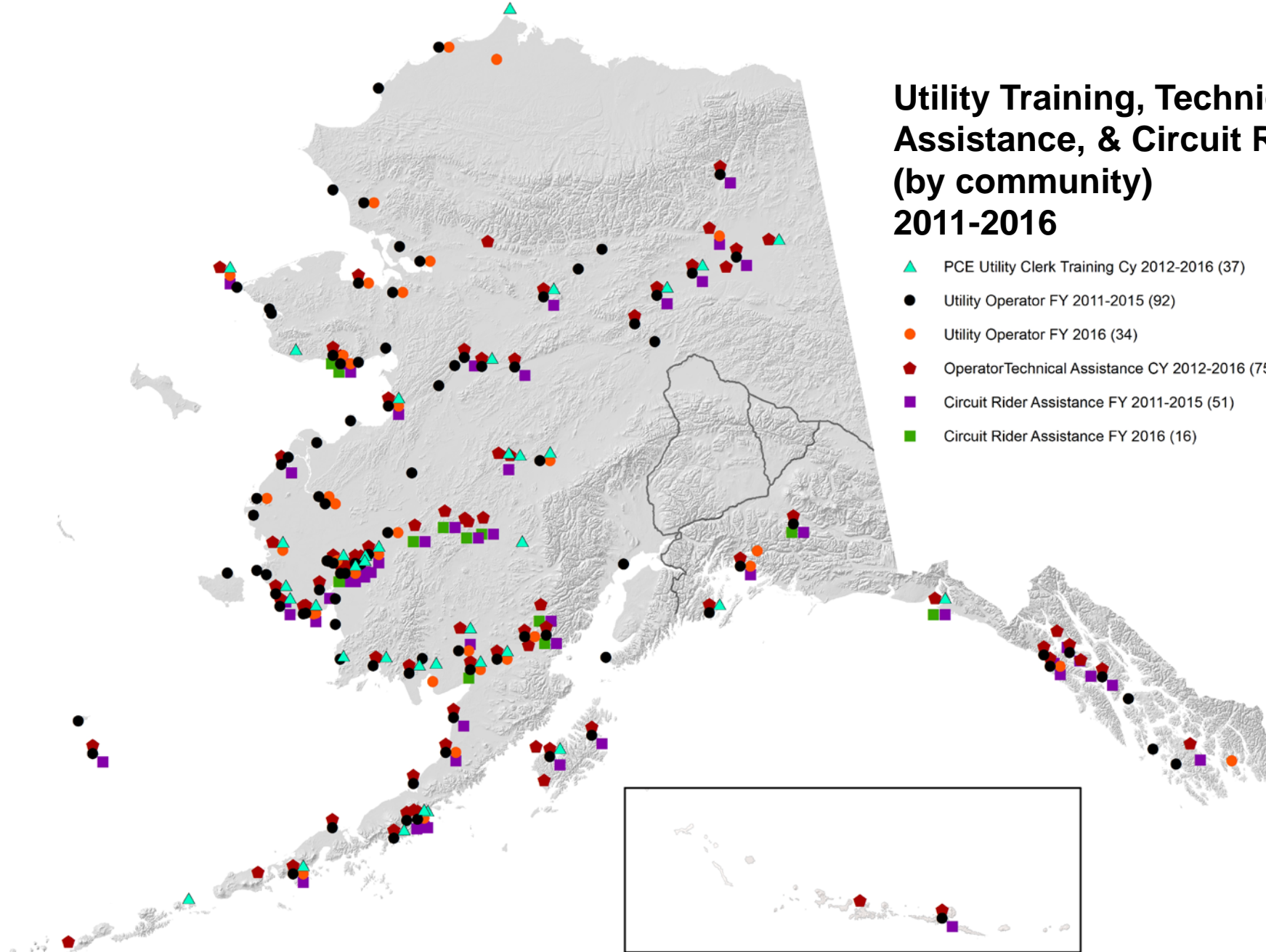
## Circuit Rider Assistance (by community) 2011-2016

- Circuit Rider Assistance FY 2016 (16)
- Circuit Rider Assistance FY 2011-2015 (51)





## Utility Training, Technical Assistance, & Circuit Rider (by community) 2011-2016





### **3 AAC 108.230. Electrical emergency assistance provided by the authority**

(a) If a **utility** eligible under 3 AAC 108.210 **suffers an electrical emergency, the authority will, subject to the availability of appropriations, assist the utility in responding to the emergency and recovering the ability to generate and transmit power** to the utility's customers in a manner that does not constitute a significant threat to life or property. **Assistance may include financial assistance or technical assistance, including emergency repairs.**

(b) In this section, "**electrical emergency**" means a condition in a utility's system that presents an **imminent danger** to life or likelihood of **significant disruption of electrical service.**



# Emergency Response Flow



Regular  
Utility  
Operations

Power  
Outage

AEA Emergency  
Response  
Activated: Phone  
Call with Utility  
Operator

Problem  
Diagnosed by  
AEA

Then the Utilities,  
AEA Personnel  
and/or Contractor  
Engaged for  
repairs

Power  
Restored,  
***"Imminent  
Danger"*** is  
Over

Then it is the  
utility's  
responsibility,  
after the  
emergency  
response, to  
complete the  
permanent fix, if  
required

Regular  
Utility  
Operations

**Most Emergency Response Calls  
are resolved within 12 - 48 Hours**

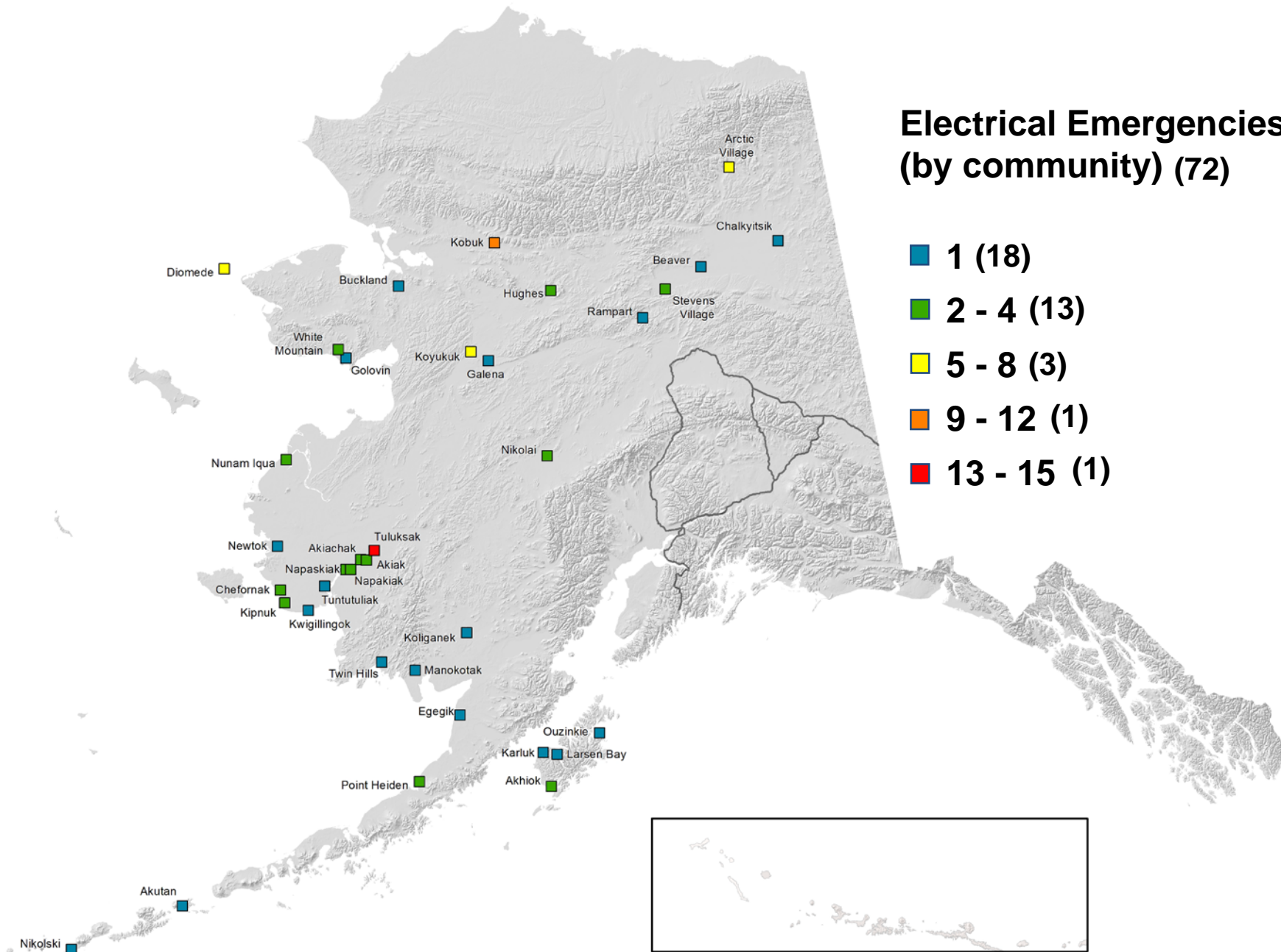
**Arctic Village: PPF \$  
& Diomedes: CDQ \$**





## Electrical Emergencies FY 06-16 (by community) (72)

- 1 (18)
- 2 - 4 (13)
- 5 - 8 (3)
- 9 - 12 (1)
- 13 - 15 (1)



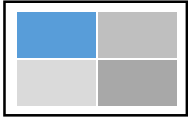


# Ten Year Average for Emergency Response

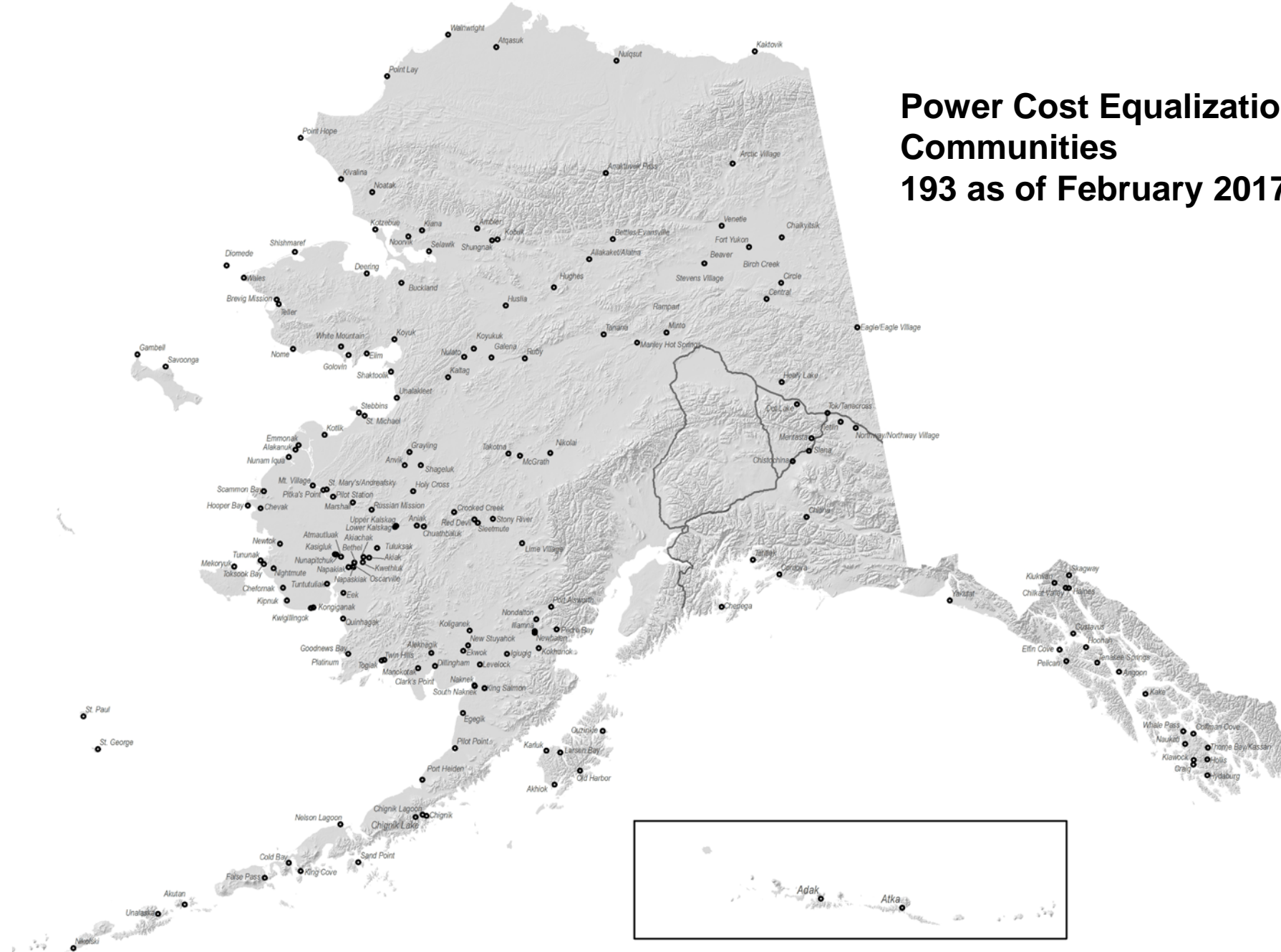
| Type                             | Cost                      | Percentage |
|----------------------------------|---------------------------|------------|
| State Labor & Travel             | \$525,190                 | 18%        |
| Contractors                      | \$1,233,744               | 43%        |
| Freight                          | \$302,855                 | 11%        |
| Materials & Supplies             | <u>\$786,043</u>          | 28%        |
| <b>Total</b>                     | <u><u>\$2,847,832</u></u> |            |
| <b>Per year average</b>          | <u><u>\$284,783</u></u>   |            |
| 72 Community Emergency Responses |                           |            |

RPSU Emergencies -vs- Replacement Cost:  
\$285k Assistance/\$975M Rural Utility Assets -vs-  
**= 0.00029 = .029%**

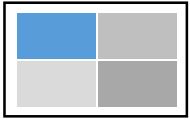
Car Analogy:  
\$100 Roadside Tire Assistance/\$30,000 Car  
**= 0.003 = .3%** (10x cost)



# Power Cost Equalization (PCE) Communities 193 as of February 2017

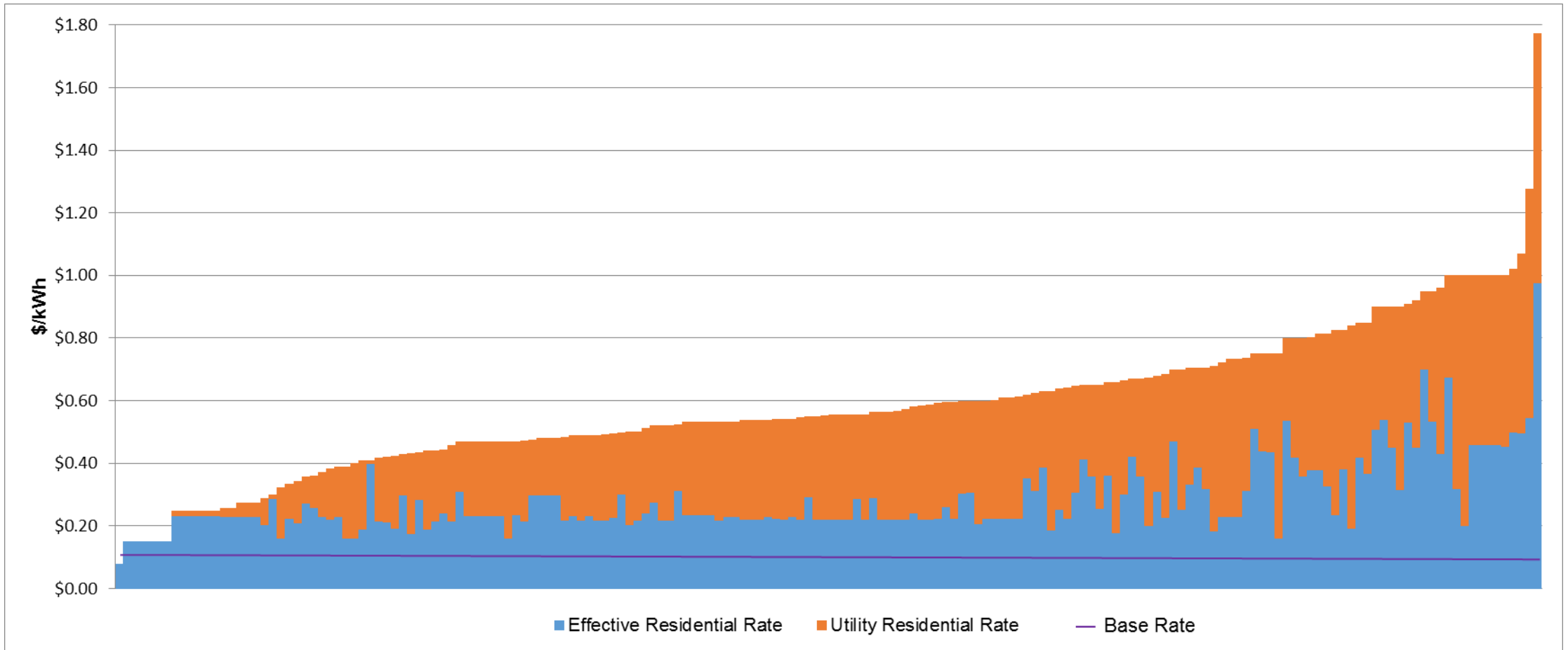






# Stabilizing Power Rates

## Power Cost Equalization Communities



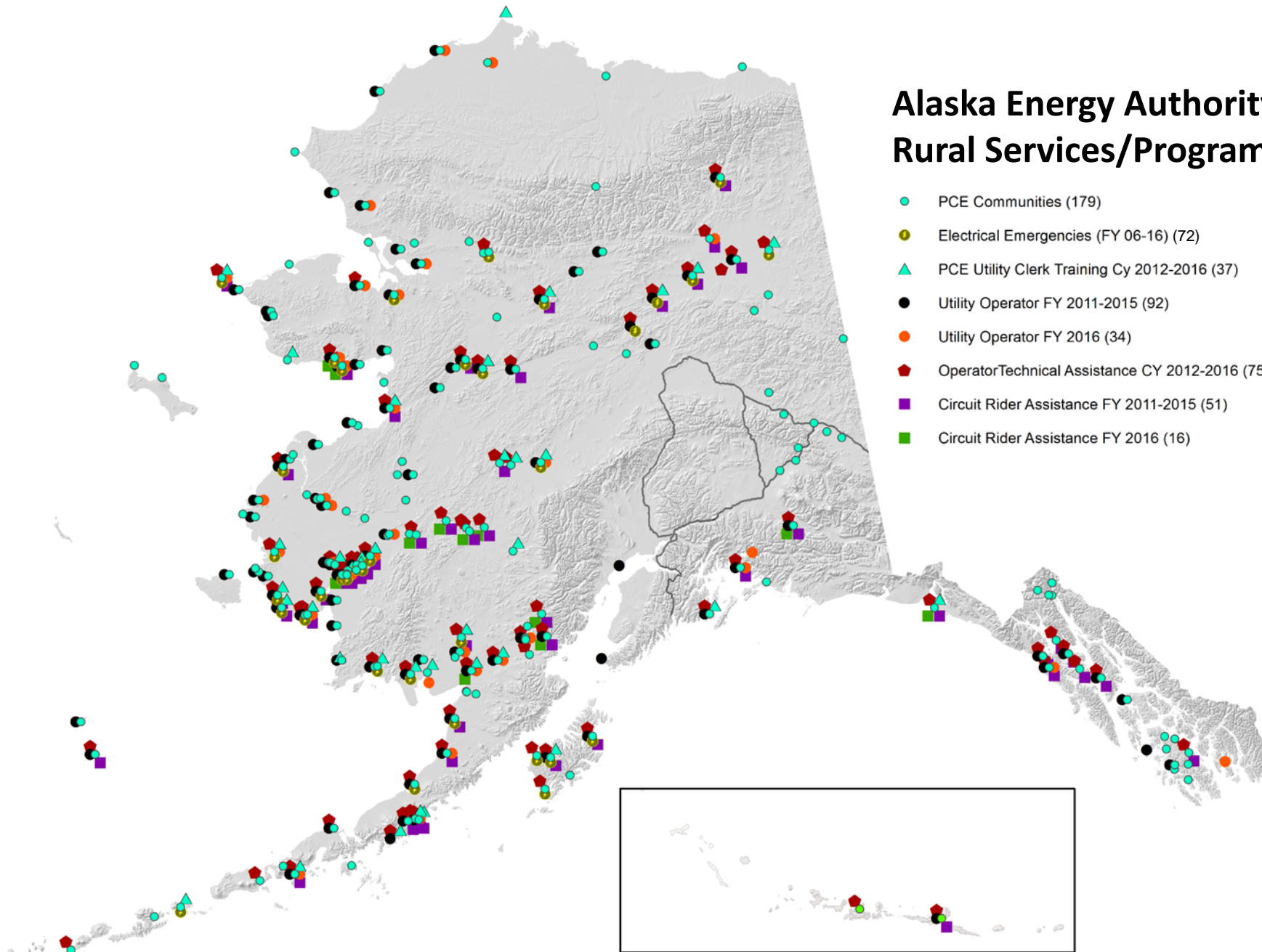
**ALASKA ENERGY AUTHORITY**  
**FY2018 OPERATING BUDGET OVERVIEW (in thousands)**  
**All Component Summary**

| <b>AEA All Components</b>             | <b>FY2013<br/>Actuals</b> | <b>FY2014<br/>Actuals</b> | <b>FY2015<br/>Actuals</b> | <b>FY2016<br/>Actuals</b> | <b>%<br/>Change</b> | <b>FY2017<br/>Authorized</b> | <b>FY2018<br/>Governor</b> | <b>%<br/>Change</b> |
|---------------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------|------------------------------|----------------------------|---------------------|
| <b><u>Expenditure Categories:</u></b> |                           |                           |                           |                           |                     |                              |                            |                     |
| Travel                                | 246.8                     | 186.2                     | 186.0                     | 100.6                     |                     | 162.0                        | 162.0                      |                     |
| Services (includes payroll)           | 9,465.0                   | 10,565.8                  | 10,620.3                  | 9,741.0                   |                     | 9,662.0                      | 8,948.2                    |                     |
| Supplies                              | 172.2                     | 177.2                     | 192.1                     | 122.6                     |                     | 56.0                         | 56.0                       |                     |
| Equipment                             | 90.4                      | 134.4                     | 113.3                     | 20.1                      |                     | 15.0                         | 15.0                       |                     |
| Grants                                | 40,100.0                  | 41,006.0                  | 37,777.3                  | 31,596.1                  |                     | 40,100.0                     | 37,600.0                   |                     |
| <b>Totals</b>                         | <b>50,074.4</b>           | <b>52,069.6</b>           | <b>48,889.0</b>           | <b>41,580.4</b>           | <b>-17%</b>         | <b>49,995.0</b>              | <b>46,781.2</b>            | <b>-6%</b>          |
| <b><u>Funding Sources:</u></b>        |                           |                           |                           |                           |                     |                              |                            |                     |
| Unrestricted GF (UGF)                 | 19,936.8                  | 10,820.5                  | 2,794.6                   | 3,512.0                   | -82%                | 2,276.1                      | 874.5                      | -62%                |
| Power Project Fund (DGF)              | 1,053.2                   | 1,053.2                   | 1,053.2                   | 551.4                     |                     | 995.5                        | 995.5                      |                     |
| Renewable Energy (DGF)                | 1,927.5                   | 1,758.3                   | 2,155.0                   | 2,068.2                   |                     | 2,000.0                      | 2,000.0                    |                     |
| PCE Endowment (DGF)                   | 22,875.8                  | 33,091.0                  | 38,132.3                  | 31,951.1                  |                     | 40,355.0                     | 38,236.8                   |                     |
| GF Program Receipts (DGF)             | -                         | -                         | -                         | 1.8                       |                     | 100.0                        | 100.0                      |                     |
| Bulk Fuel (DGF)                       | 53.6                      | -                         | -                         | -                         |                     | -                            | -                          |                     |
| Subtotal (UGF & DGF)                  | <b>45,846.9</b>           | <b>46,723.0</b>           | <b>44,135.1</b>           | <b>38,084.5</b>           | <b>-17%</b>         | <b>45,726.6</b>              | <b>42,206.8</b>            | <b>-8%</b>          |
| CIP Receipts                          | 3,873.5                   | 4,758.8                   | 4,243.2                   | 3,241.7                   |                     | 2,567.8                      | 2,567.8                    |                     |
| Federal Receipts                      | -                         | 331.8                     | 271.2                     | -                         |                     | 445.0                        | 752.0                      |                     |
| AEA Receipts                          | 244.7                     | 256.0                     | 224.6                     | 253.8                     |                     | 981.7                        | 980.7                      |                     |
| I/A Receipts                          | 109.3                     | -                         | -                         | -                         |                     | 123.9                        | 123.9                      |                     |
| Statutory Designated Program Receipts | -                         | -                         | 14.9                      | 0.4                       |                     | 150.0                        | 150.0                      |                     |
| <b>Totals</b>                         | <b>50,074.4</b>           | <b>52,069.6</b>           | <b>48,889.0</b>           | <b>41,580.4</b>           | <b>-17%</b>         | <b>49,995.0</b>              | <b>46,781.2</b>            | <b>-6%</b>          |



## Alaska Energy Authority Rural Services/Programs

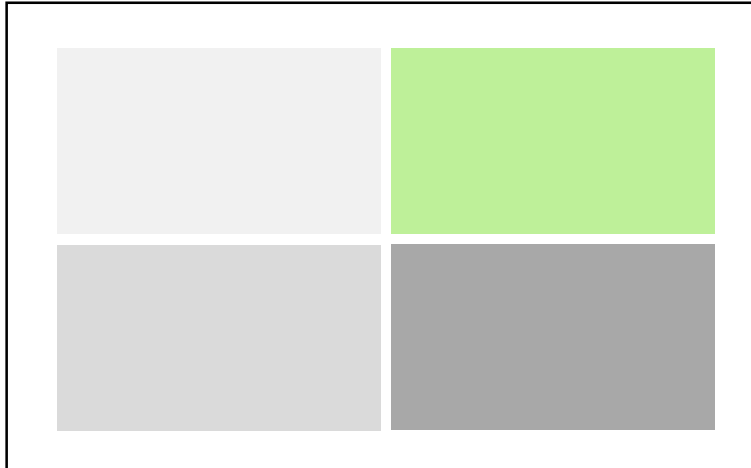
- PCE Communities (179)
- Electrical Emergencies (FY 06-16) (72)
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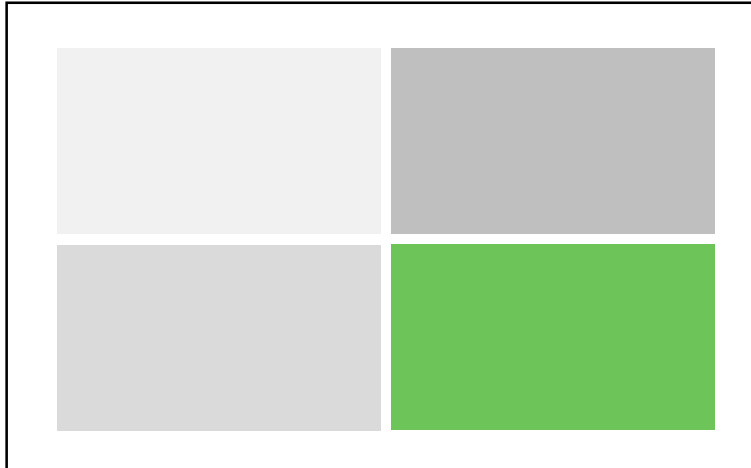
# Capital Budget Projects/Infrastructure

# Rural Capital Budget Projects/Infrastructure



- Rural Power System Upgrades
- Bulk Fuel Tank Farms
- End-use Efficiency
- Hydroelectric Power
- Biomass
- Heat Recovery
- Wind Energy
- Energy Planning
- Renewable Energy Grant Fund
- Emerging Energy Technology Grant Fund

# Urban Capital Budget Projects/Infrastructure



- Bradley Lake Hydroelectric
- Battle Creek Expansion (Bradley)
- Alaska Intertie
- Susitna-Watana Hydro (full shut down by July 1, 2017)
- Project Development & Finance Assistance (biomass, wind, hydro, end-use efficiency, diesel)
- Energy Planning
- Renewable Energy Grant Fund
- Emerging Energy Technology Grant Fund



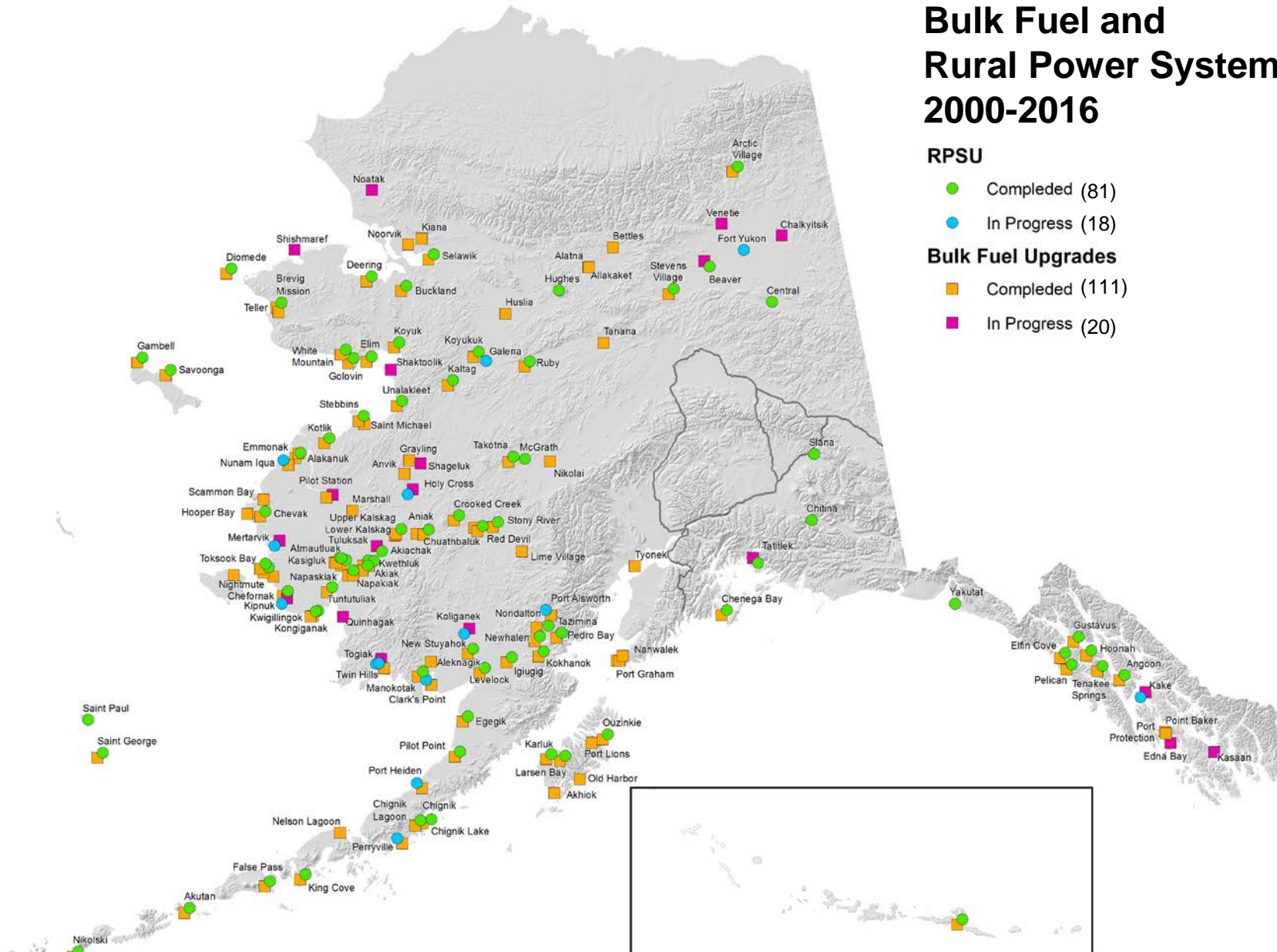
# Bulk Fuel and Rural Power System Upgrades 2000-2016

## RPSU

- Completed (81)
- In Progress (18)

## Bulk Fuel Upgrades

- Completed (111)
- In Progress (20)







# Investing in rural energy projects brings benefits to communities

## Rural Power System Upgrades (RPSU) Program

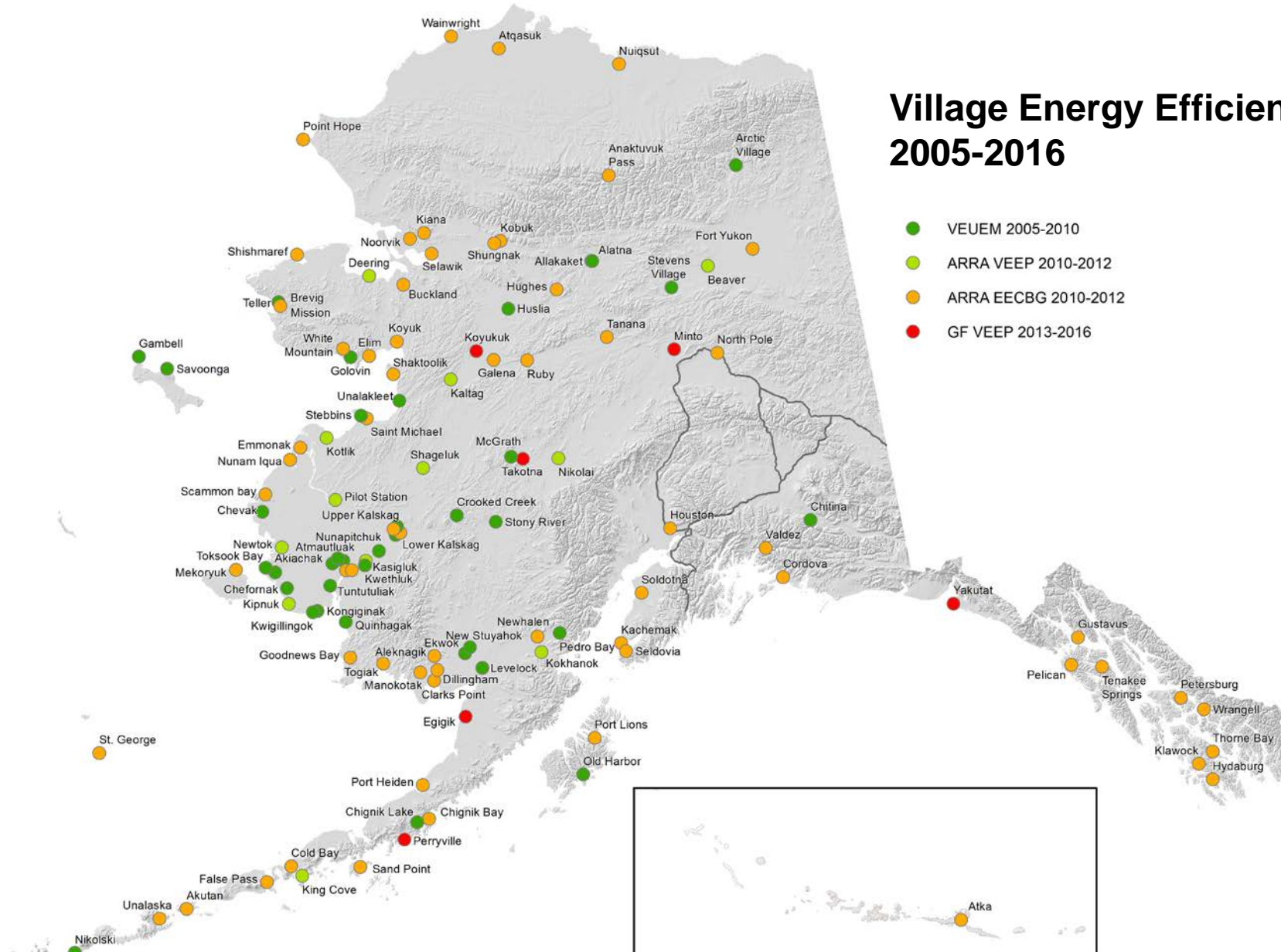
- Builds code compliant facilities providing stable and reliable power
- ~10% to 20% efficiency improvement in diesel generation
- Value of grant funds between \$0.12 and \$0.89/kWh

## Bulk Fuel Tank Farm Upgrades Program

- 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



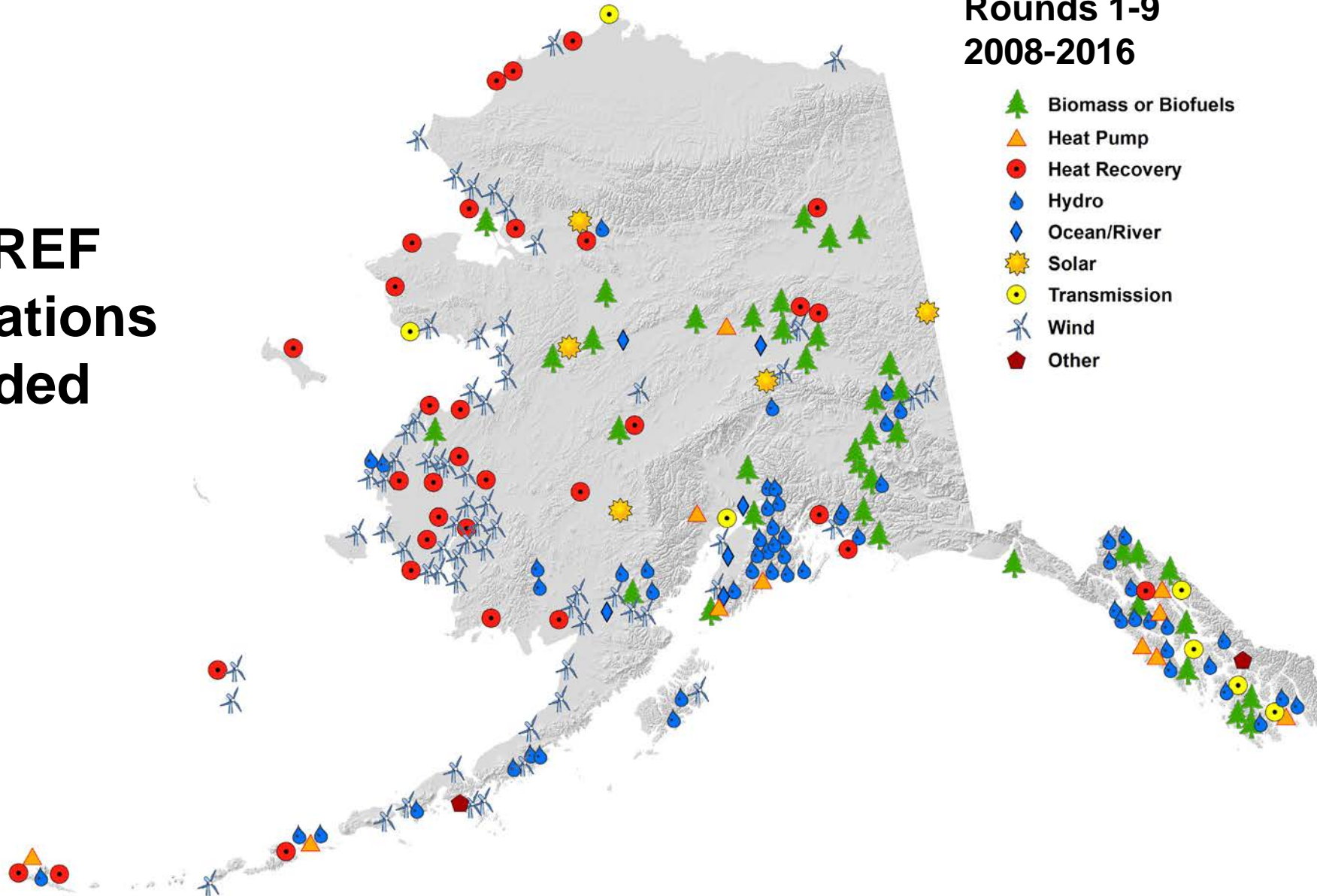
## Village Energy Efficiency Program 2005-2016





## Renewable Energy Fund Grants Rounds 1-9 2008-2016

**287 REF  
Applications  
Funded**

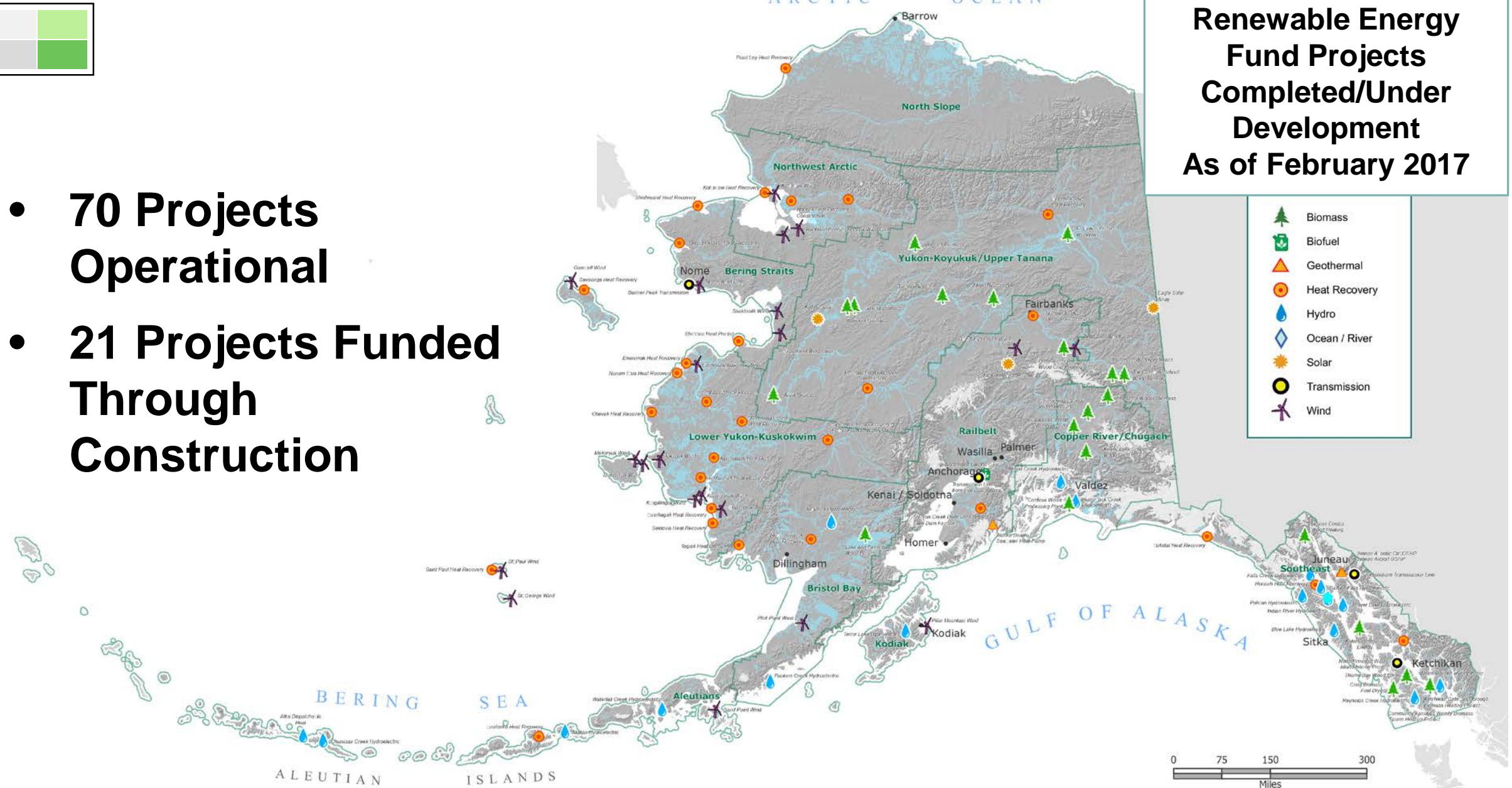






- 70 Projects Operational
- 21 Projects Funded Through Construction

## Renewable Energy Fund Projects Completed/Under Development As of February 2017





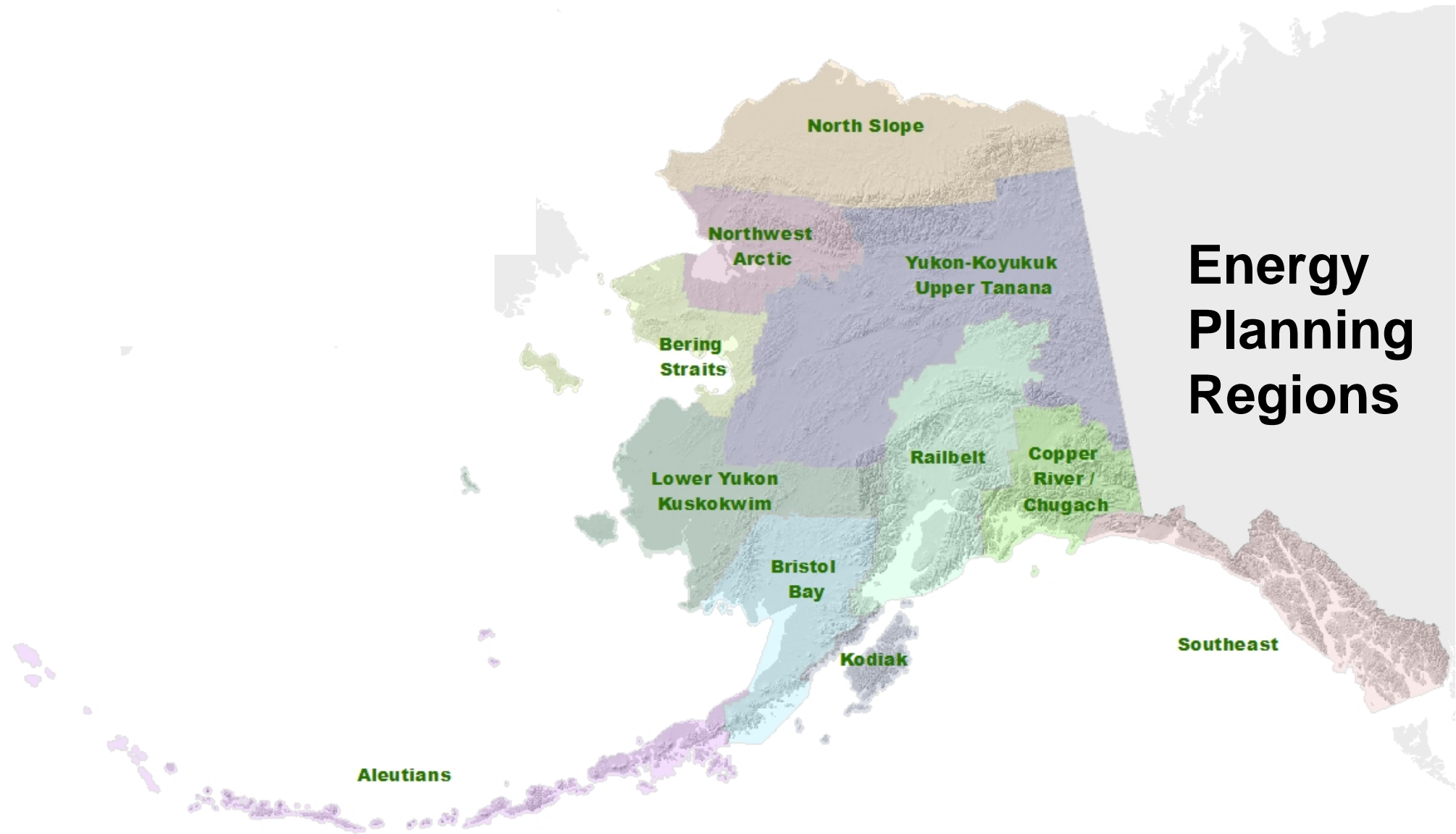
# AEA Energy Projects are Effective

## Renewable Energy Fund

- \$257 million since 2008
- Jumpstarted renewable energy market in Alaska
- Leveraged hundreds of millions of federal and private dollars
- Displacing ~31 million diesel equivalent gallons annually
- Which equates to ~\$63 million in 2016



*Eva Creek Wind (Golden Valley Electric)*

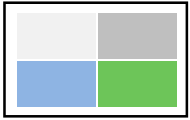


# Energy Planning Regions



# AEA Owned Energy Infrastructure



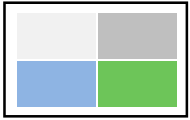


# AEA-Owned Energy Infrastructure

## Alaska Intertie



- 173 miles from Willow to Healy
- Allows GVEA to connect to and benefit from lower cost power
- \$40 million average annual avoided cost to Golden Valley Electric Association



# AEA-Owned Energy Infrastructure

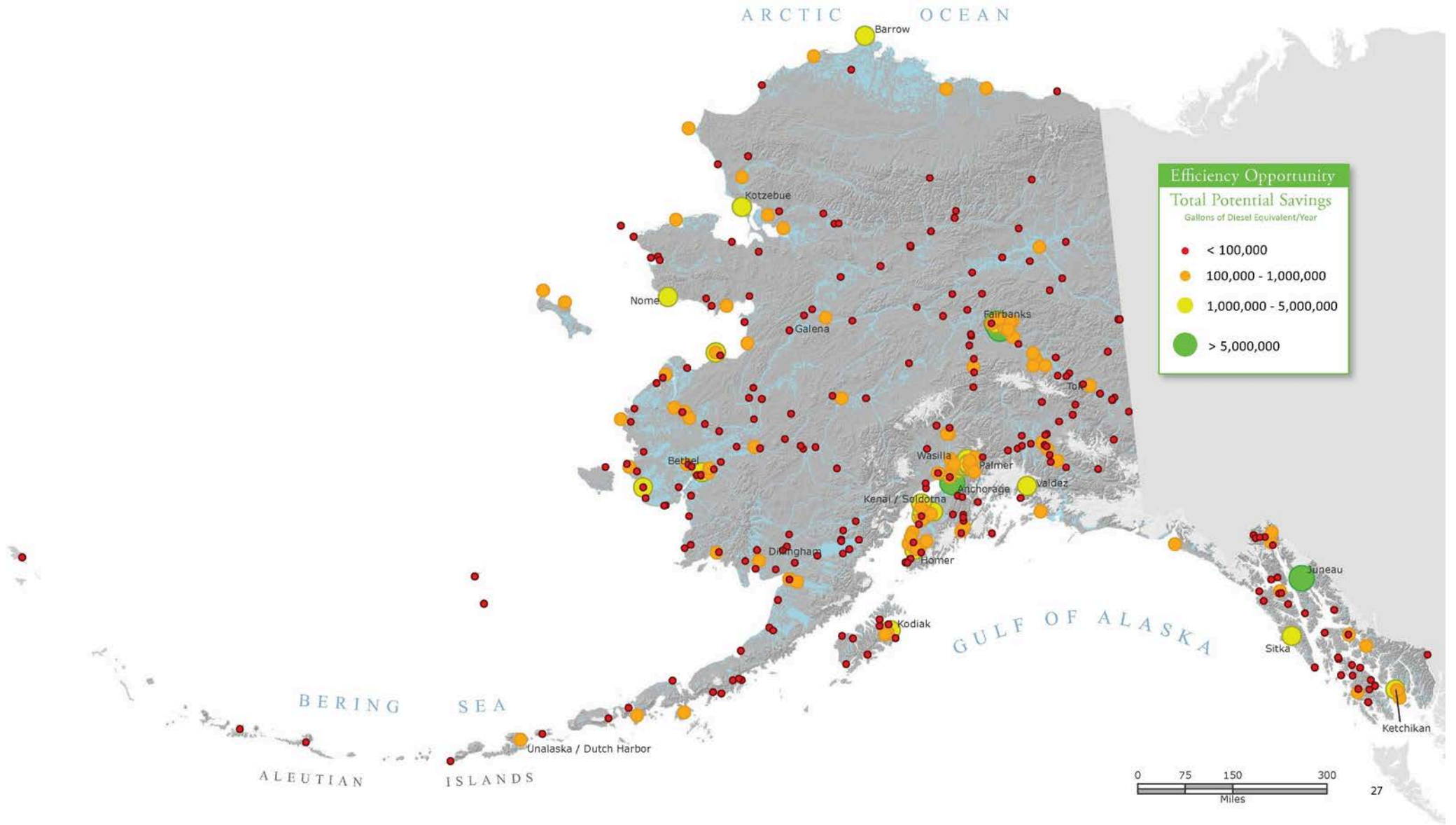
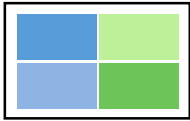
## Bradley Lake Hydro



- Provides the Railbelt with low cost power
- All six Railbelt utilities benefit



# The Future: Project Development

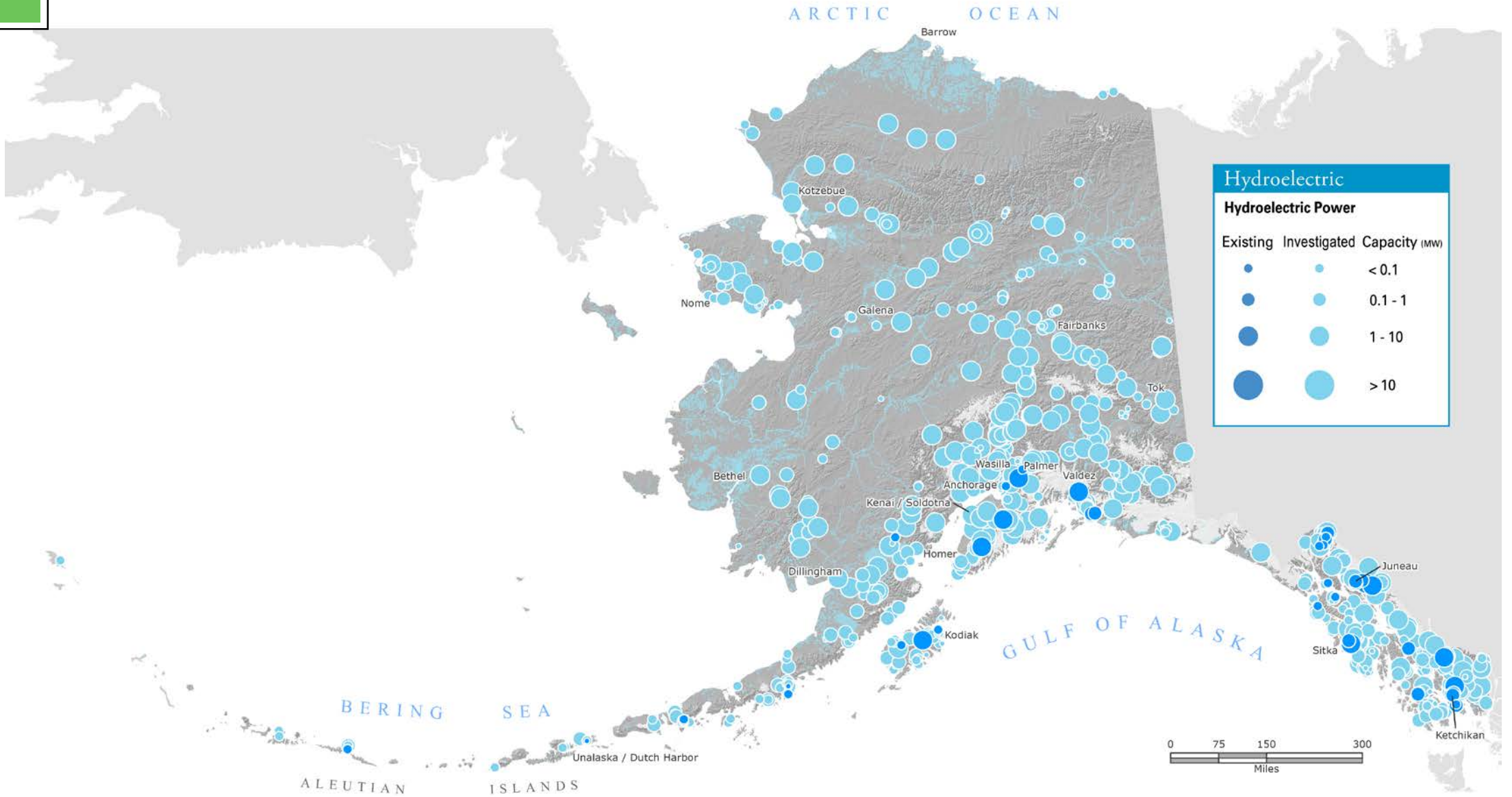
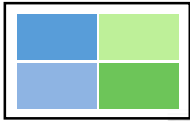


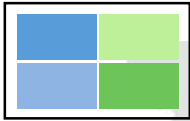
**Efficiency Opportunity**

**Total Potential Savings**  
Gallons of Diesel Equivalent/Year

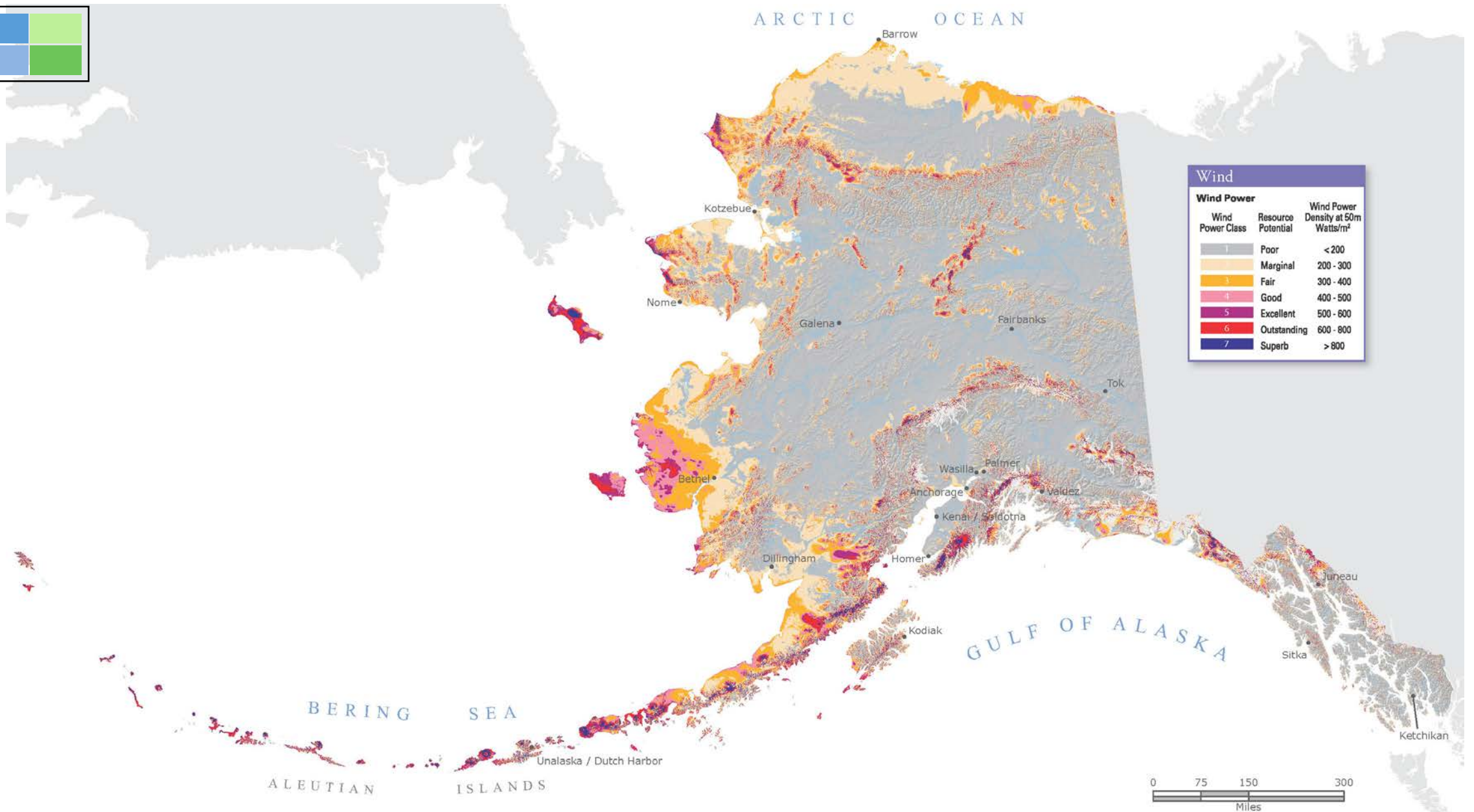
- < 100,000
- 100,000 - 1,000,000
- 1,000,000 - 5,000,000
- > 5,000,000











| Wind             |                    |  |
|------------------|--------------------|--|
| Wind Power Class | Resource Potential | Wind Power Density at 50m Watts/m <sup>2</sup> |
| 1                | Poor               | < 200  |
| 2                | Marginal           | 200 - 300                                      |
| 3                | Fair               | 300 - 400                                      |
| 4                | Good               | 400 - 500                                      |
| 5                | Excellent          | 500 - 600                                      |
| 6                | Outstanding        | 600 - 800                                      |
| 7                | Superb             | > 800  |



# The Power Project Fund

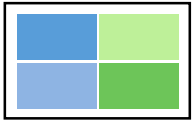
- Flexible loan program to meet community need
- Covers all aspects of supply side energy system
- Available for all phases of project development
- Technically, economically and financially viable
- Increased interest and activity in recent years
- Anticipate activity will continue to grow

**ALASKA ENERGY AUTHORITY****Power Project Loan Fund****Status as of January 31, 2017**

|   |            | Balance at<br>January 31, 2017 |
|---|------------|--------------------------------|
| Cash Balance  |            | \$ 40,672,307                  |
| <b>Less Budget Commitments:</b>   |            |                                |
| FY2017 Remaining Operating  | 822,319    |                                |
| FY2018 Operating Budget (Governor's budget)   | 995,500    |                                |
| <b>Subtotal Budget Commitments</b>  |            | <b>(1,817,819)</b>             |
| <b>Less Undisbursed Loans:</b>  |            |                                |
| Haida Energy Loan Reserve   | 82,718     |                                |
| Haida Energy, Inc. (hydroelectric project construction)*  | 16,818,519 |                                |
| City of Pelican (hydro lower penstock stabilization project)  | 61,000     |                                |
| City of King Cove (waterfall creek hydro)   | 1,975,000  |                                |
| Ungusraq Power Company (install new diesel genset/repairs to distribution system)   | 119,012    |                                |
| <b>Subtotal Undisbursed Loan Commitments</b>  |            | <b>(19,056,250)</b>            |
| * Legislative approval - \$9 million SLA2010 Ch. 70 Sec. 6 Page 3 Lines 17-22 & \$11 million FSSLA 2011 Ch. 6 Sec. 6 Page 4 Lines 23-28 |            |                                |
| Less Cordova Electric/Humpback Creek legislatively restricted fund capitalization   |            | <b>(10,000,000)</b>            |
| <b>Uncommitted Loan Fund Balance</b>  |            | <b>\$ 9,798,239</b>            |
| <b>Subtotal Pending Submitted Loan Applications</b>   |            | <b>-</b>                       |
| <b>Available Loan Fund Balance</b>  |            | <b>\$ 9,798,239</b>            |

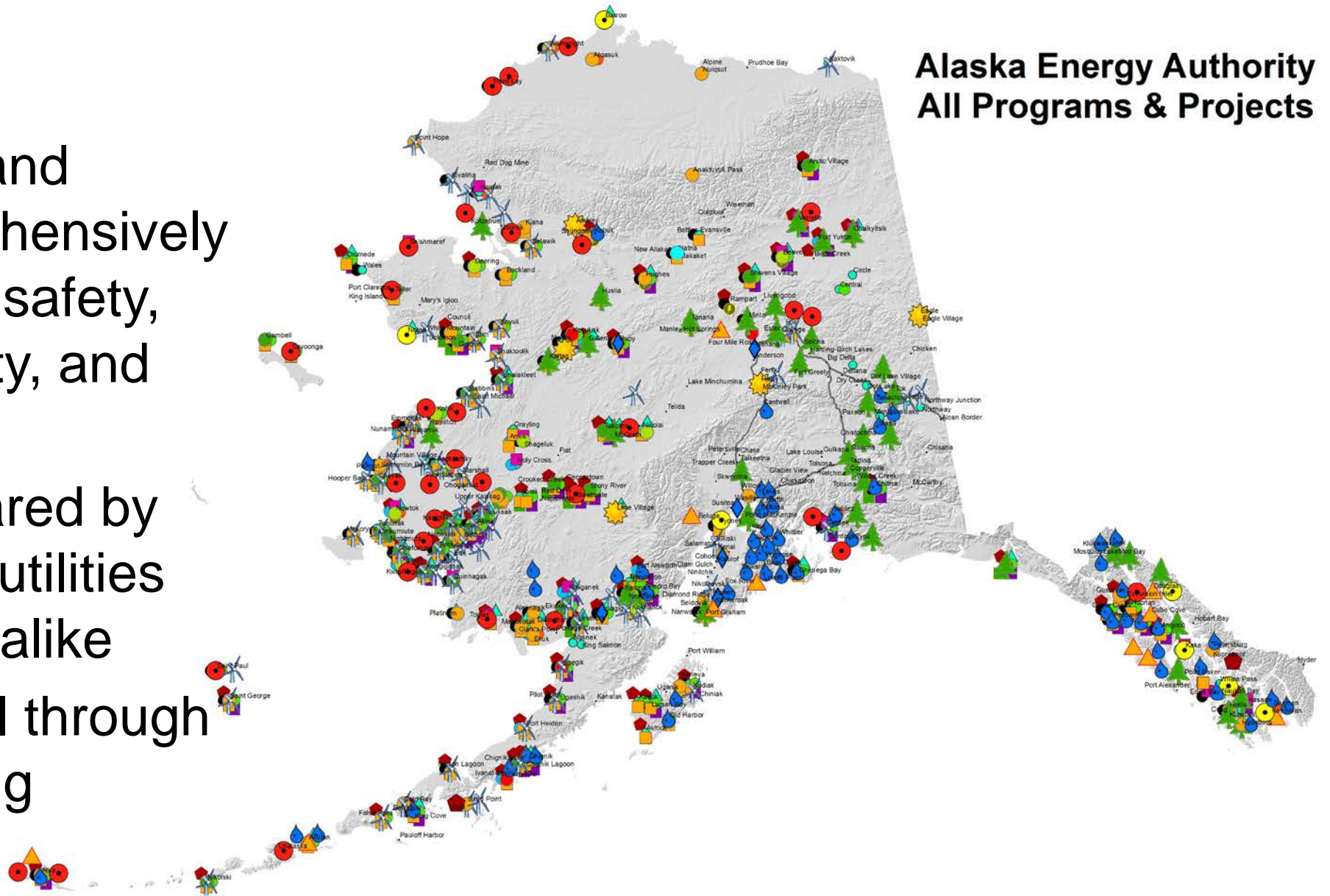
**AEA Outstanding Loan Balance as of January 31, 2017 was \$9,401,492.**





## Alaska Energy Authority All Programs & Projects

- AEA programs and projects comprehensively improve energy safety, stability, reliability, and affordability
- Benefits are shared by rural and urban utilities and consumers alike
- Growth potential through non-state funding





# AEA/AIDEA Shared Services

# AIDEA and AEA: “SISTER AGENCIES”

- Two distinct State corporate agencies, with discrete programs and projects
- Each Authority has its own Executive Director (CEO)
- There’s no commingling of assets, liabilities, or programmatic operational activities
- Therefore, two sets of independently audited financial statements are prepared annually
- AIDEA and AEA maintain a long-term successful “consolidated shared services” relationship
- A borrowing arrangement exists: AIDEA provides up to \$7.5M of liquid working capital to AEA
- 1993 Legislation requires AIDEA Board Members to serve as AEA Board of Directors
- AEA has no employees, AIDEA provides personnel services, but is reimbursed by AEA



# OPERATIONS

## AEA Direct Programs/Projects

- AEA Owned Infrastructure
  - Bradley Lake Hydro
  - Alaska Intertie
  - Susitna-Watana Hydro
- State Energy Office
- Power Cost Equalization program
- Rural Energy Projects – Powerhouse & tank farms
- Rural Training program – operator training for energy infrastructure
- Power Project Fund Loan Program
- Electrical Emergency Response
- Circuit Rider program
- Technical Assistance
- Alternative Energy
- Energy Efficiency
- Emerging Energy Technology Fund
- Renewable Energy Grant Fund Program
- Wind Energy
- Hydroelectric Energy
- Biomass program
- Solar

## AIDEA Direct Programs/Projects

- Infrastructure Development
  - Oil & Gas
  - Mining
  - Marine
  - Energy
- Commercial Lending & Finance
  - Real Estate
  - Tourism
  - Commercial Offices
- Conduit Bond Program
- Project Development Asset Management
  - Oil & Gas
  - Air Cargo
  - Mining
  - Shipyard
- External Affairs and Business Development
  - Public Comment and Response
  - Legislative Inquiries

## “Consolidated Shared Services” Support Functions



Investing



Treasury  
/Banking  
Functions



Office Space



Budgeting/  
Appropriations



Parking



Financial  
System  
(Navision)



Meeting  
Rooms



Accounting



Office  
Equipment



External  
Financial  
Reporting



Grant  
Management



Bond  
Compliance



Internal  
Financial  
Reporting



Procurement of  
Goods/Services



Payroll



Human  
Resources



Debt Issuance



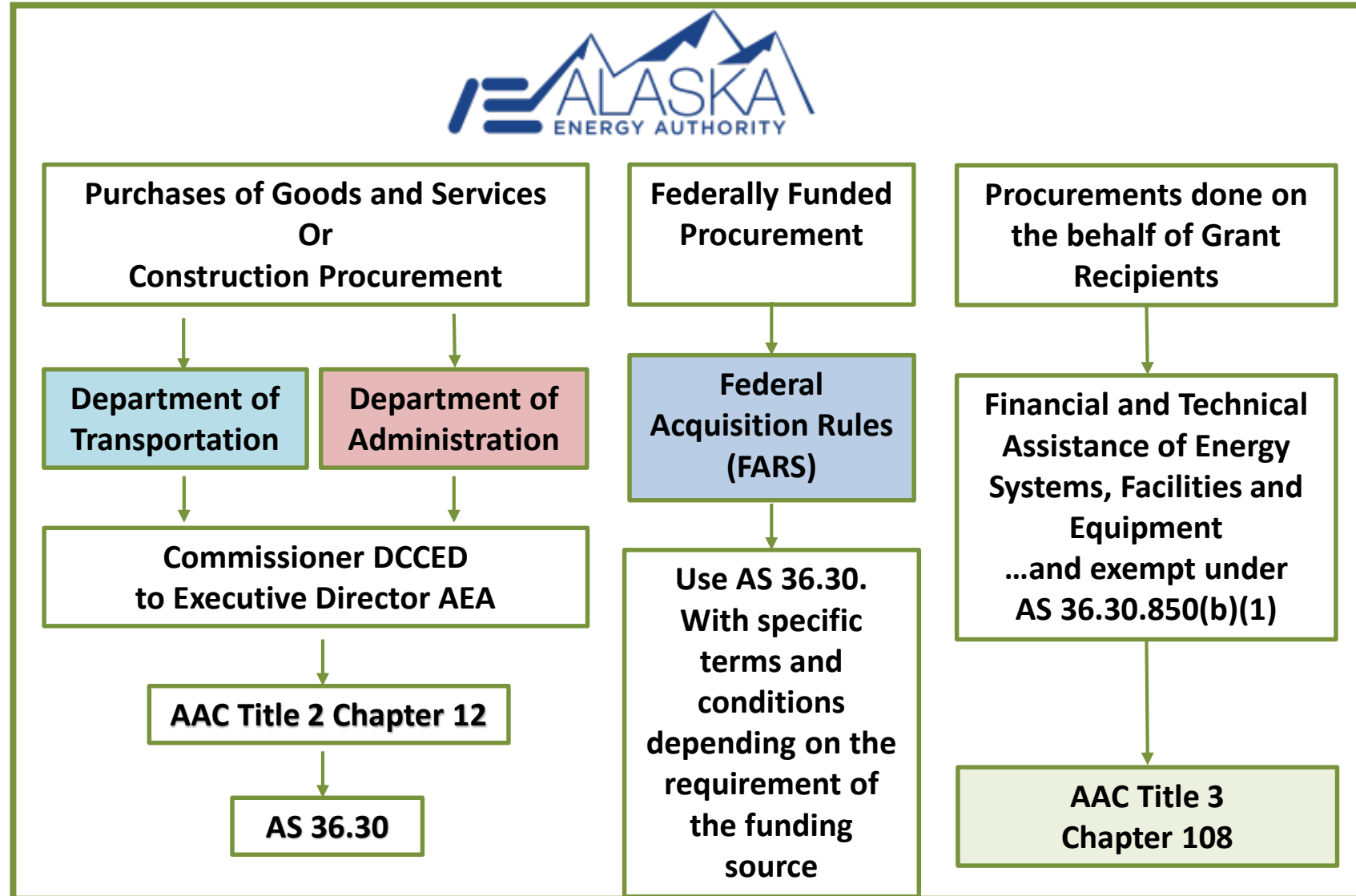
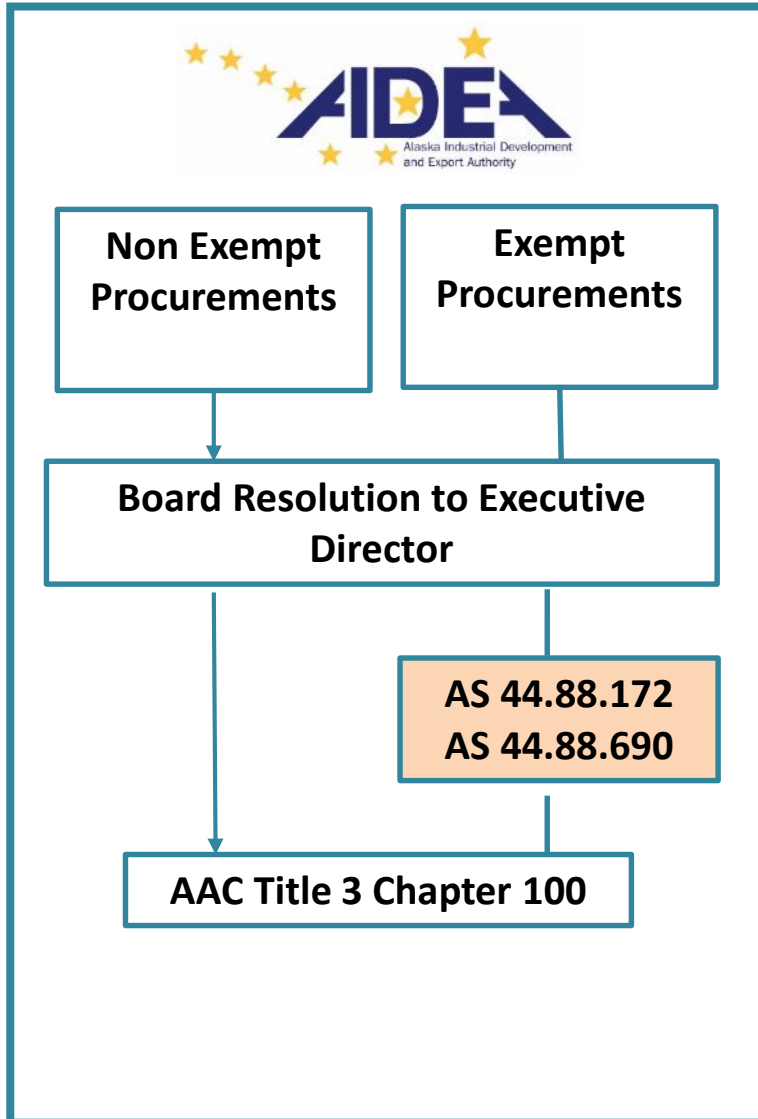
Information  
Technology

# PROCUREMENT

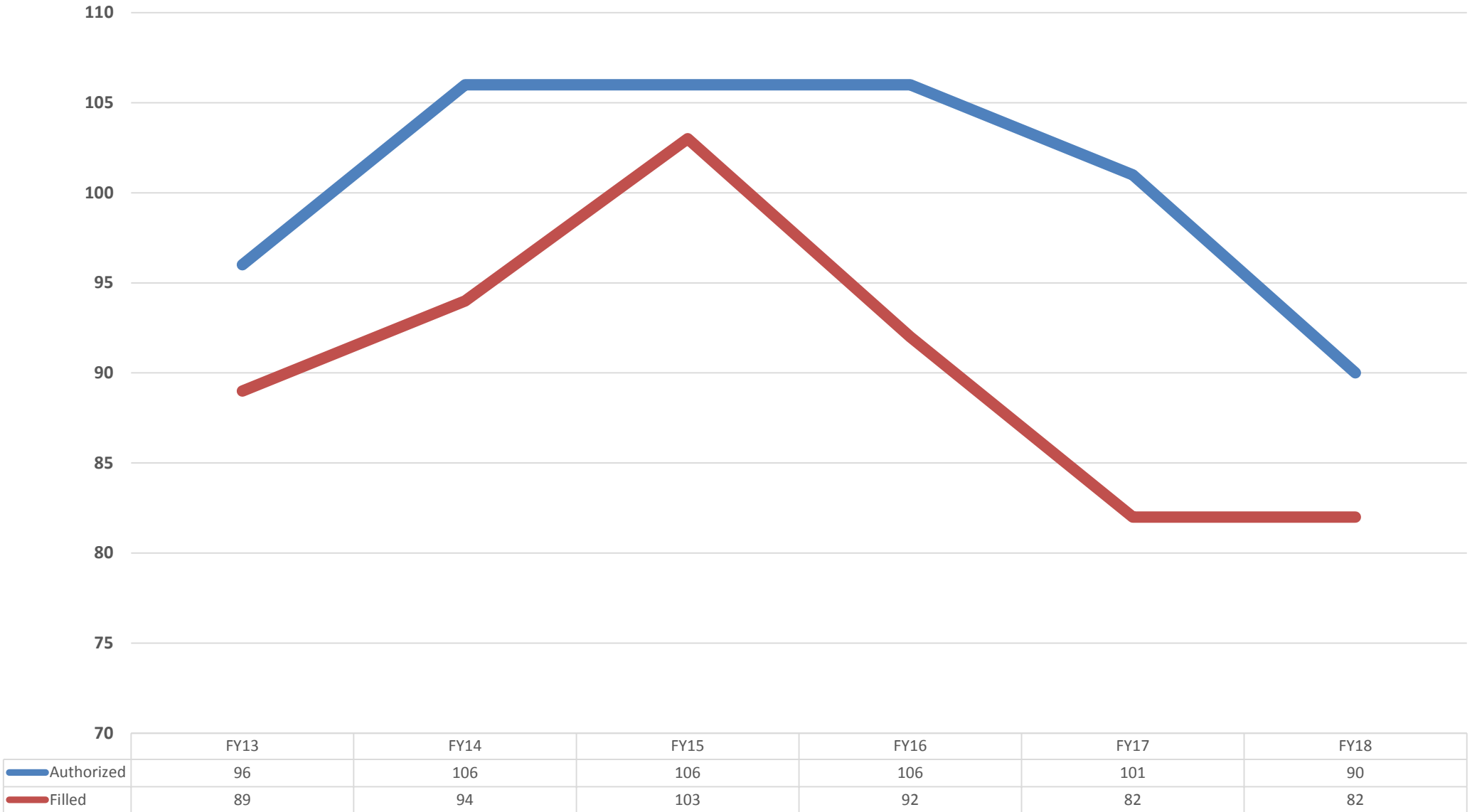
- A single Procurement Department does all of the procuring for AEA & AIDEA
- Fair, open, and competitive procurement processes are adhered to (a control function)
- Solicitations through:
  - ✓ Invitation to Bids - (ITB)
  - ✓ Request for Proposals - (RFP)
  - ✓ Request for Quotations - (RFQ)
- Contracts for procurement are executed, administered, and overseen for contract compliance
- Disposal of surplus property and equipment (assets) is overseen by Procurement
- There are five (5) unique procurement policies for acquiring goods, services, professional services, and construction Procurement is responsible for using between AIDEA & AEA

(see delegations next page)

# Procurement Delegations



## AIDEA & AEA Direct and Shared Services PCN Count FY13 to FY18





## ALASKA ENERGY AUTHORITY

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Toll Free (Alaska Only) 888-300-8534

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



[www.akenergyauthority.org](http://www.akenergyauthority.org)

**ALASKA ENERGY AUTHORITY**  
**FY2018 OPERATING BUDGET OVERVIEW (in thousands)**  
**AEA Owned Facilities Component**

| <b>AEA Owned Facilities</b>           | <b>FY2013<br/>Actuals</b> | <b>FY2014<br/>Actuals</b> | <b>FY2015<br/>Actuals</b> | <b>FY2016<br/>Actuals</b> | <b>%<br/>Change</b> | <b>FY2017<br/>Authorized</b> | <b>FY2018<br/>Governor</b> | <b>%<br/>Change</b> |
|---------------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------|------------------------------|----------------------------|---------------------|
| <b>Expenditure Categories:</b>        |                           |                           |                           |                           |                     |                              |                            |                     |
| Travel                                | -                         | -                         | -                         | -                         |                     | 30.0                         | 30.0                       |                     |
| Services (includes payroll)           | 244.7                     | 256.0                     | 224.6                     | 253.8                     |                     | 938.7                        | 937.7                      |                     |
| Supplies                              | -                         | -                         | -                         | -                         |                     | 8.0                          | 8.0                        |                     |
| Equipment                             | -                         | -                         | -                         | -                         |                     | 5.0                          | 5.0                        |                     |
| Grants                                | -                         | -                         | -                         | -                         |                     | -                            | -                          |                     |
| <b>Totals</b>                         | <b>244.7</b>              | <b>256.0</b>              | <b>224.6</b>              | <b>253.8</b>              | <b>4%</b>           | <b>981.7</b>                 | <b>980.7</b>               | <b>0%</b>           |
| <b>Funding Sources:</b>               |                           |                           |                           |                           |                     |                              |                            |                     |
| Unrestricted GF (UGF)                 | -                         | -                         | -                         | -                         |                     | -                            | -                          |                     |
| Power Project Fund (DGF)              | -                         | -                         | -                         | -                         |                     | -                            | -                          |                     |
| Renewable Energy (DGF)                | -                         | -                         | -                         | -                         |                     | -                            | -                          |                     |
| PCE Endowment (DGF)                   | -                         | -                         | -                         | -                         |                     | -                            | -                          |                     |
| GF Program Receipts (DGF)             | -                         | -                         | -                         | -                         |                     | -                            | -                          |                     |
| Bulk Fuel (DGF)                       | -                         | -                         | -                         | -                         |                     | -                            | -                          |                     |
| Subtotal (UGF & DGF)                  | -                         | -                         | -                         | -                         |                     | -                            | -                          | 0%                  |
| CIP Receipts                          | -                         | -                         | -                         | -                         |                     | -                            | -                          |                     |
| Federal Receipts                      | -                         | -                         | -                         | -                         |                     | -                            | -                          |                     |
| AEA Receipts                          | 244.7                     | 256.0                     | 224.6                     | 253.8                     |                     | 981.7                        | 980.7                      |                     |
| I/A Receipts                          | -                         | -                         | -                         | -                         |                     | -                            | -                          |                     |
| Statutory Designated Program Receipts | -                         | -                         | -                         | -                         |                     | -                            | -                          |                     |
| <b>Totals</b>                         | <b>244.7</b>              | <b>256.0</b>              | <b>224.6</b>              | <b>253.8</b>              | <b>4%</b>           | <b>981.7</b>                 | <b>980.7</b>               | <b>0%</b>           |



**ALASKA ENERGY AUTHORITY**  
**FY2018 OPERATING BUDGET OVERVIEW (in thousands)**  
**AEA Rural Energy Operations (Assistance) Component**

| <b>AEA Rural Energy Operations (Assistance)</b> | <b>FY2013<br/>Actuals</b> | <b>FY2014<br/>Actuals</b> | <b>FY2015<br/>Actuals</b> | <b>FY2016<br/>Actuals</b> | <b>%<br/>Change</b> | <b>FY2017<br/>Authorized</b> | <b>FY2018<br/>Governor</b> | <b>%<br/>Change</b> |
|---|---------------------------|---------------------------|---------------------------|---------------------------|---------------------|------------------------------|----------------------------|---------------------|
| <b>Expenditure Categories:</b>                  |                           |                           |                           |                           |                     |                              |                            |                     |
| Travel  | 80.6                      | 29.8                      | 19.1                      | 31.3                      |                     | 132.0                        | 132.0                      |                     |
| Services (includes payroll)                     | 2,530.1                   | 2,792.1                   | 2,778.9                   | 3,282.3                   |                     | 5,348.5                      | 5,655.5                    |                     |
| Supplies  | 108.7                     | 99.3                      | 101.9                     | 77.5                      |                     | 48.0                         | 48.0                       |                     |
| Equipment                                       | 42.2                      | 65.6                      | 74.7                      | 10.9                      |                     | 10.0                         | 10.0                       |                     |
| Grants  | -                         | -                         | -                         | -                         |                     | 100.0                        | 100.0                      |                     |
| <b>Totals</b>                                   | <b>2,761.6</b>            | <b>2,986.8</b>            | <b>2,974.6</b>            | <b>3,402.0</b>            | <b>23%</b>          | <b>5,638.5</b>               | <b>5,945.5</b>             | <b>5%</b>           |
| <b>Funding Sources:</b>                         |                           |                           |                           |                           |                     |                              |                            |                     |
| Unrestricted GF (UGF)                           | 1,047.1                   | 1,156.7                   | 1,224.1                   | 1,735.5                   | 66%                 | 1,256.3                      | 874.5 (1)                  | -30%                |
| Power Project Fund (DGF)                        | 442.5                     | 414.8                     | 457.3                     | 172.8                     |                     | 995.5                        | 995.5                      |                     |
| Renewable Energy (DGF)                          | -                         | -                         | -                         | -                         |                     | -                            | -                          |                     |
| PCE Endowment (DGF)                             | -                         | -                         | -                         | -                         |                     | -                            | 381.8 (1)                  |                     |
| GF Program Receipts (DGF)                       | -                         | -                         | -                         | 1.8                       |                     | 100.0                        | 100.0                      |                     |
| Bulk Fuel (DGF)                                 | 53.6                      | -                         | -                         | -                         |                     | -                            | -                          |                     |
| Subtotal (UGF & DGF)                            | <b>1,543.2</b>            | <b>1,571.5</b>            | <b>1,681.4</b>            | <b>1,910.1</b>            | <b>24%</b>          | <b>2,351.8</b>               | <b>2,351.8</b>             | <b>0%</b>           |
| CIP Receipts                                    | 1,169.1                   | 1,415.3                   | 1,278.3                   | 1,491.9                   |                     | 2,567.8                      | 2,567.8                    |                     |
| Federal Receipts                                | -                         | -                         | -                         | -                         |                     | 445.0                        | 752.0 (2)                  |                     |
| AEA Receipts                                    | -                         | -                         | -                         | -                         |                     | -                            | -                          |                     |
| I/A Receipts                                    | 49.3                      | -                         | -                         | -                         |                     | 123.9                        | 123.9                      |                     |
| Statutory Designated Program Receipts           | -                         | -                         | 14.9                      | -                         |                     | 150.0                        | 150.0                      |                     |
| <b>Totals</b>                                   | <b>2,761.6</b>            | <b>2,986.8</b>            | <b>2,974.6</b>            | <b>3,402.0</b>            | <b>23%</b>          | <b>5,638.5</b>               | <b>5,945.5</b>             | <b>5%</b>           |

Note (1): Fund source change for PCE administrative costs that have historically been paid by unrestricted general fund authority in this component.

Note (2): This increment is for federal Denali Commission funds anticipated for training and circuit rider programs.

**ALASKA ENERGY AUTHORITY**  
**FY2018 OPERATING BUDGET OVERVIEW (in thousands)**  
**AEA Technical Assistance Component**

| <b>AEA Technical Assistance (1)</b>   | <b>FY2013<br/>Actuals</b> | <b>FY2014<br/>Actuals</b> | <b>FY2015<br/>Actuals</b> | <b>FY2016<br/>Actuals</b> | <b>FY2017<br/>Authorized</b> | <b>FY2018<br/>Governor (1)</b> |
|---------------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|------------------------------|--------------------------------|
| <b><u>Expenditure Categories:</u></b> |                           |                           |                           |                           |                              |                                |
| Travel                                | 34.6                      | 38.9                      | 43.3                      | -                         | -                            | -                              |
| Services (includes payroll)           | 364.5                     | 360.0                     | 354.7                     | -                         | -                            | -                              |
| Supplies                              | 7.6                       | 7.8                       | 8.7                       | -                         | -                            | -                              |
| Equipment                             | -                         | -                         | -                         | -                         | -                            | -                              |
| Grants                                | -                         | -                         | -                         | -                         | -                            | -                              |
| <b>Totals</b>                         | <b>406.7</b>              | <b>406.7</b>              | <b>406.7</b>              | <b>-</b>                  | <b>-</b>                     | <b>-</b>                       |
| <b><u>Funding Sources:</u></b>        |                           |                           |                           |                           |                              |                                |
| Unrestricted GF (UGF)                 | 406.7                     | 406.7                     | 406.7                     | -                         | -                            | -                              |
| Power Project Fund (DGF)              | -                         | -                         | -                         | -                         | -                            | -                              |
| Renewable Energy (DGF)                | -                         | -                         | -                         | -                         | -                            | -                              |
| PCE Endowment (DGF)                   | -                         | -                         | -                         | -                         | -                            | -                              |
| GF Program Receipts (DGF)             | -                         | -                         | -                         | -                         | -                            | -                              |
| Bulk Fuel (DGF)                       | -                         | -                         | -                         | -                         | -                            | -                              |
| Subtotal (UGF & DGF)                  | <b>406.7</b>              | <b>406.7</b>              | <b>406.7</b>              | <b>-</b>                  | <b>-</b>                     | <b>-</b>                       |
| CIP Receipts                          | -                         | -                         | -                         | -                         | -                            | -                              |
| Federal Receipts                      | -                         | -                         | -                         | -                         | -                            | -                              |
| AEA Receipts                          | -                         | -                         | -                         | -                         | -                            | -                              |
| I/A Receipts                          | -                         | -                         | -                         | -                         | -                            | -                              |
| Statutory Designated Program Receipts | -                         | -                         | -                         | -                         | -                            | -                              |
| <b>Totals</b>                         | <b>406.7</b>              | <b>406.7</b>              | <b>406.7</b>              | <b>-</b>                  | <b>-</b>                     | <b>-</b>                       |

Note (1): Authorization transferred to Rural Energy Assistance Component starting in FY2016.

**ALASKA ENERGY AUTHORITY**  
**FY2018 OPERATING BUDGET OVERVIEW (in thousands)**  
**AEA Power Cost Equalization Component**

| <b>AEA Power Cost Equalization</b>    | <b>FY2013<br/>Actuals</b> | <b>FY2014<br/>Actuals</b> | <b>FY2015<br/>Actuals</b> | <b>FY2016<br/>Actuals</b> | <b>%<br/>Change</b> | <b>FY2017<br/>Authorized</b> | <b>FY2018<br/>Governor</b> | <b>%<br/>Change</b> |
|---------------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------|------------------------------|----------------------------|---------------------|
| <b>Expenditure Categories:</b>        |                           |                           |                           |                           |                     |                              |                            |                     |
| Travel                                | 1.4                       | 1.1                       | 2.5                       | 0.5                       |                     | -                            | -                          |                     |
| Services (includes payroll)           | 285.5                     | 343.2                     | 352.5                     | 354.1                     |                     | 355.0                        | 355.0                      |                     |
| Supplies                              | 1.2                       | 4.3                       | -                         | 0.4                       |                     | -                            | -                          |                     |
| Equipment                             | -                         | 2.4                       | -                         | -                         |                     | -                            | -                          |                     |
| Grants                                | 40,100.0                  | 41,006.0                  | 37,777.3                  | 31,596.1                  |                     | 40,000.0                     | 37,500.0                   |                     |
| <b>Totals</b>                         | <b>40,388.1</b>           | <b>41,357.0</b>           | <b>38,132.3</b>           | <b>31,951.1</b>           | <b>-21%</b>         | <b>40,355.0</b>              | <b>37,855.0</b>            | <b>-6%</b>          |
| <b>Funding Sources:</b>               |                           |                           |                           |                           |                     |                              |                            |                     |
| Unrestricted GF (UGF)                 | 17,512.3                  | 8,266.0                   | -                         | -                         | -100%               | -                            | -                          | 0%                  |
| Power Project Fund (DGF)              | -                         | -                         | -                         | -                         |                     | -                            | -                          |                     |
| Renewable Energy (DGF)                | -                         | -                         | -                         | -                         |                     | -                            | -                          |                     |
| PCE Endowment (DGF)                   | 22,875.8                  | 33,091.0                  | 38,132.3                  | 31,951.1                  |                     | 40,355.0                     | 37,855.0                   |                     |
| GF Program Receipts (DGF)             | -                         | -                         | -                         | -                         |                     | -                            | -                          |                     |
| Bulk Fuel (DGF)                       | -                         | -                         | -                         | -                         |                     | -                            | -                          |                     |
| Subtotal (UGF & DGF)                  | <b>40,388.1</b>           | <b>41,357.0</b>           | <b>38,132.3</b>           | <b>31,951.1</b>           | <b>-21%</b>         | <b>40,355.0</b>              | <b>37,855.0</b>            | <b>-6%</b>          |
| CIP Receipts                          | -                         | -                         | -                         | -                         |                     | -                            | -                          |                     |
| Federal Receipts                      | -                         | -                         | -                         | -                         |                     | -                            | -                          |                     |
| AEA Receipts                          | -                         | -                         | -                         | -                         |                     | -                            | -                          |                     |
| I/A Receipts                          | -                         | -                         | -                         | -                         |                     | -                            | -                          |                     |
| Statutory Designated Program Receipts | -                         | -                         | -                         | -                         |                     | -                            | -                          |                     |
| <b>Totals</b>                         | <b>40,388.1</b>           | <b>41,357.0</b>           | <b>38,132.3</b>           | <b>31,951.1</b>           | <b>-21%</b>         | <b>40,355.0</b>              | <b>37,855.0</b>            | <b>-6%</b>          |

**ALASKA ENERGY AUTHORITY**  
**FY2018 OPERATING BUDGET OVERVIEW (in thousands)**  
**AEA Statewide Project Development, AEE Component**

|   | FY2013         | FY2014         | FY2015         | FY2016         | %             | FY2017                | FY2018          | %             |
|---|----------------|----------------|----------------|----------------|---------------|-----------------------|-----------------|---------------|
| <b>AEA Statewide Project Development, AEE</b> | <b>Actuals</b> | <b>Actuals</b> | <b>Actuals</b> | <b>Actuals</b> | <b>Change</b> | <b>Authorized (1)</b> | <b>Governor</b> | <b>Change</b> |
| <b>Expenditure Categories:</b>                |                |                |                |                |               |                       |                 |               |
| Travel  | 130.2          | 116.4          | 121.1          | 68.8           |               | -                     | -               |               |
| Services (includes payroll)                   | 6,040.2        | 6,814.5        | 6,909.6        | 5,850.8        |               | 3,019.8               | 2,000.0         |               |
| Supplies                                      | 54.7           | 65.8           | 81.5           | 44.7           |               | -                     | -               |               |
| Equipment                                     | 48.2           | 66.4           | 38.6           | 9.2            |               | -                     | -               |               |
| Grants  | -              | -              | -              | -              |               | -                     | -               |               |
| <b>Totals</b>                                 | <b>6,273.3</b> | <b>7,063.1</b> | <b>7,150.8</b> | <b>5,973.5</b> | <b>-5%</b>    | <b>3,019.8</b>        | <b>2,000.0</b>  | <b>-34%</b>   |
| <b>Funding Sources:</b>                       |                |                |                |                |               |                       |                 |               |
| Unrestricted GF (UGF)                         | 970.7          | 991.1          | 1,163.8        | 1,776.5        | 83%           | 1,019.8               | -               | -100%         |
| Power Project Fund (DGF)                      | 610.7          | 638.4          | 595.9          | 378.6          |               | -                     | -               |               |
| Renewable Energy (DGF)                        | 1,927.5        | 1,758.3        | 2,155.0        | 2,068.2        |               | 2,000.0               | 2,000.0         |               |
| PCE Endowment (DGF)                           | -              | -              | -              | -              |               | -                     | -               |               |
| GF Program Receipts (DGF)                     | -              | -              | -              | -              |               | -                     | -               |               |
| Bulk Fuel (DGF)                               | -              | -              | -              | -              |               | -                     | -               |               |
| Subtotal (UGF & DGF)                          | <b>3,508.9</b> | <b>3,387.8</b> | <b>3,914.7</b> | <b>4,223.3</b> | <b>20%</b>    | <b>3,019.8</b>        | <b>2,000.0</b>  | <b>-34%</b>   |
| CIP Receipts                                  | 2,704.4        | 3,343.5        | 2,964.9        | 1,749.8        |               | -                     | -               |               |
| Federal Receipts                              | -              | 331.8          | 271.2          | -              |               | -                     | -               |               |
| AEA Receipts                                  | -              | -              | -              | -              |               | -                     | -               |               |
| I/A Receipts                                  | 60.0           | -              | -              | -              |               | -                     | -               |               |
| Statutory Designated Program Receipts         | -              | -              | -              | 0.4            |               | -                     | -               |               |
| <b>Totals</b>                                 | <b>6,273.3</b> | <b>7,063.1</b> | <b>7,150.8</b> | <b>5,973.5</b> | <b>-5%</b>    | <b>3,019.8</b>        | <b>2,000.0</b>  | <b>-34%</b>   |

**ALASKA ENERGY AUTHORITY**  
**CAPITAL BUDGET APPROPRIATIONS FY2013 - FY2018**

| Capital Authorization   | FY2013            | FY2014             | FY2015            | FY2016            | FY2017           | FY2018 Governor   |
|---|-------------------|--------------------|-------------------|-------------------|------------------|-------------------|
| <b>Projects:</b>  |                   |                    |                   |                   |                  |                   |
| Electrical Emergencies Program  | 330,000           | -                  | 330,000           | 330,000           | -                | 330,000           |
| Rural Power Systems Upgrades & Distribution                                 | 23,496,600        | 10,800,000         | 6,570,000         | -                 | 2,500,000        | 14,296,000        |
| Bulk Fuel Upgrades  | 7,000,000         | 6,000,000          | 7,300,000         | -                 | 1,300,000        | 12,100,000        |
| Alternative Energy & Energy Efficiency (AEEE) Programs                      | 4,800,000         | 2,000,000          | -                 | -                 | -                | -                 |
| Energy Plan Implementation (FY2015 \$500,000 reappropriated to FY2017 RPSU) | 1,000,000         | -                  | -                 | -                 | -                | -                 |
| Renewable Energy Project Grants   | 25,870,659        | 25,000,000         | 22,843,900        | 11,512,659        | -                | -                 |
| Susitna-Watana Hydroelectric Project  | -                 | 95,200,000         | 20,000,000        | -                 | -                | -                 |
| Rural Conservation Block Grants   | -                 | 500,000            | -                 | -                 | -                | -                 |
| AVTEC Power Plant Infrastructure Training Systems Upgrade                   | 400,000           | -                  | -                 | -                 | -                | -                 |
| Emerging Energy Technology Project Data Collection & Technical Assistance   | -                 | -                  | -                 | 690,000           | -                | -                 |
| Other Generation projects   | 6,922,500         | -                  | -                 | -                 | -                | -                 |
| <b>TOTAL - Projects</b>   | <b>69,819,759</b> | <b>139,500,000</b> | <b>57,043,900</b> | <b>12,532,659</b> | <b>3,800,000</b> | <b>26,726,000</b> |
| <b>Fund Sources:</b>  |                   |                    |                   |                   |                  |                   |
| General Fund  | 36,149,100        | 109,500,000        | 31,580,000        | 0                 | 0                | 6,250,000         |
| Reappropriations  | -                 | -                  | -                 | 330,000           | 1,053,858        | 330,000           |
| Federal Receipts  | 7,000,000         | 5,000,000          | 2,620,000         | 690,000           | -                | 20,146,000        |
| Other (I/A Receipts & Statutory Designated)                                 | 800,000           | -                  | -                 | -                 | -                | -                 |
| Renewable Energy Fund   | 25,870,659        | 25,000,000         | 22,843,900        | 11,512,659        | -                | -                 |
| PCE Endowment Fund  | -                 | -                  | -                 | -                 | 2,746,142        | -                 |
| <b>TOTAL - Fund Source</b>  | <b>69,819,759</b> | <b>139,500,000</b> | <b>57,043,900</b> | <b>12,532,659</b> | <b>3,800,000</b> | <b>26,726,000</b> |



| ALASKA ENERGY AUTHORITY<br>FY2018 CAPITAL BUDGET REQUEST   |                        |                   |                   |
|--|------------------------|-------------------|-------------------|
| Program Description  | FY2018 Governor Budget |                   |                   |
|  | State GF               | Federal           | Total             |
| Electrical Emergencies   | 330,000                | -                 | 330,000           |
| <b>Bulk Fuel Upgrade Program</b> - request is for federal receipt authority and matching state funds.  |                        |                   |                   |
| 1) Tuluksak - new tank farm  | 780,000                | 3,120,000         | 3,900,000         |
| 2) Holy Cross - new tank farm  | 800,000                | 3,200,000         | 4,000,000         |
| 3) Venetie - repair & relocate   | 320,000                | 1,280,000         | 1,600,000         |
| 4) Nunpitchuk - new tank farm  | 520,000                | 2,080,000         | 2,600,000         |
|  | <b>2,420,000</b>       | <b>9,680,000</b>  | <b>12,100,000</b> |
| <b>Rural Power System Upgrade</b> - request is for federal receipt authority and matching state funds for four RPSU projects. This request is also for federal receipt authority and state matching funds for Diesel Emission Reductions (DERA) Community Engine Replacement projects. |                        |                   |                   |
| 1) DERA - community engine replacement   | 310,000                | 286,000           | 596,000           |
| 2) Twin Hills - electrical distribution tie-line to Togiak   | 800,000                | 3,200,000         | 4,000,000         |
| 3) Port Alsworth - new powerhouse module   | 1,300,000              | 1,300,000         | 2,600,000         |
| 4) Chefornek - electrical distribution system  | 480,000                | 1,920,000         | 2,400,000         |
| 5) Adak - new powerhouse   | 940,000                | 3,760,000         | 4,700,000         |
|  | <b>3,830,000</b>       | <b>10,466,000</b> | <b>14,296,000</b> |
| <b>TOTAL FY2018 REQUEST</b>  | <b>6,580,000</b>       | <b>20,146,000</b> | <b>26,726,000</b> |