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

- AEA Labor & Travel: $1,314,530.30, 7.40%
- Contractors (>5,000): $191,121.15, 1.08%
- Workers Comp & Bookkeeping Service: $989,015.45, 5.57%
- Module Labor (FAL): $1,133,825.70, 6.39%
- Community Labor (FAL): $169,376.87, 0.95%
- Freight (<5,000): $1,455,504.22, 8.20%
- Materials (<5,000): $100,347.35, 0.57%
- Travel (FAL): $2,000,000.00

Total: $9,682,398.59
Contractors Benefit from Rural Infrastructure Investments

AEA Bulk Fuel Upgrade Combined Project Summary

- AEA Labor & Travel: 2.8% ($656,812)
- Contractors (>5,000): 94.8% ($2,725,999)
- Workers Comp & Bookkeeping: 0.2% ($55,560)
- Community Labor (FAL): 2.2% ($501,314)

Project Summary:
Procurement Delegations

Non Exempt Procurements
Board Resolution to Executive Director
AS 44.88.172
AS 44.88.690
AAC Title 3 Chapter 100

Exempt Procurements

Purchases of Goods and Services Or Construction Procurement
Department of Transportation
Commissioner DCCED to Executive Director AEA
AAC Title 2 Chapter 12
AS 36.30

Federally Funded Procurement
Department of Administration
Federal Acquisition Rules (FARS)

Procurements done on the behalf of Grant Recipients

Financial and Technical Assistance of Energy Systems, Facilities and Equipment ...and exempt under AS 36.30.850(b)(1)

AAC Title 3 Chapter 108

Use AS 36.30. With specific terms and conditions depending on the requirement of the funding source
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*

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

<table>
<thead>
<tr>
<th>Description</th>
<th>Date Issued</th>
<th>Amount Issued</th>
<th>Outstanding at 6/30/15</th>
<th>Final Maturity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable Rate Demand Note</td>
<td>9/7/1989</td>
<td>111,755</td>
<td>100</td>
<td>7/1/2021</td>
</tr>
<tr>
<td>Power Revenue Bonds, Sixth Series</td>
<td>7/1/2011</td>
<td>28,800</td>
<td>28,800</td>
<td>7/1/2021</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>$ 247,750</strong></td>
<td><strong>$ 71,155</strong></td>
<td></td>
</tr>
</tbody>
</table>

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 issues 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

<table>
<thead>
<tr>
<th>AEA Operating Components</th>
<th>FY2016 Authorized</th>
<th>Percent Change from FY2015</th>
<th>FY2017 Revised Governor</th>
<th>Percent Change from FY2016</th>
<th>Pending Amendments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owned Facilities</td>
<td>981.7</td>
<td>-8%</td>
<td>981.7</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Rural Energy Operations/Rural Energy Assistance</td>
<td>5,902.7</td>
<td>-6%</td>
<td>5,638.5</td>
<td>-4%</td>
<td></td>
</tr>
<tr>
<td>Technical Assistance (combined with Rural Energy Ops Component in FY2016)</td>
<td>-</td>
<td>n/a</td>
<td>-</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Statewide Project Development, AEE (excludes multi-year authorizations)</td>
<td>6,725.0</td>
<td>0%</td>
<td>-</td>
<td>-100%</td>
<td>2,000.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13,609.4</strong></td>
<td><strong>-7%</strong></td>
<td><strong>6,620.2</strong></td>
<td><strong>-51%</strong></td>
<td><strong>2,000.0</strong></td>
</tr>
</tbody>
</table>

**Funding Sources:**

- Unrestricted GF: 2,711.4 (4% increase from 1,256.3, -54% decrease from FY2016)
- GF Program Receipts: 100.0 (0% change, 100.0 in FY2015)
- Power Project Fund: 1,050.9 (0% change, 995.5 in FY2015)
- Renewable Energy: 2,152.3 (0% change, -100% decrease from FY2016, 2,000.00 pending)
- CIP Receipts: 5,956.7 (-14% decrease from 2,567.8, -57% decrease from FY2016)
- Federal Receipts: 271.9 (0% change, 445.0 in FY2015)
- Other Receipts (AEA Receipts, I/A Receipts, Stat Designated): 1,366.2 (-9% change, 1,255.6, -8% decrease from FY2016)

**Total:** 13,609.4 (7% decrease from 6,620.2, 51% decrease from FY2016) 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% change, 40,355.0 in FY2016) -2%
## Capital Budget Overview (03/15/16)

**ALASKA ENERGY AUTHORITY**  
CAPITAL BUDGET OVERVIEW  
Prepared March 15, 2016

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

**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):

<table>
<thead>
<tr>
<th>Project</th>
<th>Amount (thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bradley Lake Hydroelectric Project</td>
<td>$167,235</td>
</tr>
<tr>
<td>Alaska Intertie Project</td>
<td>35,254</td>
</tr>
<tr>
<td>Susitna-Watana Hydroelectric Project</td>
<td>165,671</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$368,160</strong></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Liability</th>
<th>Amount (thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Due to the State of Alaska (advances)</td>
<td>$29,199</td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>26,603</td>
</tr>
<tr>
<td>Bonds Payable (Bradley Lake Hydroelectric Project)</td>
<td>71,155</td>
</tr>
<tr>
<td>Other bond liabilities</td>
<td>1,849</td>
</tr>
<tr>
<td>Accrued interest payable</td>
<td>1,953</td>
</tr>
<tr>
<td>Other liabilities</td>
<td>628</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$131,387</strong></td>
</tr>
</tbody>
</table>
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

- Chief Financial Officer
  - Financial Systems Analyst
    - Accounting Analyst
  - Accounting Systems Analyst
    - Administrative Support Specialist
    - Loan Servicing/Account Technician
- Controller
  - Assistant Controller
  - Accountant
  - Accounting Technician
  - Accounting Technician
- Controller
  - Assistant Controller
  - Accountant II
  - Finance Assistant
  - Accounting Technician
  - Accounting Technician
- Controller
  - Sr. Acct Special Projects
  - Accountant, Compliance, Inventory, Grants Mgt
  - Finance Grants, Asst Project Coordinator
- Controller
  - Sr. Contracting Officer
  - Contracting Officer
  - Contract Administrator
  - Contracting Officer
  - Contract Compliance Specialist

- Human Resources Director
  - Human Resources Technician
  - Front Desk Administrator
  - IT Systems Manager
  - Systems Programmer