Reducing the Cost of Energy

- Energy Planning and Policy
- Technical and Community Assistance
- Investing in Alaska’s Energy Infrastructure
- Diversifying Alaska’s Energy Portfolio
Energy Planning and Policy

Alaska’s Energy Office

• Serve as lead on Alaska’s energy policy development
• Coordination of energy plans on statewide level
• Monitor State energy goals
• Coordinate multi-agency efforts
• Individual project analysis and vetting
• Transmission planning

Statutory Authorities

• 44.99.115 4(B)

“by using one office or agency, as may be specified by law, to serve as a clearinghouse in managing the state’s energy related functions to avoid fragmentation and duplication and to increase effectiveness”
Energy Program Coordination

State Agencies
* Alaska Housing Finance Corp. (AHFC)
* Alaska Industrial Development & Export Authority (AIDEA)
* Department of Education
* Department of Environmental Conservation
* Division of Community and Regional Affairs
* Department of Natural Resources
* ISER
* Alaska Center for Energy and Power
* Department of Veterans and Military Affairs
* Department of Labor & Workforce Development
* Department of Transportation

Policy Direction: Legislature
Governor’s Office
Board of Directors

Flowchart:

Federal Agencies:
* National Marine Fisheries Service
* Department of Energy
* Federal Emergency Management Agency
* Federal Energy Regulatory Authority
* U.S. Department of Agriculture
* Environmental Protection Agency
* National Marine Fisheries Service
* Arctic Council
* Denali Commission
* Bureau of Land Mgt.
* Fish and Wildlife Serv.
* Federal Aviation Admin.

NGOs
* Renewable Energy Alaska Project (REAP)
* Rural Alaska Community Action Program (RurAL CAP)
* Energy Efficiency Partnership
* Technology Working Groups
* Alaska Power Association
* Alaska Village Initiatives
* Alaska Regional Development Organizations (ARDORs)
* Alaska Railbelt Cooperative Transmission & Electric Co (ARCTEC)
* National Association of State Energy Officials

Stakeholders
* Ratepayers
* Utilities
* Independent Power Producers
* Grantees
* Communities
Technical and Community Assistance

• AEA community-based organization
• AEA technical staff have assisted 64 communities this year
• Energy Planning
  • Technical assistance to local communities to provide synergy between planning and funding sources
  • Assist communities to move to project-ready status
  • Village Energy Efficiency Program (VEEP), Renewable Energy Grant Fund, Emerging Energy Technology Fund
• Training
  • Partnership with AVTEC in Seward
  • Circuit Rider and emergency services; Bulk Fuel Operator; Power Plant Operator; Advanced Power Plant Operator Training
• Emergency community assistance provided to about 20 communities since Sept. 2012
• Circuit rider program assisted about 50 communities in 2013
Investing in Energy Infrastructure

**Large Projects**

**Bradley Lake Hydro**
- Produces about 10% of Railbelt electricity
- AEA-owned asset
- Low-cost energy producer
- 120 megawatts, 4.5 cents/kWh

**Alaska Intertie**
- 170-miles from Willow to Healy
- AEA-owned, operated by AEA and Railbelt utilities

**Susitna-Watana Hydro**
- Will provide about 50% Railbelt electricity
- SB 42 authorized AEA to pursue licensing
- Long-term, stable rates
Investing in Energy Infrastructure

Bulk Fuel and Rural Power System Upgrades

- Help utilities improve efficiency, safety and reliability of power systems
  - Promote local hire and training
- Completed $304 million in rural bulk fuel and rural power system upgrade projects since 2000, in partnership with Denali Commission
- Common to see 30 to 40% increase in fuel savings after a Rural Power Systems Upgrade is completed
Investing in Energy Infrastructure

Power Project Fund

- Low-interest loans to upgrade or develop small-scale electric power facilities
- Includes bulk fuel storage, transmission and distribution, waste energy, energy conservation, energy efficiency and alternative energy facilities and equipment
- State assistance for a project more than $5 million requires Legislative approval
Power Cost Equalization

- Provide economic assistance in rural Alaska where electrical rates can be 3 to 4 times higher than in urban Alaska
- Available to community facilities and residential customers
- Regulatory Commission of Alaska (RCA) sets rates, calculations based on use, costs and efficiencies
- Approximately 80,000 people live in the 188 participating communities (FY 12)
- PCE program costs approximately $41 million
- $867 million PCE Endowment (July 1, 2013)
Diversifying Alaska’s Energy Portfolio

Alaska’s Electrical Generation
Preliminary Alaska Energy Statistics Report Data

50% Renewable
50% Oil & Gas & Coal
Diversifying Alaska’s Energy Portfolio

Emerging Energy Technology Fund

- Provides funds for projects that can demonstrate commercial viability within 5 years
- Includes renewable and alternative energy
- First successful year 2012-2013
  - Sixteen projects selected for funding
- Round 2 process underway
  - Six projects selected for funding
- Projects in Juneau, Fairbanks, Kodiak, Delta Junction, Nenana, Nikiski, Igiugig, Tuntutuliak, Kwigllingok and Kotzebue
- Program extended to 2020

*Installation of Slinky Loop*

*Altaeros Energies Helium Balloon Wind Turbine*
Diversifying Alaska’s Energy Portfolio

Renewable Energy Grant Fund

- Displaces volatile-priced fossil fuels through heat recovery, hydro, wind, geothermal, biomass, solar, wind and transmission projects
- 251 projects approved totaling $277.5 million
  - FY15 Capital Budget includes $22,843,900
- More than 60 projects currently under construction
- In 2013 13 million gallons of diesel and natural gas equivalent were displaced
- Capitalizes on local energy resources
- Benefits businesses not eligible for PCE
- Expands Alaska’s renewable energy knowledge base
Energy Efficiency and Conservation

- AEA’s focus: commercial buildings, rural public buildings, industrial facilities and electrical efficiency
- Statewide outreach and education [AKEnergyEfficiency.org](http://AKEnergyEfficiency.org)
- Coordination between State agencies

Results:
- $1,534,062 and 282,938 diesel equivalent gallons in projected savings
- Average immediate savings of implemented efficiency measures: $0.29 cents/ $1 invested, 300% ROI after 10 years
- Alaska Commercial Energy Audit Program measures produce 30% savings with 6.2 year simple payback