

DRAFT Meeting Energy Needs In Alaska

2008 Alaska Workforce Investment Board Meeting

October 27, 2008

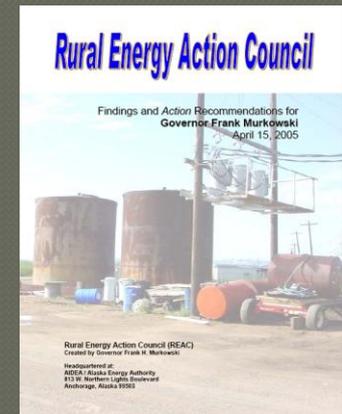
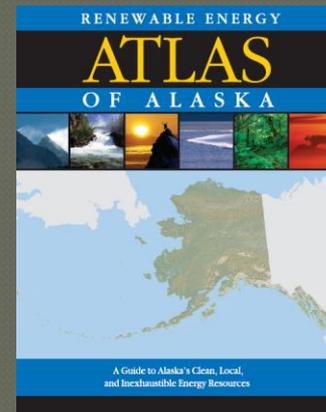
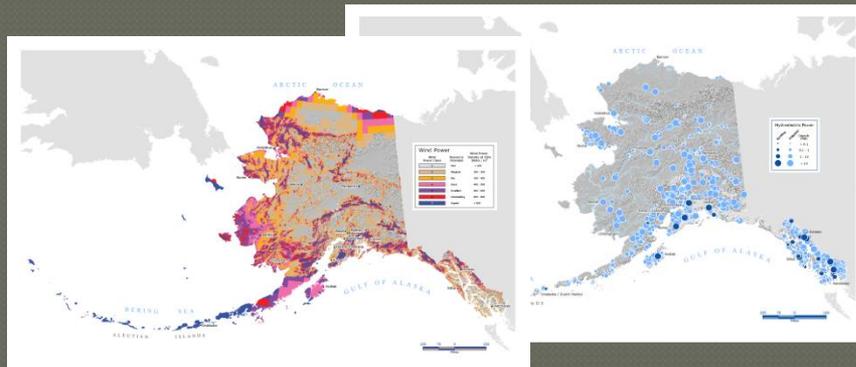
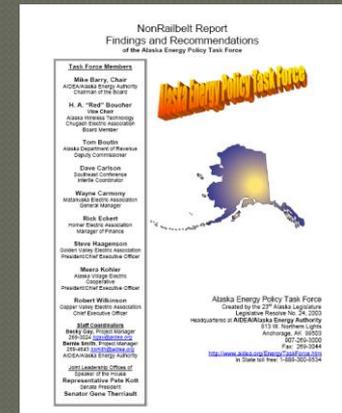
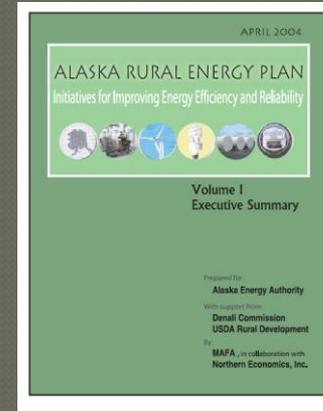


AEA Programs

- Statewide Energy Planning
- Infrastructure Owner
- Bulk Fuel/Rural Power System Upgrades
- Alternative Energy and Energy Efficiency
- Power Cost Equalization (PCE)
- Project Financing
- Training
- Railbelt Electrical Grid Authority
- Renewable Energy Fund
- Alaska Energy Plan

Statewide Energy Planning

- Rural Energy Plan
 - Energy Policy Task Force
 - Railbelt
 - Non-Railbelt
- Rural Energy Action Council
- RE Atlas of Alaska
- Alaska Power Statistics

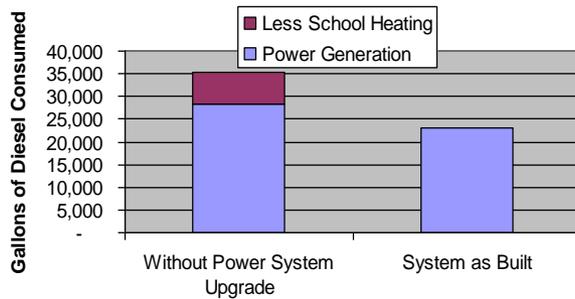


RPSU: Tuluksak power house

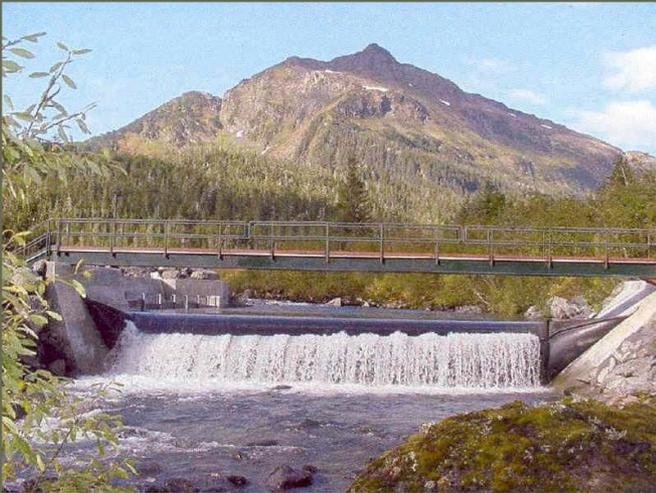
Before and After



Pedro Bay Power System Efficiency FY06



Hydroelectric



Cordova Electric: Power Creek 6 MW

AEA: Akutan Controls Upgrade



AP&T: South Fork 2 MW



AEA: Chuniisax (Atka) 270 kW

Biomass

Wood Energy Program:

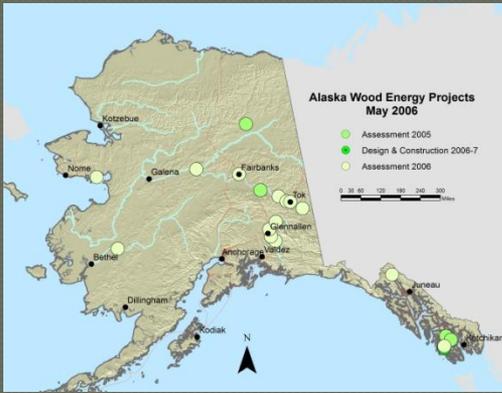
- Alaska Wood Energy Dev Task Group
- Craig District Heating project

Fish Oil Biodiesel Program:

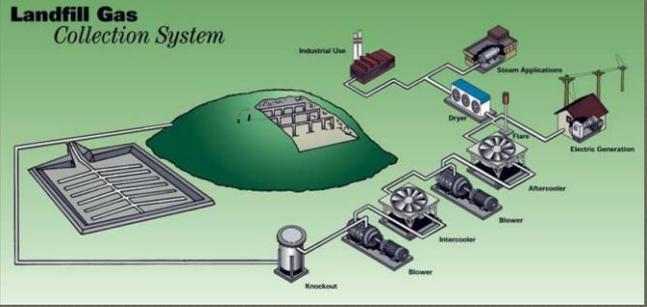
- Engine and handling tests at UAF and NPS
- Develop fish oil rendering module

Municipal Waste:

- Anchorage Landfill Gas feasibility analysis

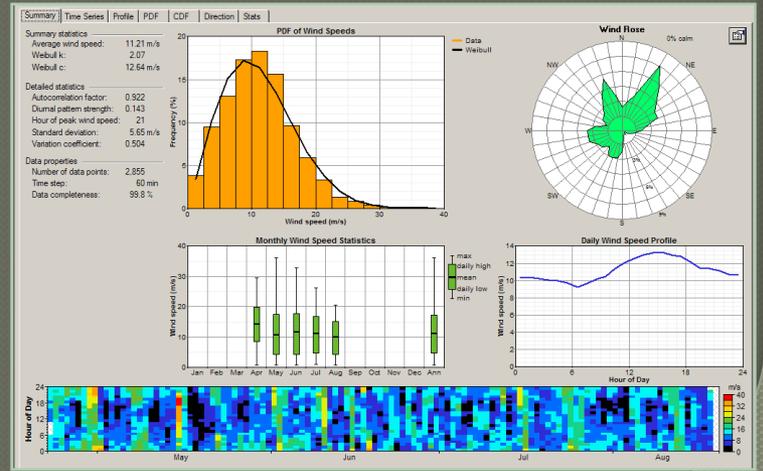
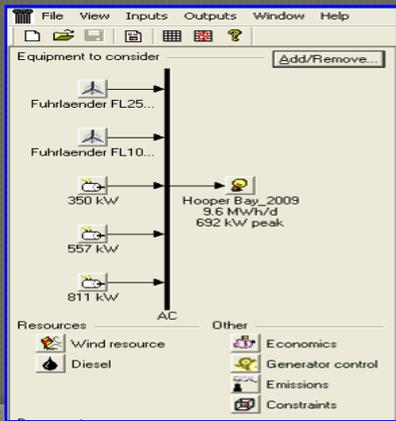
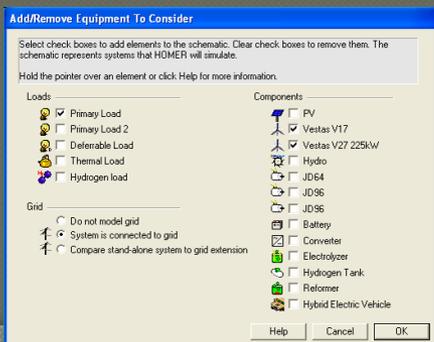
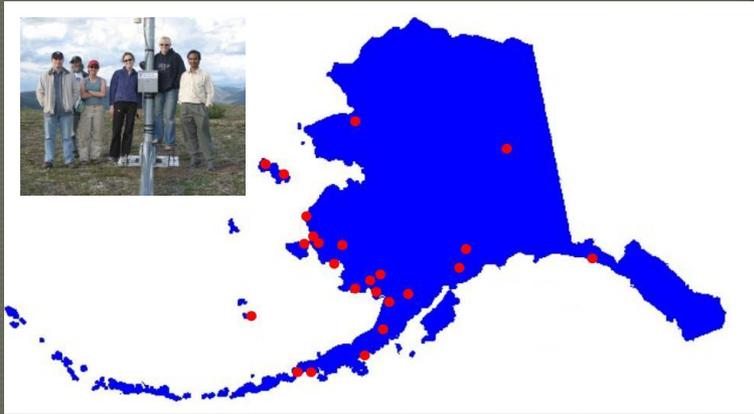


Notice the Traveling Auger



Wind

- Anemometer Loan Program:
 - Provide met towers and project siting assistance
 - Wind resource data analysis
- Project Feasibility Assessment:
 - Training and use of Homer model for project optimization
- Project Financing:
 - RFP 1: TDX Sand Point Wind (1MW)
 - RFP 2: Release in late October



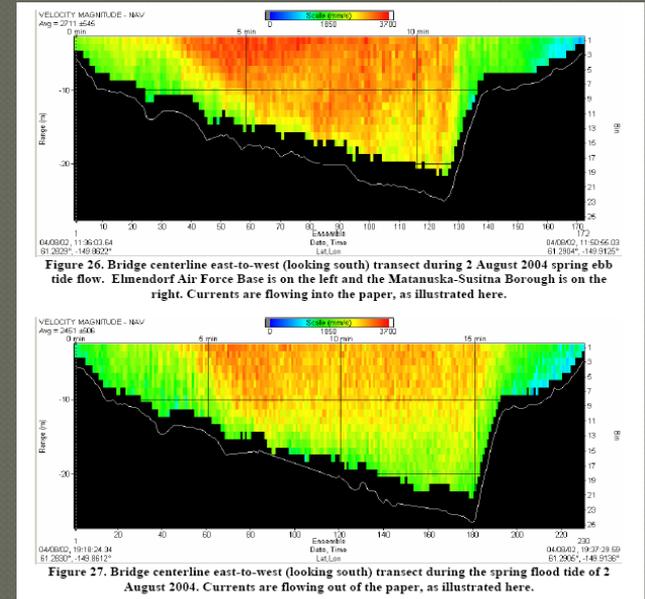
Geothermal

- Alaska Geothermal Working Group: 47 participants with REAP assistance.
- Chena Hot Springs Project: \$846k total grant and loan participation.
- Project Development: Mt. Spurr, Manley Hot Springs, Bell Island, Akutan, Pilgrim Hot Springs, etc.



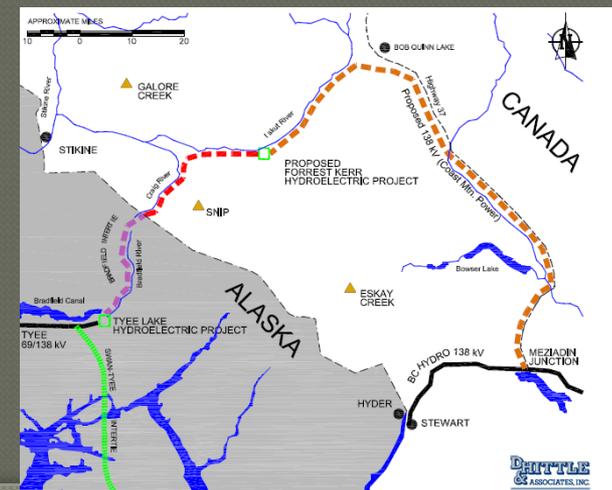
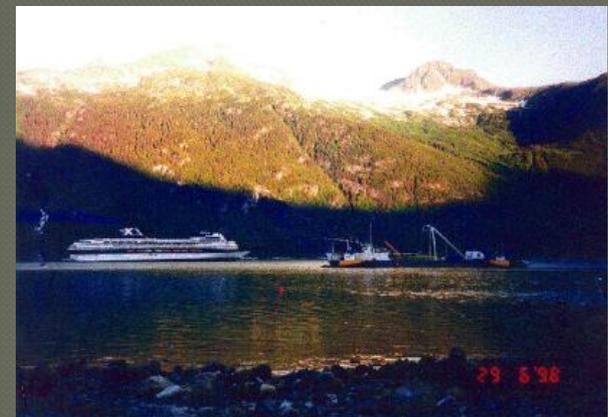
Ocean Energy

- EPRI study on tidal energy potential of Knik Arm completed in May 2006
- Five new FERC preliminary FERC tidal energy applications filed this year
- Tidal energy conference in Ketchikan, January 2007



Interties

- Construction Financing through grants and loans
- Intertie Feasibility Assessment
 - Alaska-BC Intertie Feasibility Report Completed



End Use Efficiency

- EE Tech Asst Program: Facility and power system energy audits.
- Village EUE Measures: Upgrades in 100+ facilities in 30 communities.
- State Building Efficiency Program: Help DOTPF establish energy services contract



Training and Education

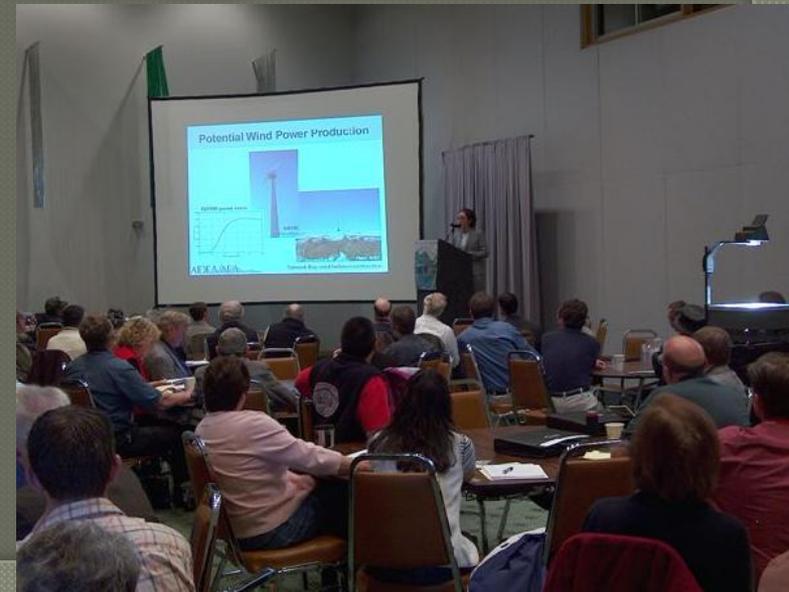
■ Training Program

- Advanced Powerplant Operator
- Bulk Fuel Operator
- Bulk Fuel Bookkeeper
- Bulk Fuel Manager
- Electrical Utility Bookkeeper
- Electrical Utility Manager
- Hydro Operator
- On-Site Bulk Fuel
- Power Plant Operator
- PCE Utility Clerk



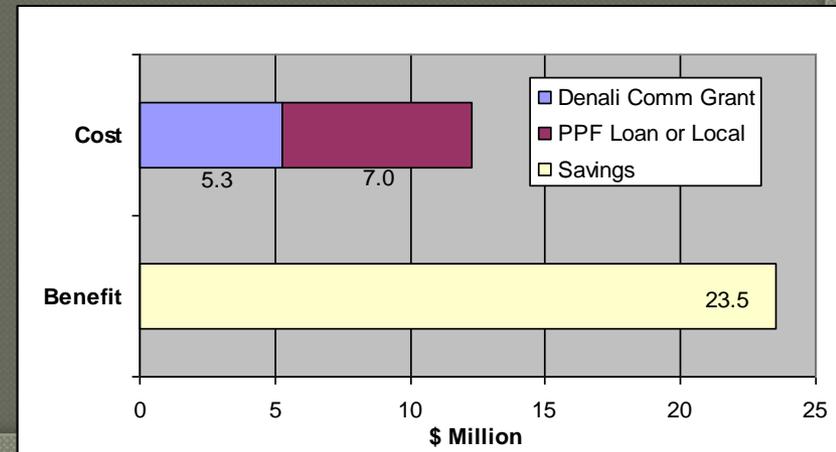
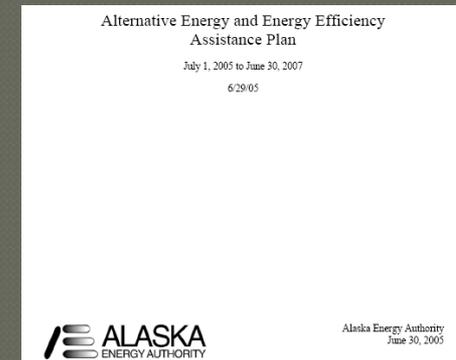
■ Rural Energy Conference

■ Workshops



Project Finance

- **Energy Cost Reduction RFP**
 - Selection based on life-cycle cost, ranked by B/C ratio
 - 1.4 million gal/year savings in diesel and natural gas
- **Bulk Fuel Revolving Loan Fund**
- **Power Project Fund**
- **Program specific**



Alaska Railbelt Electrical Grid Authority

- In November 2007, AEA held a two-day conference for stakeholders and decision makers concerned with the future of the Alaska Railbelt Electrical Grid.
- Alaska Energy Authority organized the conference to study the concept of an Alaska Railbelt Electrical Grid Authority (REGA) to manage and dispatch electric power on the Railbelt Grid.

HB 152 Renewable Energy Fund

- \$100 M available in fy09, +\$200 M intended for next 4 years
- Selection criteria:
 - Economic and technical feasibility
 - Energy cost per capita
 - Statewide balance
 - Matching funds
- Advisory committee helps develop methods
- Legislative approval in years 2-5

Conclusion

- In rural areas continue to support reliable energy delivery through PCE and bulk fuel loans.
- But long-term sustainability will require actions that avoid exporting cash for imported fuels.
- Statewide: Need significant capital investment for cost-effective projects that stabilize long-term energy costs, through such mechanisms as renewable energy fund and RPSU.

AEA

Alaska Energy Authority
813 West Northern Lights Blvd.
Anchorage, Alaska 99503
907-771-3000
1-888-300-8534 (toll free in Alaska)

www.akenergyauthority.org