

04/03/13

Overview:

State

Energy

Policy

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Energy Policy</SUBJECT><COMM>HENE28</COMM></TARGET>

Alaska Legislature

House Special Committee on Energy



Rep. Charisse Millett

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Agenda

Wednesday, April 3, 2013

8:00 – 10:00 a.m.

Barnes Committee Room (#124)

OVERVIEW: +State Energy Policy

Sarah Fisher-Goad, Executive Director, AK Energy Authority
Gene Therriault, Deputy Director, Statewide Energy Policy Development, AK Energy Authority

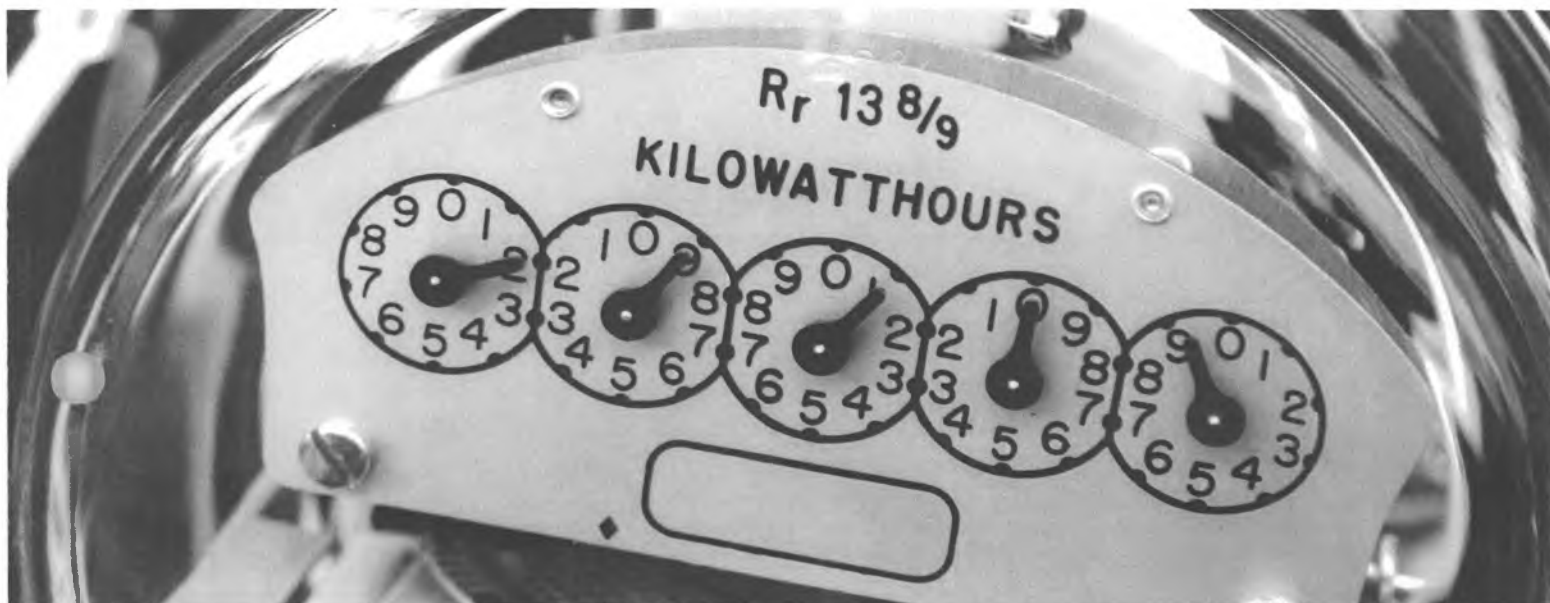
Available in audience for questions:

Stacy Schubert, Director of Governmental Affairs, AK Housing Finance Corporation
Bob Brean, Director of Research and Rural Development, AK Housing Finance Corporation

Bills previously heard/scheduled

- * First hearing in first committee of referral
- + Teleconferenced
- = Bill previously heard/scheduled

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Alaska Energy Authority Policy Overview

House Energy April 3, 2013



Reducing the Cost of Energy

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

Pathway from Policy to Projects



- Administration
- Alaska Legislature
- AEA Policy Development

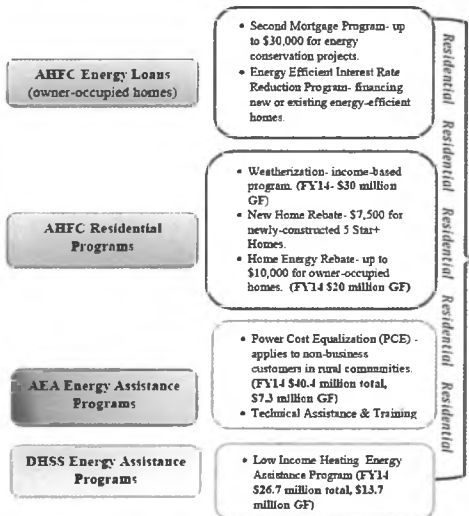
- Board of Directors
- Regional Planning
- In-House Project Evaluation

- Loans and Direct Grants
- Project Management
- Partnerships (Private, AIDEA)

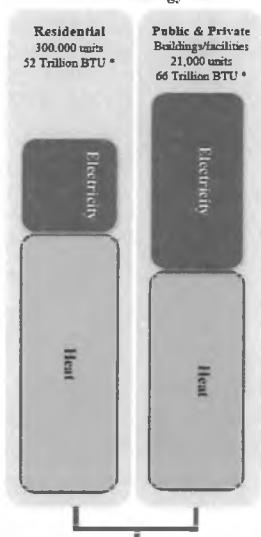


State of Alaska Energy Programs: Serving the needs of Alaska's residential and commercial energy users

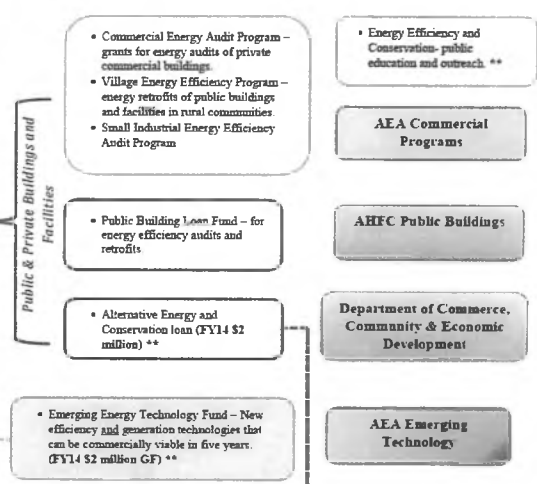
Residential Programs



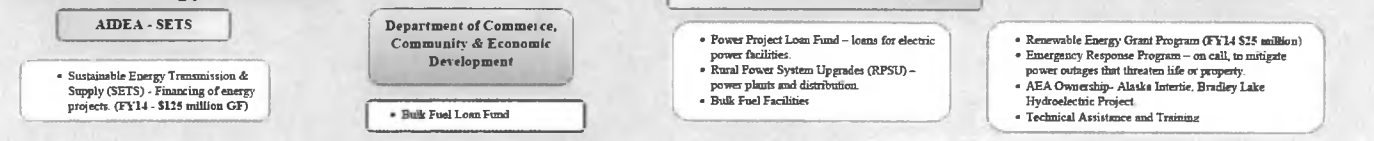
In-State Energy Use



Public and Private Sector Program



SUPPLY - Energy Generation



Prepared by: Alaska Energy Authority and Office of Management and Budget (1/29/2013)

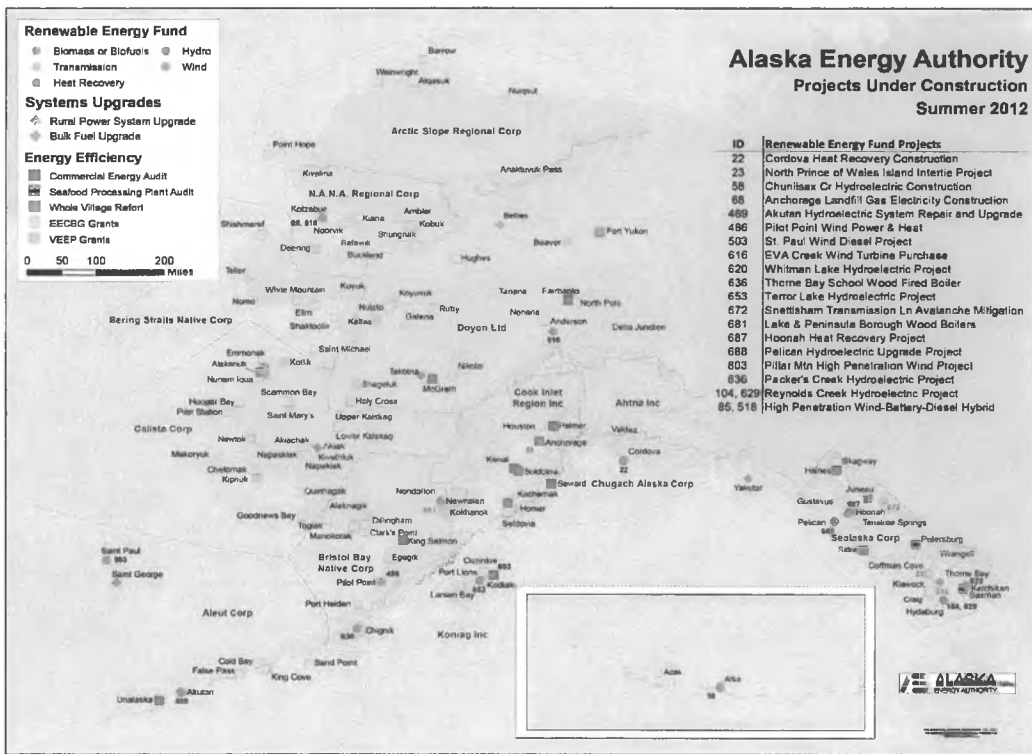
* Source: Energy Information Authority

** Note that some programs do not fall within specific categories - Public outreach and education serves both the commercial and residential markets and Emerging Technology and the Alternative Energy and Conservation loan serve both generation and efficiency

Energy Policy Development and Coordination

- Serve as lead on Alaska's energy policy development
- Monitor State energy goals
- Coordinate multi-agency efforts
- Deputy Director for Statewide Energy Policy Development
- In-House Evaluation Team
 - Sara Fisher-Goad- management team lead
 - Gene Therriault- policy
 - Nick Szymoniak- economics
 - Kirk Warren- engineering







Renewable and Emerging Energy

Renewable Energy Fund

- State Goal: 50% renewable electricity by 2025
- HB 152 (2008) authorized AEA to manage program, reauthorized in 2012
- Provides consistent vetting mechanism for individual capital projects
- By 2016, 12.3 million gallons of diesel and natural gas equivalent will be displaced annually. Results: \$45 million in annual savings

Emerging Energy Technology Fund

- SB 220 (2010) created fund
- Leveraged Federal funds
- Can provide consistent vetting mechanism for emerging energy technologies (renewable, fossil fuels, efficiencies)
- Not a research fund, projects must be commercially viable within 5 years



Improve Energy
Efficiency 15 % by
2020



Energy Efficiency and Conservation

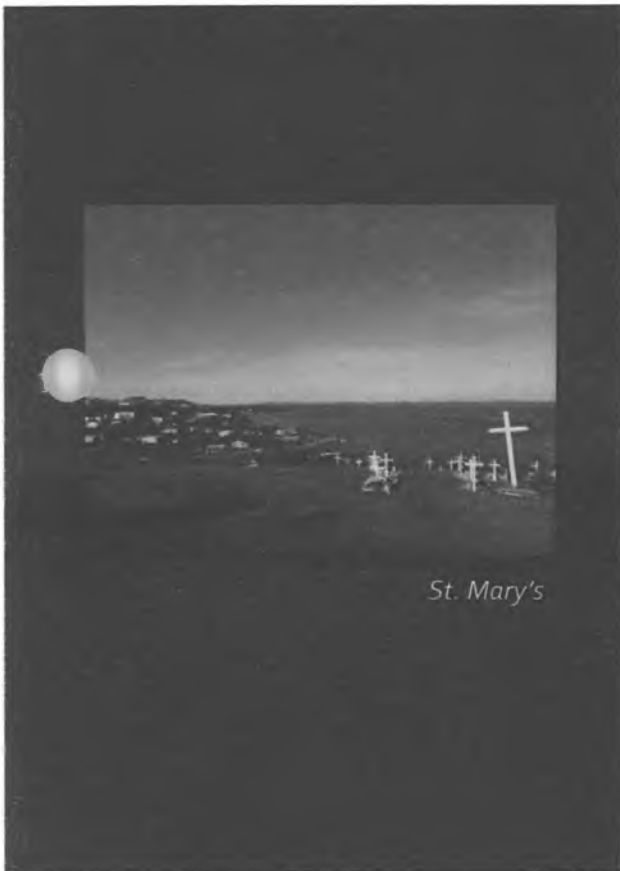
- State Goal: improve efficiency 15% by 2020
- AEA's focus is on commercial buildings, rural public buildings, industrial facilities and electrical efficiency
- Statewide outreach and education
- Support for multi-stakeholder group, Alaska Energy Efficiency Partnership AKEnergyEfficiency.org
- Coordination between State agencies
- \$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



Rural Energy Infrastructure

Assessing Community Needs

- Assessment of Community Power System
- Fuel Delivery System
- Are lower-cost energy sources available?
 - Renewable energy
 - Fossil fuels (coal, natural gas, etc.?)
 - Transmission
- Community capacity to maintain the infrastructure
- Is there potential for economic development?

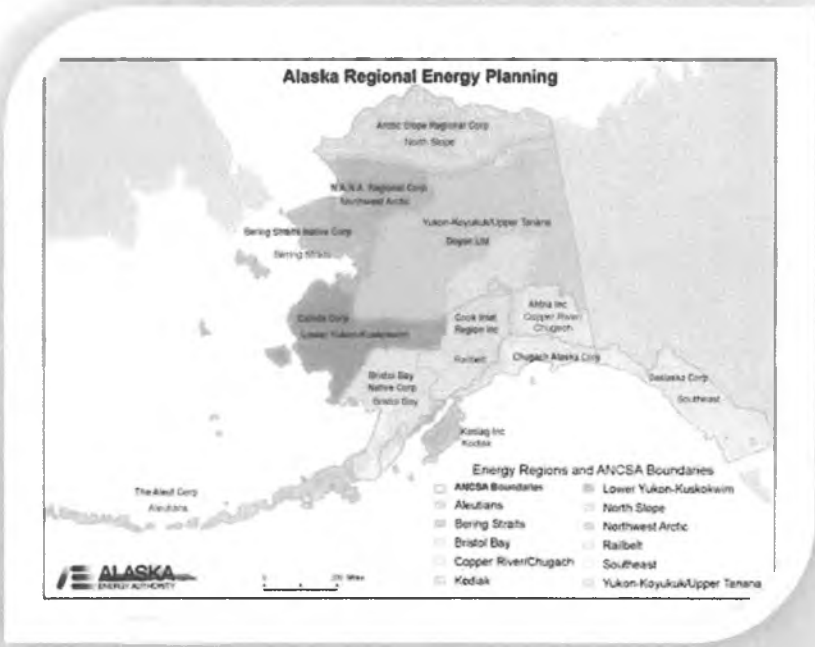


Supporting Regional Solutions

Regional Energy Planning

- No one energy plan for Alaska
- Energy Pathways led to regional planning
- Strategy to address unique challenges while capitalizing on regional resources
- Locally driven and community-vetted blueprint for sustainability
- Objective to provide specific, actionable recommendations
- Includes electric, heat and transportation energy
- Previous Plans: Railbelt Integrated Resources Plan and Southeast Integrated Resources Plan





Current Regional Plan Contracts

- **Ahtna Region** (Copper Valley Development Association)
- **Aleut Region** (Southwest Alaska Municipal Conference (SWAMC))
- **Bering Straits Region** (Bering Straits Development Council)
- **Bristol Bay Region** (SWAMC)
- **Calista Region** (Nuvista Light and Electric Cooperative)
- **NANA Region** (Northwest Arctic Borough Economic Development Commission)
- **Doyon Region** (Direct grant to Tanana Chiefs Conference from the Denali Commission)
- Working with Chugach, Kodiak and Arctic Slope Regions



Regional Planning Group



State Energy Goal



Alaska's Energy Picture

Why Susitna-Watana Hydro

- Serves ~80% of state's population
- 1,000 jobs during peak construction
- Stable electricity rates for 100+ years
- Long-term diversification
- Clean, reliable energy source
- Promotes integration of variable power sources



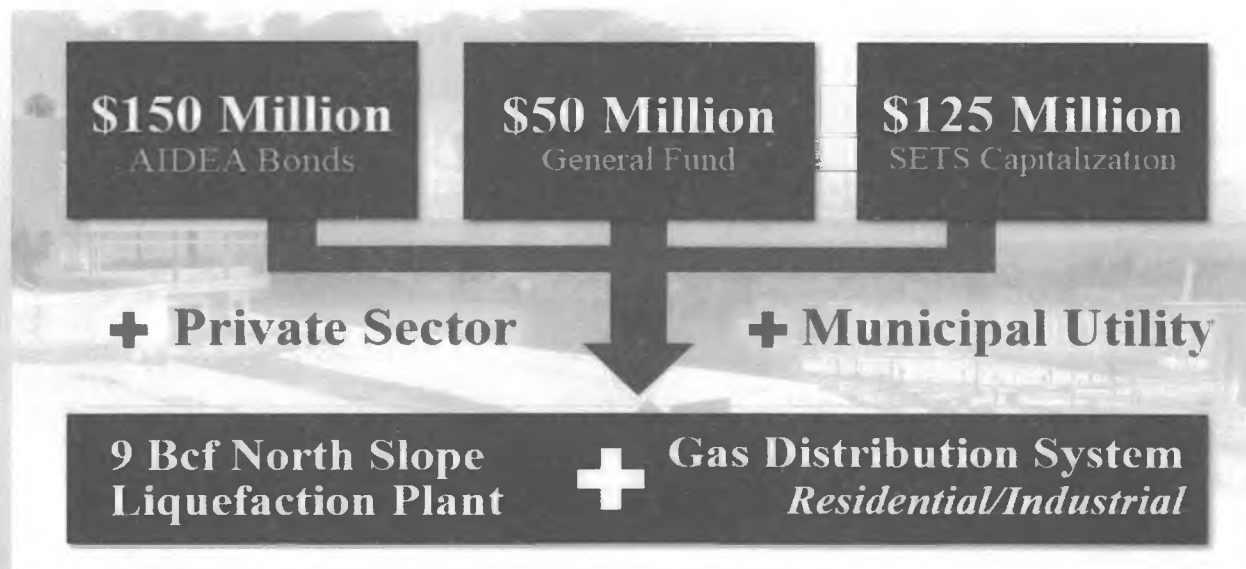
Interior Energy Plan

- Opportunity to provide Alaskans with low-cost North Slope natural gas and propane
- Governor's finance package acts as a catalyst, bringing together LNG and propane customers with the private entities that will construct and operate the system
- AIDEA is investigating project feasibility and will only utilize their authorized finance tools if the project makes economic sense
- AIDEA will take an equity stake in project but will not outright build or operate the LNG plant or distribution system
- Governor's finance package is targeted at funding the initial capacity with future expansion funded by private/community investment

Interior Energy Plan: Project Goals

- Provide lowest-cost energy to Interior Alaska consumers as soon as possible
- Get gas first to the Interior while assuring long-term access to gas and propane from liquefaction plant for all Alaskans
- Utilize private sector mechanisms as much as possible

Governor's Finance Package



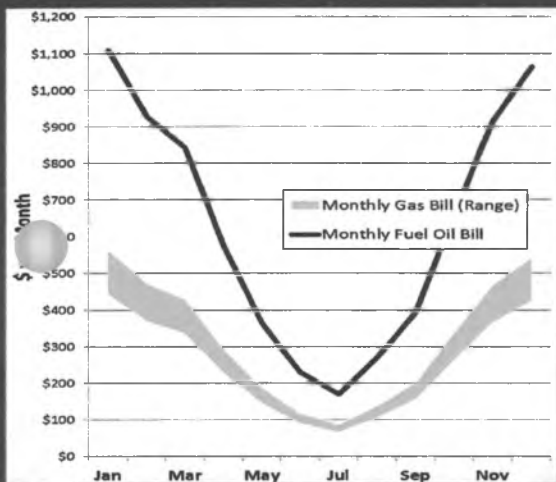
Household Heating Savings

Typical Home Heating Savings

- \$2,900 - \$3,750 annually
- 43% - 55% reduction in cost

Key Assumptions

- Typical Interior Alaska household will use 225 Mcf of gas per year (equivalent to 1,700 gallons of fuel oil)
- Does not account for expected improvement in heating efficiency with natural gas



Energy Policy Issues

- Developing State Resources on State Lands
- Can the State facilitate access to resources?
- Southeast Alaska Power Agency Call for Power
 - Looking for new sources of power
 - Allows all potential providers to participate in the discussion
 - AEA letter of support
- Open Access to Alaska Intertie
 - Alaska Intertie Agreement amended and restated Nov. 18, 2011
 - All potential users shall be provided access under common terms and conditions
 - Railbelt utilities to provide open access methodology July 1, 2013
- Unified Railbelt Transmission System

AKEnergyAuthority.org



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April 2, 2013

Sara Fisher-Goad, Executive Director
Alaska Energy Authority and AIDEA
813 W Northern Lights Blvd
Anchorage, AK 99503

[RE: Susitna Watana Hydro Project]

Dear Ms. Fisher-Goad,

On February 20, 2013, you addressed the House Special Committee on Energy regarding the status and plan for the 600 megawatt (MW) Susitna-Watana Hydro Project. We appreciated all the detailed information and look forward to seeing this project move forward.

During the presentation, you explained that the original, 1600 MW capacity dam had been downsized, but reassured the committee the project was moving forward such that the dam could be expanded to 1000 MW if that decision were made. The 600 MW dam would accommodate approximately 50% of today's Railbelt usage.

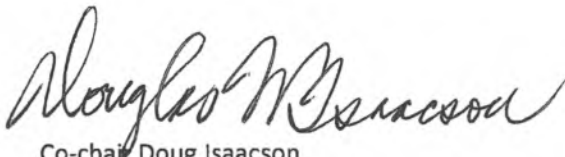
Representatives Higgins and Hughes inquired about the downsizing of the dam in relation to growing need in the future for electrical power. Representative Hughes asked how much power is drawn by a typical mining operation. You stated that power usage of over 300 MW is not unusual for a mine. Given that the 600 MW dam would serve the current capacity of 50% of the Railbelt, anticipating no additional electrical growth from now until 2025, if a mining operation were to come on line, it might use half of the Susitna-Watana capacity. This seems to indicate that the "ultimate build out" to 1000 MW may very well be necessary to accommodate the needs of a mine and anticipated growth of the Railbelt needs.

We ask that you assure the committee in writing that expansion of the smaller capacity dam would not require repeating the entire permit process and a complete reconstruction of the smaller dam to accommodate the

expansion. We also ask that you please provide in writing the dam capacity that is currently being permitted compared to the expansion capacity and describe that additional effort needed to complete the "build-out" to 1000 MW, or greater if deemed economical.

The committee seeks to ensure that we would not be doubling effort and extending the permitting timeline unnecessarily – at added cost – if the decision is made for the Susitna-Watana Hydro Project to be expanded.

Sincerely,

A handwritten signature in cursive script, appearing to read "Doug Isaacson".

Co-chair Doug Isaacson

A handwritten signature in cursive script, appearing to read "Charisse Millett".

Co-chair Charisse Millett