Alaska Energy Authority (AEA)

Presentation for

2007 Mt. Spurr Geothermal Workshop

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by

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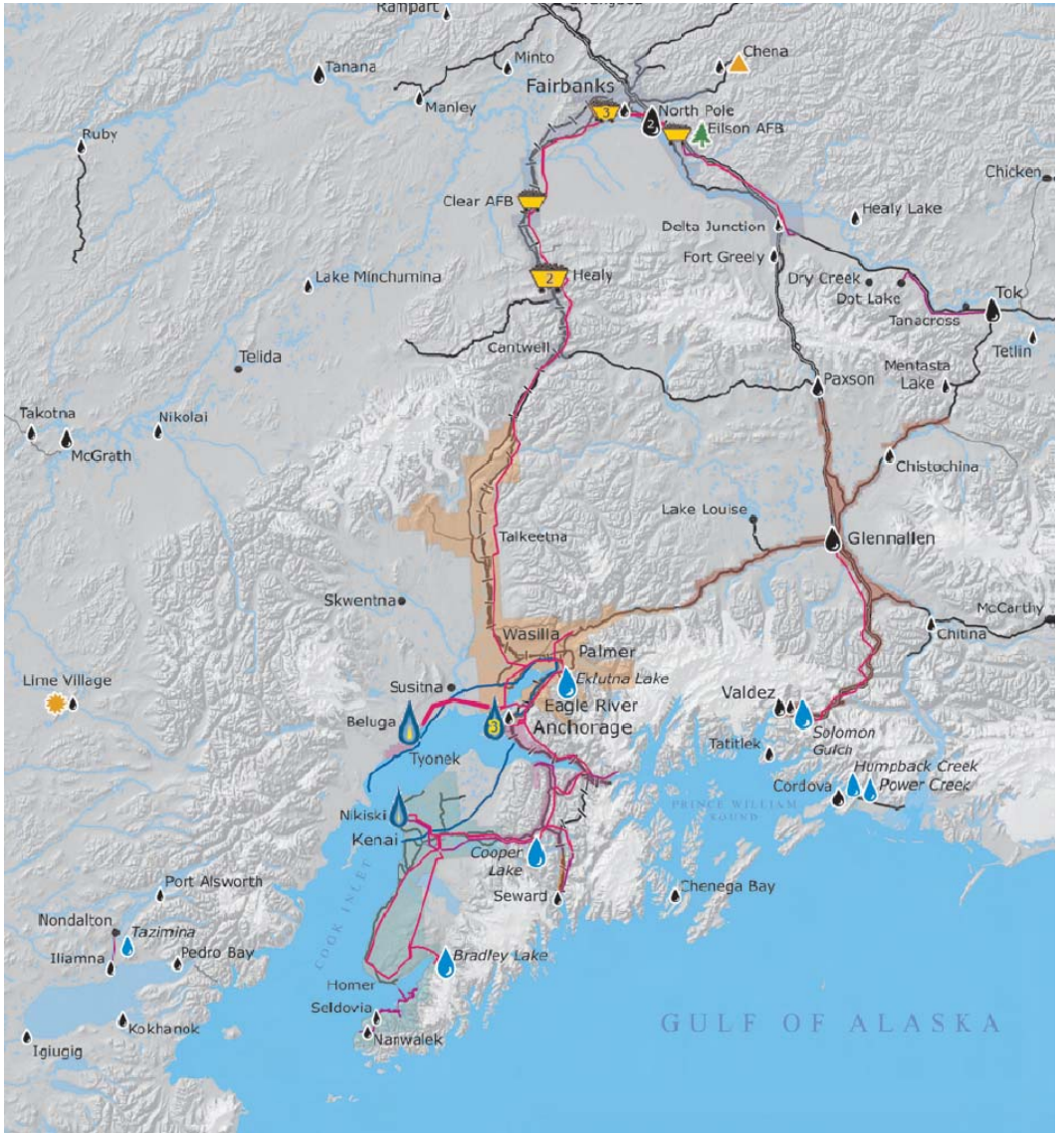
Railbelt Utility Issues – related to Mt. Spurr Development

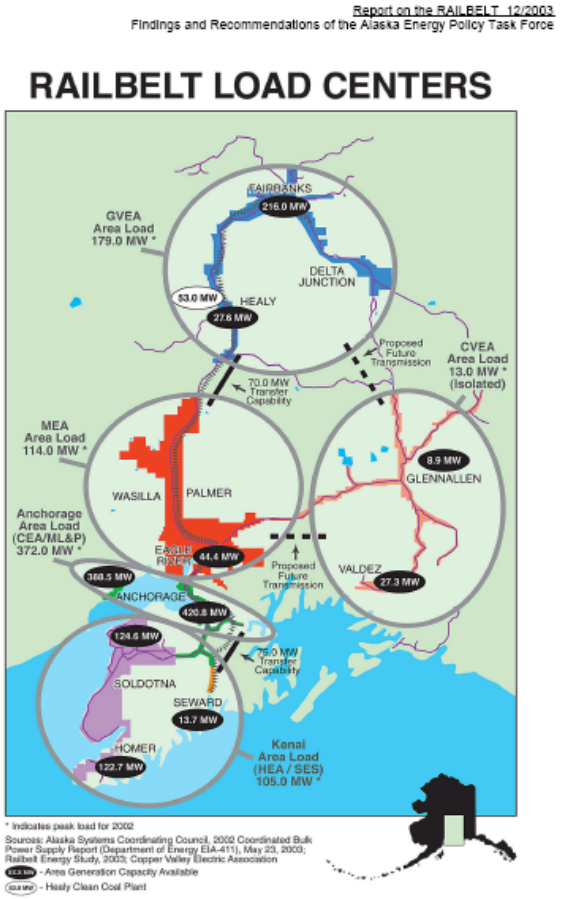
- Goals of Presentation
  - Explain the structure of the Alaska Railbelt Electrical Grid
  - Explain the ways renewable energy project can market power to the Grid under present structures

The Railbelt at a glance



- Renewable Energy projects for the Alaska Railbelt
  - Project Economics
  - Nearness to Load Centers
  - Ability to compete with existing power sources
  - Ways to access the Railbelt Wholesale Power market

- Physical Extent of Railbelt
  - Stretches from Seldovia to Delta Junction
  - Discrete monopoly service areas
  - Ownership divided between certificated utilities and the Alaska Energy Authority



- Project Economics
  - Feasibility criteria
    - Cost of Power and Energy
      - Ability to provide energy commodities
      - Respond to market needs
    - Ability to secure long term financing
    - Ability to access markets and write long term power sales contracts
    - Manage long term economic risk

- Railbelt Grid Business Structures
  - Regulated public utilities with defined service areas, and economically regulated rates.
    - Wholesale power contracts are common with Railbelt Utilities
    - There are 6 Railbelt utilities with defined service areas
    - All six are municipally owned or non-profit member owned electrical cooperatives.

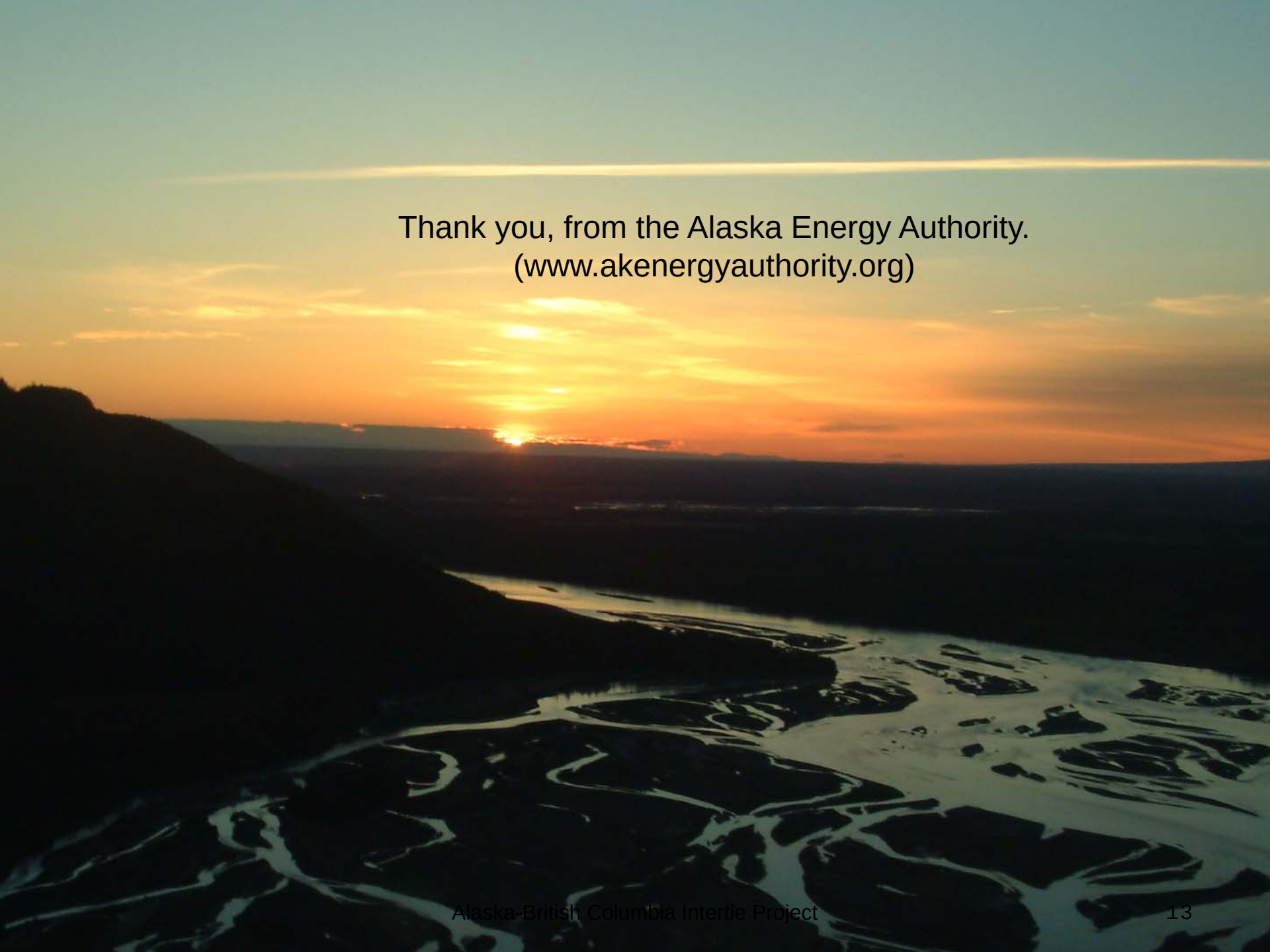
- Railbelt Grid Regulatory Structure
  - Regulated Public Utilities have certificates to serve.
  - Economic operations of Utilities subject to Regulatory Commission of Alaska jurisdiction
  - Regulated components
    - Wholesale Power Contracts
    - Retail Rates

- Access to Market
  - Energy Commodity attractive to regulated utility
  - Project is acceptable to the Regulating agency, the RCA
  - Ability to enter the market as a Qualifying Facility
    - Requires compliance with definitions as being a renewable energy project or cogeneration.

- Power Sales Agreements
  - Different types
  - All Requirements – firm energy
    - Energy supply contracts
    - Ancillary Services
  - Interconnection with Network
  - Reliability of Network

- Practical Business development concerns
  - Configure business structure to address and minimize economic risk.
    - Design project to produce attractive commodities
    - Address needs for interconnection and contributions to network reliability up front
    - Begin consultation with regulated utilities early on.

- Parting thoughts for the project developer
  - Become knowledgeable on the dynamics of the Railbelt Grid
  - Power needs are growing
  - Future Fuel Supplies are an issue


Thank you, from the Alaska Energy Authority.
(www.akenergyauthority.org)