ALASKA ENERGY AUTHORITY

INTEGRATED TRANSMISSION LINES

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About AEA

AEA's mission is to reduce the cost of energy in Alaska. To achieve this mission, AEA strives to diversify Alaska's energy portfolio — increasing resiliency, reliability, and redundancy.

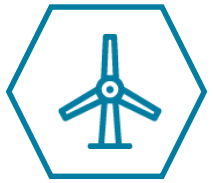
Railbelt Energy – AEA owns the Bradley Lake Hydroelectric Project, the Alaska Intertie, and the Sterling to Quartz Creek Transmission Line — all of which benefit Railbelt consumers by reducing the cost of power.

Power Cost Equalization (PCE) – PCE reduces the cost of electricity in rural Alaska for residential customers and community facilities, which helps ensure the sustainability of centralized power.

Rural Energy – AEA constructs bulk fuel tank farms, diesel powerhouses, and electrical distribution grids in rural villages. AEA supports the operation of these facilities through circuit rider and emergency response programs.

Renewable Energy and Energy Efficiency – AEA provides funding, technical assistance, and analysis on alternative energy technologies to benefit Alaskans. These include biomass, hydro, solar, wind, and others.

Grants and Loans – AEA provides loans to local utilities, local governments, and independent power producers for the construction or upgrade of power generation and other energy facilities.



Energy Planning – In collaboration with local and regional partners, AEA provides economic and engineering analysis to plan the development of cost- effective energy infrastructure.

Foundation of a Dependable Transmission System

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Resiliency

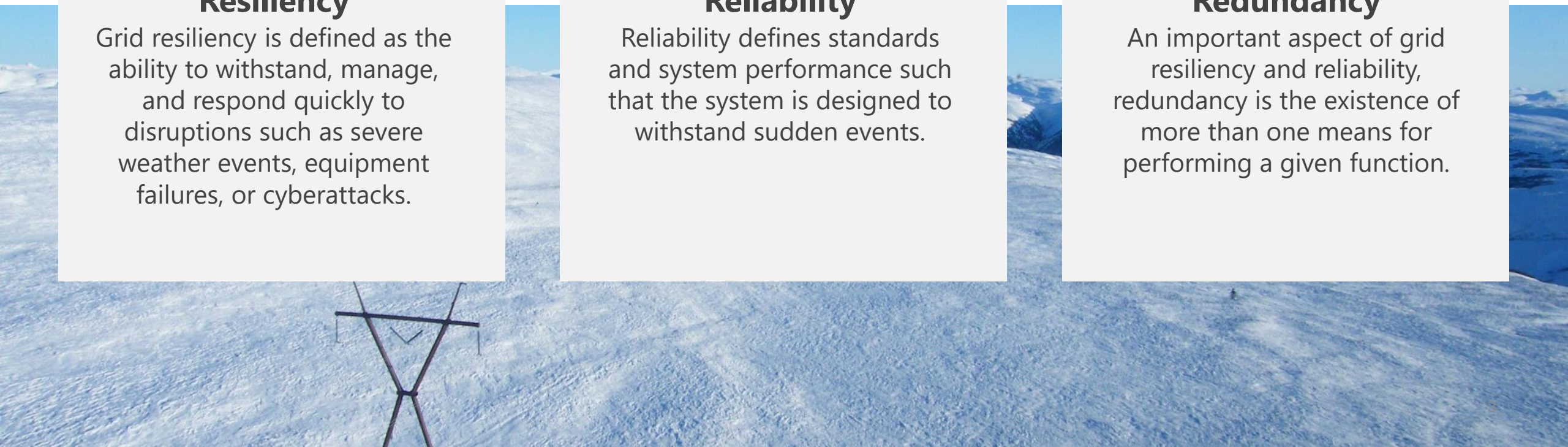
Grid resiliency is defined as the ability to withstand, manage, and respond quickly to disruptions such as severe weather events, equipment failures, or cyberattacks.

Reliability

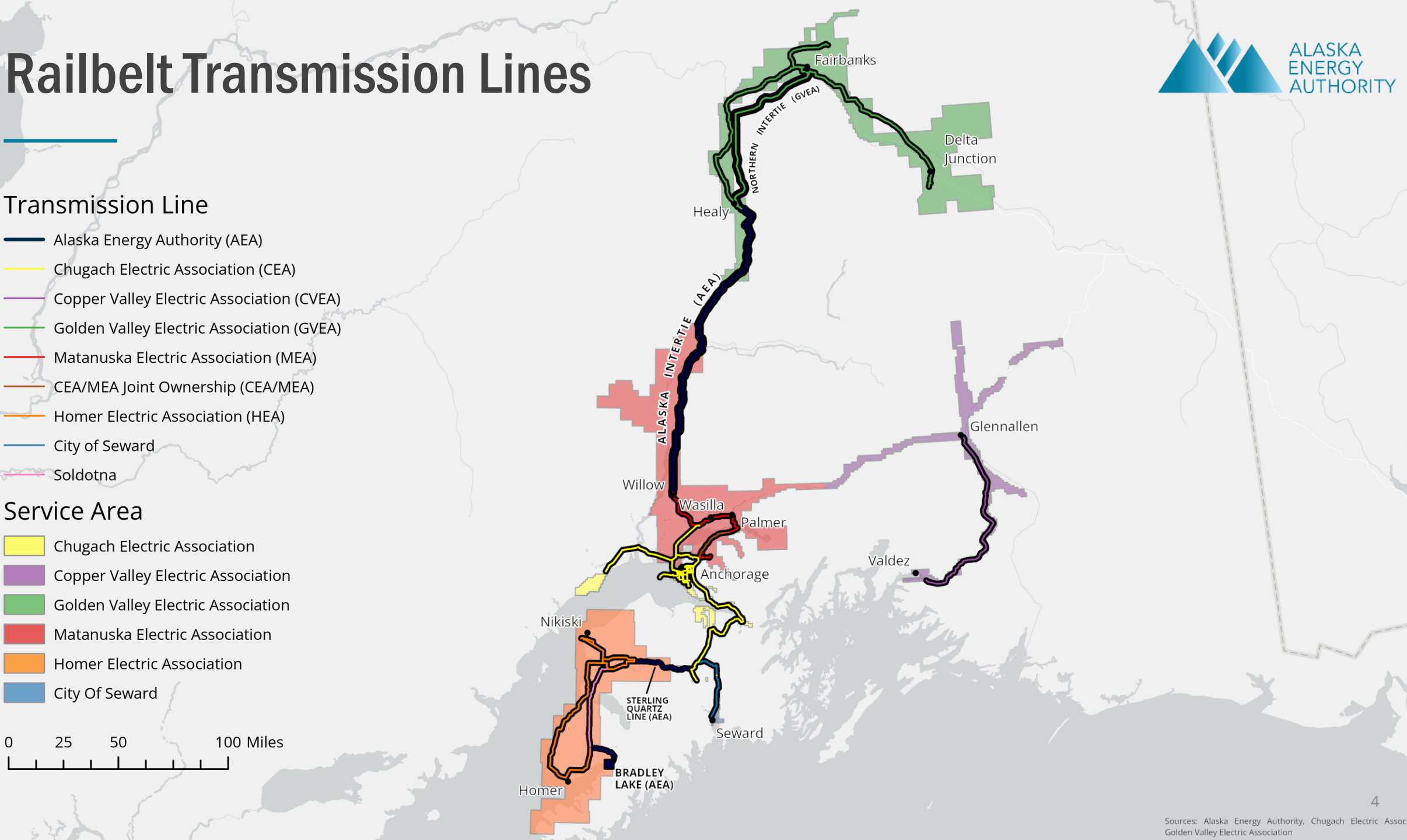
Reliability defines standards and system performance such that the system is designed to withstand sudden events.

Redundancy

An important aspect of grid resiliency and reliability, redundancy is the existence of more than one means for performing a given function.



Railbelt Transmission Lines



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Sources: Alaska Energy Authority, Chugach Electric Association, Golden Valley Electric Association

Railbelt Transmission System Urgently Needs Modernization

The majority of the Railbelt transmission system was constructed more than 40 years ago. A resilient, reliable, and redundant Railbelt transmission system is not only achievable but also necessary to create the needed capacity to integrate additional renewable energy in the future.

Grid Forming
A grid with alternate paths will increase reliability, resiliency, and fuel diversification.

Fuel Savings
Upgrades and alternate paths will reduce line losses.

Energy Security
Natural or other events can isolate cities or regions from energy.

Generation Changes
New renewable energy projects are not located in existing cities. New transmission to connect new renewable projects to existing transmission paid for by projects. However, existing transmission must be upgraded to transmit energy to and between the Railbelt regions.

Alaska Energy Security Task Force

60+
Subcommittee Meetings

11
Task Force Meetings

150+
Hours of Public Meetings

8
Energy Symposiums with 16 hours of OnDemand learning

6
Subcommittees have created over 60 preliminary actions for considerations:

- Railbelt Transmission, Generation, and Storage
- Coastal Generation, Distribution, and Storage
- Rural Generation, Distribution, and Storage
- State Energy Data
- Incentives and Subsidies
- Statutes and Regulations

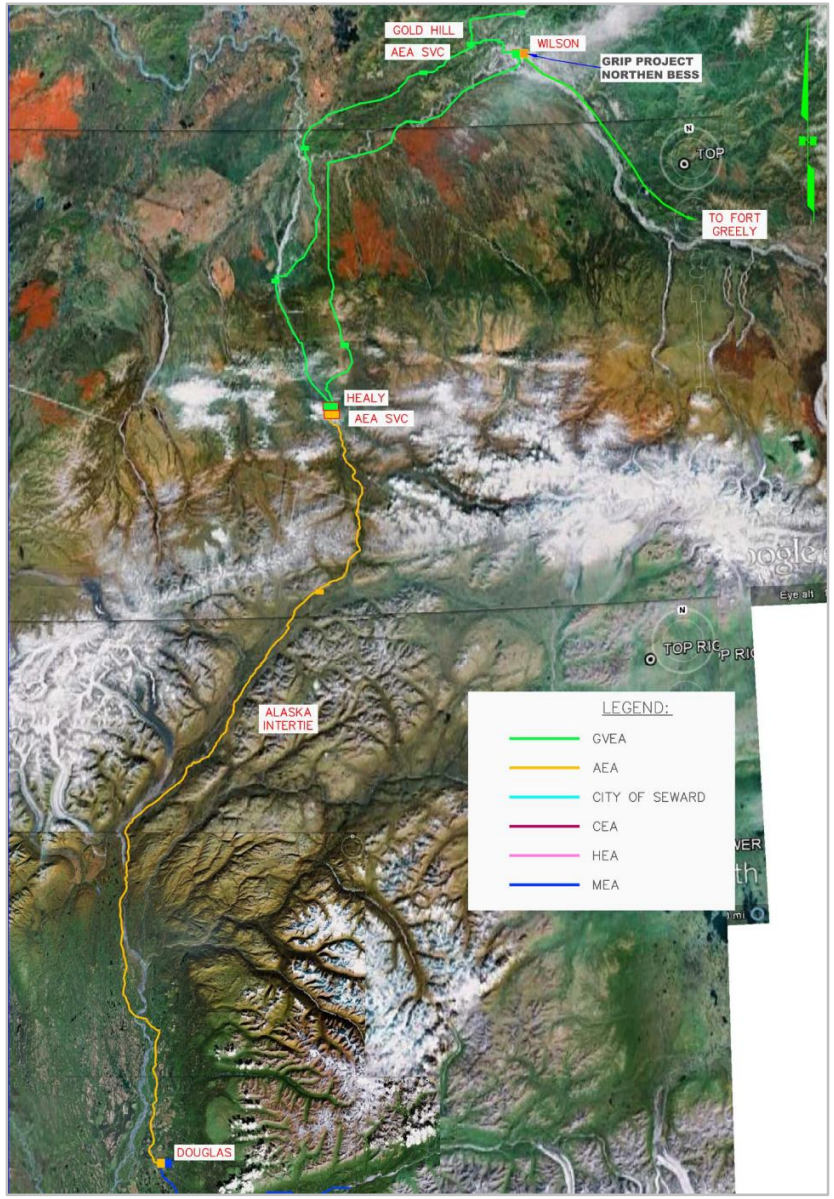
Priority A: Railbelt Transmission, Generation, and Storage

Strategies and Actions		
Strategy A-1: Unify & Upgrade Transmission & Storage		
	Action A-1.1	Unify all existing transmission assets along the Railbelt and Bradley Lake under Alaska Energy Authority or a new not-for-profit regulated utility.
Strategy A-2: Diversify Generation		
	Action A-2.1	Adopt Clean Energy Standard and incentives to diversify generation.
	Action A-2.2	Modify existing statute(s) requiring the Regulatory Commission of Alaska to consider long term diversification goals when approving additional/new Railbelt power generation.
	Action A-2.3	Progress known near term energy diversification projects to a go/no-go decision: 2.3.1: Dixon Diversion
	Action A-2.4	Progress known long term energy diversification projects to a go/no-go decision: 2.4.1: Susitna Watana 2.4.2: AKLNG, Bullet Line & Alternatives

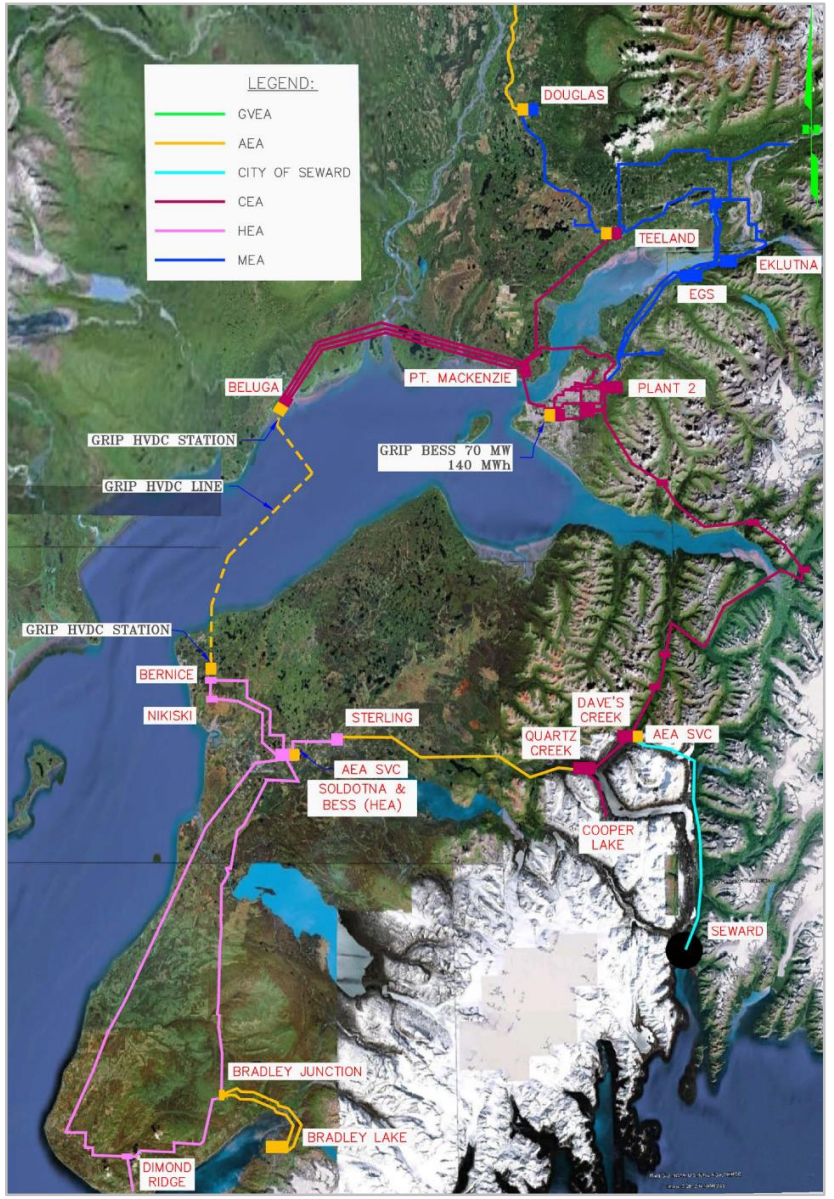
Priority E: Incentives and Subsidies

Strategies and Actions		
Strategy E-2: Reduce the barriers to private sector investments		
	Action E-2.1	Establish a strategic approach to policy, tax, and program development that stimulates and incentivizes private sector activity that leads to reduced cost, locally sourced, and reliable energy.

Northern System



Southern & Central System



Thank You

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