ALASKA ENERGY AUTHORITY

ALASKA ENERGY SECURITY TASK FORCE

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Executive Director

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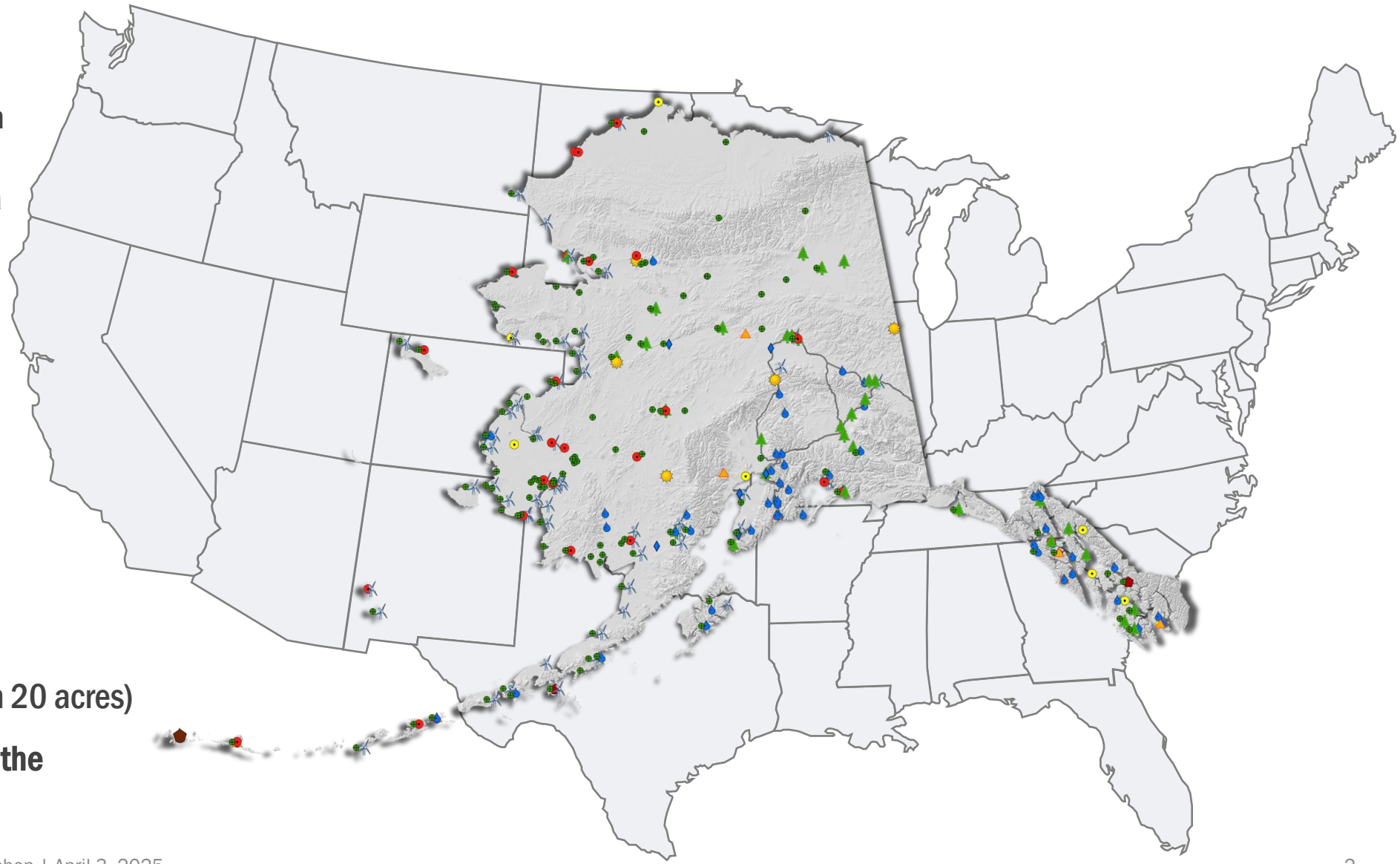
ALASKA ENERGY AUTHORITY

Alaska by the Numbers

Alaska spans 586,000 square miles of land, making it one-fifth the size of the Lower 48 states. To put it into perspective, Alaska is 488 times larger than Rhode Island, two and a half times the size of Texas, and even larger than the next three biggest U.S. states combined.

- **33,904 miles** of shoreline
- **6,640 miles** of coastline
- **19 mountain peaks** over 14,000 feet
- 3 **million lakes** (larger than 20 acres)
- Home to more than **half of the world's glaciers**



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 — enhancing reliability, resiliency, and redundancy.

Railbelt Energy (Owned Assets)
- Bradley Lake Hydroelectric Project
- Alaska Intertie
- Sterling to Quartz Creek Transmission Line
- High-Voltage Direct Current Transmission Line

Power Cost Equalization
- $48 Million Program
- 192 Rural Communities
- 91 Electric Utilities
- 80,000+ Alaskans

Rural Energy
- Bulk Fuel Upgrades
- Rural Power System Upgrades
- Circuit Rider Program
- Electrical Emergency Assistance

Renewable Energy and Energy Efficiency
- Renewable projects: biomass, electric vehicles, hydroelectric, solar, and wind
- Federal programs: NEVI, Solar for All, and Home Energy and High Efficiency Rebate Allocations

Grants and Loans
- Renewable Energy Fund
- Power Project Fund

Energy Planning
- Alaska Energy Security Task Force
- State Energy Security Profile
- Electronic Library
- Energy Data Resources
- 40101(d) Grid Resilience Program

Railbelt Transmission Organization

Task Force Organization

15 Member Board

Chaired by Lt. Governor Dahlstrom

5 Ex-officio members from legislature, state & federal agencies

Lieutenant Governor
Nancy Dahlstrom
Chair

Curtis W. Thayer
Alaska Energy Authority
Vice Chair

Clay Koplin
Cordova Electric Cooperative
Vice Chair

Commissioner John Boyle
Department of Natural Resources

Commissioner Emma Pokon
Department of Environmental Conservation

Nils Andreassen
Alaska Municipal League

Andrew Guy
Calista Corporation

Karl Hanneman
International Tower Hill Mines

Tony Izzo
Matanuska Electric Association

Jenn Miller
Renewable IPP

Duff Mitchell
Juneau Hydropower

John Sims
ENSTAR Natural Gas Company

Isaac Vanderburg
Launch Alaska

Robert Venables
Southeast Conference

Dan White
University of Alaska Fairbanks

Senator Click Bishop
(Ex Officio)

Garrett Boyle
Denali Commission
(Ex Officio)

Commissioner Keith Kurber
Regulatory Commission of Alaska
(Ex Officio)

Representative George Rauscher
(Ex Officio)

Dr. Erin Whitney
U.S. Department of Energy
Arctic Energy Office
(Ex Officio)

Task Force Subcommittees

- The Task force was given the authority to create advisory subcommittees to further organize the planning process.
- Six subcommittees were formed — **three regional subcommittees** focused on the Railbelt, Coastal, and Rural; and **three functional subcommittees** focused on Data, Incentives, and Subsidies.
- The subcommittees developed strategic priorities supported by actions that met the intent of AO 345.

REGIONAL SUBCOMMITTEES

Railbelt

Coastal

Rural

FUNCTIONAL SUBCOMMITTEES

State Energy Data

Incentives and Subsidies

Statutes and Regulations

Task Force Goals and Objectives

The Task Force developed comprehensive recommendations to advance affordability, reliability, and security/resilience. These objectives were divided into short-term, mid-term, and long-term goals.

Short-Term
Minimize regret cost while providing reliable service.

Mid-Term (2-20 Years)
Invest in infrastructure improvements to advance our long-term goal of energy diversification.

Long-Term (2040 and beyond)
Significantly diversify power generation with an emphasis on local, reliable, and affordable energy.

Planning Process for the Energy Master Plan

ALASKA ENERGY AUTHORITY

PUBLIC & STAKEHOLDER INVOLEMENT

Roles:	Responsibilities:
Governor's Office: Created A.O. 345	Approves Final Energy Master Plan
Alaska Energy Security Task Force (AESTF): Primary decision-making body to produce Energy Master Plan	Sets goal(s) and priorities of the Energy Master Plan and reviews and approves strategies/actions developed by the subcommittees.
Subcommittees: Organized by energy focus area or energy priority	Develops energy actions, and implementation timetables to meet the goal(s) of the AESTF.

ENERGY SYMPOSIUM SERIES

ACADEMIA & CONSULTANT SUPPORT

Planning Process by the Numbers

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

Thank You

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APPENDIX

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-do decision: 2.4.1: Susitna Watana 2.4.2: AKLNG, Bullet Line & Alternatives
Strategy A-3: Increase Demand		
	Action A-3.1	Significantly increase load to drive down energy rates. 3.1.1: RFP for industrial customers 3.1.2: Energy tax credit for new industrial customers 3.1.3: Identify “load-friendly” areas already in-place

Priority B: Coastal Generation, Distribution, and Storage

Strategies and Actions

Strategy B-1: Alaska Market Initiatives		
	Action B-1.1	Integrate and promote heat pump technology and systems (ASHP, SWHP, GSHP) as an alternative energy resource in Coastal Alaska.
	Action B-1.2	Plan, finance, and support the execution of Shore power at Public and Private Cruise Docks to Sell Excess Energy to Cruise Ships
	Action B-1.3	Beneficially electrify the Alaska Ferry Fleet to lower the cost of transportation, emissions, and assist in reducing the cost of power in coastal communities.
	Action B-1.4	Identify and support the colocation of industrial load (e.g. data servers) with Alaska hydropower facilities for synergies to lower energy costs.
	Action B-1.5	Identify, assist, and fund Battery Energy Storage Systems (BESS) and other Energy Storage Systems (ESS) for successful integration into Coastal communities to increase energy security, grid resilience and to lower energy costs.
Strategy B-2: Alaska Policy Recommendations		
	Action B-2.1	Establish, require, assist, and implement community Integrated Resource Plans (light) to forecast energy demand and generation for community and regional future energy needs and to lower energy costs
	Action B-2.2	Strengthen Alaska's Net Metering energy framework, tariffs, and regulations for Alaska's diverse stakeholders to promote net metering renewable energy investments.
	Action B-2.3	Strengthen and streamline the State of Alaska's internal state regulatory and land use administrative processes to accelerate approval to advance strategic energy projects and transmission for regional energy security and lower energy costs.
	Action B-2.4	Strategize and prioritize State of Alaska funding to match federal funding and federal financing to build and expand sustainable transmission and distribution lines in Alaska to bring Alaska on par with the US transmission systems for Alaskan energy security and lower energy costs.
	Action B-2.5	Establish and provide valuable energy planning and modeling metrics from State data sources, where available and requested (such as DMV electric vehicle registrations and Air Source Heat Pump (ASHP) installation) by individual communities.

Priority B: Coastal Generation, Distribution, and Storage (Cont'd)

Strategies and Actions		
Strategy B-2: Alaska Policy Recommendations (Continued)		
	Action B-2.5	Establish and provide valuable energy planning and modeling metrics from State data sources, where available and requested (such as DMV electric vehicle registrations and Air Source Heat Pump (ASHP) installation) by individual communities.
	Action B-2.6	Recruit, train, and enhance Alaska workforce with technical skills and training for advancing beneficial electrification to lower Alaska energy costs and to sustain Alaska's growing energy infrastructure.
Strategy B-3: State of Alaska Coordination with Federal Agencies and Federally Recognized Tribes Recommendations		
	Action B-3.1	Establish an Alaska/ federal Clean Energy Policy Force to develop, collaborate, and prioritize State energy, plan, goals, and rights to optimally advance renewable energy and transmission on federal lands.
	Action B-3.2	State of Alaska partners and collaborates with Federally recognized Alaska tribes and federal agencies to develop mutually beneficial Energy Development and Transmission/ Distribution to advance the State Energy Plan to lower the cost of energy
Strategy B-4: Alaska Hydropower Generation Recommendations		
	Action B-4.1	Foster, support, and assist Hydropower development and their transmission in Alaska to lower energy costs, provide energy security, and spur economic growth, job creation, and prosperity for Alaska

Priority C: Rural Generation, Distribution, and Storage

Strategies and Actions		
Strategy C-1: Increase Capital Availability		
	Action C-1.1	Identify a funding or financing mechanism for rural communities including a "local match" for Federal grants.
	Action C-1.2	Identify opportunities for Public Private Partnerships to finance/fund energy infrastructure projects in rural Alaska.
	Action C-1.3	State of Alaska commit to sufficient capital budget funding for energy projects in rural Alaska, as identified by AEA, communities, or the Legislature.
Strategy C-2: Infrastructure Investment		
	Action C-2.2	Promote a regional planning approach to connected energy, transportation, and broadband infrastructure.
	Action C-2.2	Identify gaps by leveraging studies done by regional ANC corporations, Economic Development Districts, Denali Commission, and other organizations as well as state and federal agencies.
	Action C-2.3	Replace or appropriately displace community-focused aging infrastructure in rural communities of Alaska.
	Action C-2.4	Invest in pilot projects using appropriate technologies that demonstrate a regional approach to supplying affordable and reliable power to multiple communities.
	Action C-2.5	Fund and construct opportunities to connect rural communities through transmission lines and other shared energy projects.
	Action C-2.6	Invest in critical repairs and resilient infrastructure that may be at high risk to current and future natural hazards (wildfire, extreme cold, storms, etc.), to avoid energy disruptions and preserve continuity of operations.
	Action C-2.7	Invest in expanding the Railbelt grid to rural areas.
	Action C-2.8	Evaluate micronuclear, natural gas, hydrogen and other emerging/ underutilized technologies throughout the State of Alaska.

Priority C: Rural Generation, Distribution, and Storage (Cont'd)

Strategies and Actions		
Strategy C-3: Lower Operational Costs		
	Action C-3.1	Expand and inventory technical assistance, training and workforce development to identify gaps, increase capability & capacity building activities for Training a Rural Energy Workforce. i.e. apprenticeship programs for energy production.
	Action C-3.2	Identify innovation in logistics transportation to improve supply chain reliability.
	Action C-3.3	Create and implement a community outreach and education program to encourage stakeholder adoption of energy projects in rural areas.
	Action C-3.4	Procure, install, and improve grid modernization and automation.
Strategy C-4: Improve Economies of Scale		
	Action C-4.1	Identify economies of scope/scale to provide multi-benefit utility projects.
	Action C-4.2	Identify energy anchor tenants to provide economy of scale for rural communities.
	Action C-4.3	Identify funding and financing mechanisms for rural communities including a "local match" for Federal grants.
	Action C-4.4	Identify and complete a regional pilot project to demonstrate economies of scale.
	Action C-4.5	Develop and invest in rural beneficial electrification.
Strategy C-5: Improve Data-Driven Decision Making		
	Action C-5.1	Locate and catalog existing energy studies, and update and collect data necessary to make informed value decisions related to energy generation, distribution, transmission, and storage in rural Alaskan villages.
	Action C-5.2	Leverage critical local knowledge provided by residents in coordination with and complementary to ongoing and planned projects.
	Action C-5.3	Explore and leverage existing and new data capture tools including artificial Intelligence to quickly analyze existing and new data collected in rural Alaska to provide potential energy solutions.

Priority D: State Energy Data

Strategies and Actions		
Strategy D-1: Establish a Data Department within the Alaska Energy Authority (AEA), using statute as necessary		
	Action D-1.1	Institute or update statutory requirements for AEA Data Department.
	Action D-1.2	Fund, develop, and implement a technical and needs assessment.
	Action D-1.3	Fund, develop, and implement a capital asset plan.
	Action D-1.4	Develop and fund an operating and maintenance budget, to include the identification of potential funding sources and mechanisms.
	Action D-1.5	Appropriately staff the department based on the technical and needs assessment.
Strategy D-2: Establish an energy data governance committee that is responsible for setting minimum protocols for data collection, quality, storage, use, and access		
	Action D-2.1	Form a technical advisory committee to draft recommendations on where the data governance committee should be established, supported, staffed, membership composition, scope of duties responsibilities, and other issues that may need to be addressed.
	Action D-2.2	Fund a long-term data governance strategy based on recommendations made by the Technical Advisory Committee.
Strategy D-3: Fund data capacity		
	Action D-3.1	Establish dedicated data collection and analysis positions in state agencies that are responsible for collecting, analyzing, hosting, distributing data in formats that are accessible, and liaising with the AEA Data Department.
	Action D-3.1	Provide professional development and/ or skills training opportunities for staff and other agency partners as it relates to data collection and analysis.
Strategy D-4: Improve existing statewide energy data and collect new, needed data with respect to electricity, heat, and transportation		
	Action D-4.1	Fund a gap analysis of energy data, including existing data, accessibility, quality, age, and what is and would be needed for data-informed decision making.
	Action D-4.2	Revitalize, fund, and maintain energy data platforms and services so as to ensure the long-term availability and accessibility of data.

Priority D: State Energy Data (Cont'd)

Strategies and Actions		
Strategy D-4: Improve existing statewide energy data and collect new, needed data with respect to electricity, heat, and transportation (Continued)		
	Action D-4.3	Conduct a data audit of the Regulatory Commission of Alaska (RCA) to include recommendations.
	Action D-4.4	Expand the Power Cost Equalization (PCE) report and the extent of such data reported.
	Action D-4.5	Expand the definition of "energy data" by adopting the Technical Advisory Committee (TAC) definition, ensuring the definition is inclusive of heat/thermal and transportation fuel data.
	Action D-4.6	Understand how heating and transportation fuel is delivered and used.
	Action D-4.7	Re-establish annual updates to the Alaska Energy Statistics report.

Priority E: Incentives and Subsidies

Strategies and Actions	
Strategy E-1: Strengthen state-federal coordination and investment	
Action E-1.1	Establish a state/federal working group that identifies and works toward 1) improved access on federal lands, 2) establishes funding to accelerate a local, reliable, and affordable energy transition, 3) and enables leveraging investment opportunities between state and federal programs.
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.
Strategy E-3: Maintain residential subsidy focused on equity, while reducing need across communities	
Action E-3.1	Continue the commitment by the State to ensure residents have access to Power Cost Equalization (PCE) funds for as long as lower costs are not achieved, as the State actively works to 1) consider alternative mechanisms, 2) strategically deploy PCE funds to advance low-cost energy solutions, and 3) identify opportunities to expand the ability of PCE to reduce costs across sectors within communities.
Strategy E-4: Improve the economics of project development	
Action E-4.1	Create a multi-pronged approach to reduce risk to utilities and project proponents, increase the availability of financing mechanisms, and encourage ancillary investments that will benefit the industry and economies of communities.
Strategy E-5: Increase State programmatic investments	
Action E-5.1	Evaluate and change current programmatic investments such that 1) these programs have sufficient capacity and competency to act effectively in support of lowering energy costs in Alaska, and 2) that the braiding of programmatic intent results in streamlining action and reducing CAPEX and OPEX costs.

Priority F: Statutes and Regulations

Strategies and Actions		
Strategy F-1: Improve Electrical Transmission System		
	Action F-1.1	Identify state matching funds necessary for all federal funds available for transmission infrastructure (also see Matrix B-2.4).
	Action F-1.2	Clarify state statute AS 09.65.86 on Utility ROW wildfire liability.
	Action F-1.3	Review 17 AAC 15.131. Utility accommodation on controlled-access highways in order to continue to allow transmission and distribution lines to share DOT right-of-way.
	Action F-1.4	Establish a State/ Municipal, Federal, ANCSA corps and tribes planning effort to focus on future transmission and distribution siting and ROW's to facilitate efficient buildout of Alaska's transmission infrastructure (also see Matrix B-3.2).
	Action F-1.5	Modify 11 ACC 93.120 and other permits related to hydro-electric generation projects in order to accelerate design, construction and operation of these new power sources.
	Action F-1.6	Unify railbelt transmission management within AEA . (see Matrix A-1.1).
	Action F-1.7	Collaborate with State, Federal, ANCSA corps and tribes to identify transmission in rural Alaska (see Matrix B-3.2).
Strategy F-2: Encourage Energy and Generation Diversification		
	Action F-2.1	Appropriate or identify state funds to provide the local match required to obtain federal grants for electrical generation projects when a cost/ benefit analysis shows a positive benefit to the state or the communities the project is intended for (See Matrix C-1.1).
	Action F-2.2	Maximize future optionality for use of Alaska sourced fossil fuels by monitoring and evaluating third party development of carbon capture and sequestration technologies and passing legislation establishing a regulatory framework for the geologic storage of carbon.
	Action F-2.3	Encourage development of cost effective hydropower projects throughout Alaska, including ensuring that state funds are appropriated for timely investment in the Dixon Diversion Hydroproject as project feasibility warrants (see Matrix A-2.3 and B-4.1).
	Action F-2.4	RCA to consider diversification for new generation (see Matrix A-2.2).

Priority F: Statutes and Regulations (Cont'd)

Strategies and Actions		
Strategy F-3: Utility Regulation		
	Action F-3.1	Provide support for the Regulatory Commission of Alaska (RCA) sufficient to improve the RCA's ability to respond timely and appropriately to the complex energy production, generation, and transmission challenges in Alaska.
	Action F-3.2	As Alaska works toward achieving a goal of $.10 cents per kw/hr the Task Force recommends maintaining and expanding the PCE Program until all Alaskans benefit from actual equitable and lower cost energy.
	Action F-3.3	Modify 3AAC 46.270 (f) to reduce the ambiguity surrounding avoided cost standards. Modify (AS 42.05.760- .785) to ensure alignment with unified Railbelt transmission authority (see Matrix A-1.1).
	Action F-3.4	Adopt a Clean Energy Standard with incentives (See Matrix A-2.1).
	Action F-3.5	Provide incentivized power tariff rate to attract new industry to Alaska.
Strategy F-4: Executive and Organizational Changes		
	Action F-4.1	Create a data department with the Alaska Energy Authority (AEA), using statute as necessary (see Matrix D-1.1).