



ALASKA ENERGY SECURITY TASK FORCE REPORT



DRAFT NOVEMBER 20, 2023

ACKNOWLEDGEMENTS

The Alaska Energy Security Task Force consists of 15 voting members and five (5) ex officio members appointed by and serving at the pleasure of the Governor.

The 15 voting members are as follows:

Lieutenant Governor Dahlstrom
(Chair of the Task Force)

Curtis W. Thayer
(Vice Chair of the Task Force and Executive Director of the Alaska Energy Authority)

Clay Koplin
(Vice Chair of the Task Force and Cordova Electric Cooperative - Member from a utility that represents rural Alaska or a community receiving power cost equalization)

Acting Commissioner Emma Pokon
(Commissioner of the Department of Environmental Conservation)

Commissioner John Boyle
(Commissioner of the Department of Natural Resources)

Nils Andreassen, Alaska Municipal League
(Member who represents a city, borough, or municipality)

Tony Izzo, Matanuska Electric Association
(Member with a Railbelt utility background)

John Simms, Enstar
(Member from the oil and gas industry)

Karl Hanneman, International Tower Hill Mines
(Member from the mining industry)

Robert Venables, Southeast Conference
(Member with a background in economic development)

Andrew Guy, Calista Corporation
(Member from the business community)

Jenn Miller, Renewable Independent Power Producers
(Member from any segment of the Alaskan energy industry)

Duff Mitchell, Juneau Hydropower
(Member of the general public)

Isaac Vanderburg, Launch Alaska
(Member of the general public)

Daniel White, University of Alaska Fairbanks

The five (5) ex officio members are as follows:

Commissioner Keith Kurber
(Regulatory Commission of Alaska)

Garrett Boyle
(Representative from the Denali Commission)

Erin Whitney
(U.S. Department of Energy, Arctic Energy Office)

Senator Click Bishop
(District R)

Representative George Rauscher
(District 29)

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Anchorage, AK 99503



December 1, 2023

Fellow Alaskans,

Alaska's economic and energy future rests on the ability to identify, develop, and provide affordable, reliable, and resilient electric, heating, and transportation energy across our state. Understanding this, Governor Dunleavy formed the Alaska Energy Security Task Force ("Task Force") in February and March of this year through [Administrative Order \(A.O.\) No. 344](#) and [A.O. No. 345](#). The purpose of the Task Force is to provide recommendations on overall energy policy for the State of Alaska, as well as strategies and tactics to achieve its goal of reducing the cost of energy to Alaskan residents.

Confronting energy challenges requires decisive and intentional action across all sectors and levels of government. To prepare Alaska to meet this challenge, our Task Force has developed this Alaska Energy Security Task Force Report ("Report"), as an iterative planning tool. While broad in its reach, the Report is but a first step in a strategic effort to aid Alaska to reach the goal of energy affordability, reliability, and resilience. This inaugural edition could not and does not prescribe the detailed legislative, regulatory, and policy changes that must be developed through further public discourse. Rather, it establishes baseline considerations, suggests a prioritization of key public policy concerns, and presents a framework for continuous public engagement. Through innovation and collaboration, we aspire to not only reduce the cost of energy but to reach the goal of \$0.10/kwh. There is no panacea to achieve this goal rather the Report recommends actions that would help pave the way to a more affordable and sustainable energy future. Importantly, the Report acknowledges that energy resilience is more critical to some Alaskans than others .

Finally, we must note that this Report and the actions that must follow would not be possible without the dedicated staff of the Alaska Energy Authority and the thoughtful collaboration of representatives from across the Alaska Energy Security Task Force. Over the last ten months, these volunteers and public servants assembled to develop this Report for ensuring Alaska's energy resilience. Through a public planning process with over 150 hours of public meetings, the Task Force has identified over 60 recommendations across 6 energy priority areas for the three distinct regions of Alaska for the Governor and the legislature to consider to create affordable, reliable, and resilient energy for all Alaskans. This Report will further support our great state in responding to protect our communities, grow our economy, and lift all of our people. Together, we will meet this critical moment.

It is the pleasure of the Task Force to serve and present this Report to the Honorable Mike Dunleavy, Governor of the Great State of Alaska, and our fellow Alaskans.

DRAFT LETTER FOR FINAL REPORT

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EXECUTIVE SUMMARY



STATE ENERGY PRIORITY AREAS



Railbelt Transmission,
Generation, and
Storage



Coastal Generation,
Distribution,
and Storage



Rural Generation,
Distribution,
and Storage



State Energy
Data



Incentives and
Subsidies



Statutes and
Regulations

A.O. 345 - ALASKA ENERGY SECURITY TASK FORCE

Governor Mike Dunleavy issued Administrative Order 344 on February 23, 2023, establishing the Alaska Energy Security Task Force (“Task Force”). The purpose of the Task Force is to develop a comprehensive statewide energy plan, that will evaluate energy generation, distribution, and transmission for the State of Alaska and its communities. The development of this plan included collaboration with both public and private stakeholders. This statewide energy plan, including proposed timelines and milestones, will be presented to the governor upon completion.

Administrative Order (A.O.) No. 345 on March 22, 2023 identified the Lieutenant Governor as the Chair. The Alaska Energy Security Task Force consists of 15 voting members and three ex officio members, appointed by and serving at the pleasure of the Governor. A.O. No. 345 tasked the Task Force to produce a final report with recommendations by mid-November 2023.

The Task Force began meeting in April 2023 and met regularly every three weeks through October 2023. The Task Force divided into six subcommittees to work more efficiently in the time available. Subcommittees were divided regionally; Railbelt, Coastal, Rural, and functionally; Data, Incentives & Subsidies and Statutes & Regulations. Each subcommittee met bi-weekly outside of the regularly scheduled Task Force meetings. The subcommittees were tasked to develop strategic priorities supported by actions intended to meet the intent of AO 345.

GOALS

In order to develop a comprehensive recommendation, the Task Force determined the need to establish long-term, mid-term, and short-term goals that reflect desired outcomes. These goals were centered on affordability, reliability, and resilience. Three key factors the Task Force identified to meet the overall goal of lowering the cost of energy for Alaskans while simultaneously ensuring energy security for our state. The recommended goals include the following:

- Short-term: Minimize regret cost while providing reliable service.
- Mid-term: Invest in infrastructure improvements to advance the long-term goal of energy diversification.
- Long-term: Significantly diversify power generation with an emphasis on local, reliable, and affordable energy.

The Task Force was motivated to seek transformational approaches to reach these goals that might provide electrical energy to residents at a target price of \$0.10/kwh in the future. The Task Force reviewed numerous generation and transmission configurations and strategies from publicly available data but did not complete independent or internal cost estimates in developing action items or strategies.

In the **short-term**, the Task Force acknowledges that continued reliability for generation and transmission in many areas of the state may require certain actions that are likely to increase costs. The expected increase in costs is directly tied to project permitting, available fund or financing, and in the case of the Railbelt, local gas supply market in Cook Inlet. Short term options for electric and gas utilities that can reliably serve the local demand are limited. The magnitude of the rising costs, and the ability to arrest and then reverse these rising costs as energy sources are diversified, will depend upon the State of Alaska’s collective response to the recommendations set forth within. Therefore, it is important that investments in the short term do not hinder mid-term and long-term goals of infrastructure improvements for diversified power generation sources.

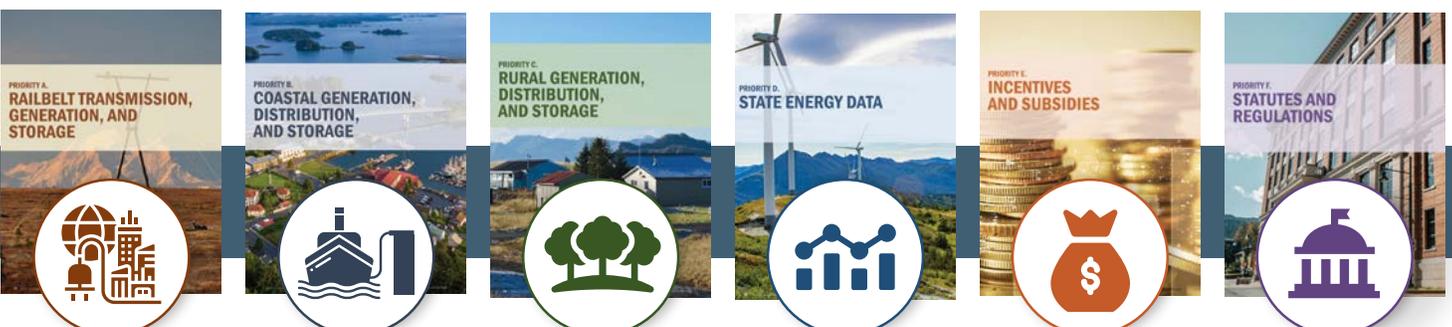
In the **mid-term** (2-20 years), significant state and federal investment must be made in energy and power infrastructure to enable the long-term goal of diversified, local, reliable, and affordable energy. Alaska must invest in its future. Transmission system upgrades must be made to allow cost competition to optimize all generation, including renewables. Energy storage is another much needed investment area; where it is viewed that shared costs and control will help optimize overall energy cost and enable diverse generation forms to expand. Transmission upgrades, further deployment of energy storage and improved operating models are necessary to facilitate economic dispatch of electrical energy.

In the **long term**, for 2040 and beyond, the Task For established a goal that the system for generation, transmission and space heating should reflect a significant diversification of energy supply from 2023 metrics and be affordable, sourced within the State of Alaska and, most importantly, reliable. Energy generation sources also need to be considered in the context of a sustained supply for the years to come.

ENERGY PRIORITY AREAS & STRATEGIES

Each subcommittee identified key strategies they felt supported the A.O. No. 345 mandate. Energy Priority Areas and strategies are organized by subcommittee. The first three subcommittees focused on geographic area needs and created strategies to meet those needs. The Railbelt subcommittee covers the geographic area from Homer, AK, the Kenai Peninsula, to Anchorage, then north through the Mat-Su Borough to Fairbanks. The Coastal Subcommittee covers coastal communities through the Aleutian Chain and then south and east to include all Southeast Alaska communities. Finally, the Rural subcommittee represented all rural communities outside those represented by the first two geographic subcommittees.

Three subcommittees focused on functional issues that support the three geographic subcommittees. The Data subcommittee focused on all past, present and future energy data that exists or may be collected in the future. The Incentives and Subsidies subcommittee presented ideas that might help to lower energy costs across the state. Finally, the Statutes and Regulations subcommittee looked through all subcommittee recommendations and generated recommendations related to legislative or departmental actions necessary to guide state policy or appropriations toward the goal of lowering costs of energy.



PRIORITY A: RAILBELT TRANSMISSION, GENERATION, AND STORAGE



A

The Railbelt subcommittee identified three key strategies:

A-1 Unify Railbelt transmission and storage: Unify all existing transmission assets along the Railbelt and Bradley Lake under Alaska Energy Authority or a new not-for-profit regulated utility.

A-2 Diversify generation: Encourage and coordinate the diversification of Railbelt generation assets through projects and policy that provide opportunities to maximize energy cost savings.

A-3 Increase demand: Significantly increase load to drive down energy rates.

Key Outcomes

- Investing in transmission and storage infrastructure and simplifying its operation will ultimately enable the long-term goal to significantly diversify Railbelt generation and provide energy that is reliable, affordable, and generated in-state.
- Greater diversification of power generation to provide reliable, lower cost electricity, for Railbelt rate payers.
- A significant increase in load would spread fixed costs over a larger base, drive down prices for all consumers, and spur economic development overall.

PRIORITY B: COASTAL GENERATION, DISTRIBUTION, AND STORAGE



B

The Coastal subcommittee identified four key strategies:

B-1 Alaska market initiatives: Maximize utilization of existing energy generation and transmission and promote new renewable energy assets to lower energy costs for Alaskans and their industries through market initiatives and expansion.

B-2 Alaska policy recommendations: Enhance Alaska's departmental and regulatory policies to spur and sustain renewable energy and transmission development to cut energy costs and advance economic prosperity for Alaska

B-3 State of Alaska coordination with Federal agencies and with Federally and State recognized Tribes recommendations: Refine federal policy to bolster Alaska's renewable energy and support communities in securing affordable energy.

B-4 Alaska hydropower generation recommendations: Enhance Alaska's policies to fast-track hydropower for provide affordable, secure energy for Alaskans.

Key Outcomes

- Strategically planned market initiative actions with tactical implementation will optimize State of Alaska's Energy plan to lower Alaskans' energy costs (electric, heating, transportation).
- Strategically planned and matured by the Administration and AEA of Task Force Recommendations, optimizing federal funding for the strategic achievement of goals will reduce the cost of power for Alaskans today and leave an energy legacy for generations to follow.
- The expected results and outcomes from this cross-agency, inclusive tribal interest effort will lower Alaska's energy costs and reduce the dependency on imported fuels, using local Alaska land and energy resources for the benefit of Alaska.
- The State of Alaska can take an active, willful, and calculated role in lowering the energy cost for Alaskans, by effectively guiding hydropower development policy and investments in hydropower assets and related transmission infrastructure.

C PRIORITY C: RURAL GENERATION, DISTRIBUTION, AND STORAGE

The Rural subcommittee identified five key strategies:

C-1 Increase access to capital: Increase access to capital to provide additional funding/finance for project and infrastructure construction.

C-2 Infrastructure investment: Support existing infrastructure and add new infrastructure to provide Alaskans with reliable energy at reduced cost.

C-3 Lower operational costs: Lower operational costs of power/electricity in rural Alaskan villages.

C-4 Increase economies of scale: Reduce the cost of power and improve reliability.

C-5 Data decision making: Improve access to relevant data necessary to make informed value decisions related to energy generation, distribution, transmission and storage in rural Alaskan villages.

Key Outcomes

- Identify sufficient investment in energy projects/infrastructure to reduce the cost of energy in rural Alaska.
- Investment in connected regional infrastructure for the community needs that lead to the most affordable and reliable energy.
- Connect communities to each other and anchor tenants to improve the reliability and reduce the cost of energy.

D PRIORITY D: STATE ENERGY DATA

The Data subcommittee identified four key strategies:

D-1 Establish a data department within the Alaska Energy Authority (AEA): Staff and properly equip a team dedicated to energy data management within the Alaska Energy Authority.

D-2 Establish an energy data governance committee: Ensure that collection, quality, storage, use of, and access to energy data in Alaska meets industry standards, current protocols, and best practices.

D-3 Fund data capacity: Establish dedicated data collection and analysis positions in state agencies that are responsible for collecting, analyzing, hosting, distributing data in formats that are accessible

D-4 Improve existing statewide energy data and collect new: Fund a gap analysis of energy data, including existing data, accessibility, quality, age, and what form and character of data is and would be needed for data-informed decision making.

Key Outcomes

- Provision of consistent and accessible data further enabling data-informed decision-making on energy projects and policy across the state and across electric, heat, and transportation sectors.
- Energy data in Alaska meets and conforms with industry standards, protocols, and best practices. Increased participation of energy data stakeholders and end-users.
- Increased collaboration, reduced duplication of efforts, ease of data access, and better-informed decision making.

PRIORITY E: INCENTIVES AND SUBSIDIES



The Incentives subcommittee identified five key strategies:

E-1 Strengthen state-federal coordination and investment: Establish a state/federal working group that identifies and works toward improved access on federal lands with funding in place to accelerate a local, reliable, and affordable energy transition.

E-2 Reduce the barriers to private sector investments: Create a strategic approach to policy, tax, and program development that stimulates and incentivizes private sector activity leading to lower cost, local, and reliable energy.

E-3 Maintain residential subsidy focused on equity, while reducing need across communities: Ensuring residents have access to subsidy and to 1) consider alternative mechanisms, 2) strategically deploy PCE funds to advance low-cost energy solutions, and 3) expand the ability of PCE to lower costs across sectors within communities.

E-4 Improve the economics of project development: Create a multi-pronged approach to reduce risk to utilities and project proponents, increase the availability of financing mechanisms, and encourage ancillary investments.

E-5 Increase State programmatic investments: Evaluate and update current programmatic investments.

Key Outcomes

- Increased knowledge of available funding and implementation support for energy projects in Alaska, and should leverage current federal investment through IIJA and IRA.
- Initiating a series of statutory changes and encouraging quicker adoption by communities and use by utilities and others will unlock private sector investment.
- Working toward a flatter rate across Alaska improves the mobility of residents, increased economic opportunity, and overall improved quality of life for Alaskans.

PRIORITY F: STATUTES AND REGULATIONS



The Statutes subcommittee identified four key strategies:

Statutes F-1 Improve Electrical Transmission System: Identify changes in statutes, regulations, or appropriations needed to improve electrical transmission in Alaska.

Statutes F-2 Encourage Energy and Generation Diversification: Identify changes in statutes, regulations, or appropriations needed to encourage energy generation diversification.

Statutes F-3 Utility Regulation: Identify changes in statutes, regulations, or appropriations needed to implement AESTF recommendations related to utility regulation.

Statutes F-4 Executive and Organizational Changes: Staff and properly equip a team dedicated to energy data management within the Alaska Energy Authority.

Key Outcomes

- More resilient and reliable transmission and electric grid system that will lower rates, help bring online clean energy, reduce costs for consumers, and promote job creation.
- Greater diversification of power generation to provide reliable, lower cost electricity, heat, and transportation for rate payers.
- Improved utility regulation and a more efficient RCA will allow utilities to be able to respond to system challenges in a more timely and cost effective manner.



Haines, Alaska

NEXT STEPS AND ACTIONS RECOMMENDED FOR IMMEDIATE IMPLEMENTATION

The Task Force recognizes that this report will become an iterative planning tool to be continually updated to meet the mandate of A.O. No. 344 and A.O. No. 345. Updates to this report will become more comprehensive in nature as actions are implemented across agencies and departments. This report is intended to guide institutions in building programs and policies that promote energy affordability, reliability, and resilience.

The actions listed below are those actions the Task Force feels are ready for immediate implementation to help advance the overall actions/outcomes identified in the plan. These actions deserve to be considered for further development by the Governor or the Legislature in the coming legislative session. Detailed description of each of these actions can be found in **Appendix II- Additional Action Detail Summary**.

High priority actions are as follows:

Railbelt A-1.1: Unify all existing transmission assets along the Railbelt and Bradley Lake under AEA or a new not-for-profit regulated utility.

Railbelt A-2.1: Adopt Clean Energy Standard and Incentives to Diversify Generation.

Coastal B-1-1, B-1-2, B-1-3, B-1-4, B-1-15: Alaska Market Initiatives

Coastal 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.

Coastal 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.

Coastal 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.

Rural C-2.3: Fund and Construct Opportunities to Connect Rural Communities through Transmission Lines and Other Shared Energy Projects.

Rural C-3.4: Procure, install, and improve grid modernization and automation

Incentives E-2.1(3): Adopt a Clean Energy Standard with incentives to facilitate reaching diversification goals.

Incentives E-2.1(4): Implement low-interest loan program (concessionary capital, like Power Project Loan Fund) that facilitates affordable energy development and infrastructure improvements.

Incentives E-3.1(2): Implement a strategic approach to lowering costs according to highest use communities.

Incentives E-3.1(5): Consider the development of a postage stamp rate alternative, where all Alaskans pay the same rate.

Incentives E-4.1(1): Establish a Green Bank for financing of community scale energy efficiency projects.

Incentives E-4.1(6): Reestablish the Emerging Energy Technology Fund (EETF) in order to promote public-private investment in energy technology demonstration and deployment programs.

Incentives E-5.1(4): Ensure adequate workforce training and skills development alongside job creation and quality goals of State.

Statutes F-1.1: Identify state matching funds necessary for all federal funds available for transmission infrastructure (also see Action F 1.6, B-2.4, C2.3).

Statutes F-2.1: Identify state matching funds necessary for all federal funds available for generation infrastructure when a cost/benefit analysis shows a positive benefit to the state or the communities the project is intended for. (see also C3.4).

Statutes F-2.2: Monitor and evaluate third party development of carbon capture and sequestration technologies and pass legislation establishing a regulatory framework for the geologic storage of carbon.

Statutes 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.

Statutes F-3.2: Maintain and expand the PCE Program until all Alaskans benefit from actual equitable and lower cost energy.

Statutes F-3.5: Adopt a Clean Energy Standard with incentives (See Action A-2.1).

Statutes F-4.1: Create a Data Department with the Alaska Energy Authority (AEA), using statute as necessary (see Action D-1.1).

SECTION I. INTRODUCTION



BACKGROUND

On September 30th, 2022, Governor Dunleavy established the Office of Energy Innovation to provide a central point of focus for Alaska's efforts to reduce the cost of energy for residents. Alaskans suffer from exorbitantly high energy costs, restricted energy supply, and limited opportunities to drive down energy costs to consumers. Consequently, energy security and affordability are critical to Alaska's prosperity going forward. The Task Force will provide recommendations on overall energy policy for the State of Alaska, as well as strategies and tactics to achieve its goal of reducing the cost of energy to Alaska residents.

TASK FORCE FORMATION

Governor Mike Dunleavy issued Administrative Order 344 on February 23, 2023, establishing the Alaska Energy Security Task Force ("Task Force"). The purpose of the Task Force is to develop a comprehensive statewide energy plan, that will evaluate energy generation, distribution, and transmission for the State of Alaska and its communities. The development of this Alaska Energy Security Task Force Report included collaboration with both public and private stakeholders. This Report, including proposed timelines and milestones, will be presented to the governor upon completion.

Administrative Order 345 on March 22, 2023 identified the Lieutenant Governor as the Chair. The Alaska Energy Security Task Force consists of 15 voting members and three ex officio members, appointed by and serving at the pleasure of the Governor. The duties and responsibilities of the task force were established as follows:

- Establish a baseline energy portfolio for the State of Alaska.
- Identify and evaluate potential future changes that could occur to energy supply and distribution in the state; the impacts of such changes; and the opportunity for mitigating impacts and leveraging opportunities associated with such change.
- Identify solutions for meeting Alaska's energy needs now and in the future with a focus on affordability, reliability and security.
- Identify policies, programs, regulatory changes, and funding that could accelerate adoption of these energy strategies.
- Develop and maintain a public database of



taskforce information and recommend strategies for sharing energy data and information through an energy data portal.

- Recommend a statewide energy goal, a plan to achieve it, and identify additional work that may be required to refine this vision.

The voting members are as follows:

- Lieutenant Governor Dahlstrom (Chair of the Task Force)
- Acting Commissioner Emma Pokon (Commissioner of the Department of Environmental Conservation)
- Commissioner John Boyle (Commissioner of the Department of Natural Resources)
- Curtis Thayer (Vice Chair of the Task Force) (The Executive Director of the Alaska Energy Authority)
- Clay Koplín, Cordova Electric Cooperative (Member from a utility that represents rural Alaska or a community receiving power cost equalization)
- Nils Andreassen, Alaska Municipal League (Member who represents a city, borough, or municipality)
- Tony Izzo, Matanuska Electric Association (Member with a Railbelt utility background)
- John Sims, Enstar (Member from the oil and gas industry)
- Karl Hanneman, International Tower Hill Mines (Member from the mining industry)
- Robert Venables, Southeast Conference (Member with a background in economic development)
- Andrew Guy, Calista Corporation (Member from the business community)

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 Koplín
Cordova Electric Cooperative
Vice Chair



Commissioner John Boyle
Department of Natural
Resources



**Acting Commissioner
Emma Pokon** Department of
Environmental Conservation



Nils Andreassen
Alaska Municipal League



Andrew Guy
Calista Corporation



Karl Hanneman
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Tony Izzo
Matanuska Electric
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Jenn Miller
Renewable IPP



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(Ex Officio)



Garrett Boyle
Denali Commission
(Ex Officio)



Commissioner Keith Kurber
Regulatory Commission of Alaska
(Ex Officio)



**Representative George
Rauscher**
(Ex Officio)



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



Governor Mike Dunleavy (center) establishes issued Administrative Order 344 on February 23, 2023 establishing the Alaska Energy Security Task Force ("Task Force")

- Jenn Miller, Renewable Independent Power Producers (Member from any segment of the Alaskan energy industry)
- Duff Mitchell, Juneau Hydropower (Member of the general public)
- Isaac Vanderburg, Launch Alaska (Member of the general public)

The ex officio members are as follows (plus the two seats from the legislature):

- Commissioner Keith Kurber (Member of the Regulatory Commission of Alaska)
- Garrett Boyle (Representative from the Denali Commission)
- Erin Whitney (From the U.S. Department of Energy, Arctic Energy Office)
- Senator Click Bishop (District R)
- Representative George Rauscher (District 29)

SUBCOMMITTEE FORMATION

The Task force was given the authority to create advisory subcommittees to further organize the planning process. Subcommittee organization was proposed during Task Force Meeting #1, hosted April 25, 2023. Further discussion regarding subcommittee formation was presented during Meeting #2, and finalized during Task Force Meeting #3. The final subcommittee formation and organization is presented below.

- **Railbelt Transmission, Generation, and Storage:** Co-Chairs: Tony Izzo & Jenn Miller
- **Coastal Generation, Distribution, and Storage:** Co-Chairs: Duff Mitchell, & Robert Venables
- **Rural Generation, Distribution, and Storage:** Co-Chairs: Clay Koplín & Andrew Guy
- **State Energy Data:** Chair: Dan White
- **Incentives and Subsidies:** Co-Chairs: Nils Andreassen & Isaac Vanderburg
- **Statutes and Regulations:** Co-Chairs: Robert Venables & Karl Hanneman



Lt. Governor Dahlstrom, Task Force Chair



“In order to develop a report of comprehensive recommendations, the Task Force focused on strategies and actions to advance the goals of affordability, reliability, and security/resilience.”

ALASKA ENERGY SECURITY TASK FORCE REPORT GOALS DEFINED

- **Energy Affordability:** consumers should be able to pay for their electricity use without being overburdened to meet basic needs.
- **Energy Reliability:** is the ability of a power system to withstand instability, uncontrolled events, cascading failures, or unanticipated loss of system components.
- **Energy Security/Resilience:** uninterrupted availability of energy sources at an affordable price.

GOALS AND OBJECTIVES

In order to develop a report of comprehensive recommendations, the Task Force focused on strategies and actions to advance the goals of affordability, reliability, and security/resilience. To meet these goals, short-term, mid-term, and long-term objectives were developed. These include the following:

- **Short-term:** Minimize regret cost while providing reliable service.
- **Mid-term:** Invest in infrastructure improvements to advance our long-term goal of energy diversification.
- **Long-term:** Significantly diversify power generation with an emphasis on local, reliable, and affordable energy.

The Task Force was motivated to seek transformational approaches to reach these goals that might provide electrical energy to residents at a target price of \$0.10/kwh in the future. The Task Force reviewed numerous generation and transmission configurations and strategies from publicly available data but did not complete independent or internal cost estimates in developing action items and our strategy.

In the **short-term**, the Task Force acknowledges that continued reliability for generation and transmission in many areas of the state may require certain actions that are likely to increase costs. The expected increase in costs is directly tied to project permitting, available fund or financing, and in the case

of the Railbelt, local gas supply market in Cook Inlet. Short term options for electric and gas utilities that can reliably serve the local demand are limited. The magnitude of the rising costs, and the ability to arrest and then reverse these rising costs as energy sources are diversified, will depend upon our collective response to the recommendations set forth within. Therefore, it is important that investments in the short term do not hinder mid-term and long-term objectives of infrastructure improvements for diversified power generation sources.

In the **mid-term** (2-20 years), significant state and federal investment must be made in energy and power infrastructure to enable the long-term objective of diversified, local, reliable, and affordable energy. Alaska must invest in its future. Transmission system upgrades must be made to allow cost competition to optimize all generation, including renewables. Energy storage is another much needed investment area; where it is viewed that shared costs and control will help optimize overall energy cost and enable diverse generation forms to expand. Transmission upgrades, further deployment of energy storage and improved operating models are necessary to facilitate economic dispatch of electrical energy.

In the **long-term** (2040 and beyond), the Task Force established a objective that the system for generation, transmission and space heating within the Railbelt should reflect a significant diversification of energy supply from 2023 metrics and be affordable, sourced within the State of Alaska and, most importantly, reliable. Energy generation sources also need to be considered in the context of a sustained supply for the years to come.



ORGANIZATION OF TASK FORCE REPORT RECOMMENDATIONS

ENERGY PRIORITY AREA/SUBCOMMITTEE

Section IV. Energy Priority Areas of the Report are color coded based on Priority Area/Subcommittee.

REGIONAL SUBCOMMITTEES

FUNCTIONAL SUBCOMMITTEES



Railbelt



Coastal



Rural



State Energy Data



Incentives and Subsidies



Statutes and Regulations

STRATEGY DETAILS AND LIST OF ACTIONS

Section IV. Energy Priorities further details Strategies and lists actions for each Priority Area/Subcommittee.

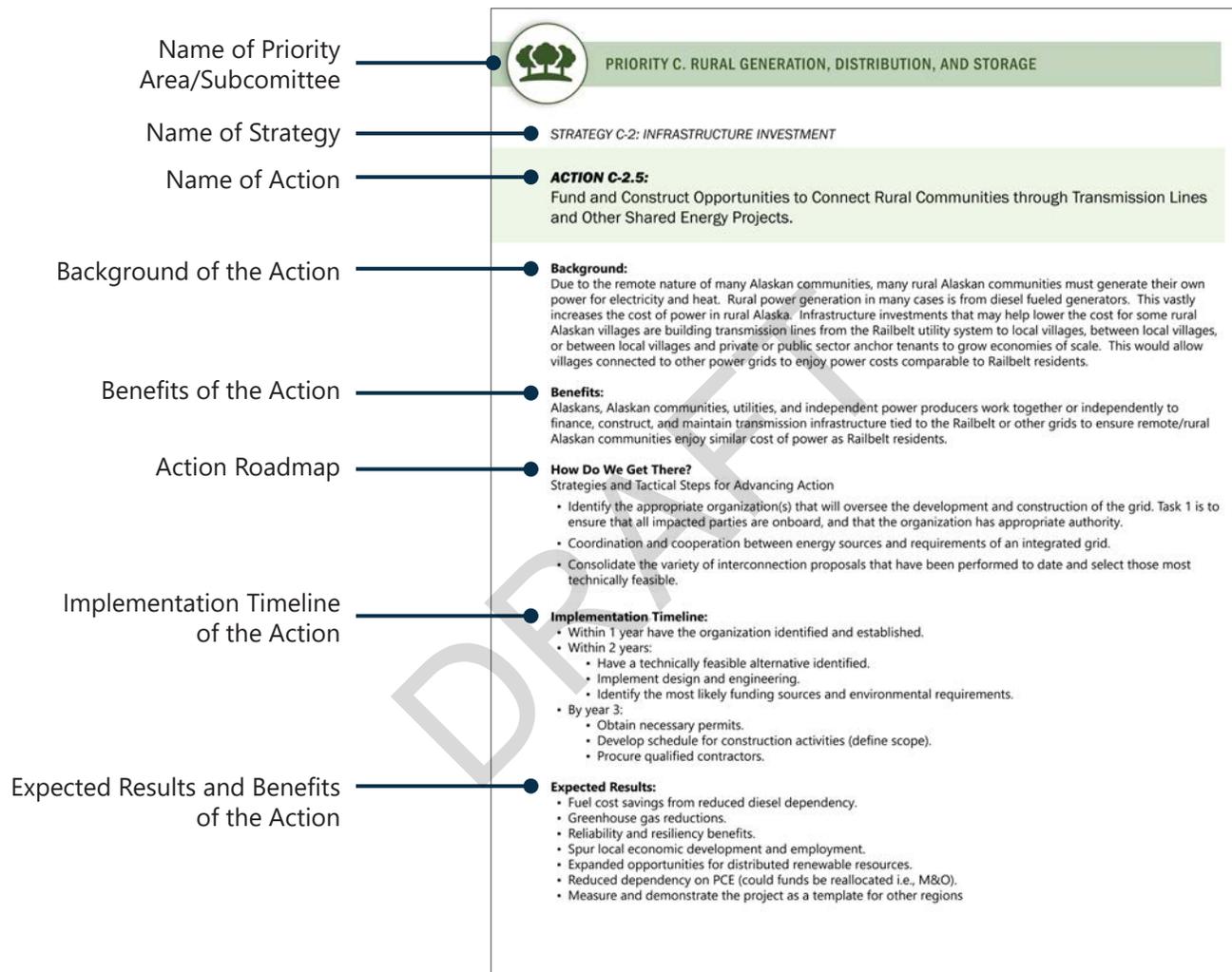
| | |
|---|---|
| <p>Name of Priority Area/Subcommittee</p> |  <p>PRIORITY C. RURAL GENERATION, DISTRIBUTION, AND STORAGE</p> |
| <p>Name of Strategy</p> | <p>STRATEGY C-1: Increase Capital Availability</p> |
| <p>List of Actions with specific changes in policies, programs, regulations, or funding to advance the strategy</p> | <p>ACTIONS</p> <ul style="list-style-type: none"> C-1.1 Identify a Funding or Financing Mechanism for Rural Communities including a "Local Match" for Federal Grants. C-1.2 Identify opportunities for Public Private Partnerships to finance/fund energy infrastructure projects in rural Alaska. 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. |
| <p>Purpose of the Strategy</p> |  <p><i>Humpback Creek Intake, Cordova, Alaska</i></p> <p>Purpose: Increase access to capital to provide additional funding/finance for project and infrastructure construction.</p> |
| <p>Background to the Strategy</p> | <p>Background: Small communities and developing regions do not have the economy required to generate the capital needed to build energy projects – e.g. hydro, SMR, transmission infrastructure</p> |
| <p>Benefits of the Strategy</p> | <p>Benefits: Alaskans need to reduce the cost and increase access to reliable energy in rural Alaska.</p> |
| <p>Expected Results of the Strategy</p> | <p>Expected Results: Sufficient investment in energy projects/infrastructure to reduce the cost of energy in rural Alaska.</p> |

Sample Page organization and layout illustrated above.

ORGANIZATION OF TASK FORCE REPORT RECOMMENDATIONS

ADDITIONAL DETAILS RELATED TO ACTIONS

Appendix II Additional Action Detail Summary includes background information and an implementation roadmap for individual actions identified in Section IV. Energy Priorities.



Sample Page organization and layout illustrated above.



NEXT STEPS AND ACTIONS RECOMMENDED FOR IMMEDIATE IMPLEMENTATION

Section V. Next Steps includes actions that the Task Force feels are ready for immediate implementation to help advance the overall strategy and outcomes identified in the plan. These actions deserve to be considered for further development by the Governor or the Legislature in the coming legislative session.

SECTION II.

PLANNING PROCESS



OVERVIEW

The Task Force planning process was conducted over 28 weeks and involved participation from both members of the Task Force, the Alaska Energy Authority, and participation from the public. Six separate Subcommittees were formed to add efficiency to the effort. The Task Force met every other week, and Subcommittee meetings were held in during the days between each Task Force meeting.

All Task Force and Subcommittee meetings were noticed per the State of Alaska Open Meetings Act, and were open to the public. Most meetings were attended by the public and were often supplemented by invited stakeholders and energy experts from around the state.

An Energy Symposium Series, and support from academia and consultants provided key support to the Task Force and added to the planning process that resulted in this report.

Also notable in this planning process is the fact that all Task Force members are senior executives in state government, in economic development organizations, in local utilities, or in private industry. All of these individuals gave significant time to meet the expectations and goals set out in A.O. No. 344 and 345. Several subcommittee meetings were either whole day or half day events demanding considerable time away from full time commitments.

Planning Process by the Numbers:



60+
Subcommittee Meetings



11
Task Force Meetings



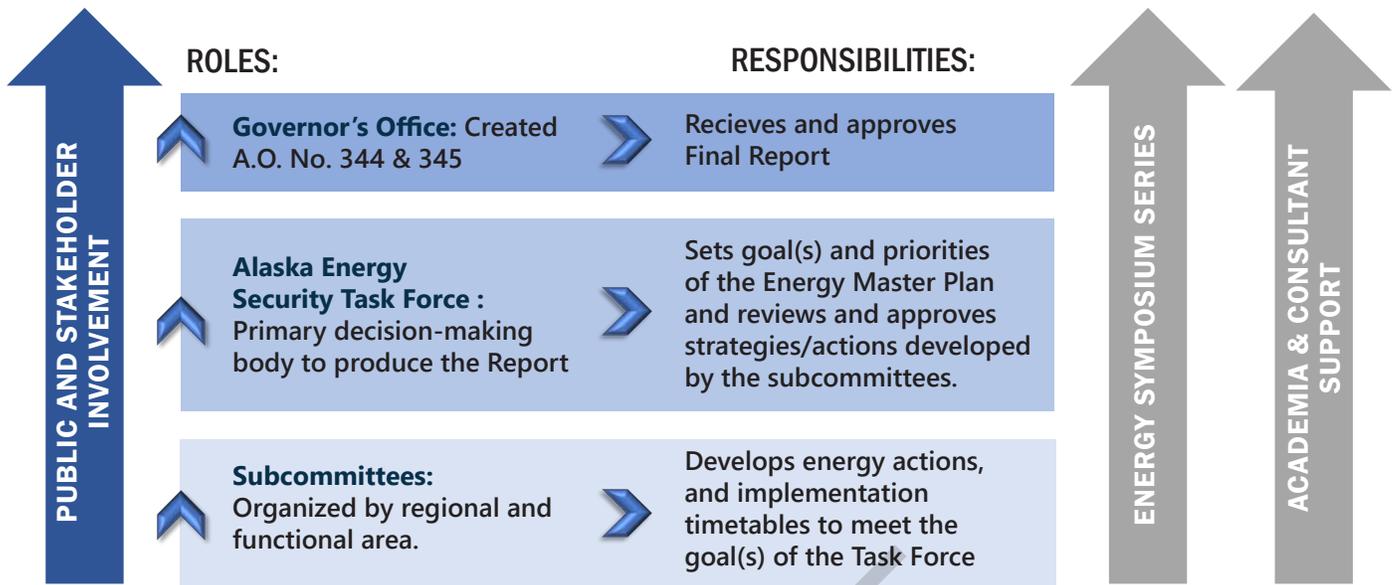
150+
Hours of Public Meetings



8
*Energy Symposiums with 16 Hours
of OnDemand learning*



6
*Subcommittees have created over 60
preliminary actions for consideration*



Planning Process for the Alaska Energy Security Task Force Report

Relevant roles, responsibilities and other participation details are outlined in the graphic below. Task force members met regularly through standing meetings, subcommittee meetings, and educational energy symposiums. Subcommittee meetings primarily consisted of members identifying and refining Energy Priorities for their specific geographical or functional area, and creating recommended actions the administration, state agencies, or the legislature might take to reach Task Force defined goals; to make energy more affordable, more reliable, and more resilient in Alaska for Alaskans. Task Force meetings encouraged in-person interaction and focused on Subcommittee reports, and review of work progress. Two full day Task Force meetings included subcommittee breakout sessions to allow face-to-face interaction and concentrated effort. Further details regarding the number and hours of meetings are included below. Meeting materials and documentation may be reference in **Appendix V**.

TASK FORCE MEETINGS AND SCHEDULE

| Number | Meeting | Date | Time |
|--------|--|-------------------------------|--------------------|
| 1 | Task Force | Tuesday, April 25, 2023 | 2:00 PM – 4:00 PM |
| 2 | Task Force | Tuesday, May 9, 2023 | 3:00 PM – 5:00 PM |
| 3 | Task Force | Tuesday, June 27, 2023 | 2:00 PM – 4:30 PM |
| 4 | Task Force | Tuesday, July 18, 2023 | 1:30 PM – 4:30 PM |
| 5 | Task Force | Tuesday, August 8, 2023 | 9:00 AM – 4:40 PM |
| 6 | Task Force | Tuesday, August 29, 2023 | 10:00 AM – 2:00 PM |
| 7 | Task Force Meeting and Status Update at National Hydropower Regional Meeting | Wednesday, September 13, 2023 | 9:00 AM – 10:00 AM |
| 8 | Task Force | Tuesday, September 19, 2023 | 9:00 AM – 10:00 AM |
| 9 | Task Force | Tuesday, October 3, 2023 | 9:00 AM – 4:30 PM |
| 10 | Task Force | Tuesday, October 10, 2023 | 2:00 PM – 4:00 PM |
| 11 | Task Force | Tuesday, October 24, 2023 | 5:00 PM – 7:00 PM |
| 12 | Task Force | Tuesday, October 31, 2023 | 9:00 AM – 4:30 PM |
| 13 | Task Force | Tuesday, November 7, 2023 | 2:00 PM – 5:00 PM |
| 14 | Task Force | Monday, November 20, 2023 | 3:00 PM - 4:00 PM |

SUBCOMMITTEE MEETINGS AND SCHEDULE

PRIORITY A: RAILBELT TRANSMISSION, GENERATION, AND STORAGE



The Railbelt Transmission, Generation, and Storage subcommittee meetings were noticed per the State of Alaska Open Meetings Act. Meetings that occurred are listed below and meeting material is available in **Appendix V**.

Railbelt Transmission, Generation, and Storage Subcommittee Meetings and Schedule

| Number | Subcommittee | Date | Time |
|--------|---|------------------------------|---------------------|
| 1 | Railbelt Transmission, Generation and Storage | Tuesday, July 25, 2023 | 3:00 PM – 4:00 PM |
| 2 | Railbelt Transmission, Generation and Storage | Tuesday, August 8, 2023 | 10:55 AM – 12:25 PM |
| 3 | Railbelt Transmission, Generation and Storage | Wednesday, August 30, 2023 | 1:00 PM – 2:00 PM |
| 4 | Railbelt Transmission, Generation and Storage | Tuesday, September 5, 2023 | 3:00 PM – 4:00 PM |
| 5 | Railbelt Transmission, Generation and Storage | Thursday, September 14, 2023 | 9:00 AM – 4:00 PM |
| 6 | Railbelt Transmission, Generation and Storage | Tuesday, September 19, 2023 | 10:40 AM – 12:00 PM |
| 7 | Railbelt Transmission, Generation and Storage | Monday, September 25, 2023 | 12:00 PM – 4:00 PM |
| 8 | Railbelt Transmission, Generation and Storage | Friday, October 6, 2023 | 12:00 PM – 4:00 PM |
| 9 | Railbelt Transmission, Generation and Storage | Tuesday, October 17, 2023 | 1:00 PM – 3:00 PM |

PRIORITY B: COASTAL GENERATION, DISTRIBUTION, AND STORAGE



The Coastal Generation, Distribution, and Storage Subcommittee meetings were noticed per the State of Alaska Open Meetings Act. Meetings that occurred are listed below and meeting material is available in **Appendix V**.

Coastal Generation, Distribution and Storage Subcommittee Meetings and Schedule

| Number | Subcommittee | Date | Time |
|--------|--|------------------------------|---------------------|
| 1 | Coastal Generation, Distribution and Storage | Friday, July 28, 2023 | 11:00 AM – 12:00 PM |
| 2 | Coastal Generation, Distribution and Storage | Tuesday, August 8, 2023 | 10:55 AM – 12:25 PM |
| 3 | Coastal Generation, Distribution and Storage | Friday, August 11, 2023 | 11:00 AM – 12:00 PM |
| 4 | Coastal Generation, Distribution and Storage | Friday, August 25, 2023 | 11:00 AM – 12:00 PM |
| 5 | Coastal Generation, Distribution and Storage | Friday, September 1, 2023 | 11:00 AM – 12:00 PM |
| 6 | Coastal Generation, Distribution and Storage | Friday, September 8, 2023 | 11:00 AM – 12:00 PM |
| 7 | Coastal Generation, Distribution and Storage | Friday, September 15, 2023 | 10:00 AM – 12:00 PM |
| 8 | Coastal Generation, Distribution and Storage | Friday, September 15, 2023 | 2:00 PM – 3:00 PM |
| 9 | Coastal Generation, Distribution and Storage | Tuesday, September 19, 2023 | 10:40 AM – 12:00 PM |
| 10 | Coastal Generation, Distribution and Storage | Friday, September 22, 2023 | 11:00 AM – 12:00 PM |
| 11 | Coastal Generation, Distribution and Storage | Thursday, September 28, 2023 | 11:00 AM – 12:00 PM |
| 12 | Coastal Generation, Distribution and Storage | Friday, October 20, 2023 | 11:00 AM – 12:00 PM |

C  **PRIORITY C: RURAL GENERATION, DISTRIBUTION, AND STORAGE**

The Rural Generation, Distribution, and Storage Subcommittee meetings were noticed per the State of Alaska Open Meetings Act. Meetings that occurred are listed below and meeting material is available in **Appendix V**.

Rural Generation, Distribution and Storage Meetings and Schedule

| Number | Subcommittee | Date | Time |
|--------|--|-----------------------------|---------------------|
| 1 | Rural Generation, Distribution and Storage | Tuesday, July 25, 2023 | 1:00 PM – 2:00 PM |
| 2 | Rural Generation, Distribution and Storage | Tuesday, August 8, 2023 | 10:55 AM – 12:25 PM |
| 3 | Rural Generation, Distribution and Storage | Thursday, August 17, 2023 | 1:00 PM – 2:00 PM |
| 4 | Rural Generation, Distribution and Storage | Thursday, August 24, 2023 | 1:00 PM – 2:00 PM |
| 5 | Rural Generation, Distribution and Storage | Thursday, September 7, 2023 | 1:00 PM – 2:00 PM |
| 6 | Rural Generation, Distribution and Storage | Monday, September 18, 2023 | 1:00 PM – 3:00 PM |
| 7 | Rural Generation, Distribution and Storage | Tuesday, September 19, 2023 | 10:40 AM – 12:00 PM |
| 8 | Rural Generation, Distribution and Storage | Friday, September 22, 2023 | 1:00 PM – 2:00 PM |
| 9 | Rural Generation, Distribution and Storage | Friday, September 29, 2023 | 1:30 PM – 2:30 PM |
| 10 | Rural Generation, Distribution and Storage | Monday, October 9, 2023 | 1:00 PM – 3:00 PM |

D  **PRIORITY D: STATE ENERGY DATA**

The State Energy Data subcommittee meetings were noticed per the State of Alaska Open Meetings Act. Meetings that occurred are listed below and meeting material is available in **Appendix V**. These meetings were facilitated and lead by the University of Alaska Fairbanks and the Alaska Center for Energy and Power (ACEP).

State Energy Data Meetings and Schedule

| Number | Subcommittee | Date | Time |
|--------|-------------------|-----------------------------|-------------------|
| 1 | State Energy Data | Monday, August 7, 2023 | 1:00 PM – 2:00 PM |
| 2 | State Energy Data | Tuesday, August 8, 2023 | 1:35 PM – 3:05 PM |
| 3 | State Energy Data | Thursday, August 10, 2023 | 9:00 AM |
| 4 | State Energy Data | Monday, August 21, 2023 | 2:30 PM – 3:30 PM |
| 5 | State Energy Data | Tuesday, September 19, 2023 | 1:10 PM – 2:30 PM |

PRIORITY E: INCENTIVES AND SUBSIDIES



The Incentives and Subsidies Subcommittee meetings were noticed per the State of Alaska Open Meetings Act. Meetings that occurred are listed below and meeting material is available in **Appendix V**.

Incentives and Subsidies Meetings and Schedule

| Number | Subcommittee | Date | Time |
|--------|--------------------------|------------------------------|---------------------|
| 1 | Incentives and Subsidies | Tuesday, July 25, 2023 | 2:00 PM – 3:00 PM |
| 2 | Incentives and Subsidies | Monday, August 7, 2023 | 8:00 AM – 9:00 AM |
| 3 | Incentives and Subsidies | Tuesday, August 8, 2023 | 10:55 AM – 12:25 PM |
| 4 | Incentives and Subsidies | Monday, August 21, 2023 | 8:00 AM – 9:00 AM |
| 5 | Incentives and Subsidies | Monday, August 28, 2023 | 8:00 AM – 9:00 AM |
| 6 | Incentives and Subsidies | Tuesday, September 5, 2023 | 8:00 AM – 9:00 AM |
| 7 | Incentives and Subsidies | Monday, September 11, 2023 | 8:00 AM – 9:00 AM |
| 8 | Incentives and Subsidies | Friday, September 15, 2023 | 12:00 PM – 2:00 PM |
| 9 | Incentives and Subsidies | Monday, September 18, 2023 | 8:00 AM – 9:00 AM |
| 10 | Incentives and Subsidies | Tuesday, September 19, 2023 | 1:10 PM – 2:30 PM |
| 11 | Incentives and Subsidies | Monday, October 2, 2023 | 8:00 AM – 9:00 AM |
| 12 | Incentives and Subsidies | Monday, October 9, 2023 | 8:00 AM – 10:00 AM |
| 13 | Incentives and Subsidies | Monday, October 16, 2023 | 8:00 AM – 9:00 AM |
| 14 | Incentives and Subsidies | Monday, October 23, 2023 | 8:00 AM – 9:00 AM |
| 15 | Incentives and Subsidies | Wednesday, November 15, 2023 | 8:00 AM – 9:00 AM |

PRIORITY F: STATUTES AND REGULATIONS



The Statutes and Regulations Subcommittee meetings were noticed per the State of Alaska Open Meetings Act. Meetings that occurred are listed below and meeting material is available in **Appendix V**.

Statutes and Regulations Meetings and Schedule

| Number | Subcommittee | Date | Time |
|--------|--------------------------|------------------------------|---------------------|
| 1 | Statutes and Regulations | Monday, July 24, 2023 | 10:30 AM – 11:30 AM |
| 2 | Statutes and Regulations | Friday, August 4, 2023 | 10:30 AM – 11:30 AM |
| 3 | Statutes and Regulations | Tuesday, August 8, 2023 | 1:35 PM – 3:05 PM |
| 4 | Statutes and Regulations | Tuesday, August 22, 2023 | 10:30 AM – 11:30 AM |
| 5 | Statutes and Regulations | Tuesday, September 5, 2023 | 10:30 AM – 11:30 AM |
| 6 | Statutes and Regulations | Tuesday, September 19, 2023 | 1:10 PM – 2:30 PM |
| 7 | Statutes and Regulations | Tuesday, October 3, 2023 | 10:30 AM – 11:30 AM |
| 8 | Statutes and Regulations | Tuesday, October 10, 2023 | 10:30 AM – 11:30 AM |
| 9 | Statutes and Regulations | Tuesday, October 17, 2023 | 10:30 AM – 11:30 AM |
| 10 | Statutes and Regulations | Tuesday, October 24, 2023 | 10:30 AM – 11:30 AM |
| 11 | Statutes and Regulations | Wednesday, November 15, 2023 | 8:00 AM - 9:00 AM |

ENERGY SYMPOSIUM MEETINGS AND SCHEDULE

The 2023 Energy Symposium Series included eight symposiums on energy issues in Alaska which examined the challenges, opportunities, and other factors that Alaska Energy Security Task Force members need to consider as part of the development of a statewide energy plan. The symposium presentations were virtual, with task force members participating as panelists and members of the public attending as participants. More information on the Energy Symposium Series is discussed in **Section III. Energy in Alaska.**

Energy Symposium Meetings and Schedule

| Number | Symposium | Date | Time |
|--------|---|------------------------------|--------------------|
| 1 | Energy Symposium - Future Natural Gas Supply for the Alaska Railbelt | Thursday, July 13, 2023 | 11:00 AM – 1:00 PM |
| 2 | Energy Symposium -Alaska Rural Energy: Challenges & Opportunities for Reducing the Cost | Thursday, July 20, 2023 | 11:00 AM – 1:00 PM |
| 3 | Energy Symposium -Global Trends and Grid of the Future | Thursday, July 27, 2023 | 11:00 AM – 1:00 PM |
| 4 | Energy Symposium - Railbelt Hydropower Development & Financing: Lessons Learned from the Past, Opportunities for the Future | Thursday, August 03, 2023 | 11:00 AM – 1:00 PM |
| 5 | Energy Symposium - Alaska Energy Statistics & Economics | Thursday, August 17, 2023 | 11:00 AM – 1:00 PM |
| 6 | Energy Symposium - Transmission and Storage: Building a More Resilient Grid | Thursday, August 24, 2023 | 11:00 AM – 1:00 PM |
| 7 | Energy Symposium - Emerging Technologies and Opportunities for Alaska: Small Scale Nuclear | Thursday, August 31, 2023 | 11:00 AM – 1:00 PM |
| 8 | Energy Symposium - RPS and Clean Energy Standards: National Policy Comparisons | Thursday, September 07, 2023 | 11:00 AM – 1:00 PM |

PUBLIC COMMENT AND TESTIMONY MEETINGS AND SCHEDULE

Two periods for in-person, virtual, and written public comment and testimony opportunities were provided as part of regularly scheduled Task Force Meetings. Agendas for both meetings below also included instruction to submit written comments to the Task Force via email. **Public comments received during both meetings and via email is included in Appendix VI.**

Public Comment and Testimony Meetings and Schedule

| Number | Meeting | Date | Time |
|--------|------------------|---------------------------|-------------------|
| 1 | Public Testimony | Tuesday, October 10, 2023 | 2:00 PM – 4:00 PM |
| 2 | Public Testimony | Tuesday, October 24, 2023 | 5:00 PM – 7:00 PM |

Public Comments recieved were further organized by general Task Force related comments and those specific to actions or strategies by energy prioity area/subcommittee so they could be effieciently dicussed at subcommittee-level and taskforce level meetings.



SECTION III.

ENERGY IN ALASKA



INTRODUCTION

On September 30th, 2022, Governor Dunleavy established the Office of Energy Innovation to provide a central point of focus for Alaska's efforts to reduce the cost of energy for residents. Alaskans suffer from exorbitantly high energy costs, restricted energy supply, and limited opportunities to drive down energy costs to consumers. Consequently, energy security and affordability are critical to Alaska's prosperity going forward.

Alaska is an energy rich state. Over 19 billion barrels of oil have moved through TAPS since 1977 when the pipeline first began operating. There are likely billions more barrels of untapped oil in North Slope reservoirs. There are billions of cubic feet of stranded natural gas stored underground on the North Slope. Finally, Alaska's known coal reserves could power the entire country for decades if not centuries. Hydrocarbons aren't the only energy resource available to Alaskans. Hydropower has been providing clean energy for some Alaska communities for nearly 100 years. This source of clean, renewable energy has significant growth potential in our state.

However, Alaska lacks sufficient electrical transmission infrastructure to provide reliable, redundant, and affordable power distribution in the Railbelt, where over 70% of Alaskans live. In fact, power distribution is nearly non-existent in rural Alaska, where local villages must rely on incredibly expensive village diesel generated power to meet their electrical and heating energy needs. Additionally, Cook Inlet natural gas supplied to Railbelt utilities for electrical and heat energy sources is rapidly decreasing. Existing contracts for Cook Inlet natural gas begin expiring as soon as 2027. This will force Railbelt utilities to find alternate sources of natural gas, at prices significantly higher compared to the current gas supply price.

The State of Alaska has previously prepared statewide energy plans, including the 2010 Alaska Energy Pathway and 2019 Energy Atlas as presented below. These previous planning efforts provide current context of this report. In addition, further context is provided through partnership with the University of Alaska as part of the eight meeting Energy Symposium Series, discussed below.



Yukon Mountains, Alaska

PRIOR ALASKA ENERGY PLANS

Alaska Energy Pathway: Toward Energy Independence, July 2010

In January 2009, the Alaska Energy Authority (AEA) published a report titled “Alaska Energy - A first step toward energy independence.” This guide is now being used by communities to review available resources and help determine least-cost energy options. A resource map was constructed that indicates the available resources for each community and AEA developed information on options that each community can use to achieve energy savings. This work effort evolved into a new report called the Alaska Energy Pathway, going one step further. The Pathway starts with addressing the ‘big picture’ by beginning to set an overall policy direction for the State, including aggressive targets for energy efficiency and conservation as well as renewable energy development.

Specific actions identified in this plan include:

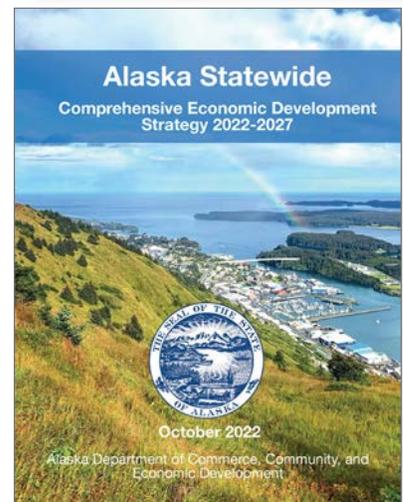
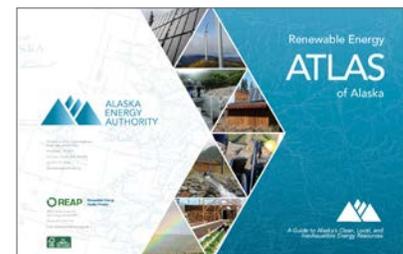
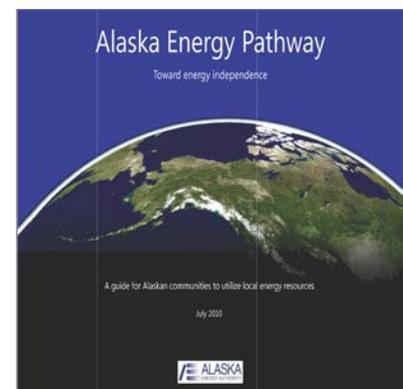
- 20% Energy Efficiency and Conservation Improvements by 2020
- 50% Renewable Energy for Electric Power by 2025
- Addressing Climate Change
- Energy Security
- Economic Development
- Investing in Innovation
- Education and Workforce Development
- Alaska’s Fossil Energy Future

Renewable Energy Atlas of Alaska, 2019

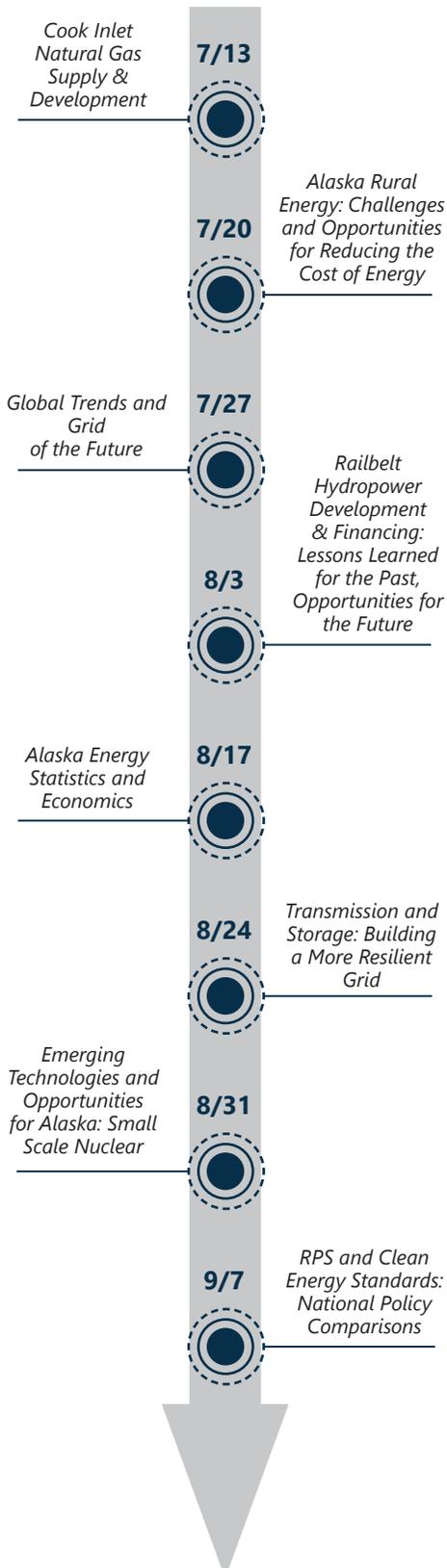
The Renewable Energy Atlas of Alaska is designed as a resource for the public, policy makers, advocates, landowners, developers, utility companies and others interested in furthering the production of electricity, heat and fuels from hydro, wind, biomass, solar, geothermal and ocean power resources. Produced with the use of geographic information system (GIS) technology, this Atlas brings together renewable resource maps and data into a single comprehensive document. The maps contained in this Atlas do not eliminate the need for on-site resource assessment. However, they do provide a high level estimate of the available resources.

Alaska Statewide Comprehensive Economic Development Strategy, October 2022

The Alaska Statewide Comprehensive Economic Development Strategy (CEDS) is a five-year economic development plan for Alaska, active from 2022-2027. Driven by the need to improve the resilience of the state’s



2023 Energy Symposium Series Timeline



economy and intentionally lay a foundation for future growth, this plan follows the U.S. Economic Development Administration’s Comprehensive Economic Development Strategy (CEDS) guidelines. It takes the place of the prior Statewide CEDS, which was in effect from 2017 to 2022. The Alaska Statewide CEDS is the product of a six-month process reflecting extensive analysis of the state economy, the input of hundreds of Alaskans, and the involvement of dozens of business, government, education, and nonprofit leaders. Although led by state government, it is designed to be used broadly by anyone working to strengthen the Alaska economy.

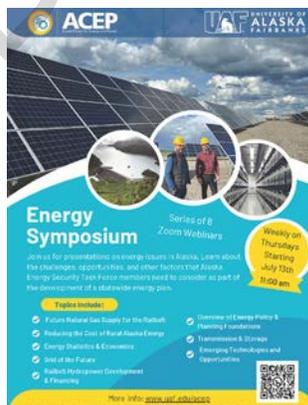
Economist Scott Goldsmith famously used the metaphor of a three-legged stool to describe Alaska’s economic base: oil and gas, federal spending, and everything else.

This plays a major factor in developing the plan’s goals, below:

- Strengthen Economic Engines
- Cultivate and Grow Emerging Sectors
- Support a Strong Business Climate and Entrepreneurial Ecosystem
- Build and Update Economic Foundations
- Develop Alaska’s Workforce and Human Capital
- Build a Resilient Economy

ENERGY SYMPOSIUM SERIES

The Task Force attended an Energy Symposium Series, focused on energy issues in Alaska. The **Energy Symposium Series** included eight symposiums on energy issues in Alaska which examined the challenges, opportunities, and other factors that Alaska Energy Security Task Force members need to consider as part of the development of a statewide energy plan. The symposium presentations were virtual, with task force members participating as panelists and members of the public attending as participants.



Topics of the Energy Symposium Series included:

- Future Natural Gas Supply for the Railbelt
- Reducing the Cost of Rural Alaska Energy
- Energy Statistics & Economics
- Grid of the Future
- Railbelt Hydropower Development & Financing
- Overview of Energy Policy & Planning Foundations
- Transmission & Storage
- Emerging Technologies and Opportunities

Presentation materials from the Energy Symposium Series are included in **Appendix III**. These topics are also outlined and summarized on the following pages. Links to video recordings of these symposium’s are also provided.

July 13th Energy Symposium:

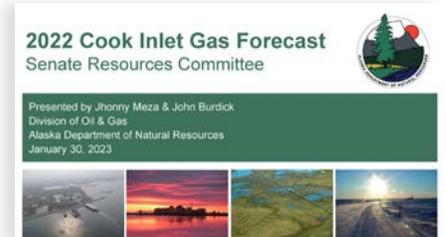
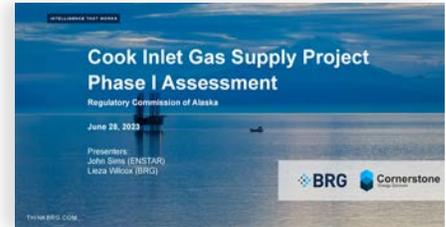
Cook Inlet Natural Gas Supply and Development

Presentations Included:

- **2022 Cook Inlet Gas Forecast**
Prepared by: Division of Oil & Gas, Alaska Department of Natural Resources
- **Cook Inlet Gas Supply Project Phase I**
Prepared by: Regulatory Commission of Alaska
- **Alaska Liquefied Natural Gas (LNG) Project**
Prepared by: Alaska Gasline Development Corp

Key Topics Explored:

- Cook Inlet gas won't meet forecasted demand beyond 2026 (current reserves) or early/mid 2030s (assuming incremental supply development)
- Viable options for Cook Inlet Gas supply must be reduced to single sanction decision by December 2023
- Alaska LNG project update



Watch the complete July 13th Energy Symposium recording [here](#).

July 20th Energy Symposium:

Alaska Rural Energy: Challenges & Opportunities for Reducing the Cost of Energy

Presentations Included:

- **Providing Electricity in Rural Alaska**
Prepared by: Alaska Village Electric Cooperative
- **How is AVEC Doing?**
Prepared by: Alaska Village Electric Cooperative
- **Standalone Rural Electric Utilities**
Prepared by: Matanuska Telephone Association
- **Public Private Partnerships & The Case for Community – IPPs**
Prepared by: Northwest Arctic Borough & NANA Regional
- **From the Frontier to the Future**
Prepared by: Intelligent Energy Systems, LLC

Key Topics Explored:

- Why electricity is expensive in rural Alaska?
- Strategies discussed to reduce power cost
- Case Studies and examples from standalone utilities and cooperatives
- Public Private Partnerships – IPPs



Watch the complete July 20th Energy Symposium recording [here](#).

July 27th Energy Symposium:

Global Trends and Grid of the Future



Presentations Included:

- **Energy Transformation – It can Happen Faster than you Think! South Australia as a Case Study,**
Prepared by: Sandia National Laboratories
- **Opportunities for Electric Load Growth in Alaska**
Prepared by: Sandia National Laboratories
- **Insights into the Icelandic Energy Market**
Prepared by: Alaska Center for Energy and Power



Key Topics Explored:

- Heating space and water is the biggest energy user in Alaska
- Cold-climate air source heat pumps (ccASHP): problems and solutions with widespread heat pump adoption and solutions
- Potential Solutions include: dual fuel heat pumps, better building envelope, geothermal heat pumps

Case Studies:

- Proliferation of diverse energy in South Australia
- Overview of Iceland’s energy market and how it compares to Alaska

Watch the complete July 27th Energy Symposium recording [here](#).



August 3rd Energy Symposium:

Railbelt Hydropower Development & Financing: Lessons Learned from the Past, Opportunities for the Future



Presentations Included:

- **Small Hydropower in Southcentral Alaska**
Prepared by: Polarconsult Alaska, Inc.
- **Bradley Lake Operations and Governance**
Prepared by: Bradley Lake Project Management Committee
- **Railbelt Hydropower – Current & Upcoming Projects**
Prepared by: Alaska Energy Authority
- **Susitna-Watana Hydro**
Prepared by: Susitna-Watana Hydro

Key Topics Explored:

- Dixon Diversion
- Susitna-Watana Hydro
- Southcentral small hydro
- Bradley Lake Operations and Governance

Watch the complete August 3rd Energy Symposium recording [here](#).



August 17th Energy Symposium:

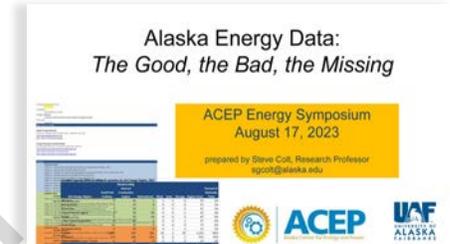
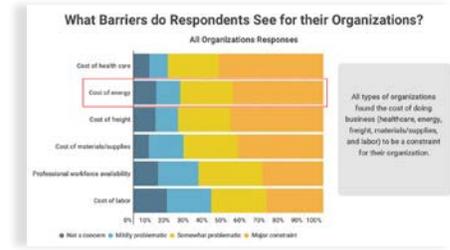
Alaska Energy Statistics & Economics

Presentations Included:

- **Alaska Energy Data: The Good, the Bad, the Missing**
Prepared by: Alaska Center for Energy and Power
- **Alaska Comprehensive Economic Development Strategy (CEDS) Overview**
Prepared by: UA Center for Economic Development, Alaska DCCED
- **CEDS Energy – Specific Goals & Objectives**
Prepared by: Department of Commerce, Community, and Economic Development

Key Topics Explored:

- Need for central energy data repository with regular maintenance and updates
- Unreliable/uncleaned data is worse than no data
- There is almost zero measured fuel oil consumption data
- Impact of EVs and Heat Pumps



Watch the complete August 17th Energy Symposium recording [here](#).

August 21th Energy Symposium:

Transmission & Storage: Building a More Resilient Grid

Presentations Included:

- **Energy Storage Options and Selection Considerations**
Prepared by: Sandia National Laboratories
- **Beneficial and Equitable Electrification**
Prepared by: Alaska Center for Energy and Power
- **Tidal Power in Alaska**
Prepared by: Alaska Center for Energy and Power

Key Topics Explored:

- Energy storage system (ESS) selection is scenario specific, key scenario considerations
- Beneficial and Equitable Electrification
- Tidal Power in Alaska: Policy & Permitting Recommendations



Watch the complete August 24th Energy Symposium recording [here](#).

August 31st Energy Symposium:

Emerging Technologies and Opportunities for Alaska: Small Scale Nuclear

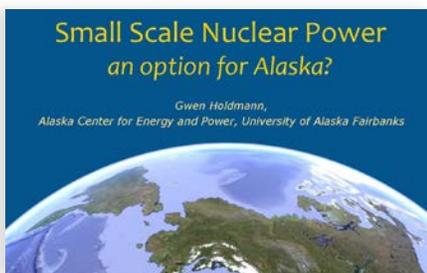


Presentations Included:

- **Copper Valley Electric Association Ultra Safe Nuclear**
Copper Valley Electronic
- **Nuclear Energy: State of Micro Reactors**
Nuclear Energy Institute
- **Small Nuclear Power: an Option for Alaska?**
Alaska Center for Energy and Power, University of Alaska Fairbanks

Key Topics Explored:

- Copper Valley – Micro Modular Reactor Energy Systems Overview, pre-feasibility study process overview and relevant stakeholder engagement.
- Micro Reactor Technology – feasibility, cost-competitiveness, financing, workforce
- Community members generally supportive of small scale nuclear after proper outreach and community engagement (information changes perspectives)



Watch the completed August 31st Energy Symposium recording [xxx](#).



September 7th Energy Symposium:

RPS and Clean Energy Standards: National Policy Comparisons



Presentations Included:

- **Renewable Energy Standards and Clean Energy Standard Overview**
Prepared By: National Renewable Energy Laboratory (NREL)

Key Topics Explored:

- Key Renewable Portfolio Standard Elements
- Clean Electricity Standards Overview and Design Elements
- Renewable Portfolio Standard policy comparisons at the national level

Watch the complete September 7th Energy Symposium recording [xxx](#).





SECTION IV. ENERGY PRIORITIES



This section is divided into the following Energy Priorities:

- Priority A. Railbelt Transmission, Generation, and Storage**
- Priority B. Coastal Generation, Distribution, and Storage**
- Priority C. Rural Generation, Distribution, and Storage**
- Priority D. State Energy Data**
- Priority E. Incentives and Subsidies**
- Priority F. Statutes and Regulations**

PRIORITY A.

RAILBELT TRANSMISSION, GENERATION, AND STORAGE

PLANNING PROCESS HIGHLIGHTS

Task Force Meetings by the Numbers

73 *Total Number
of Meetings*

158 *Total Hours
of Meetings*

Railbelt Generation, Transmission, and Storage Subcommittee Meetings by the Numbers

9 *Total Number
of Meetings*

22.5 *Total Hours
of Meetings*

Note: Some Task Force Meetings include break-out subcommittee meetings.

STRATEGIES:

- A-1 Unify & Upgrade Transmission & Storage
- A-2 Diversify Generation
- A-3 Increase Demand



INTRODUCTION

The Railbelt Generation, Transmission, and Storage (RGTS) subcommittee of the Task Force was created to develop an energy plan that will move the Railbelt towards energy independence while lowering the cost to its residents over the long-term. In order to complete this plan, it was important to understand the current state of our energy portfolio. Since Statehood, the Railbelt utilities and their customers have benefited from the significant natural gas finds in the Cook Inlet. Over time, this basin has supported approximately 80% of the power generation, and a majority of the population hubs' space and water heating needs.

Sixty years later, local supplies of natural gas are getting harder to find and the quantities of gas behind pipe and available for market consumption are dwindling. This fact is causing commodity prices to increase, presenting the region with an opportunity to diversify our power generation and build for the future. It also forced the RGTS to acknowledge the fact that we must include solutions for space and water heating in our plan recommendations. In order to develop our recommended plan, the RGTS determined the most efficient approach would be to establish long-term, mid-term, and short-term goals that reflect our desired outcomes here along the Railbelt. Here are the recommended goals:

- Short-term: Minimize regret cost while providing reliable service.
- Mid-term: Invest in infrastructure improvements to advance our long-term goal of energy diversification.
- Long-term: Significantly diversify power generation with an emphasis on in-state, reliable, and more affordable clean energy.

The RGTS was motivated to seek transformational approaches to reach these goals that might provide electrical energy to residents at a target price of \$0.10/kwh in the future. The RGTS reviewed numerous generation and transmission configurations and strategies from publicly available data but did not complete independent or internal cost estimates in developing action items and our strategy.

In the short-term, the RGTS acknowledges that continued reliability along the Railbelt generation and transmission system may require certain actions that are likely to increase costs. The expected increase in costs is directly tied to the local gas supply market in Cook Inlet. There are no other options for electric and gas utilities that can reliably serve the local demand in the short to mid-term. The magnitude of the rising costs, and the ability to arrest and then reverse these rising costs as energy sources are diversified, will depend upon our collective response to the recommendations set forth within. Therefore, it is important that investments in the short term do not hinder mid-term and long-term goals of infrastructure improvements for diversified power generation sources.

In the mid-term (2-20 years), significant state and federal investment must be made in energy and power infrastructure to enable the long-term goal of diversified, local, reliable, and affordable energy. Alaska must invest in its future. Transmission system upgrades must be made to allow cost competition to optimize all generation, including clean energy. Energy storage is another much needed investment area; where it is viewed that shared costs and control will help optimize overall energy cost across the Railbelt and enable diverse generation forms to expand in the Railbelt. Transmission upgrades, further deployment of energy storage and improved operating models are necessary to facilitate economic dispatch of electrical energy.

In the long term, for 2040 and beyond, the RGTS has established a goal that the system for generation, transmission and space heating within the Railbelt should reflect a significant diversification of energy supply from 2023 metrics and be affordable, sourced within the State of Alaska and, most importantly, reliable. Energy generation sources also need to be considered in the context of a sustained supply for the years to come.



STRATEGY A-1:

Unify & Upgrade Transmission & Storage

ACTIONS

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.



Purpose:

Provide a strong transmission system which enables new generation projects to integrate to the grid. Investing in transmission and storage infrastructure and unifying assets will enable the long term goal to significantly diversify Railbelt generation and provide energy that is reliable, affordable and generated in-state. We recommend accomplishing this by:

- Unify all existing transmission assets along the Railbelt and Bradley Lake under AEA or a new not-for-profit regulated utility.
- Identify state and federal funding opportunities for transmission upgrades
 - Complete HVDC transmission line from the Kenai peninsula
 - Complete HVDC transmission line from Anchorage to Fairbanks
 - Complete additional necessary system upgrades
- Develop transmission, operation, and control reform with a regulated version of management committee.
- Establish a single transmission rate for the Railbelt.
- Align ERO statute and regulations with transmission reform.

Background:

The Railbelt system is made up of five electric utilities providing service to the communities from the Kenai peninsula to Fairbanks. These five utilities all generate power through various means including hydro-electric generation, natural gas powered generation and coal fired generation. The transmission system ownership and operatorship is split up across its length and transmitting generation from one region to another currently incurs wheeling charges which may be multiple depending on the number of operating areas energy is transmitted across. The transmission lines have current bottleneck points and generally lack redundancy. Battery energy storage systems are being added to the grid to stabilize operations and additional storage is needed to enable generation diversification and ensure reliability.



The AEA, in partnership with the five Railbelt utilities, has identified several opportunities for transmission line upgrades and battery energy storage systems that will reduce existing constraints on the Railbelt grid by increasing the Kenai Peninsula’s transmission capacity to export power from Bradley Lake hydropower, while also allowing for the integration of additional clean energy generation.

Further, AEA and Railbelt utilities are seeking federal funding to construct a second line between Soldotna and Healy to allow Bradley Lake power to reach consumers along the Railbelt even when one line is out of service on either a scheduled or unscheduled basis.

Benefits:

- Reduces transmission constraints on Railbelt grid, while also allowing for the quicker integration of additional clean energy generation.
- Provides system redundancy, resilience, and increases reliability.
- Benefits utilities and ratepayers by sharing power throughout the region.
- Reduces costs for consumers and promotes job creation.
- Coordinates planning, financing, and construction of new infrastructure.
- Augments and diversifies Environment, Social, and Governance investment portfolio holdings.

Expected Results:

This strategy will result in a more resilient and reliable transmission and electric grid system that will lower rates, help bring online clean energy, reduce costs for consumers, and promote job creation, reduce costs for consumers, and promote job creation.



Wasilla, Alaska



STRATEGY A-2: Diversify Generation

ACTIONS

A-2.1 Adopt Clean Energy Standard and incentives to diversify generation.

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.

A-2.3 Progress known near term energy diversification projects to a go/no-go decision:
2.3.1: Dixon Diversion

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



Alaska Intertie, Alaska (Source: GVEA)

Purpose:

Encourage and coordinate the diversification of Railbelt generation assets through projects and policy that provide opportunities to maximize energy cost savings.

Background:

Today, 80-90% of the Railbelt's energy (heat and power) is generated using Cook Inlet (CI) natural gas, a supply source which is forecasted to fall short of demand as soon as 2027. Alaska utilities may likely need to import Liquefied Natural Gas (LNG) to meet short term supply needs and this is anticipated to increase the cost of energy and introduces potential energy security concerns. In order to ensure a secure, local supply of energy that is affordable and reliable, the Task Force Railbelt Subcommittee set a long term goal of significantly diversifying the Railbelt's energy generation.

Today, many proven and cost competitive electricity generation technologies exist and are ready for at-scale deployment across the Railbelt, and the state as a whole. Alternative technologies for central heat generation are not as ready to deploy and distributed heat generation solutions such as heat pumps point to electricity generation as their source. Based on this, the Railbelt Subcommittee recommends a near term focus on diversifying electricity generation. This will conserve natural gas for heat while increasing energy security with local and diverse electricity generation projects.

To enable this strategy the Railbelt Subcommittee supports the state adopting a Clean Energy Standard which would set electricity diversification goals. These goals should be supported with incentives rather than penalties to ensure affordable, reliable power is delivered to rate-payers. The Railbelt Subcommittee also recommends modifying state statutes to provide the Regulatory Commission of Alaska (RCA) the ability to value generation diversification (in addition to price) when reviewing and approving contracts.



The Railbelt Subcommittee did not complete comprehensive analysis or cost estimates for potential generation projects and ultimately all technologies should compete to bring the most affordable, diverse, reliable energy to the Railbelt. That said, there are projects which have previously been proposed or are currently being worked and the Subcommittee supports taking these projects through feasibility such that a “go/no-go” decision can be made. Alaska has several projects in various stages of development and permitting that could provide diversified renewable and clean power generation for Railbelt utilities including the Dixon Diversion project at Bradley Lake, and the potential mega-project at Susitna-Watana. Additionally, the Alaska LNG (AKLNG) project has the potential to open vast quantities of trapped North Slope natural gas for uses across the interior and south-central Alaska. The AKLNG is strategic in that it provides a local gas supply for heat and electricity base load for generations to come.

Benefits:

Encouraging and promoting diversification of power generation in the Railbelt and across Alaska may provide reliable, low cost energy for Alaskans.

Expected Results:

Greater diversification of power generation to provide reliable, lower cost electricity, for Railbelt rate payers.

“Today, 80-90% of the Railbelt’s energy (heat and power) is generated using Cook Inlet (CI) natural gas, a supply source which is forecasted to fall short of demand as soon as 2027.”



Seward Highway Transmission Line



Houston Solar Field
Houston, Alaska



STRATEGY A-3: Increase Demand

ACTIONS

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



Port of Alaska, Anchorage, Alaska

Purpose:

Significantly increase load to drive down energy rates.

Background:

All other things being equal, if the fixed infrastructure costs of a power grid are spread over more customers and greater energy loads, customers will end up paying less on a per-kWh basis. This strategy has been used in Iceland, for example, where a high volume of production and sales have created efficiencies and economies of scale. According to analysis provided by Holdmann and Gudleifsson (in preparation), Iceland’s total electric production and Alaska’s tracked very closely until the mid-1990s, as did the delivered cost for electric power. After that point in time, the trajectories diverged significantly both in terms of annual production and sales as Iceland actively courted and attracted large industry (aluminum smelting) to its electric grid. This new industry increased Iceland’s energy demand by four-fold. Iceland’s cost of power delivered to the customer’s meter is now \$0.7-\$0.13 per kWh, as compared with \$0.19-\$0.26 for power from Alaska’s Railbelt grid.

A similar approach could be undertaken on Alaska’s Railbelt to drive the cost of power down for all customers and spur continued economic growth. Examples of new, large customers on the Railbelt could include ore processing of locally-resourced materials as well as new fuel generation production facilities for the transportation industry (air carriers, shipping, etc.), among others. A key insight is that Iceland simultaneously sought out new industry and committed to lower than current energy costs to incentivize industry to select Iceland as the preferred location.

Benefits:

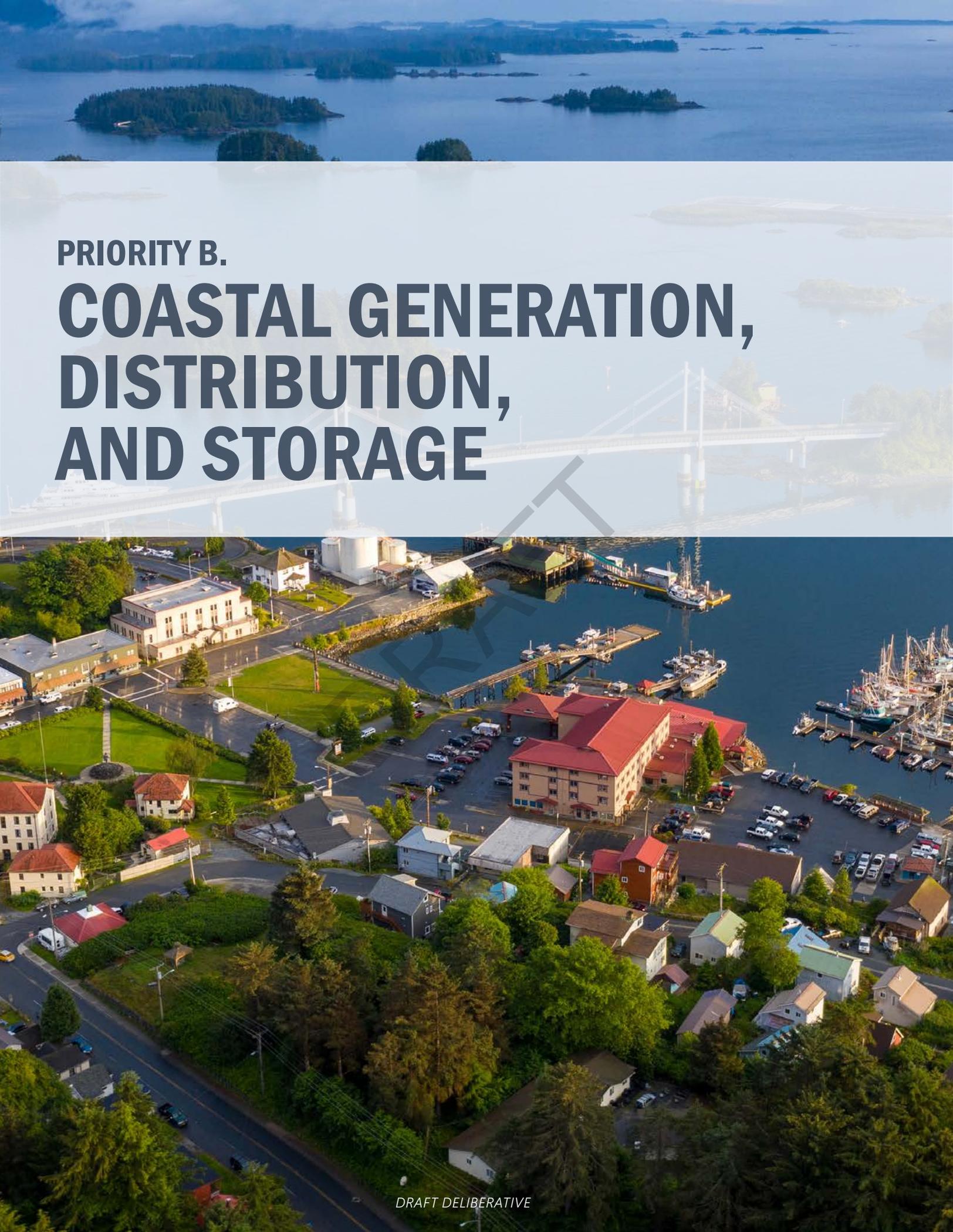
Incentivizing and attracting large industry customers to Alaska’s Railbelt to increase electricity production demand, following a similar model to Iceland, could help lower the cost per- kWh for all Railbelt customers.

Expected Results:

The Railbelt will significantly increase its load to drive down prices for all consumers and spur economic development overall.

“The Railbelt system is made up of five electric utilities providing service to the communities of the Kenai peninsula to Fairbanks.”



The image is a composite of two aerial photographs. The top half shows a wide expanse of blue water with several small, forested islands. A large white cable-stayed bridge spans across the water. The bottom half shows a coastal town with a mix of buildings, including a large multi-story building with a red roof, a marina filled with fishing boats, and a parking lot. The text is overlaid on the top half of the image.

PRIORITY B.

COASTAL GENERATION, DISTRIBUTION, AND STORAGE



INTRODUCTION

The Coastal Subcommittee’s strategies and actions are meant to support the overall Alaska Energy Security Task Force goal of identifying opportunities to lower the cost of energy in Alaska for Alaskans. The Coastal Subcommittee settled on four high-level strategies supported by twelve specific action recommendations focused on lowering energy costs for Alaskans living in coastal areas of the state. Our strategies recommend Alaska and Federal policy updates to allow streamlined project identification, planning, funding/financing and permitting. The Market Initiatives strategy seeks to maximize use of existing energy generation and transmission assets and promote new renewable energy assets to lower energy costs for Alaskans and their industries. Finally, as hydropower is one of the primary sources of energy generation for many coastal Alaskan communities, the Alaska Hydropower strategy recommends enhancing Alaska’s policies to fast-track hydropower for affordable, secure energy Alaskans expect by optimizing Alaska public policies and investments to promote and advance execution-ready hydropower projects to lower the cost of energy and to bolster community and regional energy security.

PLANNING PROCESS HIGHLIGHTS

Task Force Meetings by the Numbers

73 Total Number of Meetings

158 Total Hours of Meetings

Coastal Generation, Distribution, and Storage Subcommittee Meetings by the Numbers

12 Total Number of Meetings

14.5 Total Hours of Meetings

Note: Some Task Force Meetings include break-out subcommittee meetings.

STRATEGIES:

- B-1 Alaska Market Initiatives
- B-2 Alaska Policy Recommendations
- B-3 State of Alaska Coordination with Federal Agencies and Federally Recognized Tribes Recommendations
- B-4 Alaska Hydropower Generation Recommendations



STRATEGY B-1: Alaska Market Initiatives

ACTIONS

- B-1.1** Integrate and promote heat pump technology and systems (ASHP, SWHP, GSHP) as an alternative energy resource in Coastal Alaska.
- 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.
- 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.
- 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.



Purpose:

Maximize utilization of existing energy generation and transmission and promote new renewable energy assets to lower energy costs for Alaskans and their industries through market initiatives and expansion.

Background:

Energy generation and transmission assets, like power plants and electricity distribution grids, have significant upfront costs. For these assets to be cost-effective and viable, they need to be built at a particular scale, benefiting from what is known as “economies of scale,” the more significant the operation, the more cost-effective it becomes per unit of energy produced or transmitted. Market initiative and expansion of electricity is known as beneficial electrification. “Beneficial Electrification” refers to replacing direct fossil fuel use for heating and transportation with electricity to reduce overall emissions and energy costs while simultaneously delivering broader environmental and societal benefits. The primary aim is to shift end-use energy sources to cleaner, renewable electricity sources.



Energy Generation and Transmission assets require minimally sufficient economies of scale to enable minimum viable generation projects and transmission to be built or expanded. Expanding energy markets through market initiatives that serve multiple goals creates sufficient economies of scale to lower energy costs through demand creation for critical energy generation and transmission assets, thereby increasing affordability, reliability, energy security, and grid resilience that reduce the cost of energy through displacement of higher cost fuel sources and by creating new energy demand. These market initiatives also create family-wage-sustaining jobs in Alaska.

Benefits:

The proposed market initiatives create multiple economic and societal benefits while providing Alaskans lower cost energy.

The Alaska Market Initiative Action Items have a range of planning, development, financing, implementation, and operation implementation timelines extending from the immediate to the long-term horizon for Alaska’s Energy Plan.

Expected Results:

Strategically planned market initiative actions with tactical implementation focused on fully utilizing generation and transmission current and future assets will optimize State Alaska’s Energy plan to lower Alaskans’ energy costs (electric, heating, transportation).

ACTIONS (CONT.)

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.



Cordova, Alaska



STRATEGY B-2: Alaska Policy Recommendations

ACTIONS

- 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.
- 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.
- 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.



Purpose:

Enhance Alaska's departmental and regulatory policies to spur and sustain renewable energy and transmission development to cut energy costs and advance economic prosperity for Alaska.

Background:

Alaska policies, while unintended, can prevent, stall, or, in some cases, prohibit the permitting and necessary governmental authorizations to timely and optimally develop and advance renewable energy and transmission assets required to move Alaska forward from a developing state status to a first-world energy state that Alaskans deserve. While there is not one solution, the Administration can take many internal steps and actions to create a unity of effort among State agencies with disparate missions and objectives. An overarching Energy Plan that directionally provides State agencies the authority and motivation to help the Governor successfully implement that State Energy Plan and achieve recommended action is doable with a coordinated effort.

Alaska can transcend policies that have been focused on the past or regulatory mission and should directionally (as opposed to aspirational) incorporate the Governor's directives to implement the State Energy Plan in concert with regulatory balance, protecting our environment while streamlining processes, procedures and producing results to lower the cost of energy for Alaskans. Regardless of whether the policy directive is called a "unity of purpose and effort" or an all-hands-on-deck policy, Alaskans are better served through introspection of how we can and should do better, with concentrated and collective efforts to do better in serving Alaskans achieve lower cost energy now and for future generations.



Ketchikan, Alaska

Benefits:

The proposed Alaska Policy Recommendations create multiple economic and societal benefits while providing Alaskans with administrative purpose and collective effort to find and exploit synergies to lower the energy cost for Alaskans in concert with Departmental missions and goals.

The proposed Alaska Policy Recommendation creates multiple economic and societal benefits while providing Alaskans lower cost energy.

Expected Results:

Strategically planned and matured by the Administration and AEA of the Task Force Alaska Policy Recommendations combined with efficient and well thought out implementation focused on light Integrated Resource Planning, reducing State of Alaska barriers and bottlenecks, optimizing federal funding for the strategic achievement of goals, tactical and practical implementation of can do, how we get to “yes” policies will reduce the cost of power for Alaskans today and leave an energy legacy for generations of Alaskans to follow.

ACTIONS (CONT.)

- 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.
- 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.
- 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, State and Federally Recognized Tribes and Alaska Native Corporations Recommendations

ACTIONS

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.

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.



Ketchikan, Alaska

Purpose:

Refine federal policy to bolster Alaska’s clean energy and support tribes in securing affordable energy. Directionally (as opposed to aspirationally) advance Alaska’s Energy Plan priorities to promote and develop clean energy generation and transmission assets through negotiating and influencing federal agencies for proactive federal energy development policy modifications and revisions and to collaborate and assist Alaska’s federally recognized tribes in obtaining lower cost energy in Alaska.

Background:

The State of Alaska has the highest disparity of power costs from one community or region to another. Some of America’s highest-cost energy communities amplify that these communities are in the Tongass and Chugach Forests lands controlled by the US Department of Agriculture (USDA) US Forest Service (USFS). Currently, there is limited or no State input or consultive rights provided by the State of Alaska to affect the federal policies of the federal government in a collaborative and constructive dialogue that lowers the cost of energy for Alaskans and reduces emissions and other national goals of energy security and lessening dependence on fossil fuels.

RS 2477 (Revised Statute 2477) refers to a provision in the Mining Act of 1866, which allowed for the construction of highways across public lands not reserved for public uses. In simple terms, RS 2477 granted a “right-of-way” to build roadways and transmission lines over public land that provide access to renewable energy project areas.

Section 4407 of Public Law 109-59 (Section 4407) of a 2005 federal transportation funding bill refers to a Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). SAFETEA-LU was



a bill sponsored by the late Congressman Don Young and was signed into law by President George W. Bush in August 2005. Section 4407 provides as follows: Notwithstanding any other provision of law, the reciprocal rights-of-way and easements identified on the map numbered 92337 and dated June 15, 2005, were enacted into law. Section 4407 Rights of Way provides roadways and transmission line corridors over the Tongass National Forest, instrumental for the State of Alaska’s interests in providing access to renewable energy project areas and transmission lines. However, Tongass Forest Land Management Plans, Land Use Designations (LUD), and other federal regulations are at odds with the State exercising its rights.

Coastal Alaska communities also want to lower energy, heating, and transportation costs. Federally Recognized Tribes actively explore energy solutions and are supported in tribal energy endeavors by federal resources mutually beneficial to the State of Alaska’s interests. Tribal goals align with the broader Alaska state mission of making energy more affordable for all residents. Additionally, many federally recognized tribes have designated staff working specifically on energy projects, often in collaboration with federal entities. By coordinating and collaborating, the State of Alaska, Federally Recognized Tribes, and our shared Alaskan communities can assist the wider Alaskan population by cooperatively developing and sharing efficient energy solutions. This joint party effort can enhance the creation, sharing, and use of energy across the State.

Benefits:

The development of state policies and goals to negotiate and carry out with federal agencies for developing cost-effective renewable energy and transmission lines on federal lands lowers energy costs for Alaskans while assisting federal agencies in meeting national clean energy goals through mutual State-Federal cooperation, respect, and understanding the proposed Alaska Policy Recommendations create multiple economic and societal benefits while providing Alaskans lower cost energy.

The State of Alaska and federally recognized tribes have mutually shared goals to provide low-cost heating, electricity, and transportation to Alaskans in our Alaskan communities. By identifying and sharing information, plans, and initiatives and establishing a framework to advance energy generation, transmission, distribution, storage, and heating solutions, the State of Alaska and Tribes can optimize resources and benefits to lower the cost of energy and increase energy security for Alaskans.

This strategy has a blend of immediate and short-term tasks for implementation.

Expected Results:

The State of Alaska, with careful and planned implementation of these recommendations, can gain common ground with federal agencies and tribes and advance and promote Alaska’s renewable energy development with cooperation and support from the federal government and Alaska’s 229 federally recognized tribes to achieve national purposes while reducing the energy cost of Alaskans. The expected results and outcomes from this cross-agency, inclusive tribal interest effort will lower Alaska’s energy costs and reduce the dependency on imported fuels, using local Alaska land and energy resources for the benefit of Alaska.



Haines, Alaska

“The expected results and outcomes from this cross-agency, inclusive tribal interest effort will lower Alaska’s energy costs and reduce the dependency on imported fuels, using local Alaska land and energy resources for the benefit of Alaska.”



STRATEGY B-4:

Alaska Hydropower Generation Recommendations

ACTIONS

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.



Unalaska, Alaska

Purpose:

Enhance Alaska’s policies to fast-track hydropower for affordable, secure energy Alaskans expect by optimizing Alaska public policies and investments to promote and advance execution-ready hydropower projects to lower the cost of energy and to bolster community and regional energy security that Alaskans deserve and expect.

Background:

The foundation of Alaska’s most cost-effective and affordable energy lies in its legacy hydropower infrastructure, some of which dates back decades or even a century. There is no cheaper energy form in Alaska than old hydropower, and Alaska cannot achieve old hydropower without proactively supporting and investing in new hydropower. Hydropower is a tried and proven Alaska energy resource, and with proper maintenance, these hydropower systems have a life expectancy of over 100 years. Once financing debt is paid, the hydropower project yields consistent, sustainable, renewable, and lowest-cost power, benefiting multiple generations of Alaskans and economic prosperity well into the future.

Historically, Alaska’s economic vitality is due directly to its hydropower assets. Whether the small local hydropower systems that powered early mining and fishing sectors or the subsidized projects like Bradley Lake and Snettisham Hydro and the hydropower investments from the era of the Four Dam Pool, these assets have consistently provided low-cost energy, driving Alaska’s prosperity.

In Alaska and across the US, the National Hydropower industry is expanding to include river hydrokinetics, tidal, and marine power projects as US hydropower projects. As these technologies evolve, Alaska’s extensive coastline and lengthy rivers — greater than all other states combined — leverage Alaska to capitalize on these innovations and benefit from these advancements to provide energy security and lower the energy cost for Alaska.



Today, hydropower accounts for 29% of Alaska’s electricity. This reliable power source underpins vital sectors of the Alaskan economy: mining, fisheries, military, and tourism, ensuring energy security and economic stability for the state.

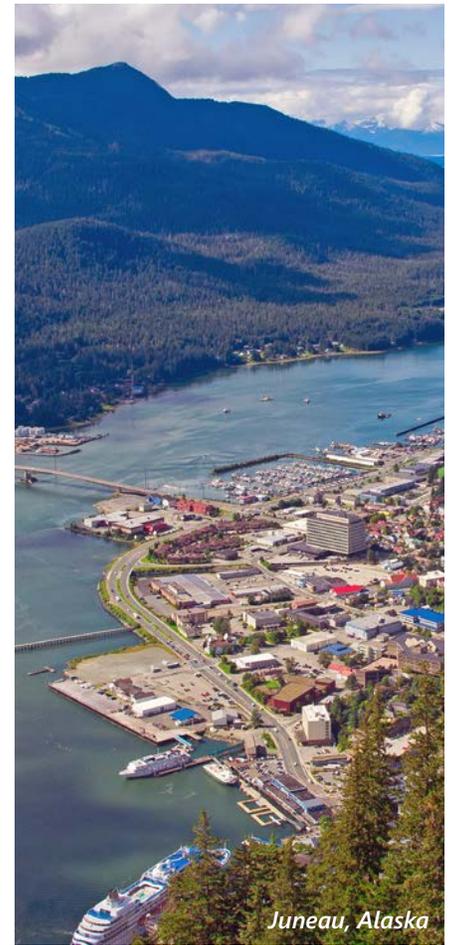
Benefits:

Hydropower in Alaska is not just an energy source; it is Alaska’s energy DNA. Historically, hydropower has consistently delivered the state’s most affordable power. By investing in hydroelectric infrastructure and related transmission, Alaska is not just tapping into a proven energy solution but securing Alaska’s energy future. This investment strategy, rooted in a track record over a century, offers unmatched cost-effectiveness in the long run and past most investment cycles. While the initial outlay is significant, the long lifecycle of hydropower — exceeding 100 years — ensures that Alaska is planting seeds for today’s needs and reaping energy dividends for future generations with sustainable, clean energy. Investing in hydropower assets is our Alaska commitment to Alaska’s proven energy model for a brighter, more affordable, energy-secure future for Alaska.

The Alaska Generation Strategy for fostering hydropower has a blend of Immediate for execution-ready hydropower and short-term, mid-term, and long-term tasks for hydropower in earlier analysis and development stages.

Expected Results:

The State of Alaska can take an active, willful, and calculated role in lowering the energy cost for Alaskans, energy security, and economic prosperity by effectively guiding hydropower development policy and investments in hydropower assets and related transmission infrastructure safeguarding Alaska’s energy future with an Alaskan tried and proven energy model.



Juneau, Alaska

Power Creek Hydroelectric Project, Cordova, Alaska



“Hydropower in Alaska is not just an energy source; it is Alaska’s energy DNA.”

PRIORITY C.
**RURAL GENERATION,
DISTRIBUTION,
AND STORAGE**





INTRODUCTION

The vast majority of Alaska’s rural communities have significantly higher cost of energy than more urbanized areas. This is primarily due to remote village locations having to rely on diesel powered generators supplying power for individual villages. The cost to purchase, transport and store diesel fuel drives these higher energy generation costs. The Rural Subcommittee identified five strategies to target opportunities to help lower the cost of energy generation in rural Alaska. Increased access to capital and infrastructure investments by the state and federal government are two of these strategies. Lowering operational costs of existing energy generation also provide actions to pursue. The previous three strategies can be supported by increasing economies of scale, either by connecting communities or attracting industrial partners to increase demand, and better decision making concerning energy generation, storage, distribution based on access to better data is the final rural subcommittee strategy. Alaska’s rural residents deserve access to clean, affordable, lower cost energy; these strategies are aimed to move the state in this direction.

PLANNING PROCESS HIGHLIGHTS

Task Force Meetings by the Numbers

73 Total Number of Meetings

158 Total Hours of Meetings

Rural Generation, Distribution, and Storage Subcommittee Meetings by the Numbers

10 Total Number of Meetings

13.5 Total Hours of Meetings

Note: Some Task Force Meetings include break-out subcommittee meetings.

STRATEGIES:

- C-1 Increase Capital Availability
- C-2 Infrastructure Investment
- C-3 Lower Operational Costs
- C-4 Improve Economies of Scale
- C-5 Improve Data-Driven Decision Making



STRATEGY C-1: Increase Capital Availability

ACTIONS

- C-1.1** Identify a funding or financing mechanism for rural communities including a “local match” for Federal grants.
- C-1.2** Identify opportunities for Public Private Partnerships to finance/fund energy infrastructure projects in rural Alaska.
- 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.



Humpback Creek Intake, Cordova, Alaska

Purpose:

Increase access to capital to provide additional funding/finance for project and infrastructure construction.

Background:

Small communities and developing regions do not have the economy required to generate the capital needed to build energy projects – e.g. hydro, SMR, transmission infrastructure

Benefits:

Alaskans need to reduce the cost and increase access to reliable energy in rural Alaska.

Expected Results:

Sufficient investment in energy projects/infrastructure to reduce the cost of energy in rural Alaska.



STRATEGY C-2: Infrastructure Investment



Wind Farm, Delta Junction, Alaska

Purpose:

Support existing infrastructure and add new infrastructure to provide Alaskans with reliable energy at reduced cost.

Background:

Replace aging and inefficient infrastructure to improve reliability and affordability. Invest in new infrastructure related to the production and transmittal of power to rural Alaska in conjunction with transportation and broadband infrastructure.

Benefits:

Make regionally connected infrastructure investments that improve reliability and affordability in rural Alaska.

Expected Results:

Investment in connected regional infrastructure for the community needs that lead to the most affordable and reliable energy which would in turn improve public health, welfare, and socio-economic conditions in rural Alaska.

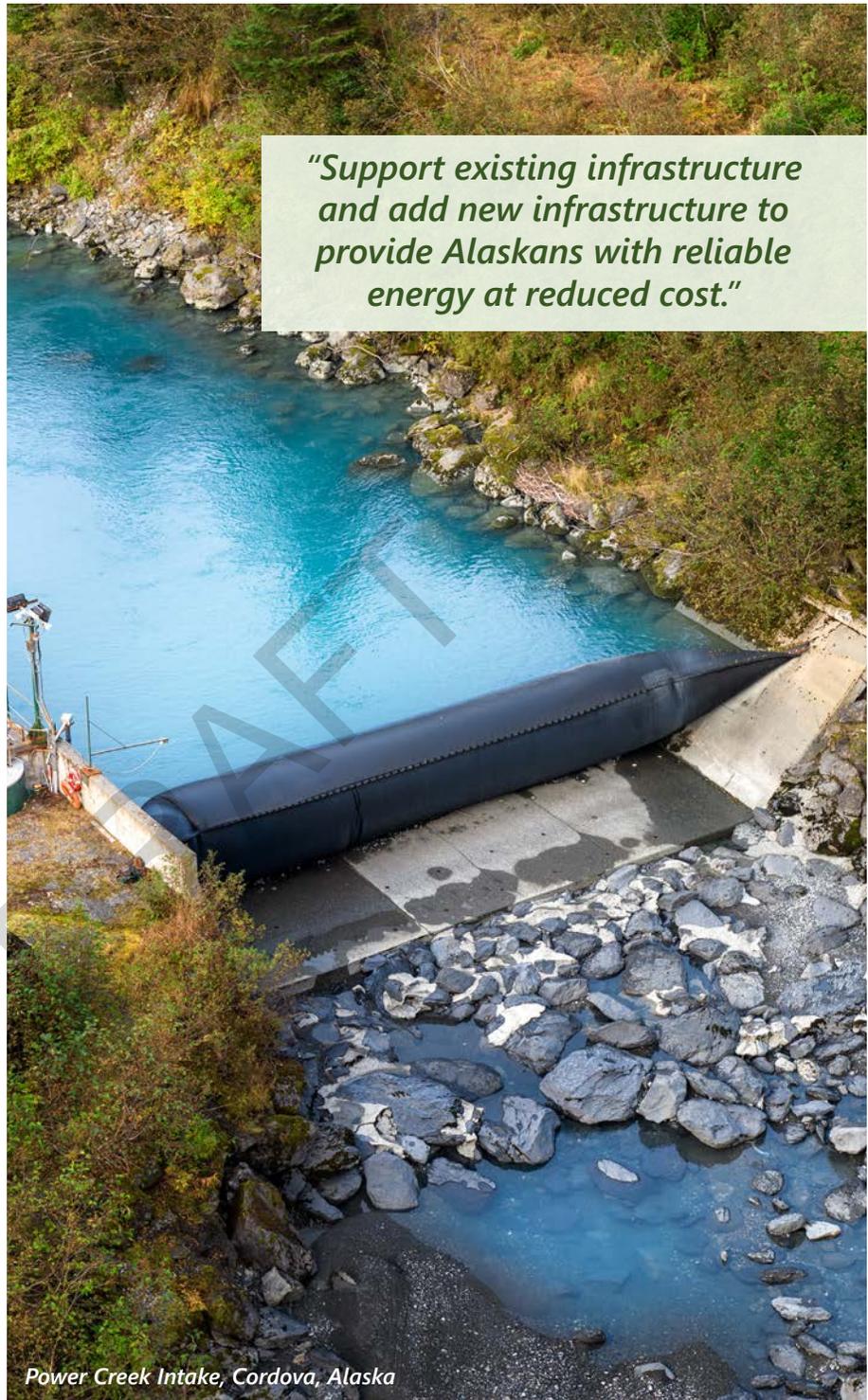
ACTIONS

- C-2.1** Promote a regional planning approach to connected energy, transportation, and broadband infrastructure.
- 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.
- C-2.3** Replace or appropriately displace community-focused aging infrastructure in rural communities of Alaska.
- C-2.4** Invest in pilot projects using appropriate technologies that demonstrate a regional approach to supplying affordable and reliable power to multiple communities.



ACTIONS (CONT.)

- C-2.5** Fund and construct opportunities to connect rural communities through transmission lines and other shared energy projects.
- 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.
- C-2.7** Invest in expanding the Railbelt grid to rural areas.
- C-2.8** Evaluate micronuclear, natural gas, hydrogen and other emerging/ underutilized technologies throughout the State of Alaska.



“Support existing infrastructure and add new infrastructure to provide Alaskans with reliable energy at reduced cost.”

Power Creek Intake, Cordova, Alaska



STRATEGY C-3: Lower Operational Costs



Purpose:

Lower operational costs of power/electricity, heating and transportation in rural Alaskan villages.

Background:

There is a need to lower operational costs to produce energy in rural Alaska. This can be done by increasing technical assistance in rural communities; lower maintenance costs; improve work force development opportunities for rural community residents; improve or develop transportation infrastructure beyond upgrading rural airports. Connecting rural communities to existing transmission/electric grids may be another option to lower operational costs.

Benefits and Expected Results:

Reduce the cost and increase access to reliable energy in rural Alaska.

ACTIONS

- 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.
- C-3.2** Identify innovation in logistics transportation to improve supply chain reliability.
- C-3.3** Create and implement a community outreach and education program to encourage stakeholder adoption of energy projects in rural areas.
- C-3.4** Procure, install, and improve grid modernization and automation.



STRATEGY C-4: Improve Economies of Scale

ACTIONS

- C-4.1** Identify economies of scope/scale to provide multi-benefit utility projects.
- C-4.2** Identify energy anchor tenants to provide economy of scale for rural communities.
- C-4.3** Identify funding and financing mechanisms for rural communities including a “local match” for Federal grants.
- C-4.4** Identify and complete a regional pilot project to demonstrate economies of scale.
- C-4.5** Develop and invest in rural beneficial electrification.



Purpose:

Reduce the cost of power and Improve reliability.

Background:

By increasing the sale of power against fixed cost we can reduce the price per KWH.

Benefits:

Adequate access to reliable energy at lower cost to improve public health and welfare. Grow rural economies.

Expected Results:

Connect communities to each other and anchor tenants to improve the reliability and reduce the cost of energy which would in turn support public health and welfare and grow rural economies.



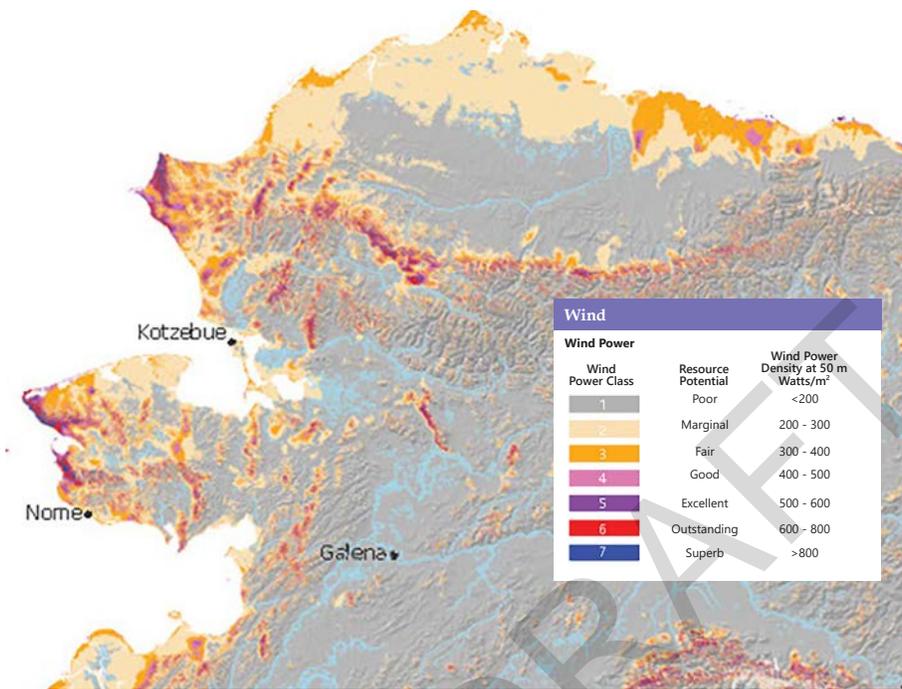
STRATEGY C-5: Improve Data-Driven Decision Making

ACTIONS

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.

C-5.2 Leverage critical local knowledge provided by residents in coordination with and complement ongoing and planned projects

C-5.3 Explore and leverage existing and new data capture tools including artificial Intelligence tools to quickly analyze existing and new data collected in rural Alaska to provide potential energy solutions.



Renewable Energy Atlas of Alaska Map

Purpose:

Improve access to relevant data necessary to make informed value decisions related to energy generation, distribution, transmission and storage in rural Alaskan villages.

Background:

Legacy data collection processes have resulted in limited or incomplete data concerning Alaska’s energy system, especially in rural Alaska. Current data analytic processes, provide an opportunity to improve baseline data access, processing, and archiving. There is no overarching data custodian within the state that collects, manages, and archives data necessary to plan, design and construct energy infrastructure in rural Alaska. This includes critical local knowledge provided by village residents.

Benefits and Expected Results:

Provide better economic outcomes, long-term cost/benefit analysis for rural Alaskan communities related to energy infrastructure.

A photograph of several white wind turbines on a mountain ridge. The turbines are positioned on a dirt road that curves across the ridge. The background shows a range of mountains under a blue sky with scattered clouds. A large, semi-transparent watermark reading "DRAFT" is overlaid diagonally across the center of the image.

PRIORITY D.

STATE ENERGY DATA



INTRODUCTION

There are literally terabytes of energy data available in the State of Alaska. Currently this data is not centrally located or managed. The Data Subcommittee created a Technical Advisory Committee to help them identify and clarify four strategies intended to help the state better collect, manage, and analyze energy data. Four strategies came from this effort. The first recommended establishing a data department within the Alaska Energy Authority to oversee management of Alaska’s energy data. Second, establish an energy data governance committee that is responsible for establishing minimum protocols for data collection, quality, storage, use, and access identifies the need for establishment of industry standard data governance protocols by an established data governance committee. The third strategy points to needed funding with the establishment of the above organizations, and the final strategy, improve existing statewide energy data and collect new, needed data with respect to electricity, heat, and transportation, focuses on validating and improving existing energy data, and collecting additional needed data to aid in future energy decision making.

PLANNING PROCESS HIGHLIGHTS

Task Force Meetings by the Numbers

73 Total Number of Meetings

158 Total Hours of Meetings

State Energy Data Subcommittee Meetings by the Numbers

5 Total Number of Meetings

20.5 Total Hours of Meetings

Note: Some Task Force Meetings include break-out subcommittee meetings.

STRATEGIES:

- D-1 Establish a Data Department within the Alaska Energy Authority (AEA), using statute as necessary
- D-2 Establish an energy data governance committee that is responsible for setting minimum protocols for data collection, quality, storage, use, and access
- D-3 Fund data capacity
- D-4 Improve existing statewide energy data and collect new, needed data with respect to electricity, heat, and transportation



STRATEGY D-1:

Establish a Data Department within the Alaska Energy Authority (AEA), using statute as necessary

ACTIONS

- D-1.1** Institute or update statutory requirements for AEA Data Department.
- D-1.2** Fund, develop, and implement a technical and needs assessment.
- D-1.3** Fund, develop, and implement a capital asset plan.
- D-1.4** Develop and fund an operating and maintenance budget, to include the identification of potential funding sources and mechanisms.
- D-1.5** Appropriately staff the department based on the technical and needs assessment.



Alaska Intertie Mountains

Purpose:

To staff and properly equip a team dedicated to energy data management within the Alaska Energy Authority.

Background:

While a substantial amount of valuable energy data exists in aggregate, they are often inconsistent, inaccessible, and provided in formats which do not meet end-user needs. Existing data needs are thus being met by implementing unsustainable, short-term solutions such as adding additional responsibilities to existing staff, which often results in delays or needs going unmet.

The Alaska Energy Authority is the state's energy office and lead agency for statewide energy policy and program development.

Benefits:

This recommendation prioritizes, centralizes, and focuses the importance of energy data management in order to ensure the consistency and accessibility of energy data so it can better inform decision-making efforts on energy projects, program, and policy development. Housing a Data Department in AEA will ensure consistency and sustainability of state energy data management.

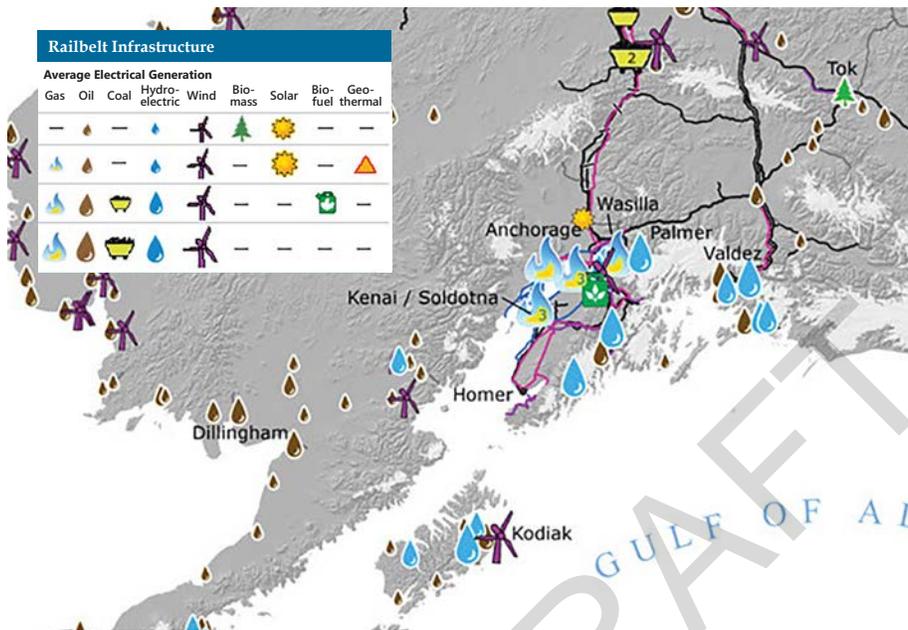
Expected Results:

The provision of consistent and accessible data further enabling data-informed decision-making on energy projects and policy across the state. Increased consistency of state data assets.



STRATEGY D-2:

Establish an energy data governance committee that is responsible for setting minimum protocols for data collection, quality, storage, use, and access



Renewable Energy Atlas of Alaska Map

Purpose:

Ensure that collection, quality, storage, use of, and access to electric, heat, and transportation energy data in Alaska meets industry standards, current protocols, and best practices.

Background:

Existing data can be inconsistent, inaccessible, and provided in formats which do not meet end-user needs. Security of, and ability to access, energy data are major concerns for public and private data users alike. The willingness to share, and the extent to which that data is shared, is significantly limited by concerns from such data providers regarding security, access, and usage.

Benefits:

Data-informed decision making is only as valid as the data on which the decision is based. The collection, quality, storage, use of, and access to energy data in Alaska should align with those industry best practices, standards, and current protocols so that all decisions are based on accurate and secure data.

Expected Results:

Energy data in Alaska meets and conforms with industry standards, protocols, and best practices. Increased participation of energy data stakeholders and end-users.

ACTIONS

- 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.
- D-2.2** Fund a long-term data governance strategy based on recommendations made by the Technical Advisory Committee.

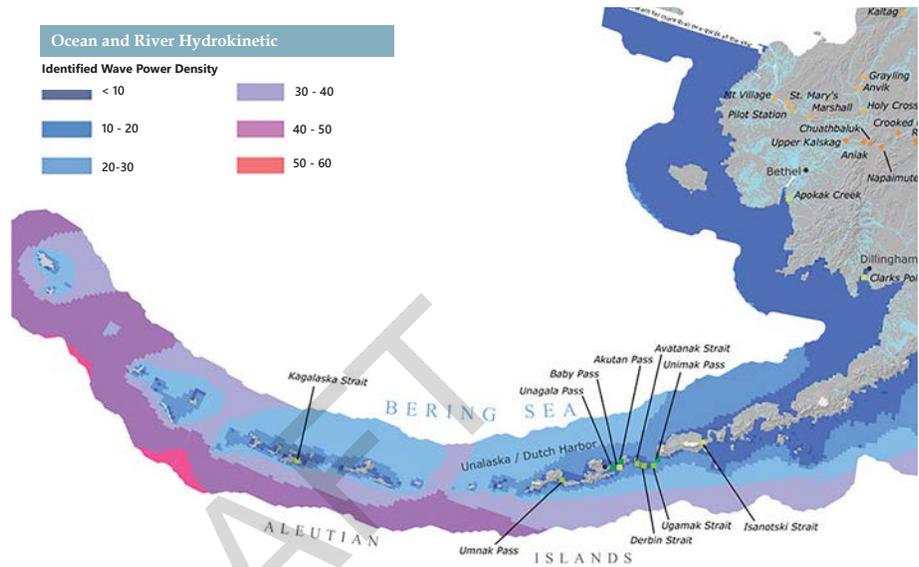


STRATEGY D-3: Fund data capacity

ACTIONS

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.

D-3.2 Provide professional development and/or skills training opportunities for staff and other agency partners as it relates to data collection and analysis.



Renewable Energy Atlas of Alaska Map

Purpose:

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.

Background:

Many of the ongoing data-related efforts across State agencies are borne by individuals whose duties and responsibilities are not primarily data-focused.

Benefits:

Establishing positions within State agencies whose primary duties and responsibilities are focused on data-related activities/initiatives, using statutes as necessary.

Expected Results:

Increased collaboration, reduced duplication of efforts, ease of data access, and better-informed decision making.



STRATEGY D-4:

Improve existing statewide energy data and collect new, needed data with respect to electricity, heat, and transportation



Wind Farm Construction, Toksook Bay, Alaska

Purpose:

Fund a gap analysis of energy data, including existing data, accessibility, quality, age, and what form and character of data is and would be needed for data-informed decision making.

Background:

Existing data can be inconsistent, inaccessible, and provided in formats which do not meet end-user needs. Thermal and transportation datasets are found to be lacking. The term “Energy Data” has historically been limited to electricity data, meaning there are significant gaps in thermal and transportation energy data.

Benefits:

Expand the definition of “Energy Data” and those existing, to-be-compiled, and to-be-created underlying datasets to include thermal and transportation data to better capture the dynamic and interrelated nature of energy use in Alaska.

Expected Results:

More all-encompassing and informed decision-making for energy projects and policies in Alaska, across electric, heat, and transportation sectors.

ACTIONS

- 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.
- D-4.2** Revitalize, fund, and maintain energy data platforms and services so as to ensure the long-term availability and accessibility of data.
- D-4.3** Conduct a data audit of the Regulatory Commission of Alaska (RCA) to include recommendations.
- D-4.4** Expand the Power Cost Equalization (PCE) report and the extent of such data reported.



ACTIONS (CONT.)

D-4.5 Expand the definition of “energy data” by adopting the TAC definition, ensuring the definition is inclusive of heat/thermal and transportation fuel data.

D-4.6 Understand how heating and transportation fuel is delivered and used.

D-4.7 Re-establish annual updates to the Alaska Energy Statistics report.





PRIORITY E.
INCENTIVES
AND SUBSIDIES



INTRODUCTION

The Incentives and Subsidies subcommittee settled on three themes and created seven strategies to support securing affordable energy in Alaska. The first theme relates to strategies and actions that incentivize private sector investment. These strategies include Decrease Barriers to Private Sector Investment, Improve Economies of Project Development, and Respond to and implement evolving Energy Business Models. The second theme is oriented to state and federal policy and law that could be modified to support and accelerate investment in energy generation, transmission, and storage in Alaska. These strategies include Strengthen State-Federal Coordination and Investment, Evaluate and implement State policy, tax, and other incentives, and Increase State programmatic investments. Finally, the Incentives subcommittee acknowledges the need to continue existing subsidies offered by the state while some of the previous strategies are implemented. The final theme and strategy includes, Maintaining Residential subsidy focused on equity, while reducing the need across communities.

PLANNING PROCESS HIGHLIGHTS

Task Force Meetings by the Numbers

73 Total Number of Meetings

158 Total Hours of Meetings

Incentives and Subsidies Subcommittee Meetings by the Numbers

15 Total Number of Meetings

18 Total Hours of Meetings

Note: Some Task Force Meetings include break-out subcommittee meetings.

STRATEGIES:

- E-1 Strengthen state-federal coordination and investment
- E-2 Reduce the barriers to private sector investments
- E-3 Maintain residential subsidy focused on equity, while reducing need across communities
- E-4 Improve the economics of project development
- E-5 Evaluate and implement State policy, tax, and other incentives



STRATEGY E-1:

Strengthen state-federal coordination and investment

ACTIONS

E-1.1 Establish a state/federal working group that identifies and works toward 1) improved access on federal lands, 2) funding to accelerate a local, reliable, and affordable energy transition, 3) the ability to leverage investment opportunities between state and federal programs.



Chugach Mountains

Purpose:

The Task Force recommends the establishment of a state/federal working group that identifies and works toward improved access on federal lands, funding in place to accelerate a local, reliable, and affordable energy transition, and the ability to leverage investment opportunities between state and federal programs.

Background:

The State of Alaska has the highest disparity of power costs from one community or region to another. Some of America's highest-cost energy communities have significant barriers in the form of federal lands, which comprise more than 60% of the state. Additionally, Alaska has comparatively underdeveloped transmission lines compared to other States and territories, and this deficiency negatively impacts renewable energy development required to lower energy costs. Federal land use policy comes with significant hurdles and a limited ability to effect widespread access or change.

Benefits and Expected Results:

A coordinated and targeted effort by state and federal agencies that focuses on improving access and removing barriers is critical to lowering the cost of energy in Alaska, even as it increases the potential to meet federal clean energy goals.

The increased capacity of the state to negotiate and execute priorities with willing federal agencies for developing cost-effective clean energy, transmission lines on federal lands, with dedicated funding in place to bring Alaska parity with the rest of the nation, will lower energy costs for Alaskans while assisting federal agencies in meeting national clean energy goals. This process will increase knowledge of available funding and implementation support for energy projects in Alaska. This action aligns with and should leverage current federal investment through IJA and IRA.



STRATEGY E-2:

Reduce the barriers to private sector investments



Homer, Alaska

ACTIONS

- E-2.1** Establish a strategic approach to policy, tax, and program development that stimulates and incentivizes private sector activity that leads to lower cost, local, and reliable energy.

Purpose:

The Task Force recommends a strategic approach to policy, tax, and program development that stimulates and incentivizes private sector activity that leads to lower cost, local, and reliable energy.

Background:

Federal and state investment is insufficient to address the scale necessary to effect widespread and meaningful transition toward lower-cost and – carbon energy. At the same time, removing barriers or reducing the burdens associated with private sector investments has the potential to increase Alaska’s ability to establish partnerships, and leverage private capital in the public interest. Ultimately, what the State has most control of is its own policy, regulatory, and tax systems. The State’s capacity to contribute to lowering the cost of energy for Alaskans is immense, and intensity of effort is required to fully assess current activity and the potential need for new laws and practices that will incentivize change.

Benefits and Expected Results:

Initiating a series of statutory changes and encouraging quicker adoption by communities and use by utilities and others will unlock private sector investment. Offsetting upfront costs and increasing the utilization of low-interest public capital will strengthen project economics while including strong public benefit criteria. Finally, this process envisions increasing the overall economy of scale, which will contribute to reducing barriers.



STRATEGY E-3:

Maintain residential subsidy focused on equity, while reducing need across communities

ACTIONS

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, even as the State actively works to 1) consider alternative mechanisms, 2) strategically deploys PCE funds to advance low-cost energy solutions, and 3) expands the ability of PCE to lower costs across sectors within communities.



Purpose:

The Task Force recommends the continued commitment by the State to ensure residents have access to subsidy where and for as long as lower costs are not achieved, even as the State actively works to 1) consider alternative mechanisms, 2) strategically deploys PCE funds to advance low-cost energy solutions, and 3) expands the ability of PCE to lower costs across sectors within communities.

Background:

The value of PCE cannot be overstated – it has proven to be a lifeline to Alaskans who bear the brunt of high costs. This equitable distribution of State funding, relative to and based on project investment in some parts of the state, has lowered costs in communities where otherwise more residents may have chosen outmigration. However, PCE has not equalized costs in any way, and it remains true that this high-cost burden falls on some Alaskans and not others. At the same time, the overall goals of the state can encompass reducing the need for this subsidy by actually lowering costs in communities.

Benefits and Expected Results:

Working toward a flatter rate across Alaska improves the mobility of residents, increased economic opportunity, and overall improved quality of life for Alaskans.



STRATEGY E-4: Improve the economics of project development



AEA Training, Nikolai, Alaska

ACTIONS

- 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.

Purpose:

The Task Force recommends a multi-pronged approach to reducing risk to utilities and project proponents, increasing the availability of financing mechanisms, and encouraging ancillary investments that will benefit the industry and economies of communities.

Background:

Alaska will always be a high-cost state, defined by the tyranny of geography, time, and distance. Access to markets, and at the tail-end of a global supply chain, there are clear competitive disadvantages within which utilities and project developers operate, even as ratepayers (or the State) bear the cost. There are ways, however, to lower the costs of project development, and state action can facilitate this.

Benefits and Expected Results:

Affordability rests on CAPEX and OPEX, and both have avoidable and unavoidable layered costs. A strategic state approach can begin peeling away or mitigating avoidable costs to improve the economics of project development, and ultimately save ratepayers money.



STRATEGY E-5: Increase State programmatic investments

ACTIONS

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.



Purpose:

The Task Force recommends the evaluation of and changes to 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.

Background:

Government programs may be developed to provide technical assistance or to serve as a resource to consumers, project proponents, and others. Program staff provide support and guidance as to how to utilize these tools. Programs may also try to provide direct services, such as improving energy efficiency, weatherization, community planning, or rate review and setting. Some programs are simply there to ensure compliance. Governments may spend significant resources on these programs. It is not clear that programs reduce the cost of energy, though they may have other benefits.

Benefits and Expected Results:

The ability of the state to achieve a moonshot goal requires a coordinated effort across agencies and through all programs that intersect with the goal. The state can consider every program through the lens of lowering energy costs for Alaskans, and refine its approaches to achieve that end



Denali Village, Alaska

A photograph of the Alaska State Capitol building, a large, multi-story structure with a mix of brick and stone. The building features numerous windows and classical architectural elements like columns. The sky is clear and blue. A semi-transparent purple box is overlaid on the upper portion of the image, containing the main title. A large, faint watermark reading 'DRAFT' is visible across the center of the image.

PRIORITY F. STATUTES AND REGULATIONS

STRATEGIES:

- F-1 Improve Electrical Transmission System
- F-2 Encourage Energy and Generation Diversification
- F-3 Utility Regulation
- F-4 Executive and Organizational Changes



INTRODUCTION

Described below is the method that the Statutes and Regulations Subcommittee (“SRS”) used to present its findings and recommendations in support of the overall objectives of the Task Force.

First, the SRS compiled a comprehensive Statutes and Regulations Matrix included herein as Table F-1 (“Matrix”). This Matrix is a summary of each of the action items from the other six Task Force subcommittees that recommend changes in government policy. While not attempting to duplicate the detailed discussion on each item presented in the subcommittee sections, the Matrix provides the reader with a consolidated and comprehensive presentation of actionable statute, regulation, appropriation, and government policy recommendations from the entire Task Force.

Second, the SRS then considered input received by the Task Force, as well as discussions within the Task Force and developed a number of action items in furtherance of Task Force goals that had not been addressed by the other subcommittees. These SRS action items are reflected in papers F1.1 – F4.1 included herein.

These SRS action items were then grouped into four general strategies (1) Improve Transmission, (2) Diversify Energy and Generation, (3) Utility Regulation, and (4) Executive and Organizational Changes. Where these align with similar strategies from other subcommittees, key statute or policy recommendations from the other subcommittees were included together in a bulleted list with the SRS action items in order to provide a compilation of all key actions needed to fully implement the strategy. When an action item arose from the SRS, it is referenced with an Fx.x number. When an action item arose from another committee, the reference Action Yx.x from the Matrix is noted.

PLANNING PROCESS HIGHLIGHTS

Task Force Meetings by the Numbers

73 *Total Number of Meetings*

158 *Total Hours of Meetings*

Statutes and Regulations Subcommittee Meetings by the Numbers

11 *Total Number of Meetings*

12 *Total Hours of Meetings*

Note: Some Task Force Meetings include break-out subcommittee meetings.



STRATEGY F-1:

Improve Electrical Transmission System

ACTIONS

- F-1.1** Identify state matching funds necessary for all federal funds available for transmission infrastructure (also see Matrix B-2.4).
- F-1.2** Clarify state statute AS 09.65.86 on Utility ROW wildfire liability.
- 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.
- 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).



Purpose:

Identify changes in statutes, regulations, or appropriations that are needed to implement Task Force recommendations regarding planning, investment, construction and operation of improved electrical transmission in Alaska.

Background:

Originally, all electrical generation in Alaska occurred within local islanded systems, whether in coastal, rural, or railbelt regions. As Alaska has grown, there is a dire need to improve reliability and efficiency of transmitting power between communities. The benefits would be:

- Reduces transmission constraints while also allowing new generation technologies and locations to compete.
- Provides system redundancy, resilience, and increases reliability.
- Benefits utilities and ratepayers by sharing power across regions or communities.
- Reduces costs for consumers and promotes job creation.
- Coordinates planning, financing, and construction of new infrastructure.

Benefits and Expected Results:

This strategy will result in a more resilient and reliable transmission and electric grid system that will lower rates, help bring online clean energy, reduce costs for consumers, and promote job creation.



ACTIONS CONTINUED FOR STRATEGY F-1



Bradley Lake Transmission Line

ACTIONS

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 to these new power sources.

F-1.6

Unify railbelt transmission ownership within AEA (see Matrix A-1.1).

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

ACTIONS

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).

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.



Purpose:

Identify changes in statutes, regulations, or appropriations that are needed to implement Task Force recommendations to encourage energy and generation diversification.

Background:

For many years, for both space heat and electricity, the railbelt has relied primarily on Cook Inlet natural gas, rural Alaska has relied primarily upon diesel fuel, and coastal Alaska has primarily used a combination of hydropower and diesel fuel.

Energy source and generation diversification within each of these regions will allow various technologies to compete to bring the most affordable, reliable, and local energy to Alaskans.

Benefits and Expected Results:

Greater diversification of power generation to provide reliable, lower cost electricity, heat, and transportation for rate payers.



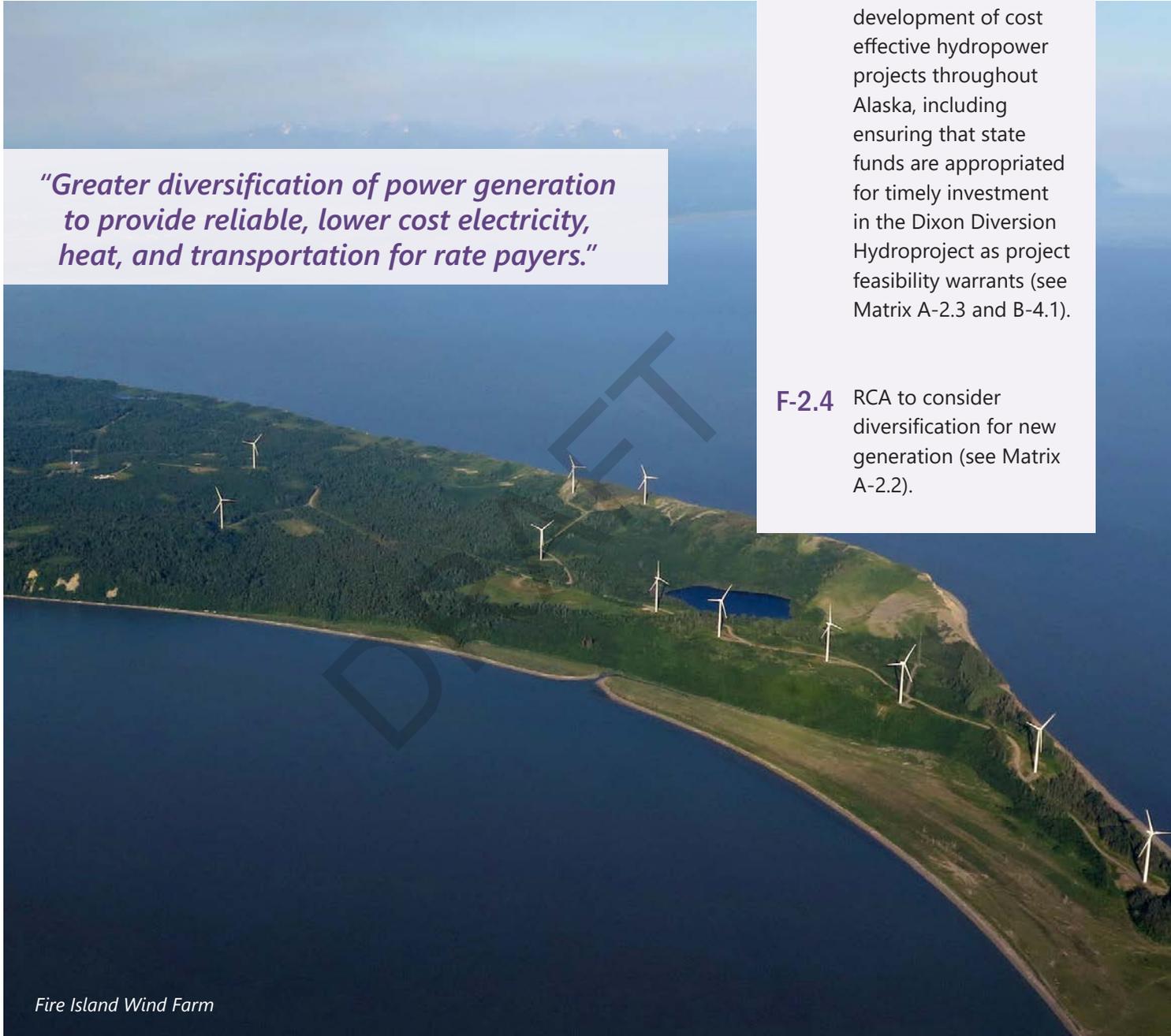
ACTIONS CONTINUED FOR STRATEGY F-2

“Greater diversification of power generation to provide reliable, lower cost electricity, heat, and transportation for rate payers.”

ACTIONS

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).

F-2.4 RCA to consider diversification for new generation (see Matrix A-2.2).



Fire Island Wind Farm



STRATEGY F-3: Utility Regulation

ACTIONS

- 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.
- 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.
- F-3.3** Modify 3AAC 46.270 (f) to reduce the ambiguity surrounding avoided cost standards.
Modify (AS 42.05.760-



Purpose:

Identify changes in statutes, regulations, or appropriations that are needed to implement Task Force recommendations related to utility regulation.

Background:

Federal, state, and local governments play a key role in development and transport of oil and gas and regulation of generation and transmission of electricity.

Benefits and Expected Results:

Budgetary support or modification of statutes and regulations that govern Alaska's utilities, energy generation, distribution, transmission and storage is recommended in order to support lower energy costs for all Alaskans.

Improved utility regulation and a more efficient RCA will support a more dynamic environment for utilities to be able to respond to system challenges in a more timely and cost effective manner.



Humpback Creek Plant, Cordova, Alaska

ACTIONS (CONT.)

F-3.4 .785) to ensure alignment with unified Railbelt transmission authority (see Matrix A-1.1).

F-3.5 Adopt a Clean Energy Standard with incentives (See Matrix A-2.1).

F-3.6 Provide incentivized power tariff rate to attract new industry to Alaska.

DRAFT



STRATEGY F-4: Executive and Organizational Changes

ACTIONS

- F-4.1** Create a data department with the Alaska Energy Authority (AEA), using statute as necessary (see Matrix D-1.1).



Purpose:

Staff and properly equip a team dedicated to energy data management within the Alaska Energy Authority.

Background:

While a substantial amount of valuable energy data exists in aggregate, this data is often inconsistent, inaccessible, and provided in formats which do not meet end-user needs. Existing data needs are thus being met by implementing unsustainable, short-term solutions such as adding additional responsibilities to existing staff, which often results in delays or needs going unmet.

The Alaska Energy Authority is the state's energy office and lead agency for statewide energy policy and program development.

Benefits and Expected Results:

This recommendation prioritizes, centralizes, and focuses the importance of energy data management in order to ensure the consistency and accessibility of energy data so it can better inform decision-making efforts on energy projects, program, and policy development. Housing a Data Department in AEA will ensure consistency and sustainability of state energy data management.





Table F-1: Comprehensive Statutes and Regulations Matrix

The table below notes where similar strategies align across subcommittees, key statute or policy recommendations.

| Priority | Strategy | Action # | Action |
|--|--------------|----------------|---|
| Category A. Railbelt Transmission, Generation, and Storage | Strategy A-1 | Action A-1.1 | Unify all existing transmission assets along the Railbelt and Bradley Lake under AEA or a new not-for-profit regulated utility. |
| Category A. Railbelt Transmission, Generation, and Storage | Strategy A-2 | Action A-2.1 | Adopt Clean Energy Standard and Incentives to Diversify Generation |
| Category A. Railbelt Transmission, Generation, and Storage | Strategy A-2 | Action A-2.2 | Modify existing statute(s) requiring the commission to consider long term diversification goals when approving additional/new Railbelt power generation. |
| Category A. Railbelt Transmission, Generation, and Storage | Strategy A-2 | Action A-2.3.1 | Progress known near term energy diversification projects to a go/no-go decision: Dixon Diversion |
| Category A. Railbelt Transmission, Generation, and Storage | Strategy A-2 | Action A-2.3.2 | Progress Known Energy Generation Diversification Projects to Go/No-Go Decision. Long Term: Susitna-Watana |
| Category A. Railbelt Transmission, Generation, and Storage | Strategy A-2 | Action A-2.3.3 | Progress known long term energy diversification projects to a go/no-do decision: Alaska Natural Gas |
| Category A. Railbelt Transmission, Generation, and Storage | Strategy A-3 | Action A-3.1 | Significantly increase load to drive down energy rates. a. RFP for Industrial Customers b. Energy Tax Credit for New Industrial Customers c. Identify "Load-Friendly" Areas Already In-Place |
| Category B. Coastal Generation, Distribution, and Storage | Strategy B-1 | Action B-1.1 | Integrate and Promote Heat Pump technology and systems (ASHP, SWHP, GSHP) as an Alternative Energy Resource in Coastal Alaska. |
| Category B. Coastal Generation, Distribution, and Storage | Strategy B-1 | 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. |
| Category B. Coastal Generation, Distribution, and Storage | Strategy B-1 | Action B-1.3 | Beneficially electrify the Alaska Ferry Fleet to lower cost of transportation, and emissions and assist in reducing the cost of power in coastal communities. |



| Priority A. Railbelt Transmission, Generation, and Storage | Priority B. Coastal Generation, Distribution, and Storage | Priority C. Rural Generation, Distribution, and Storage | Priority D. State Energy Data | Priority E. Incentives and Subsidies | Priority F. Statues and Regulations |
|---|--|--|----------------------------------|--|--|
| | | | | E-2.2 | |
| | | | | E-1.3 E-2.3 E-4.4 | F-3.6 |
| | | | | E-2.4 | F-2.4 F-3.5 |
| | | | | | F-2.3 |
| | | | | | |
| | B1.4 | C-4.2 | | E-2.6 E-4.5 E-5.4 | F-3.7 |
| | | | | | |
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Table F-1: Comprehensive Statutes and Regulations Matrix

The table below notes where similar strategies align across subcommittees, key statute or policy recommendations.

| Priority | Strategy | Action # | Action |
|---|--------------|--------------|--|
| Category B. Coastal Generation, Distribution, and Storage | Strategy B-1 | Action B-1.4 | Identify and support the colocation of industrial loads (e.g., data servers) with Alaska Hydropower facilities for synergies to lower energy costs. |
| Category B. Coastal Generation, Distribution, and Storage | Strategy B-1 | 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, increase grid resilience, and lower energy costs. |
| Category B. Coastal Generation, Distribution, and Storage | Strategy B-2 | 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. |
| Category B. Coastal Generation, Distribution, and Storage | Strategy B-2 | 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. |
| Category B. Coastal Generation, Distribution, and Storage | Strategy B-2 | 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. |
| Category B. Coastal Generation, Distribution, and Storage | Strategy B-2 | Action B-2.4 | Strategize and Prioritize State of Alaska funding to match federal funding and federal financing to build and expand Transmission and Distribution lines in Alaska to bring Alaska on par with the US transmission systems for Alaskan energy security and lower energy costs. |
| Category B. Coastal Generation, Distribution, and Storage | Strategy B-2 | 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. |
| Category B. Coastal Generation, Distribution, and Storage | Strategy B-2 | 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. |
| Category B. Coastal Generation, Distribution, and Storage | Strategy B-3 | Action B-3.1 | Establish an Alaska/ federal Renewable Energy Policy Force to develop, collaborate, and prioritize State energy, plan, goals, and rights to optimally advance renewable energy and transmission on federal lands. |



| Priority A. Railbelt Transmission, Generation, and Storage | Priority B. Coastal Generation, Distribution, and Storage | Priority C. Rural Generation, Distribution, and Storage | Priority D. State Energy Data | Priority E. Incentives and Subsidies | Priority F. Statutes and Regulations |
|---|--|--|----------------------------------|--|---|
| | | | | | |
| | | C-2.1 | | E-2.6 | F-1.4 |
| A-2.3 | | | | E-1.2 | F-1.5 |
| | | C-1.1 | | E-1.1 | F-1.1 |
| | | C-5.1 | D-4.2 | | |
| | ✓ | C-3.1 | | E-5.2 E-5.4 | ✓ |
| ✓ | | C-3.1 | | E-1.2 E-1.5 | ✓ |



Table F-1: Comprehensive Statutes and Regulations Matrix

The table below notes where similar strategies align across subcommittees, key statute or policy recommendations.

| Priority | Strategy | Action # | Action |
|---|--------------|--------------|---|
| Category B. Coastal Generation, Distribution, and Storage | Strategy B-3 | 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. |
| Category B. Coastal Generation, Distribution, and Storage | Strategy B-4 | 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. |
| Category C. Rural Generation, Distribution, and Storage | Strategy C-1 | Action C-1.1 | Identify a Funding or Financing Mechanism for Rural Communities including a "Local Match" for Federal Grants. |
| Category C. Rural Generation, Distribution, and Storage | Strategy C-1 | Action C-1.2 | Identify opportunities for Public Private Partnerships to finance/fund energy infrastructure projects in rural Alaska. |
| Category C. Rural Generation, Distribution, and Storage | Strategy C-1 | Action C-1.3 | State of Alaska commit to sufficient capital budget funding for energy projects in rural Alaska. |
| Category C. Rural Generation, Distribution, and Storage | Strategy C-2 | Action C-2.1 | Promote a regional planning approach to connected energy, transportation, and broadband infrastructure. |
| Category C. Rural Generation, Distribution, and Storage | Strategy C-2 | 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. |
| Category C. Rural Generation, Distribution, and Storage | Strategy C-2 | Action C-2.3 | Replace or appropriately displace community-focused aging infrastructure in rural communities of Alaska. |
| Category C. Rural Generation, Distribution, and Storage | Strategy C-2 | 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. |
| Category C. Rural Generation, Distribution, and Storage | Strategy C-2 | Action C-2.5 | Fund and Construct Opportunities to Connect Rural Communities through Transmission Lines and Other Shared Energy Projects. |
| Category C. Rural Generation, Distribution, and Storage | Strategy C-2 | 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. |



| Priority A. Railbelt Transmission, Generation, and Storage | Priority B. Coastal Generation, Distribution, and Storage | Priority C. Rural Generation, Distribution, and Storage | Priority D. State Energy Data | Priority E. Incentives and Subsidies | Priority F. Statutes and Regulations |
|--|---|---|-------------------------------|--------------------------------------|--------------------------------------|
| ✓ | ✓ | C-4.5 | | E-1.5 | F-1.8 |
| A-2.3 | | | | | F-1.6 F-2.3 |
| | B-2.4 | | | E-1.1 | F-1.1 F-2.1 |
| | | | | E-4.6 | |
| | B-2.1 | | | E-2.6 | F-1.4 |
| | | | D-4 | | |
| | | | | E-5.2 | |
| | | | | E-1.3 | F-1.8 |
| | | | | E-5.3 | |

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Table F-1: Comprehensive Statutes and Regulations Matrix

The table below notes where similar strategies align across subcommittees, key statute or policy recommendations.

| Priority | Strategy | Action # | Action |
|---|--------------|--------------|--|
| Category C. Rural Generation, Distribution, and Storage | Strategy C-2 | Action C-2.7 | Invest in expanding the grid in rural areas. |
| Category C. Rural Generation, Distribution, and Storage | Strategy C-2 | Action C-2.8 | Evaluate micronuclear, natural gas, hydrogen and other emerging/underutilized technologies throughout the State of Alaska. |
| Category C. Rural Generation, Distribution, and Storage | Strategy C-3 | Action C-3.1 | Expand and Inventory technical assistance, training, and workforce development to identify gaps, and increase capability & capacity-building activities for Training a Rural Energy Workforce. i.e. apprenticeship programs for energy production. |
| Category C. Rural Generation, Distribution, and Storage | Strategy C-3 | Action C-3.2 | Identify Innovation in Logistics Transportation to Improve Supply Chain Reliability. |
| Category C. Rural Generation, Distribution, and Storage | Strategy C-3 | Action C-3.4 | Procure, install, and improve grid modernization and automation. |
| Category C. Rural Generation, Distribution, and Storage | Strategy C-4 | Action C-4.1 | Identify Economies of Scope/Scale to Provide Multi-Benefit Utility Projects. |
| Category C. Rural Generation, Distribution, and Storage | Strategy C-4 | Action C-4.2 | Identify Energy Anchor Tenants to Provide Economy of Scale for Rural Communities. |
| Category C. Rural Generation, Distribution, and Storage | Strategy C-4 | Action C-4.3 | Identify a Funding or Financing Mechanism for Rural Communities including a "Local Match" for Federal Grants. |
| Category C. Rural Generation, Distribution, and Storage | Strategy C-4 | Action C-4.4 | Identify and complete a regional pilot project to demonstrate economies of scale. |
| Category C. Rural Generation, Distribution, and Storage | Strategy C-4 | Action C-4.5 | Develop and invest in rural beneficial electrification. |
| Category C. Rural Generation, Distribution, and Storage | Strategy C-5 | 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. |
| Category C. Rural Generation, Distribution, and Storage | Strategy C-5 | Action C-5.2 | Leverage critical local knowledge provided by residents in coordination with and complement ongoing and planned projects. |



| Priority A. Railbelt Transmission, Generation, and Storage | Priority B. Coastal Generation, Distribution, and Storage | Priority C. Rural Generation, Distribution, and Storage | Priority D. State Energy Data | Priority E. Incentives and Subsidies | Priority F. Statutes and Regulations |
|--|---|---|-------------------------------|--------------------------------------|--------------------------------------|
| | B-2.6 | | | E-5.2 E-5.4 | |
| | | | | | |
| | | | | | |
| | | | | E-5 | |
| | | | | | |
| | | | | | |
| | | | D-4 | | |
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Table F-1: Comprehensive Statutes and Regulations Matrix

The table below notes where similar strategies align across subcommittees, key statute or policy recommendations.

| Priority | Strategy | Action # | Action |
|---|--------------|--------------|---|
| Category C. Rural Generation, Distribution, and Storage | Strategy C-5 | Action C-5.3 | Explore and leverage existing and new data capture tools including artificial Intelligence tools to quickly analyze existing and new data collect-ed in rural Alaska to provide potential energy solutions. |
| Category D. State Energy Data | Strategy D-1 | Action D-1 | To staff and properly equip a team dedicated to energy data management within the Alaska Energy Authority. |
| Category D. State Energy Data | Strategy D-2 | Action D-2 | Ensure that collection, quality, storage, use of, and access to electric, heat, and transportation energy data in Alaska meets industry standards, current protocols, and best practices. |
| Category D. State Energy Data | Strategy D-3 | Action D-3 | 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. |
| Category D. State Energy Data | Strategy D-4 | Action D-4 | Fund a gap analysis of energy data, including existing data, accessibility, quality, age, and what form and character of data is and would be needed for data-informed decision making. |
| Category E. Incentives and Subsidies | Strategy E-1 | Action E-1.1 | Establish a state/federal working group that identifies and works toward 1) improved access on federal lands, 2) funding to accelerate a local, reliable, and affordable energy transition, 3) the ability to leverage investment opportunities between state and federal programs |
| Category E. Incentives and Subsidies | Strategy E-2 | Action E-2.1 | Establish a strategic approach to policy, tax, and program development that stimulates and incentivizes private sector activity that leads to lower cost, local, and reliable energy. |
| Category E. Incentives and Subsidies | Strategy E-3 | 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, even as the State actively works to 1) consider alternative mechanisms, 2) strategically deploys PCE funds to advance low-cost energy solutions, and 3) expands the ability of PCE to lower costs across sectors within communities. |
| Category E. Incentives and Subsidies | Strategy E-4 | Action E-4.1 | Reduce the risk to utilities and project proponents, increase the availability of financing mechanisms, and encourage ancillary investments that will benefit industry and economies of communities. |
| Category E. Incentives and Subsidies | Strategy E-5 | 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 A. Railbelt Transmission, Generation, and Storage | Priority B. Coastal Generation, Distribution, and Storage | Priority C. Rural Generation, Distribution, and Storage | Priority D. State Energy Data | Priority E. Incentives and Subsidies | Priority F. Statutes and Regulations |
|---|--|--|----------------------------------|--|---|
| | | | D-4 | | |
| | | | | | F-4.1 |
| | | | | | F-4.1 |
| | B-2.5 | C-5.1 C-5.2 | | | F-4.1 |
| | | | | | F-1.5 |
| A-2.2 A-3.1 | | | | | F-3.6 |
| A-1.1 | | | | | F-3.2 |
| | | C-2.6 | | | |



Table F-1: Comprehensive Statutes and Regulations Matrix

The table below notes where similar strategies align across subcommittees, key statute or policy recommendations.

| Priority | Strategy | Action # | Action |
|--------------------------------------|--------------|--------------|--|
| Category F. Statutes and Regulations | Strategy F-1 | Action F-1.1 | Identify state matching funds for all federal funds available for transmission infrastructure (See Action B-2.4) |
| Category F. Statutes and Regulations | Strategy F-1 | Action F-1.2 | Clarify state statute AS 09.65.86 on Utility ROW wildfire liability. |
| Category F. Statutes and Regulations | Strategy F-1 | 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. |
| Category F. Statutes and Regulations | Strategy F-1 | 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. |
| Category F. Statutes and Regulations | Strategy F-1 | Action F-1.5 | Establish renewable energy or transmission line land designations and ROW's. |
| Category F. Statutes and Regulations | Strategy F-1 | Action F-1.6 | Modify 11 ACC 93.120 and other permits related to hydro-electric generation projects in order to accelerate design, construction and operation to these new power sources. (See Action B-4.1). |
| Category F. Statutes and Regulations | Strategy F-2 | 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 Action C-1.1). |
| Category F. Statutes and Regulations | Strategy F-2 | 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. |
| Category F. Statutes and Regulations | Strategy F-2 | 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 Action B-4.1). |



| Priority A. Railbelt Transmission, Generation, and Storage | Priority B. Coastal Generation, Distribution, and Storage | Priority C. Rural Generation, Distribution, and Storage | Priority D. State Energy Data | Priority E. Incentives and Subsidies | Priority F. Statutes and Regulations |
|--|---|---|-------------------------------|--------------------------------------|--------------------------------------|
| | B-2.4 | C1.1 | | | |
| | | | | | |
| | | | | | |
| | B-4.1 | | | | |
| | B-2.4 | C-1.1 | | | |
| | | | | | |
| | B-4.1 | | | | |

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Table F-1: Comprehensive Statutes and Regulations Matrix

The table below notes where similar strategies align across subcommittees, key statute or policy recommendations.

| Priority | Strategy | Action # | Action |
|--------------------------------------|--------------|--------------|--|
| Category F. Statutes and Regulations | Strategy F-2 | Action F-2.4 | RCA to consider diversification for new generation (See Action A-2.2). |
| Category F. Statutes and Regulations | Strategy F-3 | Action F-3.1 | Provide budgetary 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. |
| Category F. Statutes and Regulations | Strategy F-3 | 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. |
| Category F. Statutes and Regulations | Strategy F-3 | Action F-3.3 | Streamline state and federal permitting for energy projects within transportation/utility corridors. |
| Category F. Statutes and Regulations | Strategy F-3 | Action F-3.4 | Modify 3AAC 46.270 (f) to reduce the ambiguity surrounding avoided cost standards. |
| Category F. Statutes and Regulations | Strategy F-3 | Action F-3.5 | Modify AS42.05.760 to align with unified Railbelt transmission authority (See Action A-1.1). |
| Category F. Statutes and Regulations | Strategy F-3 | Action F-3.6 | Adopt a Clean Energy Standard with incentives (See Action A-2.1). |
| Category F. Statutes and Regulations | Strategy F-4 | Action F-4.1 | Create a Data Department with the Alaska Energy Authority (AEA), using statute as necessary (See Data Strategy - 1). |



| Priority A. Railbelt Transmission, Generation, and Storage | Priority B. Coastal Generation, Distribution, and Storage | Priority C. Rural Generation, Distribution, and Storage | Priority D. State Energy Data | Priority E. Incentives and Subsidies | Priority F. Statues and Regulations |
|--|---|---|-------------------------------|--------------------------------------|-------------------------------------|
| A-2.2 | | | | | |
| | | | | | |
| | | | | E-3.1 | |
| | | | | | |
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| | | | | | |
| | | | D-1 | | |

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SECTION IV.
NEXT STEPS



NEXT STEPS AND ACTIONS RECOMMENDED FOR IMMEDIATE IMPLEMENTATION

The Task Force recognizes that this report will become an iterative planning tool to be continually updated to meet the mandate of A.O. No. 344 and A.O. No. 345. Updates to this report will become more comprehensive in nature as actions are implemented across agencies and departments. This report is intended to guide institutions in building programs and policies that promote energy affordability, reliability, and resilience.

The actions listed below are those actions the Task Force feels are ready for immediate implementation to help advance the overall actions/outcomes identified in the plan. These actions deserve to be considered for further development by the Governor or the Legislature in the coming legislative session. Detailed description of each of these actions can be found in **Appendix II- Action Detail Summary**.

High priority actions are as follows:

Railbelt A-1.1: Unify all existing transmission assets along the Railbelt and Bradley Lake under AEA or a new not-for-profit regulated utility.

Railbelt A-2.1: Adopt Clean Energy Standard and Incentives to Diversify Generation.

Coastal B-1-1, B-1-2, B-1-3, B-1-4, B-1-15: Alaska Market Initiatives

Coastal 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.

Coastal 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.

Coastal 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.

Rural C-2.3: Fund and Construct Opportunities to Connect Rural Communities through Transmission Lines and Other Shared Energy Projects.

Rural C-3.4: Procure, install, and improve grid modernization and automation

Incentives E-2.1(3): Adopt a Clean Energy Standard with incentives to facilitate reaching diversification goals.

Incentives E-2.1(4): Implement low-interest loan program (concessionary capital, like Power Project Loan Fund) that facilitates affordable energy development and infrastructure improvements.

Incentives E-3.1(2): Implement a strategic approach to lowering costs according to highest use communities.

Incentives E-3.1(5): Consider the development of a postage stamp rate alternative, where all Alaskans pay the same rate.

Incentives E-4.1(1): Establish a Green Bank for financing of community scale energy efficiency projects.

Incentives E-4.1(6): Reestablish the Emerging Energy Technology Fund (EETF) in order to promote public-private investment in energy technology demonstration and deployment programs.

Incentives E-5.1(4): Ensure adequate workforce training and skills development alongside job creation and quality goals of State.

Statutes F-1.1: Identify state matching funds necessary for all federal funds available for transmission infrastructure (also see Action F 1.6, B-2.4, C2.3).

Statutes F-2.1: Identify state matching funds necessary for all federal funds available for generation infrastructure when a cost/benefit analysis shows a positive benefit to the state or the communities the project is intended for. (see also C3.4).

Statutes F-2.2: Monitor and evaluate third party development of carbon capture and sequestration technologies and pass legislation establishing a regulatory framework for the geologic storage of carbon.

Statutes 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.

Statutes F-3.2: Maintain and expand the PCE Program until all Alaskans benefit from actual equitable and lower cost energy.

Statutes F-3.5: Adopt a Clean Energy Standard with incentives (See Action A-2.1).

Statutes F-4.1: Create a Data Department with the Alaska Energy Authority (AEA), using statute as necessary (see Action D-1.1).

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