

State of Alaska FY2023 Governor's Operating Budget

Department of Commerce, Community, and Economic Development Alaska Energy Authority Owned Facilities Component Budget Summary

Component: Alaska Energy Authority Owned Facilities

Contribution to Department's Mission

Management and development of AEA owned infrastructure.

Major Component Accomplishments in 2021

Alaska Intertie Project: AEA owns the Alaska Intertie, a 170-mile long, 345 kilovolt (kV) transmission line between Willow and Healy, which saves Golden Valley Electric Association ratepayers \$30 million annually by purchasing lower cost electricity generated Cook Inlet. As the owner, AEA is also an active member of the Intertie Management Committee (IMC). In FY2020, the IMC completed a study of an electromechanical oscillation on the Railbelt, including the Intertie, which may pose a threat to system stability. AEA directly manages the snow load monitoring system and the static Volt Ampere Reactive compensator service contract, both of which support the proper operation of the Intertie allowing for continued energy cost savings.

Bradley Lake Hydroelectric Project: The Bradley Lake Hydroelectric Project is the largest renewable energy project in Alaska and provides the least expensive power on the Railbelt Grid at approximately 4.5 cents per kilowatt-hour (kWh). In the summer of 2020, AEA commissioned the West Fork Upper Battle Creek Diversion Project adding 10 percent energy to this vital Project. Also in the summer of 2020, AEA completed the acquisition of the Sterling to Quartz Creek Transmission line as part of the Bradley Lake Project ensuring better alignment of interests for the operation of the Project in the future. To that end, AEA continues to investigate required project work opportunities and additions/expansion to the Project while increasing the renewable energy generation within the interconnected Bulk Electric System in place in the Railbelt region of Alaska.

Electric Reliability Organization: This past year the Alaska Legislature passed SB 123, which was the culmination of years of effort to implement institutional reform in the Railbelt region of the State. SB 123 mandates the creation of an Electric Reliability Organization (ERO) to carry out specific duties for the entirety of the interconnected bulk power system. The Railbelt utilities, in accordance with the legislative efforts, have created a Railbelt Reliability Council (RRC) which is expected and anticipated to become the ERO. AEA is a member of the RRC and is on its board of directors. As such, AEA must devote significant staff resources towards the development of foundational documents for this new entity.

The Alaska Intertie and the Bradley Lake Hydroelectric facility are integral components of the bulk power system. Prudent management of these state-owned assets requires AEA to play a significant role in whatever regulations are ultimately promulgated at the Regulatory Commission of Alaska (RCA).

Transmission Congestion Mitigation: AEA made significant strides towards improving the reliability of the Railbelt bulk power system with the purchase of the Soldotna to Quartz Creek Transmission Line. This purchase led to better cost alignment of important infrastructure upgrades and improvements and aligns AEA with future efforts at least reasonable cost projects that are likely to result from the creation of an Electric Reliability Organization (ERO). To that end, AEA in collaboration with Railbelt stakeholders including all of the load-serving entities (LSE's, electric utilities), has begun development work on transmission line upgrades at the point of greatest congestion on the interconnected electrical system. The priority that brings the greatest value in terms of now on transmission congestion mitigation but also the integration of renewables into the interconnected system is as follows:

- Soldotna to Quartz Creek Transmission Line Upgrade (115 kilovolts (kV) to 230 kV)
- University to Quartz Creek Transmission Line Upgrade (115 kV to 230 kV)
- Bradley Junction to Soldotna parallel 115 kV Transmission Line
- Bradley Lake Spillway Raise
- Nikiski to Beluga DC Routing Study

This work is foundational to economic development throughout the Railbelt and will result in the creation of inputs to the inaugural Integrated Resource Plan that is forthcoming from the aforementioned ERO.

Key Component Challenges

Identification of Renewable Energy Opportunities: AEA continues to explore opportunities to provide economically viable solutions in energy production development that enhances resiliency and diversification of supply for the State of Alaska. This includes investigation of opportunities to remove constraints to the lowest-cost energy production facility on the Railbelt and expand its capacity. AEA is looking at the feasibility stage of the Dixon Diversion Project that could increase renewables by 50 percent on the Railbelt. The cost is estimated to be \$165-400 million, depending on which option is most economically viable.

Transmission Congestion: The Alaska Railbelt Grid will experience significant changes over the next few years. These changes will be driven by the creation of an Electric Reliability Organization that will oversee reliability standards, integrated resource planning, and project siting and approval; rapidly changing loads due to population shifts, electric vehicle use and beneficial electrification; and renewable energy price competitiveness compared to traditional power generation. These change mechanisms often result in transmission congestion, e.g. transmission limitations that restrict the security-constrained economic dispatch of electric power. AEA has participated in planning, design, construction, and management of Railbelt assets, including transmission lines. Over the next several years, AEA will work with Railbelt stakeholders to develop and implement solutions to relieve transmission congestion within the Railbelt. AEA in partnership with the Railbelt utilities, have identified required project work with an anticipated capital budget of over \$225 million to increase reliability, decrease line loss, and allow for increased power transmission to the Railbelt.

Significant Changes in Results to be Delivered in FY2023

No significant result changes at this time.

Statutory and Regulatory Authority

AS 44.83	Alaska Energy Authority
AS 37.07.020(e)	State Facilities Operations and Maintenance
3 AAC 105	Alaska Energy Authority

Contact Information
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Component Detail All Funds
Department of Commerce, Community, and Economic Development

Component: Alaska Energy Authority Owned Facilities (2599)
RDU: Alaska Energy Authority (453)

Non-Formula Component

	FY2021 Actuals	FY2022 Conference Committee	FY2022 Authorized	FY2022 Management Plan	FY2023 Governor	FY2022 Management Plan vs FY2023 Governor	
71000 Personal Services	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
72000 Travel	0.0	30.0	30.0	30.0	30.0	0.0	0.0%
73000 Services	664.8	737.7	737.7	737.7	737.7	0.0	0.0%
74000 Commodities	0.0	8.0	8.0	8.0	8.0	0.0	0.0%
75000 Capital Outlay	0.0	5.0	5.0	5.0	5.0	0.0	0.0%
77000 Grants, Benefits	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
78000 Miscellaneous	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
Totals	664.8	780.7	780.7	780.7	780.7	0.0	0.0%
Fund Sources:							
1107 AEA Rcpts (Other)	664.8	780.7	780.7	780.7	780.7	0.0	0.0%
Unrestricted General (UGF)	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
Designated General (DGF)	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
Other Funds	664.8	780.7	780.7	780.7	780.7	0.0	0.0%
Federal Funds	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
Positions:							
Permanent Full Time	0	0	0	0	0	0	0.0%
Permanent Part Time	0	0	0	0	0	0	0.0%
Non Permanent	0	0	0	0	0	0	0.0%

Change Record Detail - Multiple Scenarios with Descriptions
Department of Commerce, Community, and Economic Development

Component: Alaska Energy Authority Owned Facilities (2599)

RDU: Alaska Energy Authority (453)

Scenario/Change Record Title	Trans Type	Totals	Personal Services	Travel	Services	Commodities	Capital Outlay	Grants, Benefits	Miscellaneous	Positions		NP
										PFT	PPT	
***** Changes From FY2022 Conference Committee To FY2022 Authorized *****												
FY2022 Conference Committee	ConfCom	780.7	0.0	30.0	737.7	8.0	5.0	0.0	0.0	0	0	0
1107 AEA Rcpts		780.7										
Subtotal		780.7	0.0	30.0	737.7	8.0	5.0	0.0	0.0	0	0	0
***** Changes From FY2022 Management Plan To FY2023 Governor *****												
Totals		780.7	0.0	30.0	737.7	8.0	5.0	0.0	0.0	0	0	0

Line Item Detail (1676)
Department of Commerce, Community, and Economic Development
Travel

Component: Alaska Energy Authority Owned Facilities (2599)

Line Number	Line Name		FY2021 Actuals	FY2022 Management Plan	FY2023 Governor
2000	Travel		0.0	30.0	30.0
Object Class	Servicing Agency	Explanation	FY2021 Actuals	FY2022 Management Plan	FY2023 Governor
2000 Travel Detail Totals			0.0	30.0	30.0
2000	In-State Employee Travel	In-State Transportation - Transportation costs for travel relating to administration, meetings, boards and commissions.	0.0	30.0	30.0

Line Item Detail (1676)
Department of Commerce, Community, and Economic Development
Services

Component: Alaska Energy Authority Owned Facilities (2599)

Line Number	Line Name		FY2021 Actuals	FY2022 Management Plan	FY2023 Governor
3000	Services		664.8	737.7	737.7
Object Class	Servicing Agency	Explanation	FY2021 Actuals	FY2022 Management Plan	FY2023 Governor
3000 Services Detail Totals			664.8	737.7	737.7
3001	Financial Services	Accounting, auditing, management consulting, grantee monitoring, loan servicing and insurance related services.	0.0	1.0	1.0
3004	Telecommunications	Local, long distance, and cellular telephone charges, television, data/network, telecommunication equipment, and other wireless charges from outside vendors.	0.0	1.5	1.5
3006	Delivery Services	Freight, courier services, and postage.	0.0	1.0	1.0
3007	Advertising and Promotions	Advertising, promotions and legal notices.	0.0	1.0	1.0
3011	Other Services	Other professional services.	0.0	83.2	83.2
3038	Inter-Agency Management/Consulting	Commerce - AIDEA (1234) Alaska Industrial Development and Export Authority support.	48.5	50.0	50.0
3038	Inter-Agency Management/Consulting	Commerce - AIDEA (1234) Bradley Lake and Battle Creek Administrative Fee.	616.3	600.0	600.0

Line Item Detail (1676)

**Department of Commerce, Community, and Economic Development
Commodities**

Component: Alaska Energy Authority Owned Facilities (2599)

Line Number	Line Name		FY2021 Actuals	FY2022 Management Plan	FY2023 Governor
4000	Commodities		0.0	8.0	8.0
Object Class	Servicing Agency	Explanation	FY2021 Actuals	FY2022 Management Plan	FY2023 Governor
4000 Commodities Detail Totals			0.0	8.0	8.0
4000	Business	Supplies for office, library, training, and instructional needs, including small equipment, tools and subscriptions.	0.0	7.0	7.0
4002	Household/Institutional	Cleaning, food, and other household supplies.	0.0	1.0	1.0

Line Item Detail (1676)

**Department of Commerce, Community, and Economic Development
Capital Outlay**

Component: Alaska Energy Authority Owned Facilities (2599)

Line Number	Line Name		FY2021 Actuals	FY2022 Management Plan	FY2023 Governor
5000	Capital Outlay		0.0	5.0	5.0
Object Class	Servicing Agency	Explanation	FY2021 Actuals	FY2022 Management Plan	FY2023 Governor
5000 Capital Outlay Detail Totals			0.0	5.0	5.0
5004	Equipment	Equipment and furniture.	0.0	5.0	5.0

Revenue Detail (1681)

Department of Commerce, Community, and Economic Development

Component: Alaska Energy Authority Owned Facilities (2599)

Revenue Type (OMB Fund Code) Revenue Source	Component	Comment	FY2021 Actuals	FY2022 Management Plan	FY2023 Governor
5107 AEA Rcpts (1107 AEA Rcpts)			664.8	780.7	780.7
5420 Alaska Energy Authority Corporate Receipts		Administration fees project support revenues for owned facilities, including Bradley Lake, Battle Creek, and the Alaska Intertie.	0.0	780.7	780.7
5420 Alaska Energy Authority Corporate Receipts		Bradley Lake project administration fees paid by participating utilities.	38.2	0.0	0.0
5420 Alaska Energy Authority Corporate Receipts		Battle Creek project administration fees paid by participating utilities.	10.3	0.0	0.0
5420 Alaska Energy Authority Corporate Receipts		Alaska Energy Authority direct payroll costs outside of the administrative fees paid for by project debt or construction loans. Also includes labor and project administration for the Alaska Intertie.	616.3	0.0	0.0

Inter-Agency Services (1682)

Department of Commerce, Community, and Economic Development

Component: Alaska Energy Authority Owned Facilities (2599)

	FY2021 Actuals	FY2022 Management Plan	FY2023 Governor
Component Totals	664.8	650.0	650.0
With Department of Commerce, Community, and Economic Development	664.8	650.0	650.0

Object Class	Servicing Agency	Explanation	FY2021 Actuals	FY2022 Management Plan	FY2023 Governor
3038 Inter-Agency Management/Consulting	Commerce - AIDEA (1234)	Alaska Industrial Development and Export Authority support.	48.5	50.0	50.0
3038 Inter-Agency Management/Consulting	Commerce - AIDEA (1234)	Bradley Lake and Battle Creek Administrative Fee.	616.3	600.0	600.0