

State of Alaska
FY2022 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 2020

Soldotna-Quartz Creek Line Purchase: On August 5, 2020 the Alaska Energy Authority (AEA) Board of Directors endorsed the purchase of the 39.3 mile 115 kilovolt transmission line between the Sterling Substation and Quartz Creek (SSQ Line) from the Alaska Electric and Energy Cooperative, Inc., a subsidiary of the Homer Electric Association for approximately \$16 million. The SSQ Line is an essential component of the Railbelt transmission system, which delivers Bradley Lake hydroelectric generated power from Homer north to Fairbanks. Bradley Lake, a 120-megawatt hydroelectric project, is 27 miles southeast of Homer and delivers the least expensive power available to Railbelt ratepayers. This transaction brings many significant benefits to customers including better cost alignment traditional to the utility industry, increased reliability, and future prospect for upgrades to the line, which would diminish line losses and allow for increased power transmission north, thus unconstraining Bradley power. AEA is expecting to close in December 2020.

West Fork Upper Battle Creek Diversion Project: The West Fork Upper Battle Creek Diversion Project was completed in summer 2020, at a total cost of approximately \$47 million. By diverting glacial water from the West Fork of Upper Battle Creek into Bradley Lake, the power capacity of the existing facility will increase by approximately 10 percent. The diversion project began in May 2018 and includes three miles of road, a concrete diversion dam with spillway, and approximately 8,400 feet of 63" high density polyethylene piping, which delivers water into Bradley Lake. The project is expected to produce 37,000 megawatt hours of energy annually. This amount of energy is enough to light 5,000 homes and will cost significantly less than natural gas generated power in the railbelt. The project was financed with New Clean Renewable Energy Bonds and Qualified Energy Conservation Bonds, saving the Railbelt utilities approximately \$20 million in financing costs. Managed by AEA, the project was paid for by Railbelt utility customers. It is the largest improvement to the Bradley Lake Hydroelectric Facility since beginning commercial operation in September 1991. The project began operations on July 22, 2020.

Bradley Lake Hydroelectric Project: The Bradley Lake Hydroelectric Project is the largest renewable energy project in Alaska and provides some of the least expensive power on the Railbelt Grid at approximately 4.5 cents per kWh. In September 2016, AEA received the West Fork Upper Battle Creek amendment from the Federal Energy Regulatory Commission (FERC). The Battle Creek project was completed in summer 2020 and diverted the West Fork Upper Battle Creek into Bradley Lake. The diversion will increase the Bradley Lake Hydroelectric Project annual energy by approximately 37,000 megawatt hours (MWh), increasing output by 10 percent. The Battle Creek project addition includes construction of three miles of road, a concrete diversion dam, and a pipe and canal to convey the water to Bradley Lake. The project was completed on schedule and within budget. AEA continues to explore additional renewable opportunities that enhance the Bradley Lake Hydroelectric Project.

5.5 Mile Lease with Matanuska Electric Association: After years of negotiation, AEA completed the process to extend the lease for use of the Matanuska Electric Association's transmission line north of the Teeland substation in Wasilla. This segment of transmission line is the sole path to deliver power generated at the Bradley Lake Hydroelectric facility north to Golden Valley Electric Association. The lease agreement ended years of dispute as to the definitive ownership of the infrastructure and unburdened the participating utilities in both the Bradley Lake Project and the Alaska Intertie Project from potential costly transmission investment's that would ultimately be borne by Railbelt ratepayers. The lease agreement is set to expire on October 1, 2038.

Alaska Intertie Project: AEA is a member of the Intertie Management Committee (IMC) which oversees the operation and maintenance of the Anchorage to Fairbanks Intertie. 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 is working with the IMC to identify a logical termination point for the intertie extension that is based on the most recent generation and transmission planning scenarios of the Railbelt utilities. AEA directly manages the snow load monitoring system and the static Volt Ampere Reactive compensator service contract, both of which support proper

operation of the Intertie. AEA also participates in Railbelt institutional reform efforts respecting transmission and generation planning efforts for the entirety of the interconnected Bulk Electrical System.

Key Component Challenges

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. Since the mid-1980s, 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 - the first step being realignment of ownership of Soldotna-Quartz Creek Line and potential upgrades.

Significant Changes in Results to be Delivered in FY2022

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

	FY2020 Actuals	FY2021 Conference Committee	FY2021 Authorized	FY2021 Management Plan	FY2022 Governor	FY2021 Management Plan vs FY2022 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	523.2	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	523.2	780.7	780.7	780.7	780.7	0.0	0.0%
Fund Sources:							
1107 AEA Rcpts (Other)	523.2	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	523.2	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 FY2021 Conference Committee To FY2021 Authorized *****												
Conference Committee												
1107 AEA Rcpts	ConfCom	780.7	0.0	30.0	737.7	8.0	5.0	0.0	0.0	0	0	0
		780.7										
	Subtotal	780.7	0.0	30.0	737.7	8.0	5.0	0.0	0.0	0	0	0
***** Changes From FY2021 Management Plan To FY2022 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		FY2020 Actuals	FY2021 Management Plan	FY2022 Governor
2000	Travel		0.0	30.0	30.0
Object Class	Servicing Agency	Explanation	FY2020 Actuals	FY2021 Management Plan	FY2022 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		FY2020 Actuals	FY2021 Management Plan	FY2022 Governor
3000	Services		523.2	737.7	737.7
Object Class	Servicing Agency	Explanation	FY2020 Actuals	FY2021 Management Plan	FY2022 Governor
3000 Services Detail Totals			523.2	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	210.0	210.0
3038	Inter-Agency Management/Consulting	Commerce - AIDEA (1234) Alaska Industrial Development and Export Authority support.	218.2	218.2	218.2
3038	Inter-Agency Management/Consulting	Commerce - AIDEA (1234) Bradley Lake and Battle Creek Administrative Fee.	305.0	305.0	305.0

Line Item Detail (1676)

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

Component: Alaska Energy Authority Owned Facilities (2599)

Line Number	Line Name		FY2020 Actuals	FY2021 Management Plan	FY2022 Governor
4000	Commodities		0.0	8.0	8.0
Object Class	Servicing Agency	Explanation	FY2020 Actuals	FY2021 Management Plan	FY2022 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		FY2020 Actuals	FY2021 Management Plan	FY2022 Governor
5000	Capital Outlay		0.0	5.0	5.0
Object Class	Servicing Agency	Explanation	FY2020 Actuals	FY2021 Management Plan	FY2022 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	FY2020 Actuals	FY2021 Management Plan	FY2022 Governor
5107 AEA Rcpts (1107 AEA Rcpts)			523.2	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.	200.0	0.0	0.0
5420 Alaska Energy Authority Corporate Receipts		Battle Creek project administration fees paid by participating utilities.	105.0	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.	218.2	0.0	0.0

Inter-Agency Services (1682)

Department of Commerce, Community, and Economic Development

Component: Alaska Energy Authority Owned Facilities (2599)

	FY2020 Actuals	FY2021 Management Plan	FY2022 Governor
Component Totals	523.2	523.2	523.2
With Department of Commerce, Community, and Economic Development	523.2	523.2	523.2

Object Class	Servicing Agency	Explanation	FY2020 Actuals	FY2021 Management Plan	FY2022 Governor
3038 Inter-Agency Management/Consulting	Commerce - AIDEA (1234)	Alaska Industrial Development and Export Authority support.	218.2	218.2	218.2
3038 Inter-Agency Management/Consulting	Commerce - AIDEA (1234)	Bradley Lake and Battle Creek Administrative Fee.	305.0	305.0	305.0