

Federal Utility Support Programs

Select Federal Programs that are relevant to the Railbelt Utilities

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IJA or BIL – Infrastructure Investment and Jobs Act aka Bipartisan Infrastructure Law. An omnibus infrastructure bill passed by Congress and signed by President Biden Nov. 2021.

IRA - Inflation Reduction Act – another omnibus bill passed by Congress and signed by President Biden Nov. 2021.

Bipartisan Infrastructure Law (BIL)

Grid Resilience and Innovative Partnership (GRIP)

GRIP – 3 sub programs for which state governments are eligible. 5 years of funding, awarded a year at a time.

- GRIP Topic 1 – Grid Resilience Grants
- GRIP Topic 2 – Smart Grid Grants
- GRIP Topic 3 – Grid Innovation Program

The Alaska Energy Authority, acting as the State of Alaska, was awarded \$206.5 million under GRIP Topic 3 as a 50% match for building a high voltage direct current (HVDC) transmission line from Nikiski to Beluga (Pt McKenzie area) where Chugach Electric has significant transmission already) and battery storage for primarily regulation of the variability of wind. The transmission project would unconstrain transmission of our cheapest form of power generation – Bradley Lake Hydro. GVEA is supposed to receive 17% of the power generated from Bradley, but can't always due to the lack of capacity of the current transmission lines on the northern Kenai. This grant and project is still being negotiated and the Legislature will have this on their plate for funding. The 50% match would be required to meet the terms of this grant. There seems to be legislative support for the match, but unsure where it will come from, perhaps a General Obligation Bond if not a direct appropriation.

The second round (year) of GRIP funding was announced with concept letters due Jan. 14, 2023 and AEA has applied. If a concept letter is approved, the proposer will be invited to submit an application for the proposed project, which may or may not be selected. See attached for more info. My understanding is that AEA's is requesting a HVDC line from Beluga to Healy in order to provide resilience and backup of the single radial transmission line that goes from Willow to Healy. That line is also limited as to how much power it can transmit. A full load of 70 mw has about 8% line loss which costs GVEA \$17,500/day, not peanuts. From what I hear, our Round 2 is likely to not be successful until we can demonstrate moving forward with Round 1. This is a 5 year program, so there will be future rounds.

The BPMC (Bradley Lake Management Committee) is also proposing to improve Kenai area transmission under GRIP 1 Round 2. I believe there was a GRIP Topic 1 proposal as well to make further upgrades to the existing Kenai to Anchorage transmission grid. It would be doubtful we would get both.

IRA – Inflation Reduction Act

<https://www.rd.usda.gov/inflation-reduction-act>

Relevant Programs

PACE – Powering Affordable Clean Energy

USDA Rural Utilities Service (RUS) administered.

GVEA has received the go-ahead to submit an application for funding a lithium-ion battery system and substation upgrade to support a 16 mw solar farm proposed by a private developer in Nenana. The IRA allows electric cooperatives to receive the equivalent of a 30% tax break (Direct Pay for not-for-profit non-taxable cooperatives) for renewables and battery storage. There is also a provision for a 60% loan forgiveness for most of this \$109.7 million project. Expecting to hear back from RUS early first quarter 2024.

New ERA- Empowering Rural America

New ERA is a program being administered through the USDA Rural Utilities Service.

GVEA has submitted the concept paper to install a large lithium-ion battery array and transmission to serve the proposed 100+ mw Shovel Creek Wind Farm west of Murphy Dome that a private developer is pursuing. We expect to hear by 2nd quarter 2024 if GVEA is invited to submit a full application.

A major commitment of this funding is GVEA's intent to move off of fossil fuels and also replace the power from the unreliable experimental Healy 2 coal plant that the board voted to stop using by Dec. 2024. If the New Era grant/loan is approved, GVEA will be allowed to refinance Healy 2 debt (currently about \$130 million) at 0% interest, some of which can also be forgiven under certain terms. Another goal is to get out of the business of operating some of our generation for reducing operational costs and risks in the future.

Finally, the IRA allows electric cooperatives to receive the equivalent of a 30% tax break for renewables and battery storage.

All these projects are expected to reduce rates at least 7% once implemented and continuing downward. Most projects would be implemented in 2026 or 2027.

Westinghouse Pumped Thermal Storage <https://www.youtube.com/watch?v=bnVGyZ8HzB4> received a staged 50 mm grant from DOE to develop this Long Duration Storage concept to commercial capacity. GVEA was approached to share in some of the match for this project that potentially could be located next to the GVEA's Healy plant(s). Current plans are to pursue a 30% design and engineering for \$5 mm from DOE and \$5 mm from Westinghouse and other external parties with a maximum of \$1.3 mm from GVEA. Some of that \$1.3 mm could be offset by other Alaska entities, still TBD. If it did proceed to construction, GVEA would look to a storage agreement instead of owning this est. \$330 million.

Electric Vehicles and Infrastructure

Both the BIL and IRA have provisions to encourage use of electric vehicles. Alaska Energy Authority is administering the NECA vehicle infrastructure program. As a new concept in Alaska, the Regulatory Commission (RCA) is challenged in how utilities tariff for charging stations whether a utility owns them or not. Best put to say that the arrangements are evolving. The current rates are considered inception rates.

<https://www.akenergyauthority.org/What-We-Do/Renewable-Energy-and-Energy-Efficiency-Programs/Electric-Vehicles/National-Electric-Vehicle-Infrastructure-Formula-Program>

<https://www.fhwa.dot.gov/bipartisan-infrastructure-law/evs.cfm>

Dixon Diversion Project

Not a federal program, but a 50% additional expansion of Bradley Lake capacity is being studied by the Alaska Energy Authority, called the Dixon (Glacier) Diversion.

<https://www.akenergyauthority.org/What-We-Do/Railbelt-Energy/Bradley-Lake-Hydroelectric-Project/Dixon-Diversion-Project>

Broadband Programs

There are several broadband programs contained in the BIL. An Alaska Broadband Office was created under the Dept of Commerce to manage about \$1 billion of funding. This is a complex issue in how it will be managed still in progress.

There are other forms of funding through USDA Rural Utilities Service that are more focused on rural communities and tribes. <https://www.commerce.alaska.gov/web/abo/>

While not directly related to electric utilities, there are potential partnerships as the electric utilities have assets like power poles and a member base that can be used to deploy fiber and attract potential customers. The standard set by this legislation is 100 mbps download and 20 mbps upload, with encouragement to increase these to at least 1 gbps in both directions. (mbps = megabit per second, gbps = gigabit per second or 1,000 mbps).