2021 Alaska Railbelt Net Metering Update

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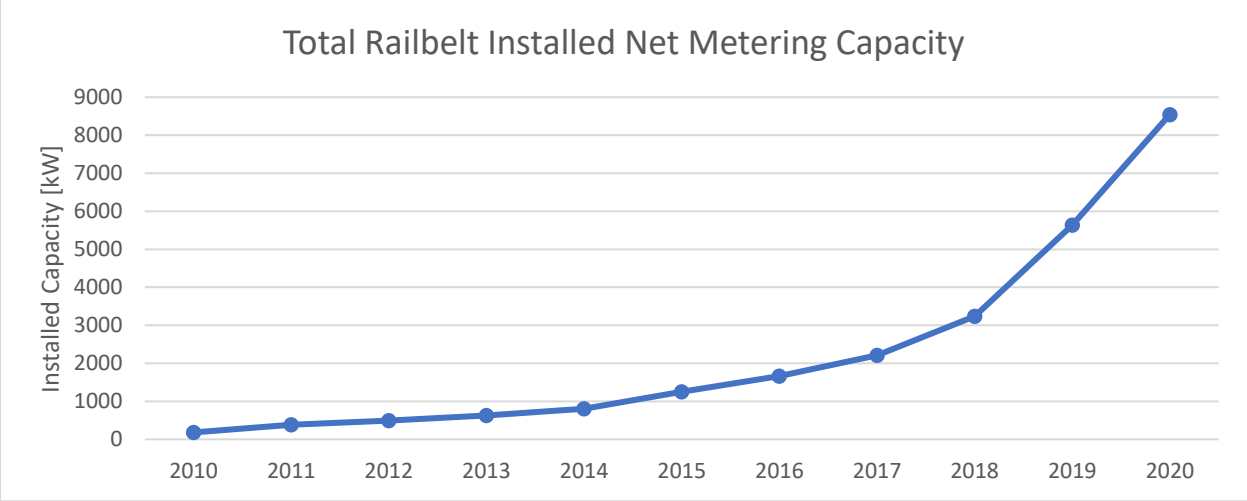
Net metered capacity on Alaska's Railbelt grew by 52% in 2020. The data below were compiled from recent Regulatory Commission of Alaska (RCA) filings submitted in February of 2021. Since the last net metering update was produced by the Alaska Center for Energy and Power (ACEP) in March of 2020, two Railbelt utilities have increased their net metering caps. Golden Valley Electric Association petitioned the RCA to increase its net metering cap from 1.5% to 3%, which was approved in May. Homer Electric Association petitioned the RCA to increase its net metering cap from 3% to 7%, which was approved in September. Solar photovoltaic (PV) installations continue to be responsible for nearly all new net metering capacity. Railbelt wide, installed net metered capacity is 1.7% of the average annual load; however, the percent of annual energy production from net metered systems is far smaller than this. Using an estimated 10% capacity factor (which is likely high since most residential roof mounted PV arrays experience at least some shading and sub-optimal tilt), net metered renewable energy production is estimated to be about 7690 MWh, or about 0.04% of the Railbelt total retail sales.

New in this year's report are additional data, which were supplied by the utilities, that report how much energy from net metered systems was fed back onto the grid. This amount is different than the amount of gross energy produced by the renewable energy asset. Because the generation source is behind the customer meter, the utility meter is only able to record power flowing back onto the grid when the customer load is less than customer generation. Of the 7690 MWh of approximated total net metered renewable energy production, 1658 MWh or about 22% was fed back onto the grid in 2020.

Homer Electric, Matanuska Electric, and Golden Valley Electric Associations saw overall load growth in 2020, while Chugach Electric saw the long-term trend of load decline continue. 2020 was the first year in some time that the majority of the Railbelt utilities saw load *growth*. However, with the global Covid-19 pandemic upending daily life for most people, 2020 can hardly be considered a representative year.

Railbelt Wide

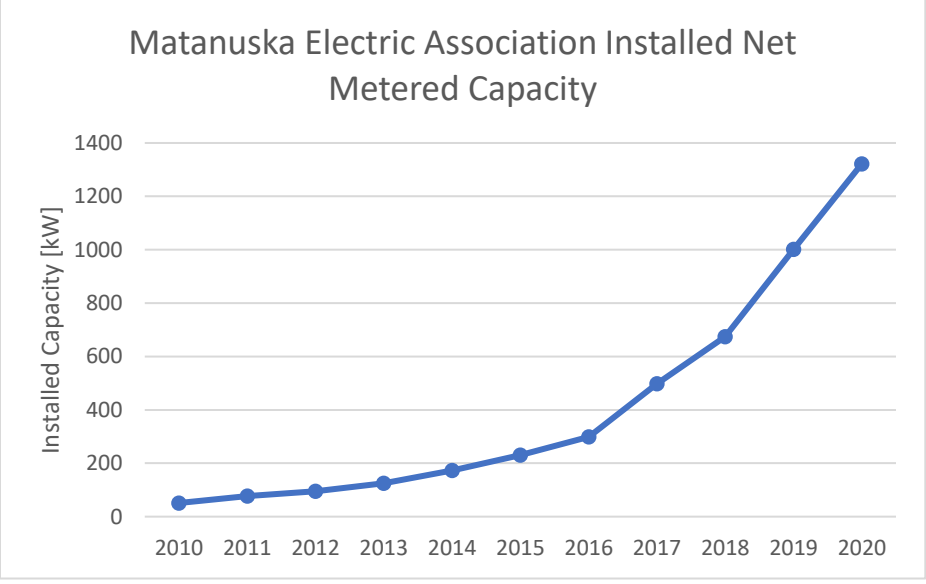
- At the end of 2020, Railbelt net metered renewable energy systems had an installed capacity of 8544 kW.
- The installed net metered capacity at the end of 2020 increased 52% over the 2019 total of 5636 kW.
- There are 1,638 net metered customers on the Railbelt grid. Breaking this down, 1,564 customers have solar PV systems, 65 customers have wind turbines, 1 customer uses biofuel generation, and 8 customers have both wind and solar PV. All the new capacity in 2020 was due to solar PV installations, except for 2 wind turbine installations.
- The total energy fed into the grid was 1658 MWh, 97% of which was generated by solar PV.



Matanuska Electric Association (MEA)

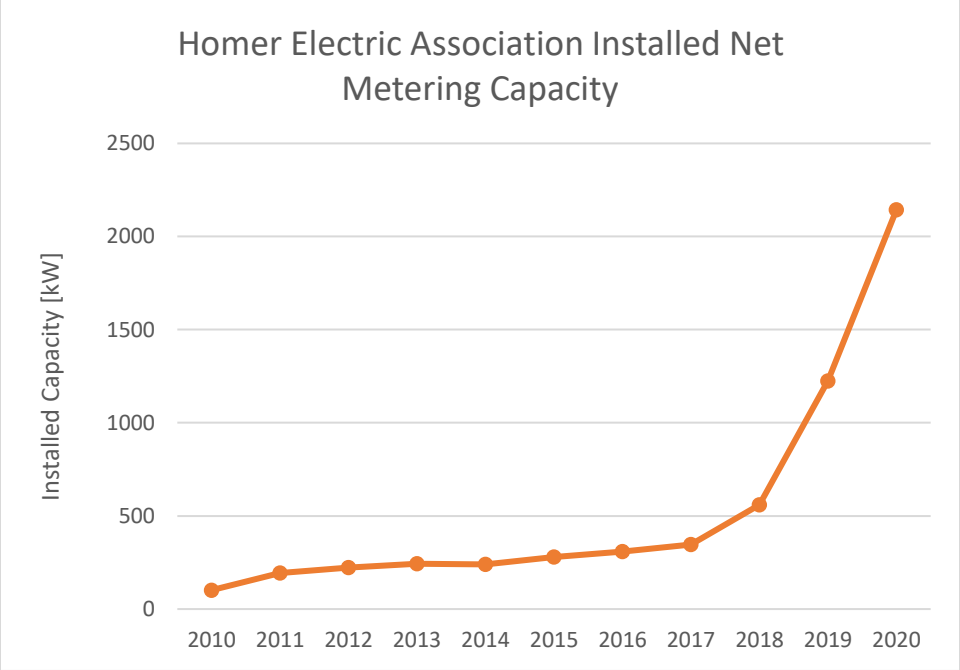
- At the end of 2020, MEA had 1322 kW of installed net metered capacity.
- This amount was 103% of the 1.5% threshold interconnection amount of 1283 kW.
- MEA net-metered customers include 207 with solar PV, 21 with wind turbines, and 8 with both solar PV and wind turbines. All added capacity in 2020 was solar PV.
- The total energy fed into MEA's system from net-metered facilities in 2020 was 441,688 kWh. Of this amount, 413,221 kWh was from solar net-metered facilities; 10,766 kWh was from wind net-metered facilities; and 17,701 kWh was from combined wind/solar net-metered facilities.
- One should take note that currently the installed net metering capacity on the MEA grid exceeds the 1.5% threshold. In their 2020 filing they stated:

  "Under the RCA's regulations, MEA is required to accept all eligible net metering applicants into the net metering program so long as the maximum nameplate capacity of all net metering members does not exceed 1.5% of MEA's average retail demand from the prior year. While MEA has not established any limit on net metering applications, and based on MEA's reading of the regulations, is not required to do so, the 1.5% threshold for mandatory utility acceptance must be updated annually in this RCA compliance filing…MEA has reached the current 1.5% retail demand threshold, but as stated previously, MEA has not established any limit on acceptance of net metering applications. MEA has been, and will continue, monitoring the net metering penetration levels on MEA's system. Rather than limiting net metering participation, MEA is investigating alternative rate designs, with the intent of enabling MEA's net metering program to continue for the foreseeable future by providing for equitable cost sharing. However, at this time MEA has made no final determinations for a course of action."



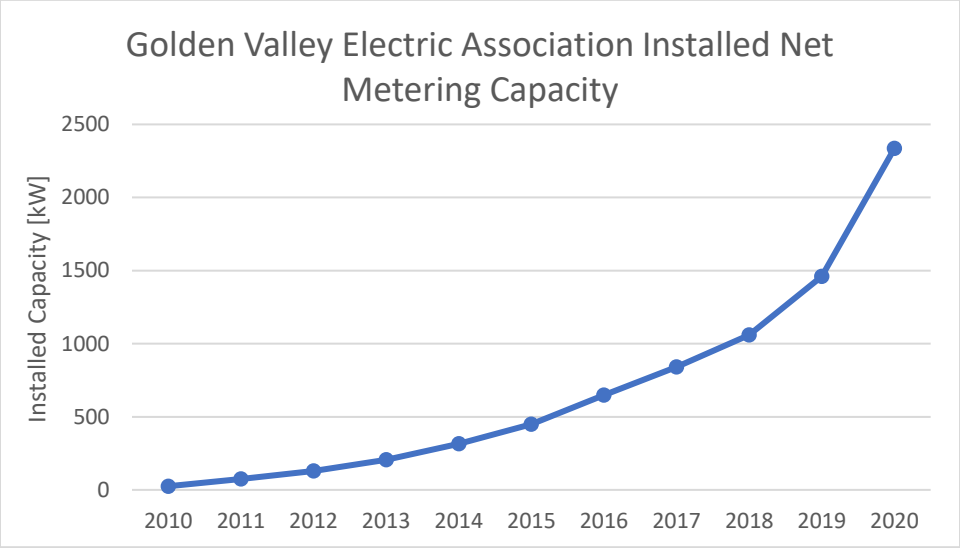
Homer Electric Association (HEA)

- At the end of 2020, HEA had 2143 kW of installed net metered capacity.
- This amount was 277% of the 1.5% threshold interconnection amount of 773 kW (1.5% of average annual load).
- In September of 2020 HEA raised its net metering limit to 7% of its average annual load (3605kW).
- Homer Electric net-metered customers include 358 with solar PV, 33 with wind turbines, and 1 with generation from biofuel. With the exception of one wind installation, all capacity installed in 2020 was solar PV.
- The total energy fed into HEA's grid from net metered facilities during the previous 12 months was 228,790 kWh. Of this amount, 223,268 kWh was from solar net-metered facilities and 5,522 kWh was from wind net-metered facilities.
- HEA collects a system delivery charge of $24.12 for customers that consume less than 150 kWh per month. Per the HEA website, the system delivery charge "recovers expenses associated with building, operating and maintaining transmission and distribution facilities whether or not electric service is used. If energy consumption meets or exceeds 150 kWh within the billing period, no charge applies."



Golden Valley Electric Association (GVEA)

- At the end of 2020, the GVEA service territory had 2,335 kW of installed net metered capacity.
- This amount was 112% of the 1.5% threshold interconnection amount of 2092 kW (1.5% of average annual load).
- In May of 2020 GVEA raised its net metering limit to 3% of its average annual load (4184kW).
- GVEA net-metered customers include 428 with solar PV and 6 with wind turbines. All new net metering capacity added in 2020 was solar PV.
- The total energy fed into GVEA's grid from net metering facilities during the previous 12 months was 152,899 kWh. All of this came from solar power.



Chugach Electric Association (CEA)

- In the fall of 2020, CEA merged with Municipal Light and Power. The data presented here include the combined totals of both CEA and Municipal Light and Power.
- At the end of 2020, CEA had 2744 kW of installed net metered capacity.
- This amount was 81% of the 1.5% threshold interconnection amount of 3367 kW (1.5% of average annual load).
- Chugach net-metered customers comprise 571 with solar PV and 5 with wind turbines. All but 1 of the net metered systems installed in 2020 were solar PV.
- The total energy fed into the CEA grid from net metering facilities in 2020 was 834,745 kWh. 98.6% of this came from solar PV, and the rest (11,294 kWh) came from wind.