Railbelt Utilities: Comments to the House Special Committee on Energy

HB 301

March 17, 2022

Agenda

- HB 301 and the Railbelt Utilities
- Proposed Amendments
- Railbelt Grid vs. Lower 48
- Closing Comments

House Bill 301 – Introduced February 4, 2022

- In our January 21, 2022 letter, the Railbelt utilities expressed their support for Governor Dunleavy's vision to bring the Railbelt electric system along with a more diversified energy mix into the future.
- Railbelt Utilities (Chugach Electric, Matanuska Electric, Golden Valley Electric, Homer Electric and Seward Electric) recognize and support the importance of a more diverse energy mix for Alaska and are fully united in their support of the "intent" of the proposed legislation.
- The Utilities see the legislation and any decisions around the legislation as a great opportunity to create a strong foundation and set a clear direction for Alaska's electric utility future.

Essentials and Other Priorities

- Utilities support a transition to a lower carbon future, see an RPS as a potential tool in this transition. We view the following as essential in any renewable or carbon reduction standard:
  - Achievable goals rooted in the physical and economic realities of the system.
  - Consideration of transmission constraints.
  - Rate and reliability caps to ensure the burden of achieving goals do not punish families and businesses.
  - Utilize the newly formed Electric Reliability Organization (ERO).
  - Protect against special interests and profit motives.
  - Allow for flexibility to respond to the fast-evolving nature of the industry.
  - Set up Alaska to achieve success and build on those successes.
- Other Priorities
  - Consideration of supply and demand-side management techniques.
  - Inclusion of nuclear and other carbon-neutral fuels.

Proposed Amendments

- The Utilities have communicated with Governor Dunleavy to outline proposed amendments to the legislation—amendments to make the current legislation more realistically achievable and affordable while considering the unique physical and economic realities of operating in Alaska's vast and remote geography.

- Focus of Proposed Amendments
  - Costs and reliability caps to protect the rates of members/consumers.
  - Achievable targets and timelines based on analysis – such as ERO's Integrated Resource Plan
  - RPS milestones coordinated with the planned replacement of the existing Railbelt generation fleet.
  - RCA required consideration of good cause for events outside the control of the utilities.
  - Streamlined RCA approval for selection, design, permitting and construction of projects.
  - Fines collected for noncompliance to be used to invest in infrastructure to support renewables.
  - Consideration of utility-developed projects in addition to power purchase agreements.

Amendment #1: AS 42.05.780(a)

- *An electric reliability organization shall file with the commission in a petition for approval an integrated resource plan for meeting the reliability requirements of all customers within its interconnected electric energy transmission network in a manner that provides the greatest value, consistent with the load-serving entities' obligations. An integrated resource plan must contain an evaluation of the full range of cost-effective means for load-serving entities to meet the service requirements of all customers, including additional generation, transmission, battery storage, and conservation or similar improvements in efficiency. An integrated resource plan must include options to meet customers' collective needs in a manner that provides the greatest value, consistent with the public interest, regardless of the location or ownership of new facilities or conservation activities.* ***An integrated resource plan must also include options to meet the renewable portfolio standard under AS 42.05.900*** *as well as, for comparative purposes, the least-cost option that meets the requirements of the region's reliability standards (reliability-adequate), if that option does not meet the renewable portfolio standard.*

- **What Changed:** In conjunction with ongoing ERO efforts and to promote and sustain collaboration amongst our utilities in achieving the RPS, while reducing unwarranted costs, language requiring an ERO's IRP to include options for each load-serving entity to meet the RPS has been eliminated.

Amendment #2: AS 42.05.900(a)

- *A load-serving entity that is subject to the standards of an electric reliability organization under AS 42.05.760 shall comply with the renewable portfolio standard established in this section.*

  The renewable portfolio standard requires that the entity's portfolio consist of net electricity sales from renewable energy resources, as follows, and pending RCA confirmation based on the completion of the ERO's first integrated resource plan….

- **What Changed:** Added language requiring percentage benchmarks and successive compliance periods to be confirmed by an ERO IRP and removes the first target year (2025) due to project development and other timing limitations.

Amendments #3 and #4: AS 42.05.900(b)(1) and (b)(2)

- *A purchase power agreement or contract to construct entered into between a load-serving entity and a renewable electrical energy producer will be considered to satisfy all or part of the quantities required under (a) of this section by the end of a compliance period if*

  (1) the effective date of the purchase power agreement or contract to construct is on or before the date of the compliance period;

  (2) the purchase power agreement or contract to construct guarantees that the renewable electrical energy will be delivered to the load-serving entity not later than two years for wind and solar and not less than 7 years for hydro or as otherwise determined by the RCA after the compliance period….

- **What Changed:**

  - Added language to provide for utility developed projects to be considered on an equal footing with power purchase agreements when looking at ways to satisfy the RPS.

  - Added language require delivery of the renewable energy resource to load-serving entities not later than two years for solar and wind energy sources and not less than seven years for hydro resources or as otherwise determined by the RCA.

Amendment #5: AS 42.05.905(e)

- *In considering the public interest, the Commission shall consider the comparison of the least-cost reliability-adequate option as outlined in AS 42.05.780(a) with the costs of complying with the RPS, as well as service quality, environmental, and other attributes deemed relevant. The Commission may stay the requirements of AS 42.05.900(a) if they find, after notice and opportunity to be heard, that costs to comply exceeds 10% of the least-cost reliability-adequate option. Additional aspects of the RPS that lead to the detriment of the reliability, resiliency, or security of the existing electric delivery network will also be evaluated. In evaluating the Compliance Period reports, the commission shall modify or delay the implementation of the renewable portfolio standard, in whole or in part, if the commission determines it is in the public interest to do so. The commission shall also do so consistent with its obligations with respect to 42.05.780 in assessing the public interest of the electric reliability organizations integrated resource plan including consideration of cost of the renewable portfolio standard above the least-cost reliability-adequate plan.*

- **What Changed**: In an effort to cap cost escalations or reliability impacts for Alaskans, added language that provides the RCA the ability to suspend in whole or in part the RPS if it is found to be contrary to the public interest. The RCA would also be allowed to stay a requirement to comply with the RPS when the costs to comply exceeds 10% of the reliability-adequate IRP scenario or has material impacts to reliability, resiliency and security.

Amendment #6: AS 42.05.915(b) and (c)

- *(b) Events or circumstances that are outside of a load-serving entity's reasonable control shall include, but not be limited to….*
- *(c) Factors for establishing good cause for noncompliance shall include, but not be limited to:*

  (1) the actions taken by the load-serving entity to procure the renewable electrical energy;

  (2) the extent of good faith efforts by the load-serving entity to comply;

  (3) the lack of past failures to comply;

  (4) the likelihood and amount of future renewable electrical energy to be procured by the load-serving entity;

  (5) the impact of the noncompliance fine on the load-serving entity considering the size or ownership of the load-serving entity;

  (6) the full cost of RPS compliance for the RPS IRP is more than 10% of the cost of non-compliance with the reliability-adequate IRP

  (7) other similar information.

- **What Changed**: Language addressing noncompliance and waiver has been modified to require that the RCA adhere to events and circumstances outside the control of load serving entities and factors for good cause in considering noncompliance with the RPS. Since these are not exhaustive factors it provides the RCA the ability to expand options through their RCA's rulemaking or adjudication process.

Amendment #7: AS 42.05.915(e)

- *The full amount of any fine (net of credits) shall be set aside by the LSEs and used to fund electrical infrastructure efforts to support the integration of renewables in the region Further, a credit shall be issued against any fine in an amount equal to the prior compliance periods amount of capital investment by the LSEs in projects that serve to decongest the transmission system of the interconnected electric energy transmission network and not funded by a previous fine amount. No fines shall be levied in the event that the Commission finds that no renewable energy sources, that meet the other provisions of this act, are available to LSEs.*

- **What Changed:** Language pertaining to the noncompliance fine has been modified to provide that a load-serving entity's noncompliance fine must be used by the utility to invest in electrical infrastructure to support renewable energy development in the region and thus be allowed in rates.

Railbelt Electric Grid…*Not the Lower 48*

- The Railbelt Electric grid supports the lives and economic well being of 475,000 Alaskans. Based on EPA and EIA data, Railbelt electricity production produced 7.7% of the carbon emissions statewide in 2019.
- Cooperatives and municipal-owned utilities are not for profit - all costs are born directly by the end-use members/consumers. Investor-owned utilities focus on profits and shareholders. Cooperative rate-making principles are more limiting, most are not regulated and many are not responsible for meeting an RPS.
- The Gris lacks the redundancy and resiliency ensure continuous power under significant stress. This level of resiliency is too expensive because of long distances and small populations. Have resolved lack of transmission with localized generation. Similar to microgrid concept but on a larger scale.
- Isolated grid, no connections to other sources of power or ready-made market of ‘firm’ renewable options to buy like lower 48. Utilities must buy develop projects and build, including transmission to reach existing transmission backbone.
- 80% renewable in Alaska means rebuilding almost the entire Railbelt generation fleet in 18 years. Further the current transmission system will need to very large infrastructure investment.

Closing

- As outlined in our communications with Governor Dunleavy, Railbelt Utilities are united in their support of an achievable, affordable and sustainable RPS with cost-containment measures designed to protect utility members/consumers.
- As NREL Indicated – their study is the first study, in a portfolio of several additional studies that must be completed to articulate the costs and benefits of proposed pathways forward. We wholeheartedly support additional, objective and thorough analysis for improved policy decisions.
- We are working proactively and collaboratively with each other, AEA, NREL and ACEP to evaluate cost-effective projects. And pathways to a lower carbon future. We look forward to the dialog to come!
- The Railbelt electric system is unique and different than the Lower 48 grid, a fact that must integral to developing and implementing any RPS.
- The soon-to-be-authorized ERO has been empowered by the legislature to plan the electric future for the Railbelt. It provides a transparent, inclusive and well-informed process for decisions supported by a diverse group of stakeholders.
- The Railbelt Utilities are excited about the opportunities an energy transition can bring for the member-consumer ratepayers, sustainability and economic development.
- We appreciate the State's bold vision regarding this RPS legislation and look forward to further collaboration to create smart policies that help ensure a successful transition.




Questions

Appendixes

Electric Reliability Organization (ERO) - Update

- Stakeholder group (RRC IC) has worked for two years to develop an organization to meet the statute and associated regulations developed through SB123.

  RRC members:

  - 5 Railbelt Utilities plus Doyon Utilities
  - Alaska Energy Authority (AEA)
  - Large, small and environmental consumer representatives (REAP, AKPIRG, ANTHC)
  - Independent Power Producers –IPPs (CIRI, AEP, AIPPA, Renewable IPP)
  - An Independent member
  - Ex officio, nonvoting: Regulatory Commission Of Alaska (RCA), Attorney General's Office of Regulatory Affairs and Public Advocacy (RAPA),

- The application will be filed with the RCA on March 25, 2022.
- RCA regulations are complete. They became highly prescriptive and detailed regulations, resulting in a higher than expected organizational cost ($10M/yr. estimate).
- This organization has been authorized by the legislature to conduct a cohesive integrated resource plan (IRP) long-term transmission and generation integrated resource development plan for entire Railbelt region.
- Statute and regulation require a rigorous, transparent and inclusive stakeholder and public process and involvement. RRC requires supermajority of 9 members and at least 5 stakeholder classes to approve an IRP. This ensure broad support from both utilities and other stakeholders
- This organization is the appropriate body to develop, or at least confirm, an aspirational and achievable path to decarbonization, including a renewable portfolio standard.

Renewable Technology Considerations

The Railbelt is an isolated grid, when you compare the Alaskan Railbelt to solutions that work in other states these are questions to ask:

1. Is the resource proven - do we know what and where it is, and how much energy and capacity it can produce and how to bring it to market?
2. Is the technology proven – is the technology well deployed, or is this a Serial Number #1 project?
3. Are the resources and technology economic to bring to market?
4. What grid changes and associated costs are required to ensure deliverability (no negative impact to reliability and resiliency).
5. Is this resource firm or non-firm?
    - If non-firm, how is energy stored for future use?
    - If non-firm how is the resource backed-up?
6. How much of the Railbelt's current energy (4,800 GWhs) of electrical load can future resources meet?
    - Grant Lake – 20 GWh
    - Fire Island Wind - 50 GWh
    - Dixon Creek – 160 GWh
    - Bradley Lake - 400 GWh and
    - Susitna/Watana - 2,800 GWh

Renewable Portfolio Standards(RPS) Considerations

A cost effective and sustainable RPS must consider and plan for the following things:

- Maintaining the requirement to balance the sources and users of electricity (Generation-Load Balance).
  - Moment by moment
  - Hour by hour
  - Plan to address seasonality of resources and load
- The ability to transfer wholesale electricity from production to retail meter.
- The economic and technical availability of resources.
- The costs commitments (debt service) for existing generation.

Historical Renewable Alternative Costs Versus Chugach Electric Avoided Cost