



March 29, 2022

Chair Schrage and Members of the House Energy Committee

HB301 Testimony

My name is Simon Harrison and I have been a resident of Anchorage for over 25 years.

I am also a co-founder and the commercial director of Alaska Marine Power LLC, a company recently established here in Alaska to generate wind and tidal energy at scale in the Cook Inlet. At AMP, we want to grow Alaska ... and cool the planet.

Before founding AMP, I worked for many years as an engineer, commercial analyst and business developer in the international oil and gas industry both here in Alaska and in the UK.

I wish to provide testimony regarding House Bill No. 301 and Senate Bill No. 179.

I will do this by summarizing my views about this matter below. I will also provide detailed drafting comments in an appendix. Hopefully this approach will be helpful. If you have any questions about my testimony, I will be happy to provide further testimony at your convenience.

Generally, I believe that the intent of this bill is important, necessary and appropriate. It is essential to Alaska's future prosperity that the state quickly embraces stable, low-cost renewable energy. It is also important that Alaska plays its part in the community of nations to combat climate change by moving away from burning fossil fuels. I therefore commend this bill to you.

That said, I believe that the bill as currently drafted raises a number of important issues that deserve the committee's attention.

Non-Compliance Fine

Firstly, and most importantly, the financial consequences to the Railbelt's load-serving entities ("utilities") of their possible future non-compliance with the proposed renewable portfolio standard are inadequate.

If you leave the non-compliance penalty ("fine") unaltered, this bill will likely have little, if any, impact on the future actions of the Railbelt's utilities. As rational cost-minimizing entities, they will simply incur the \$20/MWh fine and blame the Legislature for the resultant increase in power prices. This is because the net cost of purchasing or developing renewable energy during the next few decades will probably be several times this amount.



Instead, I propose that a utility that consistently, repeatedly and willfully fails to comply with the standard should face an increasing fine. Specifically, if such a utility fails to comply during two consecutive years, the fine during the second year should be \$40/MWh. If the utility continues not to comply in subsequent consecutive years, the fine should continue to rise by \$20/MWh each year. Thus, after three consecutive years of non-compliance the fine will be \$60/MWh, which is more than the current incremental opportunity cost of purchasing or investing in several types of renewable energy, e.g. wind and solar.

If a utility does not comply with the standard in any year, but then complies in the following year, the penalty for a future infraction should start again at \$20/MWh.

Spending the fine

Although the above penalty regime may appear to be somewhat draconian, imposing it will ensure compliance with the standard, avoid political controversy, and ensure that few, if any, fines are ever paid. In the unlikely event that the utilities should have to pay some fines, I suggest that the income received from the fine should be used to accelerate and expand the replacement of incandescent outdoor lighting (street lights, etc.) throughout the state. This reduces electricity consumption six-fold and is complimentary to the goals of this legislation by reducing electricity demand.

Renewable energy credits

This bill will create an in-state trading system for Alaskan renewable energy credits ("RECs"). This system, which will harness the hidden hand of the market, is a great way for the State to achieve its goals and is excellent policy.

The existence of this trading system, however, makes the proposed exemption in Sec. 42.05.920(a) redundant, confusing and unhelpful. If, for example, it is forecasted that in 2036 the renewable portfolio standard of 55% will be met collectively by all of the utilities then, if it is also forecasted that one utility will fail individually to meet the standard, there will, by definition, be sufficient RECs available for purchase from the other entities for the failing entity to cure its pending non-compliance. Such trading of REC's will allow entities with insufficient scale and insufficient human and financial resources to purchase RECs less expensively than creating them themselves. It will also fairly compensate utilities who create more RECs than they need.

The exemption currently proposed in Sec. 42.05.920(a) should therefore be withdrawn. Retaining it will simply invite some to drag their feet in the forlorn hope that they will be carried across the finish line by others. Alaska needs REC trading, not free-loading and finger pointing.

Planning and execution

Assuming that this legislation is enacted in January 2023, the utilities will have eight years to meet the 30% renewable standard when it comes into force in 2031. This is more than enough time to assess, select, design, construct and commission sufficient renewable power facilities. Consequently, there is no need to give the utilities a one-time exemption from the fine as proposed in Sec. 42.05.920(b). Alaska is already behind on this issue, so let's just get on with it.



I hope you find this testimony helpful.

For and on behalf of Alaska Marine Power LLC

Simon

Simon Harrison

Commercial Director

Alaska Marine Power (AMP)

www.alaskamarinepower.com





Appendix
Detailed Drafting Comments

Below I offer detailed comments regarding the language of the current draft of the bill, including specific editing suggestions.

- Sec. 42.05.785(a) should be revised to recognize that a growing proportion of the Railbelt's renewable power will probably be generated in the future by independent power producers and the owners of small distributive energy systems (e.g. residential solar systems), both of whom already have, or will have, contractual relationships with one or more public utilities. Thus I recommend that the phrase "may not construct a large energy facility unless" be amended to read "may not construct an energy facility with a capacity greater than (?) MW or enter into an agreement to purchase more than (?) MW of energy from another entity unless ..." (where ? might be something like 100 kW to exclude non-commercial entities such as owners of residential solar systems).
- Sec. 42.05.900 (a) should be revised to better define the four compliance periods and recognize that, through the creation by Sec. 42.05.910 (see below) of a market within the Alaska Railbelt for renewable energy credits (RECs), a megawatt of energy produced from renewable resources will, in the future, be comprised of two separately tradable components: the megawatt of energy itself (as today) and, separately, the positive environmental attributes of that megawatt (a "REC"). Thus, I recommend that the second sentence of this clause be revised to read as follows: "The renewable portfolio standard requires that the net number of Renewable Energy Credits created, sold, purchased, used and retired by the entity during each applicable calendar year, expressed as a fraction of that entity's net electricity sales during that same year, shall not be less than the following amounts:

Compliance Period (1): 20 percent for the years 2026 to 2030 (inclusive);
Compliance Period (2): 30 percent for the years 2031 to 2035 (inclusive);
Compliance Period (3): 55 percent for the years 2036 to 2040 (inclusive);
Compliance Period (4): 80 percent for the year 2041 and all years thereafter.
- Sec. 42.05.900 (b) is inconsistent with 42.05.900(a) and 42.05.900(e) and should be deleted in its entirety because it seeks to credit an entity with its future plans and not its past performance.
- Sec. 42.05.900 (c) is unnecessarily complex. I recommend deleting the redundant phrase "located within the load-serving entity's service area".
- Sec. 42.05.900 (d) seeks to unjustly reward public utilities for the initiative and actions of distributive energy system owners, particularly the utilities' residential solar net metering customers. This clause, which attempts to assign the RECs (i.e. property) belonging to these owners to the public utilities without the owners' consent, is certainly unfair and is probably contrary to the Common Law and the US Constitution. I recommend that the whole clause be deleted because it is most probably unenforceable. If a utility wishes to acquire REC's generated by a distributive energy system owner, let it purchase them from



that owner through the market for Alaska Railbelt RECs that will no doubt soon be established as a result of this legislation.

- Sec. 42.05.905 (a) should be revised to make it consistent with the above changes by deleting the phrase "document the entity's net electricity sales from renewable energy resources".
- Sec. 42.05.910 (a) should be revised to better explain how qualifying Renewable Energy Credits may be acquired and used. Thus, I recommend that the phrase "from generation located within the load-serving entity's service area or from generation" be replaced by the phrase "associated with the entity's energy sales or unbundled renewable energy credits purchased from another entity, provided, however, that all such electricity and Renewable Energy Credits must be generated and created by facilities ..."
- Sec. 42.05.915 (a) is unclear and does not adequately penalize an entity which consistently, repeatedly and willfully fails to meet the minimum targets set out in Sec. 42.05.900 (a). I recommend addition of the phrase "in an applicable calendar year" to the end of the first sentence. Then add "To the extent that the entity fails to meet the applicable standard in two consecutive applicable years, then the fine applicable for the second year shall be \$40 for each megawatt. Similarly, to the extent that the entity fails to meet the applicable standard in three consecutive applicable years, then the fine for the third year shall be \$60 for each megawatt. And, to the extent that the entity fails to meet the applicable standard in four or more consecutive applicable years, then the fine for the fourth year and all such later years shall continue to rise each year by an additional \$20 for each megawatt."
- Sec. 42.05.915 (b) (6) is too broad because it allows a load-serving entity that owns or rents, or needs to own or rent, electricity transmission infrastructure to acquire adequate quantities of renewable electrical energy to claim relief from this section by simply not investing in, reserving capacity in or paying to use such infrastructure. I recommend that the phrase "transmission network constraint" be replaced with "an unanticipated or unexpected transmission network constraint" to the beginning of this sentence.
- Sec. 42.05.915 (c) (4) should measure what future energy that the load-serving entity has already procured, not may procure in the future. I recommend replacing the phrase "to be" in this sentence with the phrase "that has been".
- Sec. 42.05.915 (e) (1) should be deleted in its entirety because, so long as the fine (\$20/MW) remains below the net cost of developing renewable energy the whole renewable portfolio standard could be ignored by the load-serving entities in the sure knowledge that an appeal to the RCA for relief under this clause will be successful. This outcome is not consistent with the underlying intent of this legislation.
- Sec. 42.05.915 (e) (2) should also be deleted in its entirety because Alaska possesses hundreds of gigawatts of renewable solar, wind and tidal energy resources in the vicinity of the Railbelt transmission system. To argue that there could, within the foreseeable



future, be insufficient renewable resources is a fallacy. Leaving this clause in the legislation invites unhelpful legal gaming by insincere parties.

- Sec. 42.05.920 (a) This clause has been made redundant by the introduction into this legislation of tradable RECs and should be deleted in its entirety (see my comments about this in my letter).
- Sec. 42.05.920 (b) This clause should be deleted because the utilities have more than enough time to build renewable power facilities to meet the standard. (If the clause is retained, however, it should be rewritten as follows: "A load-serving entity shall be exempt from paying a fine on the occasion of its first instance of non-compliance with the renewable portfolio standard in any one calendar year".)
- Sec. 42.05.920 (c) is inconsistent with Sec. 42.05.900 (a) as proposed above. I recommend that it should read "An exemption under (b) of this section may not be granted for the compliance period starting in January 2041".
- Sec. 42.05.925 (9) is confusing and incomplete and the toxic material referred to therein is undefined. I recommend deleting the phrase "solar power, water power or wind power, a 'renewable energy resource' comes from" and replacing the phrase "minimizes the output of toxic material in the conversion of energy" with the phrase "or the gravitational pull of the Moon".
- Sec. 42.05.925 (10) for this clause to be meaningful, the word "renewable" should be inserted after the word "of".

end

[REDACTED]

From: Alex P [REDACTED]
Sent: Tuesday, February 22, 2022 8:42 PM
To: House Energy
Subject: HB 301

Chair Schrage and members of the Committee,

I was excited to learn of Governor Dunleavy's backing of the Alaska's Railbelt Renewable Portfolio Standard (RPS). It is a win win for this State. Alaska can be more energy independent with the solar, wind, and tidal potential here while creating more local and well paying jobs. Also there would be less dependency on Washington's oil refinery. And the best part would be the benefit of lower and more stable energy prices for all of us along the Railbelt. Please, vote in favor of SB 179 as well as in the future of Alaska.

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Thank you,
Alex P [REDACTED]

From: [Barbara S](#)
To: [House Energy](#)
Subject: HB 301
Date: Tuesday, March 15, 2022 4:45:20 PM

Chair Schrage and Members of the Committee.

I am writing in support of HB 301. The State of Alaska needs to lean forward into the renewable energy realm. We need to show the nation how reducing our dependence on fossil fuels and foreign oil is done, starting with the Renewable Portfolio Standard legislation before you.
Why:

1. The Alaska Railbelt is very dependent on a single, high-priced source of fuel to generate electricity- natural gas from Cook Inlet.
2. Renewable energy prices are dropping making it cheaper to implement.
3. A more renewable energy grid will not impact reliability.

I urge the committee to pass this HB 301 and move Alaska forward into the future.

Barbara S

[REDACTED]

From: Chris L [REDACTED]
Sent: Friday, March 4, 2022 10:54 AM
To: House Energy
Subject: RE: Renewable Portfolio Standard (RPS)
Attachments: Clean currents poster 10112021.pdf

Dear Honorable House Energy Committee Representatives,

Hello, this is Chris Lee, President of Tidal Energy Corp, and developer of the Turnagain Arm Tidal Electricity Generation project (TAGEG - FERC #P-15109).

I would like to send my support for the proposed Renewable Portfolio Standard (RPS) currently under consideration by your committee.

Not only will the standard take advantage of Alaska's massive renewable resources - of which tidal energy will be a large part - a recent NREL study found that the Railbelt could achieve 80% renewable generation without impacting customer reliability.

The savings in fuel costs to Alaskans will run into the billions, and the reduction in CO2 emissions are imperative to slow down climate change, which will continue to affect Alaska's population more severely than almost anywhere else in the USA.

In addition, the development of these resources can be used to jump start the proposed Alaska-based Hydrogen Hub as described by the DOE, and get the Bush off of carbon based fuels onto renewable energy (See attached Alaska Green Hydrogen Initiative poster).

Eventually the exploitation of Alaska's renewable energy potential can be so great that it will become an exportable commodity.

And who knows more than Alaskans about exporting energy?

Thank you for your tireless work on making Alaska a leader in this effort, and please pass this important legislation.

Sincerely,

Chris L [REDACTED]



Chris L [REDACTED] - President
821 N Street, Suite 207
Anchorage, Alaska USA 99501

[REDACTED] www.tidalenergycorp.com

[REDACTED]

From: Connie [REDACTED]
Sent: Thursday, March 3, 2022 9:09 PM
To: House Energy
Subject: HB 301 House Energy

Chair Schrage and members of the Committee;

Please Support Renewable Portfolio Standard Legislation HB 301.

The current world situation has provided a backdrop for this legislation. Diversify and reduce the need for one source of energy.

Renewable energy prices are dropping as demand increases production and stabilize independence. The Rail belt region has renewable sources of solar, wind, geothermal, hydro, biomass, and tidal technologies to expand. These can be supported by transmission upgrades, batteries and natural gas generation. We CAN do this and so much more.

Please think of the future needs and the wise investment to diversify into RENEWABLE energy. Let Alaska lead the way setting a standard others can point to as what is possible.

Make Peace Profitable,
Energize Economy

Thank you for your Conscious Consideration of your Constituent.

Connie H [REDACTED]
[REDACTED]
Palmer, AK [REDACTED]

--
Sent with positive intentions.

[REDACTED]

From: Dorothy C [REDACTED]
Sent: Thursday, April 7, 2022 12:56 PM
To: House Energy
Subject: Support HB 301 comment

Dear Chair Schrage and Members of the Committee,

This is to urge the House Energy Committee to support HB 301 to establish renewable energy portfolio standards.

This bill is an exciting step toward modernizing energy production on the railbelt. We are far too dependent on natural gas from Cook Inlet but with renewable energy development we can greatly diversify and stabilize our energy future. And what a great time to do this — since renewable energy has become a great deal more reliable and the cost of infrastructure has dramatically reduced in the last 10 years or so. Voting for HB 301 will move us forward in a positive way. It's hard to find anything wrong with investing in cost effective renewable energy systems that take advantage of clean energy sources all around us!

Thank you,
Dorothy C [REDACTED]

[REDACTED]
Indian, AK [REDACTED]

[REDACTED]

From: [REDACTED]
Sent: Friday, April 22, 2022 10:04 PM
To: House Energy
Subject: HB 301

Chair Schrage and Members of the Committee,

I strongly support HB 301, establishing a renewable portfolio standard with effective dates and targets. I believe this is one of the most important things that the legislature can accomplish in this session.

I spent a career in petroleum exploration and production, including 15 years in management of a major oil company. I worked as geologic manager for natural gas production in south-central Alaska, and later estimated the timing of future gas shortfalls from local sources. After retirement, I served on the board of directors for Chugach Electric, worrying about the reliability of our future fuel supply. I was on the board when we approved power purchases from the Fire Island Wind Project.

In retirement, I have worked to understand climate change, and what I learned is deeply concerning. It is clear to me that the use of fossil fuels - the basis of my career -- must end, and soon, to prevent serious damage to many places on earth, including Alaska. For mitigation, our part must include a conversion of Railbelt electrical generation to renewables.

Governor Dunleavy recently commissioned a report from the the National Renewable Energy Laboratory (NREL). The report shows that the renewable portfolio targets are feasible, and that renewable energy offers huge potential savings in future fuel costs. It can be found here:

<https://alaskarenewableenergy.org/wp-content/uploads/2022/02/81698.pdf>

We should not jump to conclusions on the proper pathway to renewables. That's a job for the electrical engineers working for utilities, the state agencies, and the universities. The complete solution will require a lot of study and time. I think it is likely that the solution will require seasonal energy storage as a large hydro-electric project, in addition to major wind or tidal energy. But that is for the engineers to decide. The legislature needs to begin the process now, by setting renewable energy portfolio targets in HB 301, and encouraging these stakeholders to work on the road-map to renewable electrical generation.

Regards,
Doug R [REDACTED]

April 26, 2022

Subject: HB 301 Testimony



Chair Schrage and House Energy Committee,

Thank you for the opportunity to testify on HB 301. My name is Jenn Miller and I'm the CEO of Renewable IPP (Independent Power Producers). Our company develops, constructs, and operates utility scale solar farm projects in Alaska and is responsible for the largest solar farm in the State (Willow) and we're embarking on one six times its size in Houston, AK.

We are the first IPP on the Railbelt to agree and get RCA approval for two power purchase agreements. I'd like to recognize Matanuska Electric Association who was instrumental in making this possible. The key to our success has been our collaborative and transparent working style with utilities.

The energy transition is a change for everyone and no one entity has all the answers, but together we can find solutions that enable a safe and reliable transition. The Houston solar farm project has taken 3 years of careful planning and analysis to bring cost saving and reliable renewable energy to the Railbelt.

I strongly support HB 301 and Alaska having a Clean Energy Standard because we must begin with the end in mind and HB 301 sets that clear vision with strong commitment. Human nature is to procrastinate or at the very least to focus on the here and now. Our current clean energy goal of 50% by 2025 which did not have any commitment or teeth is quickly passing us by which is why we need a clean energy standard.

As legislators, Alaskans look to you to set the long-term vision for this State. We need a clear roadmap for where we want electricity generation to be in 2040 and 2050 and that goal must be set today, much like putting a man on the moon by the end of a decade.

I've read the bill in detail and would like to offer a few comments for your consideration

- 1) **Clean Energy Credit Definition & Rights:** I recommend clarifying the definition of a clean energy credit. Currently generation or purchase of clean electricity by the MWH may count as Clean Energy Credits. This is problematic because, the power purchase agreement sets the ownership rights for Clean Energy Credits and the Willow and Houston contracts agree that the CEC's will be split 50/50 between the system owner and MEA. The clean energy credit ownership split informs electricity pricing in the PPA and project funding and it's critical to honor what's agreed in the PPA. The definition of a clean energy credit should include that the load serving entity must have ownership rights of the CEC's for them to be counted.
- 2) **Targets:** The targets in HB 301 are less ambitious than the original 80% by 2040 introduced by Governor Dunleavy. Given the less ambitious targets, I would suggest setting targets for every 5 years. Human nature is to procrastinate and work to meet targets at the end of a decade will likely

get pushed out or passed onto the next leadership team or board. This would set targets for 2030, 2035, 2040, 2045 and 2050, this will ensure consistent progress and support industry development.

- 3) **Fine Waiver:** The fine waiver criteria allows for possible forgiveness if transmission lines are insufficient. This may be a valid reason for 2030, but should not be included for 2040 or 2050. I would also be cautious in allowing too much fine forgiveness or credit as it undermines the enforceability and commitment to the targets.
- 4) **Clean Energy Credits for Net Metering & Commercial Systems:** Finally, I request that the House include rights for the RCA to define how CEC's are assigned for net metering and commercial projects. It's too tactical to put in this bill, but it will be helpful to give RCA rights to define this at a working level.

I sincerely appreciate the House Energy Committee taking up this important work to set the vision for electricity generation in Alaska. Thanks so much for your time.

Sincerely,



Jenn Miller, PE
CEO of Renewable IPP, LLC



www.renewableipp.com

Ryan Johnston

From: Kate [REDACTED]
Sent: Wednesday, March 9, 2022 12:53 PM
To: House Energy
Subject: HB 301

Chair Schrage and Members of the Committee:

Please support HB 301 because 80% renewable is doable. And the best way forward in the railbelt.

I think you know all the reasons for passing HB 301 so I will briefly site a few of them again: Reliability is no longer an issue with renewables. Renewables are less volatile than fossil fuel. Renewable carbon imprint is smaller. Renewables allow Alaska to be more self-reliant, less dependent on supply chain.

Thanks for the important work and also your sacrifices to our state!!!

Kate W [REDACTED]

[REDACTED] Anchorage
[REDACTED]

For thousands of years, the Dena'ina people have cared for these Dena'ina etnena homelands now known as Anchorage.

Thank you Dena'ina people for letting us walk on your land.



Virus-free. www.avast.com

Ryan Johnston

From: Kathryn C [REDACTED]
Sent: Monday, February 21, 2022 1:49 PM
To: House Energy
Subject: HB 301

Dear Chair Schrage and Members of the House Energy Committee,

I strongly encourage you to support HB-301, the Renewable Portfolio Standards Bill.

The Alaska Railbelt is well positioned to achieve energy independence and stabilize prices by investing in renewable energy.

With impressive hydro, tidal, wind and solar energy available, we should strive to diversity our energy sources so we are not so dependent on natural gas and the fluctuating prices of that commodity.

Investing in this new energy infrastructure will also create good jobs.

Investing in renewables is the way to ensure that we have stable, affordable power for our future.

Please support HB-301.

Thank you,

Kathryn C [REDACTED], Anchorage, AK

Ryan Johnston

From: Kendra Z [REDACTED]
Sent: Tuesday, March 15, 2022 7:00 PM
To: House Energy
Subject: Support for HB 301

Dear Chair Schrage and Members of the House Energy Committee,

I fully support HB 301 to set Renewable Portfolio Standards (RPS).

I live in the Mat-Su Borough, which is heavily dependent on Cook Inlet gas. There may (or may not) be plenty of gas, but the infrastructure is aging. The cost of gas will ultimately rise when that infrastructure needs to be repaired and replaced, even if we don't consider the way that natural gas is part of the volatile global market.

Matanuska Electric Association (MEA) has formed an Innovation Committee that acts as a forum for discussing, in part, opportunities and barriers for reducing the carbon footprint in an area that continues to see population growth. The Regulatory Commission of Alaska (RCA) acts as a gate-keeper, approving or denying projects that MEA would like to bring on. The RCA acts almost entirely on whether they estimate consumer rates for energy from the new project will be higher than energy generated from natural gas. However, they are unable -- as are all of us -- to determine when renewable energy projects will meet the crossover point, where solar, wind, micro-hydro, and other projects generate energy less expensively than natural gas.

By passing RPS, the RCA will have an additional metric to measure potential projects against: the cost to rate payers, and whether the project helps meet state RPS goals. This will then give MEA greater ability to take on projects that they would like to bring onto the grid, and allow MEA to take advantage of unexpected funds, such as the federal infrastructure money, to build out infrastructure for the future.

This is particularly important as MEA looks at options when their current natural gas contract ends. Giving MEA some breathing room - through an RCA that considers the RPS as well as rate costs -- will allow them to better consider options to boost reliability in different parts of the Mat-Su Borough -- for example in areas like Trapper Creek, or where I live in the Sutton-Alpine-Chickaloon area. It will also allow MEA greater flexibility as they adapt to an expected growth in the electric-vehicle market -- for which no one can know the timeline for growth, other than it is expected to happen soon.

We expect that fossil fuels, including Cook Inlet natural gas, will be an important part of the energy mix for decades to come. But it is important to set goals now to plan for the eventual decline of Alaska-based oil and gas so that businesses, governments, and communities can have a steady supply of energy through and after this decline without volatility, brownouts, and disruptions.

It is exciting to see electric cooperatives throughout the Railbelt joining forces to provide better, smoother, more reliable service. Please vote yes on HB301 to ensure that we all have stable, reliable, local energy well past the lifetime of the Cook Inlet gas and North Slope oil fields.

Sincerely,

Kendra Z [REDACTED]

[REDACTED]
Chickaloon, AK [REDACTED]
[REDACTED]

Ryan Johnston

From: Kenneth [REDACTED]
Sent: Tuesday, February 22, 2022 4:52 PM
To: House Energy
Subject: HB 301
Attachments: Solar Array and Car2.JPG

Chair Schrage and members of the Committee,

As an Alaskan I fully support the goal of House Bill 301 to reduce our dependence on fossil fuels and legislate an energy policy that moves the state toward expanded use of alternative energy for electric Power.

Although the lion's share of my income is directly tied to the oil and gas industry, I recognize the dwindling supply of Cook inlet gas that the Railbelt energy corridor relies on heavily for power generation.

I have installed a grid tied solar array on my property and have directly experienced the advantages of adding alternative energy to the basket of power sources we can implement and rely on in the future. Naturally, small use owned solar arrays are not the silver bullet for replacing our reliance on Cook Inlet gas. Larger and more diverse systems such as wind, tidal, hydro and biomass source should also be developed and deployed.

The electric utilities are reluctant to embrace and invest in these renewable resources. I believe they need a little nudge in the right direction. I urge you and the state house to pass this bill.

Thank you for listening.

--

Kenneth F. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Ryan Johnston

From: River B [REDACTED]
Sent: Thursday, March 3, 2022 6:37 PM
To: House Energy
Subject: HB301

Chair Schrage and members of the Committee,

> Please pass the bill that requires that the utilities must generate 80% of their energy requirements from renewables by 2040. We cannot keep kicking the can down the road. We are at the end of the road already! Do not let the Susitna Dam be an excuse to further "kick the can down the road" by allowing utilities to further rely on fossil fuels.

>

> River B [REDACTED]
[REDACTED]

Ryan Johnston

From: Robert S [REDACTED]
Sent: Sunday, March 13, 2022 8:41 PM
To: House Energy
Subject: House Bill NO. 301

Chair Schrage and Members of the Committee:

I am Robert S [REDACTED], PE a registered Electrical Engineer in the State of Alaska with experience with Grid Tie of Renewable Energy Resources to the various entities that form the Railbelt Electrical Energy System. I have been designing Grid Tie connections ever since Net Metering and Grid Tie became law in Alaska. Since that time I have also been engaged in various National Standard Committees such as IEEE 1547 standards which guide the interconnection of Distributed Energy Resources to existing grids.

I have some objections to the bill as it is currently crafted. I believe that entire effort to form the Railbelt Reliability Council and this bill to establish a renewable Portfolio Standard have been extremely biased against the affected utilities to comply with the requirements thus making the non compliance fines of Sec 42.05.915 to be unreasonable under the imposed conditions.

It is my opinion that there needs to be plan in place that is supported by the State of Alaska to aid the utilities to determine what infrastructure needs to be in place to allow each of the utilities to have a realistic chance to meet the requirements set forth.

1. I have advocated for a few years that Pumped Hydro is one thing that would greatly enhance the ability for the utilities to connect and apply renewable resources to the system without curtailing the energy received. With sufficient pumped hydro capacity all of the renewable can be dispatched to pump water into the reservoir for storage for use at a later time. I have also advocated that long term energy storage is also required to provide the reliability and resiliency necessary for a system in Alaska. By long term energy storage I consider storage from June to January as a minimum to allow summer solar energy to be saved for winter months when solar energy is not in great supply but energy needs are great.

2. I also consider that hydrogen produced by electrolysis of water by the Wind, Solar or other renewable resource would also provide an adequate and acceptable energy storage to meet the long term energy storage need and allow all renewable energy resource to be used without curtailment of the renewable resource.

3. for connection of Utility Scale Wind or Solar or River Run Hydro substations would be required to be installed at the point of connection as it is unlikely there is an existing substation anywhere near where such connections would be made.

Each of these items represent infrastructure which each of the utilities would find difficult to finance and install in a timely manner without some support from the State of Alaska in some manner that would help keep the electrical costs low.

So based on the above discussion I recommend that the percentage stated in Sec 42.05.900 are too high to enforce at this time until an actual plan is in place that is realistic for the addition of infrastructure that would permit significant and meaningful addition of Renewable resources to the system. Once the infrastructure plan is in place that allows proactive solicitation from IPP (Independent Power Producers) the percentages can be updated to more aggressive values which can be considered as achievable.

I also find that Sec 42.05.925 (9) (C) that specifically excludes nuclear power to be considered. I strongly recommend that this be altered to permit the use of Microreactor nuclear power plants for use in forming Micro Grids along the Railbelt system and for use else where in Alaska.

I thank you for your consideration of my comments.

Robert S [REDACTED]

[REDACTED]
Chugiak, Alaska [REDACTED]

[REDACTED]

Ryan Johnston

From: Scott H [REDACTED]
Sent: Thursday, February 24, 2022 10:13 PM
To: House Energy
Subject: HB 301

Chair Schrage and members of the Committee,

I would encourage you to adopt this bill for a number of reasons.

1) Diversification, in any way shape or form, is good for Alaska. We are an economy with very little diversification.
2) I am advising a Civil Engineering Senior Design project involving a small hydro-electric installation this semester and the excitement from the Civil and Electrical Engineering students is palpable. They can see what a great resource we have and are eager to make use of it.

And they are young enough that they are not yet jaded by bureaucracy.

They are our future, it's what they want.

3) As the saying goes, those who CAN do hydro, SHOULD do hydro. As an engineer and a scientist, this is a no-brainer. It's cheap. It's clean. It's carbon-neutral. The fuel is free forever. It doesn't generate waste that will kill you. The tech is not complex or new or changing in price. The water is already coming down the mountains, we just need to borrow some of its energy. Infrastructure is on the expensive side, but it's an investment, not a cost. Reliable energy for 100 years. Look at the ROI on the Hoover Dam! Plus those dollars include jobs for Alaskans (you can't build a hydro in Alaska...in China!).

4) Despite what anyone tells you, Cook Inlet gas is not going away.

I've done the math on heating with other methods (I'm an engineer!), Geothermal, burning wood, etc, and none of them make any sense. Cook Inlet gas heating is what makes Anchorage possible. My brother-in-law in Vermont pays 4 times per btu what we pay! We want to make that resource last as long as possible, not waste it on generating electricity, which CAN be done other ways.

Thanks for listening,

Scott H [REDACTED]
[REDACTED]

Ryan Johnston

From: sharon w [REDACTED]
Sent: Friday, February 25, 2022 9:44 PM
To: House Energy
Subject: HB 301

Dear Chairperson Schrage and Committee members,

We need a clean energy bill for the future of Alaskans! This legislation require the five utilities in Alaska's Railbelt to generate 80% of their electricity from renewable energy by 2040. Please add your important support to this legislation!

Sharon W [REDACTED]
[REDACTED]

Homer, Ak [REDACTED]