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March 1, 2022

Senator Joshua Revak Chairman, Senate Resources Committee State Capitol Room 125 Juneau, AK 99801

Support for Senate Bill 177: Microreactors

Dear Senator Revak:

Alaska Power Association (APA) supports Senate Bill 177, and we urge its passage this year so electric utilities considering Micro Modular Reactors (MMRs) can move forward with their projects confidently knowing a portion of the permitting process has been streamlined.

APA is the statewide trade association for electric utilities in Alaska. Our members provide power for more than a half-million Alaskans from Utqiagvik to Unalaska, through the Interior and Southcentral, and down the Inside Passage.

Our electric utility members are constantly innovating and integrating new technologies that support their mission of providing safe, reliable, and affordable power. MMRs are a viable source of power that have the potential to lower the cost of energy for Alaskans, decrease dependency on diesel, better position our state for economic development opportunities, and raise Alaska's profile as a hub of energy innovation and energy independence.

It is important to point out that electric utilities seeking to permit MMRs will still have to satisfy state and federal permitting requirements before the projects can be constructed. SB 177 helps to streamline the process by exempting MMRs under 50MWe from legislative siting authority and from numerous required ongoing studies that could hamper development.

Alaska's electric utilities provide power amid harsh conditions, vast distances, and a lack of interconnection to Lower 48 regional grids. By passing SB 177, the legislature will help our state's electric utilities more easily access a viable option for providing reliable and affordable power and light in the Last Frontier.

If you have any questions, please feel free to contact me.

Crystal Enkvist Executive Director



March 1, 2022

The Honorable Joshua Revak Chair, Senate Committee on Resources Juneau, AK 99801

Chairman Revak:

On behalf of ClearPath Action, a 501(c)(4) organization working to advance policies that accelerate clean energy and industrial innovation, I am writing to express our support for the recently introduced legislation, SB 177, that would give communities the ability to explore microreactors as a source of clean energy and remove unnecessary barriers to deployment. Interest in Alaskan microreactors is growing from both the military and electric cooperatives.

The U.S. Congress, Department of Energy, and private industry have invested significant time and effort into researching and demonstrating new reactor fuels and operations enabling advanced nuclear reactors. This includes the advanced fuel used by the Ultrasafe Nuclear Corporation reactor being assessed for deployment in Valdez, as well as other microreactor concepts like the Oklo Aurora. Microreactors are 20 to 100 times smaller than conventional nuclear reactors and have the characteristics required for the harsh Alaskan climate.

This legislation not only removes the needless burden of State Legislature approval, allowing municipalities the ultimate say; but also removes a six-department study for each proposed project. Microreactors can be a reliable, financially competitive, and clean solution for communities reliant on diesel fuel generators. These tiny reactors are able to reliably supply both heat and electricity day after day, and communities are already exploring the possibility of deployment. We hope that you will support SB 177 which will remove unnecessary administrative barriers and show that Alaska is willing to explore game-changing technologies.

We look forward to working with you to advance this important legislation. Thank you for your leadership on this topic.

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Rich Powell CEO, ClearPath Action



March 9, 2022

Senator Joshua Revak Senate Resources Chair, Alaska Legislature State Capitol Room 125 Juneau AK, 99801

SUBJECT: Senate Bill 177 Support

Dear Senator Revak:

Copper Valley Electric Association (CVEA) strongly supports SB177, which will streamline the permitting process for Micro Modular Reactors (MMRs) that are 50 megawatts or less in size. When the original permitting legislation was passed some years ago, small-scale nuclear power generation technology was much less advanced. With current technology and sizing, simplifying the permitting process will facilitate field testing and deployment.

Given CVEA's large service area, our sparse, spread-out consumer base and our existing generation mix, our cooperative seems an ideal location for deployment and testing of an MMR. CVEA is blessed with economic hydropower in the summer months. But during the winter months when water sources freeze, we are largely dependent on liquid fossil fuels for power production.

Currently, with the very high cost of diesel fuel, our members' rates are double that of our warmer weather hydro generation. To overcome that disparity, CVEA has begun a feasibility study on a 10-megawatt MMR, in a modular configuration that would accommodate the "plug-and-play" addition of subsequent units. Initial indications are that this new generation source would significantly lower winter rates and stabilize them.

CVEA believes MMRs, if proven feasible, would provide immediate benefits to our consumers, as well of those of other electric utilities within our vast, lightly populated State. Feel free to contact me should you have questions or desire additional information.

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Travis Million Chief Executive Officer



March 9, 2022 The Honorable Joshua Revak Chair, Senate Committee on Resources Juneau, AK 99801

LETTER IN SUPPORT OF SB 177

The Nuclear Innovation Alliance (NIA) strongly supports the introduction in the Alaska legislature of SB 177, which lays out a blueprint for microreactor deployment to address energy demands and resilience needs. American advanced nuclear energy, supported by domestic innovation and public investment, is poised to offer new, clean, and reliable energy solutions to improve energy resilience this decade. American microreactor projects are entering licensing processes now and could debut as early as 2025. As the Alaska legislature considers how to promote clean, reliable energy, the NIA applauds this important first step in considering advanced nuclear energy and including microreactor technology as part of the state's overall energy strategy.

The Nuclear Innovation Alliance (NIA) is a non-profit think tank working to enable nuclear power as a global solution to provide clean and reliable energy. We are dedicated to encouraging innovation in technologies and business models to increase the affordability and availability of advanced nuclear energy as a tool for addressing critical reliability and energy security needs. Founded by environmental organizations, academic institutions, and private sector innovators, we work to identify barriers, perform analysis, engage with stakeholders, and educate policy makers.

Microreactors can reshape Alaska's power and energy industry. Microreactor designs vary in size and characteristics. Most are intended to produce between 1 and 100 megawatts of thermal energy that could be used directly as heat or converted into electricity. Microreactors will be factory fabricated, transported to the construction site, and located near energy users, which will lessen the difficulties associated with large-scale construction, shipping fuel to remote communities, and attaining energy resilience. Microreactors will also generally not require regular refueling. They are expected to have long core lives and can operate up to 10 years or more without refueling.

Alaska is an ideal location for a microreactor and Alaska can lead the way in broader microreactor commercialization. Alaskan communities typically experience high energy costs, a lack of energy access, and energy disruptions. Microreactor technology can alleviate energy insecurity and help Alaska's rural communities meet their energy resilience goals by providing the clean heat and electricity that an isolated community with harsh weather needs. Microreactors integrate readily into microgrid systems, which currently serve many Alaskan communities.



We look forward to seeing this legislation move forward.

Sincerely,

Judi Greenwald

Executive Director

Nuclear Innovation Alliance



March 9, 2022

Senator Joshua Revak State Capitol Room 125 Juneau AK, 99801

Dear Chairman Revak,

I am writing on behalf of Oklo Inc. in support of an act relating to microreactors. This legislation paves the way for Alaska to deploy new technologies that are critical for the climate, American competitiveness, and national security. The United States has recognized the need to identify carbonfree power solutions to mitigage the effects of climate change, and there is no more reliable, safe, and efficient source of carbon-free energy than nuclear power. The world needs advanced nuclear to help put us on the fastest path to net-zero emissions. Alaska is poised to lead in bringing American designs to market, while helping meet the state's growing need for clean, reliable, cost-efficient power and heat.

This microreactor legislation paves the way for the deployment of microreactors to contribute to Alaska's growing need for clean, reliable, cost-efficient power and heat, while ensuring each proposed location is in the best interest of the local community.

With this bill, Alaska can provide a new means of strengthening its communities and fostering vibrant places to live. Advanced microreactors offer the unique ability to provide a scalable source of power and heat, matching the needs of the community it will support. Alaska can simultaneously pave the way for the commercialization of advanced microreactors, both locally and nationally. Oklo Inc. strongly supports this bill and welcomes the pioneering spirit behind it.

If you have any questions or need any additional information, please contact us at hello@oklo.com or (650) 550-0127.

Jacob Dewitte Co-Founder, CEO Oklo Inc. Santa Clara, CA



March 9, 2022

The Honorable Joshua Revak Chair, Senate Committee on Resources Juneau, AK 99801

Chairman Revak:

Thank you for taking the time to hear and consider an Act relating to microreactors. Our company, Ultra Safe Nuclear Corporation (USNC), has designed a microreactor with Alaska's unique challenges in mind and is already discussing with Alaskans whether our technology is the right fit for their energy needs. We believe this legislation removes uncertainty in the siting process enabling a more fruitful conversation with communities interested in our Micro Modular Reactor (MMR).

Under the current law, companies like ours are required to seek legislative siting approval for land proposed to be used to develop a nuclear power generation site. We understand that the current law was written at a different time when nuclear reactors were only available in large-scale and based on light water technology. Such technology required considerable amounts of water and Emergency Planning Zones (EPZ) that extended many square miles. Our MMR requires no water for cooling and can fit roughly into a baseball field with an EPZ proposed to stop at the fence line. We believe with advanced reactor designs, now is the right time to consider this legislative change and allow our company and companies like ours the opportunity to explore military and civil opportunities for microreactors in Alaska.

By removing the uncertainty over siting, this bill enables us to engage in the robust federal process that requires engagement with Alaska's governing and regulatory authorities, as well as Alaskans themselves, through the Nuclear Regulatory Commission's (NRC) licensing process. Indeed, we believe the passage of HB299 is necessary to allow the NRC licensing process to proceed as designed and intended. We intend to engage fully with the NRC to provide all information necessary to demonstrate the safety of our technology and be responsive to all the questions and requests required to meet their criteria for licensure. Moreover, we further intend to secure from Alaskans a "social license to operate" by proactively and transparently engaging with people living in the state.



We thank Governor Dunleavy for introducing an act relating to microreactors, and encouraging energy innovation for Alaskans. As your committee and legislative body consider this legislation and the role of nuclear energy in your state, please consider us an open resource. Thank you again for your time and service to the citizens of Alaska.

Francesco Venneri Chief Executive Officer Ultra Safe Nuclear Corporation <u>fvenneri@usnc.com</u> +1 (858) 353 9895



Date: March 9, 2022

TO: The Honorable Joshua Reval Chair, Senate Resources Committee Juneau, AK 99801

SUBJECT: An Act Relating to Microreactors (SB 177)

Dear Chairman Revak,

Over the past several years, the United States Nuclear Industry Council (USNIC), along with many other nuclear and nonnuclear organizations, have highlighted the importance of advancing the United States' efforts to maintain leadership in the development and deployment of advanced nuclear technologies.

Advanced nuclear technology is perhaps the singularly most effective technology to address climate change and to provide reliable, cost-competitive, zero-carbon energy. Without nuclear energy, it will be realistically impossible to meet the numerous and ambitious goals set for carbon reduction. Deployment of U.S. advanced nuclear technologies is also vital to U.S. security, because nation-state nuclear offerings of Russia and China are a threat to U.S. international interests.

Microreactors and other nuclear reactors enable clean power to be available 24 hours a day, 7 days a week. In Alaska where solar insolation is low, where communities are isolated from a statewide grid, and when many communities rely on high-cost diesel fuel deliveries, small reactors offer many benefits.

The U.S. military sees the advantages of using microreactors in military bases in Alaska and are evaluating microreactors for their energy needs in Alaska (e.g., Eielson Air Force Base).

USNIC strongly support the initiatives of the Governor of Alaska and the Alaskan legislature for crafting and actively considering actions to facilitate microreactors and other small to medium sized nuclear reactors in Alaska. Accordingly, we urge the passage of the Alaskan legislation (SB 177) that removes requirements for the legislature to select sites. This will make siting of new nuclear reactors more straightforward and without unnecessary delay. Furthermore, a size limit of 50-megawatt electrical energy output seems like an appropriate first step.

We hope you will do necessary analysis and pass the appropriate legislation to enable nuclear reactor deployments to provide the benefits of reliable, cost-effective, zero-carbon energy sources for Alaskan people, local communities, utilities, and industry.

Respectfully,

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Bud Albright President & CEO U.S. Nuclear Industry Council & U.S. Under Secretary of Energy (2006-2008)

The United States Nuclear Industry Council (USNIC) is the leading U.S. business advocate for advanced nuclear energy and promotion of the American supply chain globally. USNIC represents over 80 companies engaged in nuclear innovation and supply chain development, including technology developers, manufacturers, construction engineers, key utility movers, service providers, and educational organizations.