

ALASKA STATE LEGISLATURE
HOUSE SPECIAL COMMITTEE ON ENERGY

February 29, 2024

10:15 a.m.

MEMBERS PRESENT

Representative George Rauscher, Chair
Representative Tom McKay
Representative Thomas Baker
Representative Stanley Wright
Representative Mike Prax
Representative Calvin Schrage
Representative Jennie Armstrong

MEMBERS ABSENT

All members present

COMMITTEE CALENDAR

HOUSE BILL NO. 368

"An Act relating to clean energy standards and a clean energy transferable tax credit; and providing for an effective date."

- HEARD & HELD

PRESENTATION(S): ULTRA SAFE NUCLEAR CORPORATION: A PRIVATE PERSPECTIVE ON THE CASE FOR DEVELOPING ADVANCED NUCLEAR IN ALASKA

- HEARD

PREVIOUS COMMITTEE ACTION

BILL: HB 368

SHORT TITLE: ELECTRICAL ENERGY & ENERGY PORTFOLIO STDS

SPONSOR(S): ENERGY

02/20/24	(H)	READ THE FIRST TIME - REFERRALS
02/20/24	(H)	ENE, FIN
02/22/24	(H)	ENE AT 11:00 AM BARNES 124
02/22/24	(H)	-- MEETING CANCELED --
02/27/24	(H)	ENE AT 11:00 AM BARNES 124
02/27/24	(H)	Heard & Held
02/27/24	(H)	MINUTE(ENE)
02/29/24	(H)	ENE AT 10:15 AM BARNES 124

WITNESS REGISTER

ROBERT "BOB" DOYLE, Chair
Regulatory Commission of Alaska
Department of Commerce, Community & Economic Development
Anchorage, Alaska
POSITION STATEMENT: Answered questions during the hearing on HB 368.

DAN LUDWIG, Business Development Manager
Ultra Safe Nuclear Corporation
Minneapolis, Minnesota
POSITION STATEMENT: Gave a PowerPoint presentation on "Ultra Safe Nuclear Corporation: A Private Perspective on the Case for Developing Advanced Nuclear in Alaska."

ACTION NARRATIVE

[10:15:24 AM](#)

CHAIR RAUSCHER called the House Special Committee on Energy meeting to order at 10:15 a.m. Representatives Armstrong, Schrage, McKay, Baker, and Rauscher were present at the call to order. Representatives Wright and Prax arrived as the meeting was in progress.

HB 368-ELECTRICAL ENERGY & ENERGY PORTFOLIO STDS

[10:16:43 AM](#)

CHAIR RAUSCHER announced that the first order of business would be HOUSE BILL NO. 368 "An Act relating to clean energy standards and a clean energy transferable tax credit; and providing for an effective date."

CHAIR RAUSCHER announced that Robert Doyle from the Regulatory Commission of Alaska would respond to questions pertaining to HB 368.

[10:18:33 AM](#)

ROBERT "BOB" DOYLE, Chair, Regulatory Commission of Alaska (RCA), Department of Commerce, Community & Economic Development (DCCED), in response to Chair Rauscher, outlined the requirements of RCA. He stated that there are several pieces of HB 368 that would require RCA to adopt or amend regulations

surrounding energy and billing. At the request of the chair, he gave an overview of how RCA works to ensure that the interests of all Alaskans are met by reasonable and just means. He moved on to discuss fiscal notes, saying that most of the concerns presented by the fiscal notes are due to staffing issues. He explained that it could be a 600-plus day process to create a regulatory document from draft to finish.

[10:26:49 AM](#)

REPRESENTATIVE SCHRAGE asked what effect the bill would have on the power cost equalization (PCE) calculation.

MR. DOYLE indicated there would be no noticeable effect on how PCE is calculated. He said the intent is to bring the statute in line with how business is conducted at RCA.

[10:29:13 AM](#)

REPRESENTATIVE MCKAY asked whether RCA regulates Fire Island and a solar farm in Houston, Alaska.

MR. DOYLE responded that all of the costs associated with independent power projects are negotiated with the utilities companies. In response to a follow-up question, he noted that information regarding the amount of electricity generated by Fire Island and Chugach Electric is public. To further questioning, he said RCA has a neutral stance toward HB 368, and he offered his understanding that green energy credits are given through the regulation docket process.

[10:37:03 AM](#)

CHAIR RAUSCHER asked Robert Doyle to explain the difference between "net billing" and "net metering."

MR. DOYLE explained that net metering is the process of selling power and energy back to the energy company, whereas net billing is how one would account for the cost of someone who is generating more power than is needed, like a monthly settlement to break the difference between cost and energy sold back to the company.

[10:40:15 AM](#)

CHAIR RAUSCHER thanked Robert Doyle for responding to questions from the committee.

[HB 368 was held over.]

**PRESENTATION(S): ULTRA SAFE NUCLEAR CORPORATION: A PRIVATE
PERSPECTIVE ON THE CASE FOR DEVELOPING ADVANCED NUCLEAR IN
ALASKA**

[10:41:47 AM](#)

CHAIR RAUSCHER announced that the final order of business would be a presentation on "Ultra Safe Nuclear Corporation: A Private Perspective on the Case for Developing Advanced Nuclear in Alaska."

[10:42:20 AM](#)

DAN LUDWIG, Business Development Manager, Ultra Safe Nuclear Corporation, gave a PowerPoint presentation [hardcopy included in the committee packet] on "Ultra Safe Nuclear Corporation: A Private Perspective on the Case for Developing Advanced Nuclear in Alaska." He began on slide 1 and explained the function and purpose of the Ultra Safe Nuclear Corporation (USNC), highlighting the types of fuels the corporation runs on and what makes it "ultra safe." On slide 2, he explained how USNC's reactors work. He detailed the construction, operation, and output of each underground module.

[10:46:31 AM](#)

MR. LUWDIG, in response to a series of questions from Chair Rauscher, explained that it would be difficult to say when a new supply of enriched uranium would be available both economically and physically. He pointed out that multiple honeycombs can be combined to make a full core. In response to a series of questions from Representative Prax, he said that his estimations are correct, that the reactors are assembled onsite, and that the reactors are generally transported via boat and haul truck, not airplane.

[10:50:12 AM](#)

MR LUDWIG continued his presentation on slide 3, which described the design of the reactors and power plants, and how that design lends itself to a safer operation.

MR. LUDWIG, in response to a series of questions from Representative Wright, said that the reactors could last up to

20 years. When the lifecycle of the reactor is complete, the site is decommissioned by removing the equipment from the site and storing the spent nuclear fuel onsite on a pad. He mentioned interest in storing the spent nuclear fuel offsite, saying that there is widespread discussion on how to best achieve that. He said a reactor puts off 45 megawatts of thermal energy, roughly 15 megawatts of electricity. The heat can be used to run a heating system but also can be used to run a cooling system.

[10:55:38 AM](#)

MR. LUDWIG responded to questions from multiple committee members. He said that the design of the module is below ground on purpose to protect from various floods and natural events. He said there is no challenge in a high water table or permafrost; USNC has found that below ground works best for its reactors. He explained how reactor technology works to create electricity. In terms of how nuclear would perform in comparison to solar, he explained that if there were any delays in service, there would be back ups in place for the reactors, such as oil and natural gas. In terms of possible effects of the module on permafrost, he explained that there is a system of water cooling that would prevent the ground around it from overheating.

[11:02:26 AM](#)

MR. LUDWIG returned to the PowerPoint, to slide 3, which shows initial developments and plants that have been constructed by USNC. Responding to questions, he said the timeline of completion for each reactor is largely driven by the nuclear regulatory commission licensing process and can take up to six years. There is a permitting pathway being developed to get faster approval, though that does involve the federal government. He said that USNC's plan is to create as simple a design as possible that is quick and easy to license. In terms of where USNC would like to develop, he explained that the corporation has been in Alaska for three years, getting a feel for the environment, learning the stakeholders, and learning who would benefit from having a reactor.

[11:07:59 AM](#)

MR. LUDWIG, returning to the PowerPoint, brought attention to slide 4, which explains the future of the fuel supply that USNC uses. The slide details the manufacturing facility where the

fuel is currently made, lists agreements for fuel purchases, and shows headlines of various articles on those agreements. To a question from Representative Wright, he said a proposal from Eielson Air Force Base for a reactor is currently in the procurement process. While showing the final slide, Mr. Ludwig discussed why USNC is in Alaska and the corporation's goals for future development of nuclear energy in the state. In response to Chair Rauscher, he acknowledged that Alaska has some geological restrictions that make it difficult to develop nuclear energy in Alaska. In terms of how spent nuclear fuel is disposed, he explained that it is placed in a steel vessel surrounded by a concrete structure. It must be taken by the U.S. Department of Energy. He remarked that the final disposition of spent nuclear fuel is not well defined on a federal level, and he said he doesn't know where it would be stored. To further questions, he allowed that spent nuclear fuel is a little more voluminous than traditional nuclear fuel. He said the regulations are all federal.

[11:18:33 AM](#)

CHAIR RAUSCHER thanked Mr. Ludwig for his presentation and encouraged USNC to work with the University of Alaska Fairbanks.

[11:19:14 AM](#)

ADJOURNMENT

There being no further business before the committee, the House Special Committee on Energy meeting was adjourned at 11:19 a.m.