ALASKA STATE LEGISLATURE
HOUSE SPECIAL COMMITTEE ON ENERGY
March 7, 2023
10:16 a.m.

MEMBERS PRESENT

Representative George Rauscher, Chair
Representative Tom McKay
Representative Stanley Wright
Representative Mike Prax
Representative Calvin Schrage
Representative Ashley Carrick

MEMBERS ABSENT

Representative Josiah Patkotak

COMMITTEE CALENDAR

HOUSE BILL NO. 74
"An Act relating to geothermal resources; relating to the definition of 'geothermal resources'; and providing for an effective date."

- MOVED HB 74 OUT OF COMMITTEE

PRESENTATION: TIDAL AND RIVER ENERGY

- HEARD

PREVIOUS COMMITTEE ACTION

BILL: HB 74
SHORT TITLE: GEOTHERMAL RESOURCES
SPONSOR(s): RULES BY REQUEST OF THE GOVERNOR

02/15/23	(H)	READ THE FIRST TIME - REFERRALS
02/15/23	(H)	ENE, RES
02/23/23	(H)	ENE AT 10:15 AM BARNES 124
02/23/23	(H)	-- MEETING CANCELED --
02/28/23	(H)	ENE AT 10:15 AM BARNES 124
02/28/23	(H)	Heard & Held
02/28/23	(H)	MINUTE(ENE)
03/02/23	(H)	ENE AT 10:15 AM BARNES 124
03/02/23	(H)	Heard & Held
03/02/23	(H)	MINUTE(ENE)

WITNESS REGISTER

AARON O'QUINN, Leasing Manager
Division of Oil and Gas
Department of Natural Resources
Juneau, Alaska
POSITION STATEMENT: Answered questions during the hearing on HB 74.

MERRICK JACKINSKY, Director of Development
Ocean Renewable Power Company
Anchorage, Alaska
POSITION STATEMENT: Gave a PowerPoint presentation, titled "Tidal and River Energy."

ACTION NARRATIVE

10:16:10 AM

CHAIR GEORGE RAUSCHER called the House Special Committee on Energy meeting to order at 10:16 a.m. Representatives Carrick, Schrage, Wright, McKay, and Rauscher were present at the call to order. Representative Prax arrived as the meeting was in progress.

HB 74-GEOTHERMAL RESOURCES

10:18:11 AM

CHAIR RAUSCHER announced that the first order of business would be HOUSE BILL NO. 74, "An Act relating to geothermal resources; relating to the definition of 'geothermal resources'; and providing for an effective date."

10:18:26 AM

REPRESENTATIVE CARRICK asked how HB 74 would affect the current tax structure, penalties, and permit structure.

10:20:55 AM

AARON O'QUINN, Leasing Manager, Division of Oil and Gas, Department of Natural Resources (DNR), answered that the proposed legislation would change "permits" to "licenses", and this would match the regulations for other types of resources.

He continued that the time period would be changed from two to five years, and the requirement for renewal would be based on the investment. Once the requirements are met, a lease will be granted.

10:23:39 AM

REPRESENTATIVE CARRICK requested an explanation of the name change.

MR. O'QUINN answered that currently a permit could be used to obtain a lease, but DNR plans to change this permit to a license. In response to a follow-up question, he stated that geothermal production facilities would face many of the same taxes as other industries, such as property taxes and corporate income taxes. He noted that since last year, Mount Spurr has generated $93,000 in rent and Augustine Island has generated approximately $9,300 in rent.

10:28:47 AM

REPRESENTATIVE MCKAY moved to report HB 74 out of committee with individual recommendations and the accompanying zero fiscal notes.

10:29:32 AM

The committee took an at-ease from 10:29 a.m. to 10:30 a.m.

10:30:19 AM

REPRESENTATIVE MCKAY withdrew his motion to move HB 74. There being no objection, the motion to move HB 74 was withdrawn.

10:30:41 AM

REPRESENTATIVE MCKAY moved to report HB 74 out of committee with individual recommendations and the accompanying fiscal notes.

10:31:02 AM

REPRESENTATIVE SCHRAGE objected and asked for the number of fiscal notes accompanying the bill.

CHAIR RAUSCHER answered that there were two.

10:31:35 AM

REPRESENTATIVE SCHRAGE removed his objection. There being no further objection, HB 74 was reported out of the House Special Committee on Energy.

10:31:46 AM

The committee took an at-ease from 10:31 a.m. to 10:34 a.m.

PRESENTATION: TIDAL AND RIVER ENERGY

10:34:30 AM

CHAIR RAUSCHER announced that the final order of business would be a presentation on tidal and river energy.

10:34:46 AM

MERRICK JACKINSKY, Director of Development, Ocean Renewable Power Company (ORPC), gave an overview of his background and a history of ORPC, as seen on slide 3 through slide 6. He stated that ORPC was created in 2007 and focuses on turning tidal processes into energy. He showed examples of the different types of turbines being used by ORPC. He continued to slide 7 through slide 10 and stated that there are 48 countries interested in the technology being used by ORPC. He stated that ORPC has recently secured $25 million in investment for expansion, and this expansion would include Alaska. He said that ORPC is working on battery systems to power remote communities. He pointed out that while other forms of renewable energy can be unpredictable at times, rivers and tides always flow.

MR. JACKINSKY continued to slide 11 through slide 13 and expressed the opinion that as the price of diesel fuel continues to increase, river and tidal power would be a good opportunity for remote communities. He pointed out that ORPC has two river systems in Igiugig that have successfully powered the community, and there has been no evidence that ORPC's systems have a negative effect on salmon populations. He added that the systems have also been proven to work in harsh winter conditions.

10:43:45 AM

CHAIR RAUSCHER asked how many rotations per minute (RPMs) the systems produce.

MR. JACKINSKY answered between 60 and 70 RPMs. In response to a follow-up question, he stated that the turbines only spin in one direction, and this is because of the design.

10:45:38 AM

REPRESENTATIVE WRIGHT asked how much power the systems could produce on a yearly basis.

MR. JACKINSKY answered that the system in Igiugig can produce approximately 40 kilowatts (kWh) per day. He added that the systems work best on small grids.

10:47:03 AM

MR. JACKINSKY continued to slide 14 through slide 20, describing that the systems are designed to work with existing infrastructure. He stated that the focus in Alaska is on smaller, remote communities in the western part of the state. He said that ORPC has received $1.5 million in funding from the U.S. Congress to locate the best places in Alaska to develop these systems. He continued that ORPC is currently working on building a system in False Pass, which also has received funding from the U.S. Congress. He expressed the understanding that Cook Inlet is one of the biggest tidal resources in the world, and ORPC is currently working with Homer Electric Association on the possibility of developing tidal energy there. He commented on the possibility that ORPC could work with oil and natural gas companies to use their platforms as work areas.

10:50:26 AM

CHAIR RAUSCHER asked whether oceanic tidal systems would require significantly more maintenance than river systems.

MR. JACKINSKY answered that ORPC's systems are designed with silt in mind, but salinity in Cook Inlet could be a challenge. He noted that the ocean system being used by ORPC in Maine would inform how to maintain any systems in Cook Inlet.

10:52:24 AM

REPRESENTATIVE CARRICK questioned the basis for labeling Cook Inlet as one of the greatest tidal resources in the world.

MR. JACKINSKY answered that Cook Inlet has a much higher flow velocity than most other places, and the high velocity of flow allows for a high volume of potential energy production.

10:54:33 AM

REPRESENTATIVE WRIGHT asked whether the chokepoint in Cook Inlet determines the amount of flow.

MR. JACKINSKY answered in the affirmative. In response to a follow-up question, he said that 200 feet is the ideal depth for production using tidal energy, and ORPC is looking for at least 100 feet of depth. He added that the systems need to be at least 10 to 15 feet below low tide to avoid any debris from ice in the winter.

10:56:38 AM

CHAIR RAUSCHER asked whether the systems could affect salmon populations in Cook Inlet.

MR. JACKINSKY answered that ORPC would use sonar to place the systems in areas where salmon populations do not generally swim through.

10:58:41 AM

MR. JACKINSKY continued to slide 20 through slide 22 and stated that the current project at Port MacKenzie is focused on the development of electro-fuels such as hydrogen. He stated that the TidGen 20 would begin testing in April 2023 in Eastport, Maine. Following the testing in Maine, ORPC plans to use the system in Cook Inlet.

MR. JACKINSKY continued to slide 23 through slide 25 and highlighted international ring-fence projects that have been producing energy. He stated that the United Kingdom is the global leader in offshore wind energy production, and it gets 25 percent of its electricity from wind power. He suggested that ORPC would like to bring the ring-fence system to Alaska to work alongside their tidal energy production.

11:04:00 AM

REPRESENTATIVE PRAX asked whether ORPC is working with the Alaska Energy Authority (AEA).

MR. JACKINSKY answered that ORPC is working with AEA on permitting and other issues. In response to a follow-up question, he said ORPC is familiar with some of the other companies in the state working on river energy production.

11:05:33 AM

ADJOURNMENT

There being no further business before the committee, the House Special Committee on Energy meeting was adjourned at 11:05 a.m.