



THE STATE  
of **ALASKA**  
GOVERNOR MIKE DUNLEAVY

Department of Natural Resources

DIVISION OF OIL & GAS

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April 17, 2023

VIA ELECTRONIC MAIL

The Honorable Click Bishop, Co-Chair  
The Honorable Cathy Giessel, Co-Chair  
The Honorable Bill Wielechowski, Vice Chair  
Senate Resources Committee  
Alaska State Capitol  
Juneau, Alaska 99801

Re: SB 69 Response to Committee Member Questions on April 12, 2023

Dear Senators Bishop, Giessel, and Wielechowski:

Senator Giessel asked about the likelihood of geothermal fluids containing minerals. Director Dave LePain responded that it is very possible, and it depends on the rocks that the fluids are coming from. California has found lithium in geothermal fluids (up to 400 mg/L), not Nevada as mistakenly mentioned during the hearing. California is exploring ways of extracting lithium from geothermal fluids in the Salton Sea area (National Renewable Energy Laboratory, 2021 U.S. Geothermal Power Production and District Heating Market Report). The Senator also asked if lithium is a hazardous substance and, with regards to groundwater, Director LePain responded that it depends on its concentration. Currently, lithium is not regulated in drinking water in the U.S., but the United States Geological Survey in collaboration with the Environmental Protection Agency (EPA), has developed a Health-Based Screening level for lithium of 10 parts per billion. They have also identified a lithium benchmark of 60 parts per billion if exposure only comes from drinking water. Lithium is naturally occurring in some groundwater in arid regions of the western U.S.

Senator Bishop asked how much power is produced with geothermal in Nevada. In 2021 Nevada had a total installed geothermal power nameplate capacity of 824.53 MW from 25 plants. Nameplate capacity is the maximum rated output of a generator designated by the manufacturer. These plants had a total output of 5,165,082 MWH (gross) and 3,940,640.25 MWH (sales) in 2021. California is the Nation's leader in geothermal energy production in the U.S., with a nameplate capacity in 2019 of 2,627 MW from 51 plants.

Sincerely,

A handwritten signature in blue ink, appearing to read "Joe Byrnes".

Joe Byrnes  
Legislative Liaison  
Department of Natural Resources