



609 Main St, 25th Floor
Houston, TX, 77002

4/29/2022

Delivered by e-mail to:
[ID Water Division??]

[Attn: _____]

RE: Initial Fervo Comments on Proposed Geothermal Regulations

Fervo Energy Inc. (“**Fervo**”) appreciates your invitation to submit our initial comments on the proposed revisions to Part 37.03.04 – Drilling for Geothermal Resources Rules (“**GT Rules**”). We applaud your forward-looking planning to facilitate responsible development of the clean-energy potential of more of Idaho’s abundant geothermal resources, including those located in areas considered undevelopable using the traditional, first-generation vertical drilling and single stage (flash) power generation technologies available when Idaho’s Geothermal Resources Act and implementing Rules were initially adopted.

As we have previously discussed, Fervo’s next-generation projects are uniquely designed to deliver 24x7 carbon-free, renewable electric power by combining innovations in geoscience, advanced drilling and production techniques, and cutting-edge, binary-cycle generation facilities. Fervo’s proprietary, closed-loop designs for production and re-injection of geothermal fluids and use of advanced air-cooling rather than evaporative cooling systems in our proposed Idaho projects are similarly designed to dramatically reduce our projected consumptive water uses.

Accordingly, our initial comments on the proposed GT Rules are focused on providing the Department with the additional flexibility and authority needed to consider and approve responsibly engineered and accepted industry designs and operating procedures utilizing recent and future advances in drilling technology not contemplated by some of the existing GT Rules.

Classification as a Geothermal Resource. The proposed Rule 10 Definitions appropriately incorporate language from corresponding provisions of the Geothermal Resources Act (“**Act**”). For example, the second sentence proposed to be inserted in Definition 13. Geothermal Resources, tracks the language of the second sentence of 42-4002(c) Geothermal resource in the Act, providing that “*Groundwater having a temperature of two hundred twelve (212) degrees Fahrenheit or more in the bottom of a well shall be classified as a geothermal resource.*”

However, this additional sentence must be read in context with the first sentence, which defines a geothermal resource as “*the natural heat energy of the earth, the energy, in whatever form, which may be found in any position and at any depth below the surface of the earth, present in, resulting from, or created by, or which may be extracted from such natural heat . . .*”

We suggest the proposed GT Rules clarify that the Director retains the authorization to classify other sources of “the natural heat energy of the earth . . . in whatever form [or temperature]” as a



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geothermal resource. For example, the Director’s written approval of an application for permit to drill submitted under Rule 25 (Drilling) 02(a), might include confirmation of the classification of the targeted non-ground water or lower water temperature source of “natural heat energy” as a geothermal resource.

See for example, the provisions of Nevada’s Geothermal Resources Act, NRS 534A.010, defining geothermal resource simply as “*the natural heat of the earth and the energy associated with that natural heat . . .*”, with its associated rule, NAC 534A.173, construing “*natural heat of the earth*” as “*energy obtained from any medium used to transfer heat, the temperature of which is greater than 85 degrees Fahrenheit at the surface.*”

Authority of Director to Grant Exceptions to Certain Drilling Rules.

We similarly suggest the proposed GT Rules include a provision confirming the authority of the Director to grant exceptions to any of the requirements of the GT Rules, “upon written application and for good cause shown.” For example, applicants proposing horizontal wells to explore, produce, or inject into underground sources of natural heat energy might submit an application for permit to drill requesting advance written approval of alternative, engineered casing, cementing, return mud cooling, cuttings collection, integrity testing or other drilling practices that differ from the requirements for drilling a vertical well implicit in the current requirements of the GT Rules. Similarly, depending on the data obtained during exploratory drilling and testing, the applicant might request pre-approval to convert a well initially drilled as an observation, production, or injection well to another, more beneficial use during operations.

See for example, NAC 534A.175.

We look forward to continuing our discussions and responding to future invitations to provide more detailed comments, including more specific wording suggestions (if requested), as part of your ongoing review of the proposed GT Rules.

Respectfully submitted,

FERVO ENERGY COMPANY

By: Sarah Jewett, Director of Strategy