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UCR CE-CERT Comments for Additions to the Roadmap

Additional submitted attachment is included below.

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July 12, 2019

California Energy Commission
Docket Unit, MS-4
Docket No. 19-ERDD-01
1516 Ninth Street
Sacramento, CA 95814-5512

RE: Comment on CEC Renewable Energy Roadmap

Dear CEC Roadmap Committee:

Thank you for the opportunity to provide input as you update the Renewable Energy Roadmap. The roadmap covers many critical research needs and we applaud you for this effort and all that CEC is doing to accellerate the transition to renewable energy. In addition to the elements targeted for investigation in the roadmap, we would ask you to consider expanding the viability of geothermal energy as a key research topic, in particular, investigating mineral extraction and co-production of geothermal power and renewable hydrogen.

Expanding geothermal energy in the Imperial Valley is a strategically important element of a balanced renewable portfolio, because it provides grid reliability benefits and helps reduce reliance on natural gas in hours of the day when solar and wind are less available. But because of higher capital costs, new geothermal development is likely to require additional revenue streams to underwrite new development.

CE-CERT has been engaged and participating in recent workshops and meetings convened by CEC Chair David Hochschild on lithium extraction from geothermal brine, and we agree this is a very high priority area for research, and should be specifically included in the roadmap.

CE-CERT also is working to combine geothermal electricity with the production of renewable hydrogen, during times when the California electric grid has surplus renewables, and wholesale prices are negative and curtailment of renewables is required. Because advanced electrolyzers can load follow, and adjust their operations as low cost geothermal is becomes available, production of renewable hydrogen can add value to geothermal, and create value to the California electric grid and renewable integration by providing a potentially cost effective means of storing renewable energy. In addition, producing renewable hydrogen in Inland Southern California will be increasingly important to provide renewable fuel for hydrogen fuel cell trucks, trains, and off road equipment.

Thank you for your consideration.

Sincerely,

Matthew Barth
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